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NIDISCO

RF Test Accessories Catalog

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Now in our fourth decade, MIDISCO continues as a leading supplier of quality Microwave/RF components. Microwave Distributors Company, our distribution affiliate, is still, by far and away, the largest Off-The-Shelf Stocking Distributor of Microwave and RF components — carrying the entire line of MIDISCO products as well as the products of other franchised quality suppliers.

This catalog of MIDISCO products includes some new items: Rotary and Pushbutton Attenuators, Multi-octave Power Dividers, Resistive Power Dividers, Terminations, Lightning & EMP Protectors, as well as assorted coaxial cable accessories. Make special note of our Ultra-Flex Coaxial Cable Assemblies which have gained very wide acceptance as a low cost, low loss, high performance replacement for semi-rigid cable.

We would be pleased to cross-reference any competitor's products where you may be having delivery or quality problems.

Thank you for the opportunity to serve you for more than 30 years.

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Phase Adjustable SMA Adapters & Connectors

Features

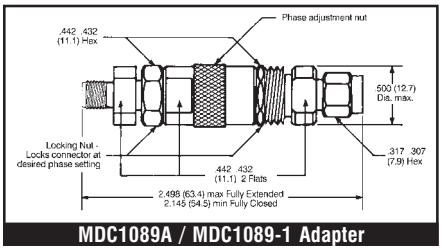
- Phase Adjustment = 10° × F (GHz)
- Available for .141 Dia. and .085 Dia. Semi Rigid Cable
- Available as Male/Female Adapter
- Phase Adjustment at Final Production Stage
- DC to 18 GHz with low VSWR
- DC to 4GHz adapter model available
- Meets Stringent Environmental Specifications
- Delivery from stock

Electrical *	
Impedence	50 ohms
Frequency Range	DC-18 GHz
Insertion Loss	dB= 1 × $\sqrt{f}$ for adapter version 0.8 × $\sqrt{f}$ for connector version (f is frequency in GHz)
VSWR	(see chart)
Phase Adjustment (degrees)	10° × f
Phase Change per revolution of adjustment nut	0.636° × f
Voltage Rating	500 Vrms

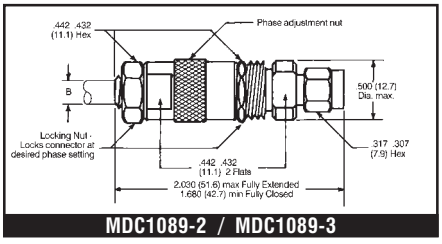
Mechanical	
Mating	Mating face dimensions compatible with the mating requirements of MIL-C-39012/55 (type SMA)
Connector Durability	(SMA interface) 500 cycles of mating and unmating without deterioration

Environmental	
Shock	MIL-Std-202, Method 213, Test Condition I
Vibration	MIL-Std-202, Method 204, Test Condition D
Thermal Limits	-65°C to +125°C

Material	
Center Conductor	Beryllium Copper, Gold Plated
Connector Body	Brass or Beryllium Copper, Gold Plated
Adjusting Nut and Locking Nut	Brass with bright nickel plate
Connector Coupling Nut	Stainless Steel Passivated
Insulation	TFE



MDC1089A / MDC1089-1 Adapter



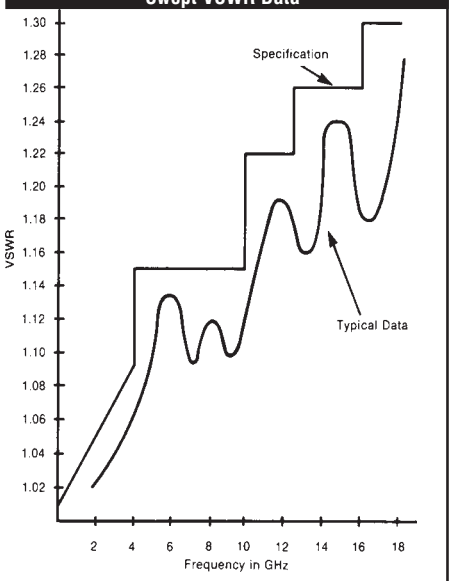
MDC1089-2 / MDC1089-3

Simple Mechanical Phase Adjustment

These SMA connectors for semi-rigid coaxial cables offer a precise yet extraordinarily simple means of phase adjustment for microwave instrumentation. MIDISCO phase adjustable connectors incorporate a threaded interconnection of variable length. Turning a phase adjustment nut creates small-increment changes in cable length and hence phase, up to a maximum of 180°, at 18 GHz. (At 9 GHz, for example, one revolution of the nut results in a mechanical length change of .021" and a phase change of 6°.)

MIDISCO phase adjustable connectors are available in two standard sizes, number MDC1089-2 for .141" dia. cable and number MDC1089-3 for .085" dia. cable. Adapter versions, numbers MDC1089-1 (DC-18GHz) and MDC1089A (DC-4GHz), are also available for in-line applications.

Swept VSWR Data



For phased array radar, test equipment, ILS landing systems & other instrumention using phase matching techniques, the new connectors substitute the ease of mechanical screw adjustments for the delays of laborious cable-trimming. Phase matching may be performed at final production stages, allowing less stringent specifications for equipment components. Once established, the proper phase setting for each cable is maintained by a connector locking nut. To compensate for system aging, the locking nut may be released and new phase adjustments made at any time.

Electrical Performance

Unlike other phase-matching techniques with limited frequency ranges which may hamper performance or require use of more than one model, each broadband MIDISCO phase adjustable connector covers the entire range from DC to 18 GHz. (MDC1089A: DC to 4GHz). Low VSWR is typical (see chart above).

Phase adjustment range in degrees is ten times the frequency in GHz (e.g. 100°, at 10 GHz, 180° at 18 GHz).

Environmental Performance

MIDISCO phase adjustable SMA connectors are operational at temperatures from -65°C to +125°C. They also meet the following sections of MIL-Std-202 for environmental conditions:

Vibration:

Method 204 - Test Condition D

Mechanical Shock:

Method 213 - Test Condition I

Model	Frequency Range	Max Length (in.)	Diameter (in.) B	Description
MDC1089A	DC-4 GHz	2½	n/a	In-Line Adapter
MDC1089-1	DC-18 GHz	2½	n/a	In-Line Adapter
MDC1089-2	DC-18 GHz	2 1/32	0.144	0.141" Cable Conn.
MDC1089-3	DC-18 GHz	2 1/32	0.088	0.085" Cable Conn.

Note: Phase adjustable SMA connectors are available for other semi-rigid cables. Please consult factory.

** These characteristics are typical and may not apply to all connectors.*

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Coaxial Detectors

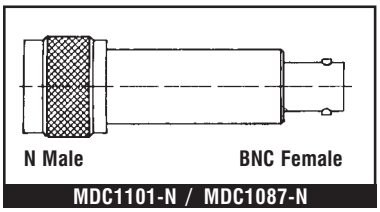
100 kHz to 26.5 GHz - Zero Bias Schottky

Features

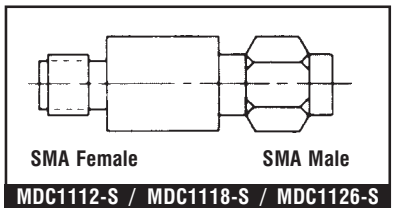
- Broadband (0.01 to 26.5 GHz)
- Excellent flatness (±0.5 dB to 26.5 GHz)
- Low VSWR due to matched input
- Very high sensitivity
- No bias required
- Metallurgically bonded diodes
- High burnout protection
- Choice of 3.5mm, 7mm (APC-7), N, K, BNC, or SMA input connectors
- Positive or Negative polarity available
- Matched pairs available
- Delivery from stock

The MIDISCO Zero Bias Schottky broadband coaxial detectors, with their superior broadband flatness, low VSWR, ruggedness and burnout protection, relative to point-contact models, are excellent for use in broadband EW system applications and microwave instrumentation. Since they do not require DC bias and can be used with common oscilloscopes, their ease of use and broadband performance make them very useful in laboratory measurements.

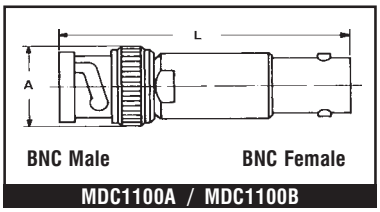
The various series include choices of 3.5mm, 7 mm (APC-7), N, K, SMA, or BNC input connectors and BNC, SMA, or SMC output connectors. Matched pairs are available (suffix -M to part number) with a frequency response less than ±0.3 dB to 18.5 GHz and ±0.5 dB from 18.5 to 26.5 GHz.



MDC1101-N / MDC1087-N



MDC1112-S / MDC1118-S / MDC1126-S



MDC1100A / MDC1100B

SPECIFICATIONS †

Frequency Range	Model Number	Connectors		Mech. Dimensions		VSWR	Frequency Response		Low Level Sensitivity	Input Power
		Input	Output	Length	Diameter		Octave	Broadband		
100kHz to 2 GHz	MDC1100A	BNC Male	BNC Female	2.50 in. (64 mm)	0.51in. (13mm)	1.3:1 max.	±0.1dB (per 100kHz)	±0.3 dB	0.50mV/μW	Maximum operating 200mW; Short duration (less than 1 minute) 1 watt (typical)
100kHz to 4 GHz	MDC1100B									
0.01 to 12.4 GHz	MDC1101-N	Type N Male	BNC Female	2.46 in. (62.5 mm)	0.75 in. (19 mm)	1.20:1 max. (to 4.5 GHz) 1.30:1 max. (to 7 GHz) 1.40:1 max. (to 12.4 GHz)	±0.2 dB	±0.5 dB (to 12.4 GHz)	0.40mV/μW	
	MDC1101-S	SMA Male	BNC Female	2.50 in. (64 mm)	0.56 in. (14 mm)					
	MDC1112-S	SMA Male	SMA Female	1.15 in. (29 mm)	0.34 in. (8.6 mm)	1.25:1 max.			0.50mV/μW	
	MDC1112-C	SMA Male	SMC Male	1.50 in. (38 mm)	0.34 in. (8.6 mm)					
0.01 to 18 GHz	MDC1087-7	APC-7	BNC Female	2.59 in. (65.8 mm)	0.75 in. (19 mm)	1.2:1 max. (to 4GHz) 1.4:1 max. (to 18GHz)	±0.2dB (to 8GHz)	±0.3dB (to 8 GHz) ±0.5dB (to 18 GHz)	>0.42mV/μW	
	MDC1087-N	Type N Male	BNC Female	2.46 in. (62.5 mm)	0.75 in. (19 mm)					
	MDC1087-S	SMA Male	BNC Female	2.50 in. (64 mm)	0.56 in. (14 mm)	1.2:1 max. (to 4GHz) 1.5:1 max. (to 18GHz)				
0.01 to 18 GHz	MDC1118-S	SMA Male	SMA Female	1.15in. (29 mm)	0.34 in. (8.6 mm)	1.25:1 max.	±0.2 dB	±0.3 dB (to 8 GHz) ±0.5 dB (to 18 GHz)	0.50 mV/μW	
	MDC1118-C	SMA Male	SMC Male	1.50 in. (38 mm)	0.34 in. (8.6 mm)					
0.01 to 26.5 GHz	MDC1126-S	SMA Male	SMA Female	1.15 in. (29 mm)	0.34 in. (8.6 mm)	1.3:1 max. (to 18.5 GHz) 2:1 max. (to 26.5 GHz)	±0.5 dB (to 18GHz) ±1.0 dB (to 26.5GHz)		0.50 mV/μW	
	MDC1126-C	SMA Male	SMC Male	1.50 in. (38 mm)	0.34 in. (8.6 mm)					
0.01 to 40 GHz	MDC1140-S	K ‡ Male (2.9mm)	SMA Female	1.30 in. (33 mm)	0.32 in. (8.2 mm)	1.3:1 max. (to 18 GHz) 1.6:1 max. (to 26 GHz) 1.8:1 max. (to 40 GHz)	±0.3 dB (to 18 GHz) ±0.6 dB (to 26 GHz) ±1.0 dB (to 40 GHz)		0.40 mV/μW	
	MDC1140-B	K ‡ Male (2.9mm)	BNC Female	1.89 in. (48 mm)	0.39 in. (9.9 mm)					
	MDC1140-C	K ‡ Male (2.9mm)	SMC Male	1.35 in. (34 mm)	0.32 in. (8.2 mm)					

† *Specifications given for T_A=+25°C*
‡ *K Connector trademark of Wiltron Co.*
Matched pairs are available for frequency response within ±0.3dB to 18.5 GHz and ±0.5dB to 26.5 GHz - add suffix M.

Output Polarity: Negative polarity standard.
For positive polarity models, add "R" suffix to part number.
Example: MDC1087-SR
Dimensions are for reference only and are subject to change

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Pin Diode Limiters

0.5 to 18 GHz

Features

P SERIES

- Low insertion loss
- 1 watt CW and 100 Watt peak (1 µsec) power handling capability
- Fast response and short recovery time (10 to 20 nsec typical)
- Built-in DC return
- Hermetically sealed module
- Moderate cost

Y SERIES

- Low limiting threshold (+6 dBm typ.)
- Low leakage level (+13 dBm typ.)
- 1 Watt CW and 200 Watts peak (1 µsec) power handling capability
- Built-in DC block both ends
- Hermetically sealed module
- Typical recovery time is less than 10 µsec

Specifications

Operating temperature .....-55°C to +125°C
Storage temperature .....-55°C to +150°C
Shock 50G, 11msec
Vibration ..... 20G, 100 to 2000Hz

Insertion Loss and VSWR tested @ -10dBm
Minimum power handling capability: 1watt CW or 100 watts peak (1µsec, 0.1% duty) derated to 20% @+125°C.
Standard outline in "1F" style. Add Suffix "D" or "2F" to the model number for optional outlines.
Package style: (inches)

MIDISCO limiters are passive (series P) or detector activated (series Y), broadband integrated module devices that are designed for power leveling and receiver protection. In ECM, radar and communications systems, these limiters can protect transistor. tunnel diode or FET amplifiers, detectors and mixers. The limiting threshold is the incident power at which the low level insertion loss increases by one dB and the limiter begins its protective role. In series Y the detector provides a bias to the PIN diode which allows the diode to attenuate at a lower level providing harder limiting than it could achieve on its own.

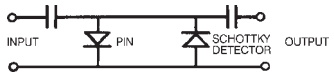
The 50 ohm hermetically sealed modules provide high reliability in severe environments. Both types are available in module form (Pkg D) or in SMA connector packages (1F or 2F).



Passive Pin Diode, Type P series @25°C

Model	Frequency Range (GHz)	Maximum Insertion Loss (dB)	VSWR (max)	Max Leak. @1W CW Input (dBm)
MDC1527P-1	0.5-1	0.5	1.4:1	+20
MDC1527P-2	0.5-2	0.7	1.4:1	+20
MDC1527P-3	1-2	0.5	1.4:1	+19
MDC1527P-4	2-4	0.8	1.4:1	+19
MDC1527P-5	2-8	1.5	1.5:1	+19
MDC1527P-6	2-18	2.2	2.2:1	+20
MDC1527P-7	4-8	1.4	1.5:1	+19
MDC1527P-8	7-12	1.8	1.7:1	+19
MDC1527P-9	8-16	2.0	1.8:1	+19
MDC1527P-10	11-18	2.2	2.0:1	+19

Limiting threshold +9dBm (typ.)

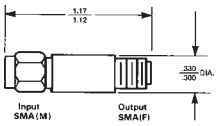


Detector Activated Type, Y series @25°C

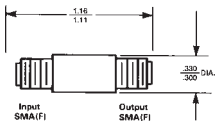
Model	Frequency Range (GHz)	Maximum Insertion Loss (dB)	VSWR (max)	Max Leak. @1W CW Input (dBm)
MDC1527Y-1	0.5-1	0.7	1.4:1	+14
MDC1527Y-2	0.5-2	0.7	1.4:1	+14
MDC1527Y-3	1-2	0.7	1.4:1	+14
MDC1527Y-4	2-4	0.8	1.4:1	+14
MDC1527Y-5	2-8	1.4	1.6:1	+14
MDC1527Y-6	2-18	2.5	2.5:1	+14
MDC1527Y-7	4-8	1.4	1.5:1	+13
MDC1527Y-8	7-12	1.8	1.6:1	+13
MDC1527Y-9	8-16	2.2	2.0:1	+13
MDC1527Y-10	11-18	2.5	2.2:1	+13

Limiting threshold +6dBm (typ.)

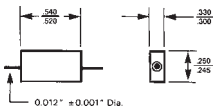
Package Style 1F



Package Style 2F



Package Style D



Tunnel (Back) Diode Detectors

For Stripline/Microstrip Assemblies — 0.01 to 18 GHz

Features

- Drop-in miniature construction
- Very low output resistance
- Broadband, flat frequency response
- Excellent temperature stability
- Very low 1/f noise

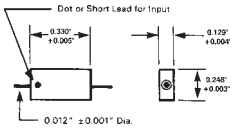
Maximum Ratings

Input power ..... + 17 dBm
Operating temp .....-65°C to +115°C
Storage temp .....-65°C to +125°C
Soldering temp.....230°C, 5 secs

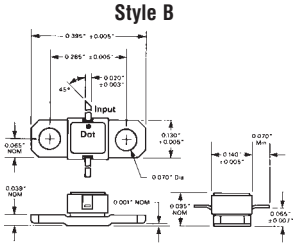
Negative output polarity standard. Add R to end of model number for positive output polarity. TSS based on 2 MHz video band width and 2 dB amplifier NF.
Add "A" or "B" to the end of the model number for package style desired.

MIDISCO drop-in tunnel diode detectors are narrow or broadband matched without resistive loading. They provide excellent sensitivity and flat response with optimum input VSWR and tangential sensitivity. The performance of these modules, in wideband video systems requiring fast pulse rise times, is impressive and the square law performance is essentially unaffected by changes in microwave power levels at small signals of less than -23dBm. Application notes are available.

Style A



Style B



Specifications (@ +25°C, up to -20dBm power input)

Model	Frequency Range (GHz)	Minimum Sensitivity K(mV/m-W)	Typical TSS (dBm)	Max. Flatness (± dB)	Typical VSWR	Nominal Output Cap (RF)	Nominal Output Res (ohm)
MDC1528-1	0.1-2	1000	-51	±0.3	1.5:1	150	250
MDC1528-2	0.1-4	900	-50	±0.5	2:1	150	250
MDC1528-3	0.1-0.5	1000	-51	±0.75	2:1	150	150
MDC1528-4	0.1-1	800	-50	±0.75	2:1	150	130
MDC1528-5	0.5-2	800	-50	±0.7	3:1	50	130
MDC1528-6	2-6	800	-50	±0.7	4:1	10	130
MDC1528-7	2-8	750	-50	±1.0	4:1	10	130
MDC1528-8	2-12	700	-50	±1.2	4:1	10	130
MDC1528-9	1-8	600	-49	±1.0	3:1	10	130
MDC1528-10	2-18	600	-49	±1.5	4:1	10	130

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Coaxial Adapters

Standard & Precision — BNC, C, CPC (blind male), F, GR874, GR900, HN, MCX, N,

Features

- Rugged construction
- Easy part number system
- Available in straight and right angle configuration (prefix R).
- Panel and bulkhead types available (prefix P or B)
- Small size
- Standard and Precision series for cost considerations
- Specials available in custom lengths
- Delivery from stock

Every conceivable combination of inter and intra series adapter is available from MIDISCO. Precision adapters, shown on the following pages, in many cases are identified with an "X". For lower frequency applications (to about 12 GHz), the cost effective standard series should be suitable. A convenient part number code table, shown here, very often enables the user to quickly specify the adapter combination desired without the need to research a part number. Custom adapters and bulkhead/flange type coaxial cable-adapter assemblies can be obtained quickly, while the adapters shown on these pages are usually in stock.



Adapter Code Table	
BNC	B
C	C
GR874	874
HN	H
N	N
SC	SC
SMA	S
TNC	T
UHF	U
Male	M
Female	F
Bulkhead	Prefix with B
Right Angle	Prefix with R
Radius (swept)	RR
Panel (flange)	Prefix with P
Precision	Prefix with X; usage through 18GHz

Examples	Part No.
N (male) to SMA (female)	NM-SF
TNC (female) to SMA (male)	TF-SM
BNC (male) to BNC (female)	BM-BF
Precision panel mount N (female) to SMA (female)	XPNF-SF

		SSMA		SMA		SMB		SMC		BNC		Type N		TNC	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
SMA	Male	MDC3314	MDC3100	SM-SM	SM-SF	MDC3037	MDC3038	MDC3039	MDC3040	BM-SM	BF-SM	NM-SM	NF-SM	TM-SM	TF-SM
	Female	MDC3312	MDC3313	SM-SF	SF-SF	MDC3033	MDC3034	MDC3035	MDC3036	BM-SF	BF-SF	NM-SF	NF-SF	TM-SF	TF-SF
SMB	Male	MDC7916-3	MDC7915-3	MDC3037	MDC3033	MDC6234	MDC6004	MDC3041	MDC3042	MDC4021-3	MDC4030-3	MDC4024-3	MDC4032-3	MDC4027-3	MDC4031-3
	Female	MDC7916-4	MDC7915-4	MDC3038	MDC3034	MDC6004	MDC6237	MDC3045	MDC3044	MDC4021-4	MDC4030-4	MDC4024-4	MDC4032-4	MDC4027-4	MDC4031-4
SMC	Male	MDC7916-1	MDC7915-1	MDC3039	MDC3035	MDC3041	MDC3045	MDC8134	MDC8001	MDC4021-1	MDC4030-1	MDC4024-1	MDC4032-1	MDC4027-1	MDC4031-1
	Female	MDC7916-2	MDC7915-2	MDC3040	MDC3036	MDC3042	MDC3044	MDC8001	MDC8137	MDC4021-2	MDC4030-2	MDC4024-2	MDC4032-2	MDC4027-2	MDC4031-2
BNC	Male	MDC7909	MDC7903	BM-SM	BM-SF	MDC4021-3	MDC4021-4	MDC4021-1	MDC4021-2	BM-BM	BM-BF	NM-BM	NF-BM	BM-TM	BM-TF
	Female	MDC7910	MDC7904	BF-SM	BF-SF	MDC4030-3	MDC4030-4	MDC4030-1	MDC4030-2	BM-BF	BF-BF	NM-BF	NF-BF	BF-TM	BF-TF
N	Male	MDC7911	MDC7905	NM-SM	NM-SF	MDC4024-3	MDC0424-4	MDC4024-1	MDC4024-2	NM-BM	NM-BF	NM-NM	NM-NF	NM-TM	NM-TF
	Female	MDC7912	MDC7906	NF-SM	NF-SF	MDC4032-3	MDC4032-4	MDC4032-1	MDC4032-2	NF-BM	NF-BF	NK-NF	NF-NF	NF-TM	NF-TF
TNC	Male	MDC7913	MDC7907	TM-SM	TMSF	MDC4027-3	MDC4027-4	MDC4027-1	MDC4027-2	BM-TM	BF-TM	NM-TM	NF-TM	TM-TM	TM-TF
	Female	MDC7914	MDC7908	TF-SM	TF-SF	MDC4031-3	MDC4031-4	MDC4031-1	MDC4031-2	BM-TF	BF-TF	NM-TF	NF-TF	TM-TF	TF-TF
SSMA	Male	MDC1143	MDC1144	MDC3314	MDC3312	MDC7916-3	MDC7916-4	MDC7916-1	MDC7916-2	MDC7909	MDC7910	MDC7911	MDC7912	MDC7913	MDC7914
	Female	MDC1144	MDC1142	MDC3100	MDC3313	MDC7915-3	MDC7915-4	MDC7915-1	MDC7915-2	MDC7903	MDC7904	MDC7905	MDC7906	MDC7907	MDC7908

This table shows some common standard and a few precision adapter combinations. See the individual specifications on the pages following or call us for assistance.

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SC, SMA, SMB, SMC, SSMA, SSMB, TNC, UHF, 2.4mm, 3.5mm, 7mm, 7/16 DIN

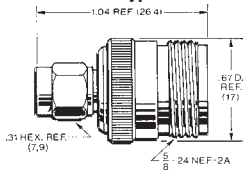
Features

- Manufactured per MIL-A-55339
- RF leakage: 90 dB (min.)
- Dielectric withstanding voltage: 1000Vrms, 60Hz (sea level)
- Temperature range: -65°C to +165°C
- Frequency: DC to 12.4 GHz
- Impedance: 50 ohms (some 75 ohm models available)
- Delivery from stock

Standard adapters are an inexpensive alternative to the MIDISCO Precision series, when operating at frequencies less than 12 GHz. Construction is rugged and, wherever applicable, is in accordance with MIL-C-39012 and MIL-A-55339. Construction is stainless steel, beryllium copper or brass as the connector series dictates with corresponding plating of gold or nickel as the specification applies.

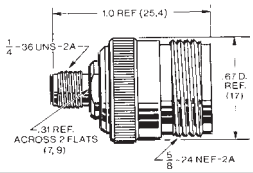
Additional types, including bulkhead, panel (flange), right angle and other series combinations are also available, usually from stock.

SMA Male to Type N Female



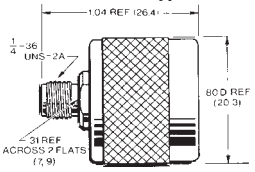
NF-SM

SMA Female to Type N Female



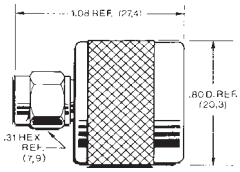
NF-SF

SMA Female to Type N Male



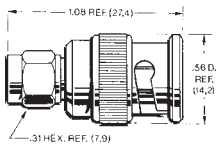
NM-SF

SMA Male to Type N Male



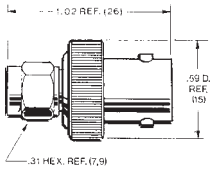
NM-SM

SMA Male to BNC Male



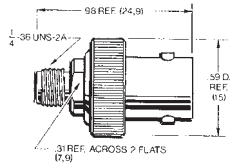
BM-SM

SMA Male to BNC Female



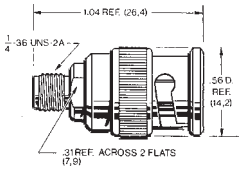
BF-SM

SMA Female to BNC Female



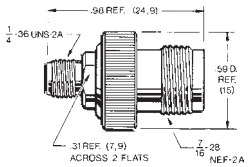
BF-SF

SMA Female to BNC Male



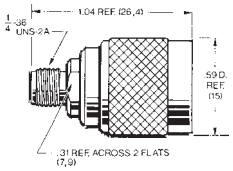
BM-SF

SMA Female to TNC Female



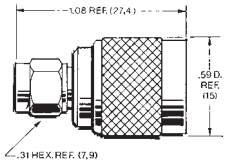
TF-SF

SMA Female to TNC Male



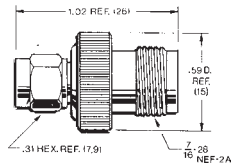
TM-SF

SMA Male to TNC Male



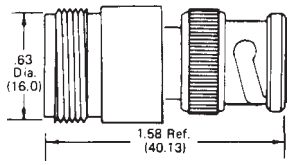
TM-SM

SMA Male to TNC Female



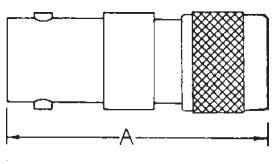
TF-SM

Type N Female to BNC Male



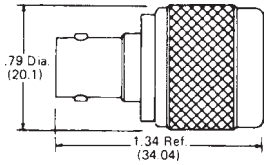
NF-BM

BNC Female to TNC Male



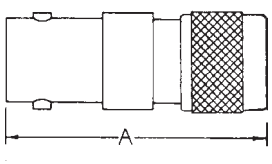
BF-TM

BNC Female to Type N Male



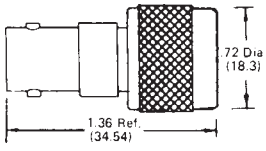
NM-BF

TNC Female to BNC Male



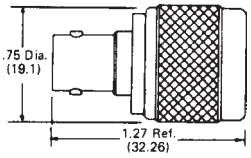
BM-TF

BNC Female to UHF Male



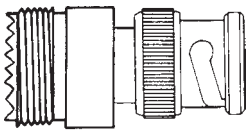
UM-BF

BNC Female to Type C Male



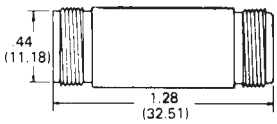
CM-BF

UHF Female to BNC Male



UF-BM

TNC Female to Female Adapter



TF-TF

For precision stainless steel construction — Prefix "X" (See precision adapters section). All dimensions shown in inches (mm).
Note: Dimensions are for reference only and are subject to change.

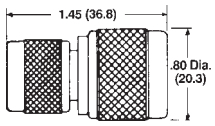
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Coaxial Adapters

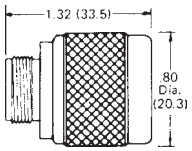
Standard & Precision — BNC, C, CPC (blind male), F, GR874, GR900, HN, MCX, N,

Type N Male to TNC Male



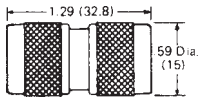
NM-TM

Type N Male to TNC Female



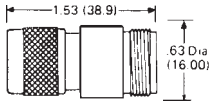
NM-TF

TNC Male to TNC Male



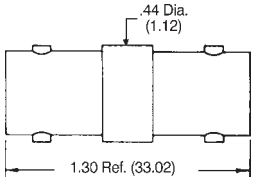
TM-TM

Type N Female to TNC Male



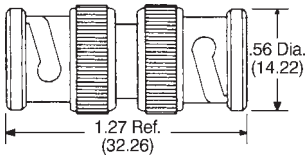
NF-TM

BNC Female to Female



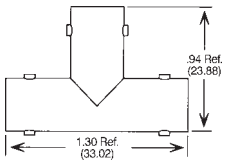
BF-BF

BNC Male to Male



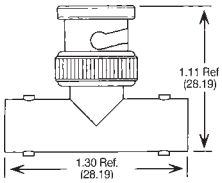
BM-BM

BNC Tee - 3 Female



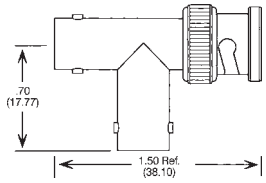
BF-BF-BF

BNC Female, Male, Female



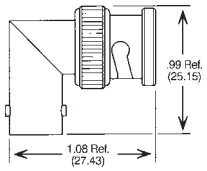
BF-BM-BF

BNC T - Male, Female, Female



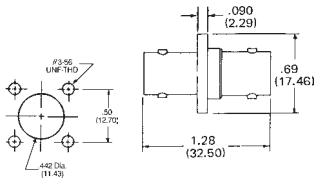
BM-BF-BF

Right Angle BNC Female to BNC Male



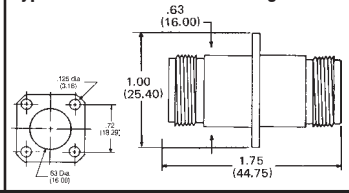
RBF-BM

BNC Female to Female Flange Mount



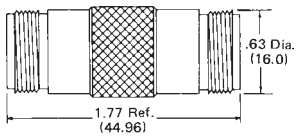
PBF-BF

Type N Female to Female Flange Mount



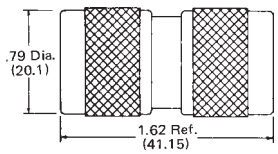
PNF-NF

Type N Female to Female



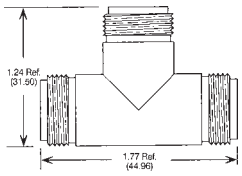
NF-NF

Type N Male to Male



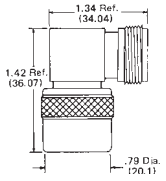
NM-NM

Type N Tee - 3 Females



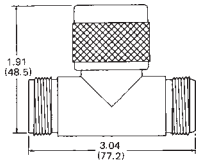
NF-NF-NF

Right Angle Type N Female to Type N Male



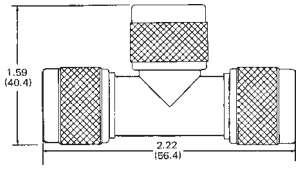
RNF-NM

Type N Tee Female, Male, Female



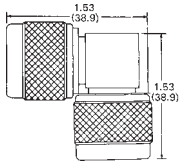
NF-NM-NF

Type N tee - 3 Males



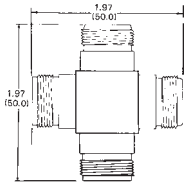
NM-NM-NM

Right Angle Type N Male to Type N Male



RNM-NM

4 Way Type N Female Adapter



NF-NF-NF-NF

Standard Material & Finish: Non-Tarnish (Nickel) Plated Brass
For Precision Stainless Steel Construction — Prefix "X" (See Precision Adapter Section)

All dimensions shown in inches (millimeters)
Note: Dimensions are for reference and are subject to change.

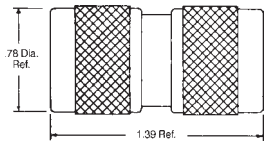
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SC, SMA, SMB, SMC, SSMA, SSMB, TNC, UHF, 2.4mm, 3.5mm, 7mm, 7/16 DIN

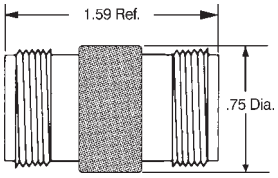
SC Adapters

SC Male to SC Male



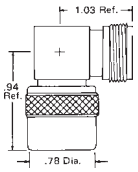
SCM-SCM

SC Female to SC Female



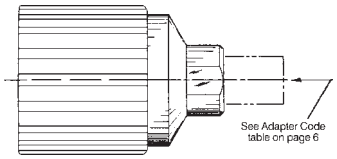
SCF-SCF

Right Angle SC Male to SC Female



RSCM-SCF

G900 Adapters

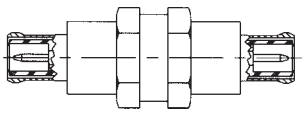


x: Connector Series
y: M=Male F=Female

900-xy

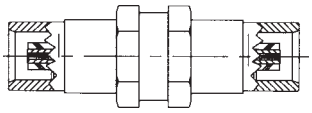
MCX Adapters

MCX Male to MCX Male



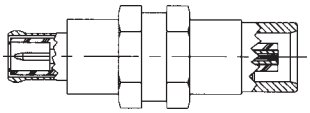
MCXM-MCXM

MCX Female to MCX Female



MCXF-MCXF

MCX Male to MCX Female

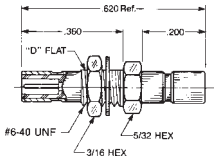


MCXM-MCXF

SSMB Adapter

SSMB Male to SSMB Male

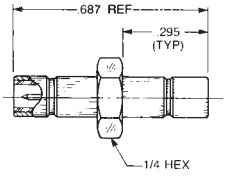
Bulkhead Mount



MDC6M243

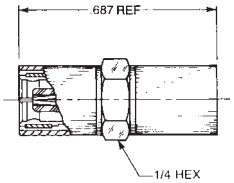
SMB Adapters

SMB Male Jack to SMB Male Jack



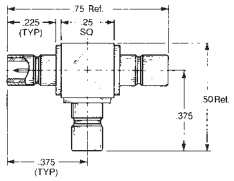
MDC6234

SMB Female Plug to SMB Female Plug



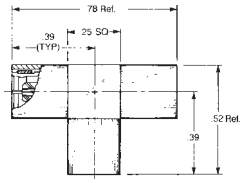
MDC6237

SMB Tee — 3 Male Jacks



MDC6328

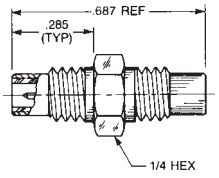
SMB Tee — 3 Female Plugs



MDC6329

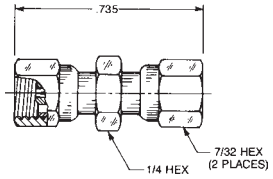
SMC Adapters

SMC Male Jack to SMC Male Jack



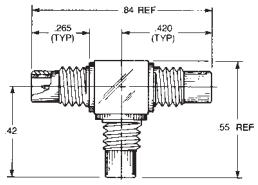
MDC8134

SMC Female Plug to SMC Female Plug



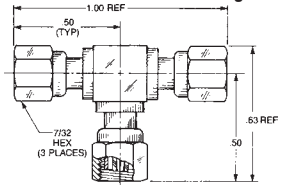
MDC8137

SMC Tee — 3 Male Jacks



MDC8128

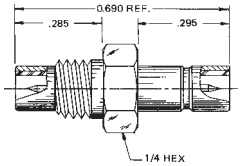
SMC Tee — 3 Female Plugs



MDC8129

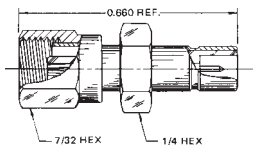
SMB to SMC Adapters

SMB Male Jack to SMC Male Jack



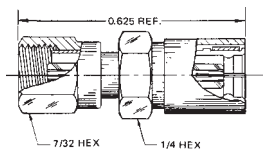
MDC 3041

SMB Male Jack to SMC Female Plug



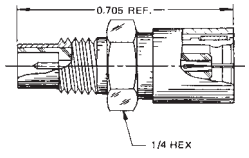
MDC 3042

SMB Female Plug to SMC Female Plug



MDC3044

SMB Female Plug to SMC Male Jack



MDC3045

All units are 50 ohms unless specified otherwise.
This series is nickel plated brass typ.

Note: SMB, SMC, SSMB plugs have female contact.
Dimesnions are for reference and subject to change.

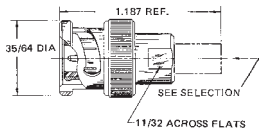
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Coaxial Adapters

Standard & Precision — BNC, C, CPC (blind male), F, GR874, GR900, HN, MCX, N,

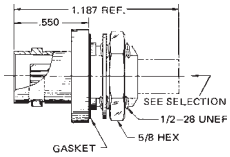
BNC to Subminiature (SMB, SMC, 50, & 75 ohm)

BNC Plug



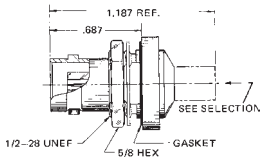
MDC4021- ( )

BNC Bulkhead Jack
Front Mount



MDC4022-( )

BNC Bulkhead Jack
Rear Mount

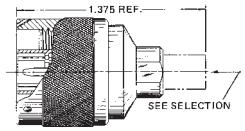


MDC4023-( )

To	Suffix
SMC Male Jack	-1
SMC Female Plug	-2
SMB Male Jack	-3
SMB Female Plug	-4
75 ohm screw-on Male Jack	-5
75 ohm screw-on Female Plug	-6
75 ohm snap-on Male Jack	-7
75 ohm snap-on Female Plug	-8

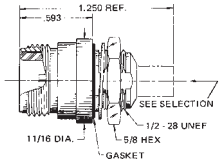
N to Subminiature (SMB, SMC, 50, & 75 ohm)

N Plug



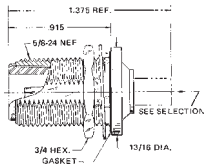
MDC4027-( )

N Bulkhead Jack
Front Mount



MDC4028-( )

N Bulkhead Jack
Rear Mount

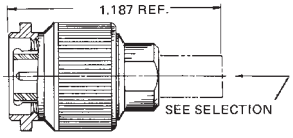


MDC4029-( )

To	Suffix
SMC Male Jack	-1
SMC Female Plug	-2
SMB Male Jack	-3
SMB Female Plug	-4
75 ohm screw-on Male Jack	-5
75 ohm screw-on Female Plug	-6
75 ohm snap-on Male Jack	-7
75 ohm snap-on Female Plug	-8

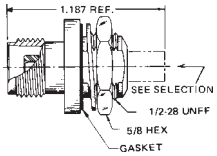
TNC to Submiature (SMB, SMC, 50, & 75 ohm)NC to Submiature (SMB, SMC, 50, & 75 ohm)

TNC Plug



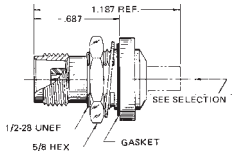
MDC4027-( )

TNC Bulkhead Jack
Front Mount



MDC4028-( )

TNC Bulkhead Jack
Rear Mount

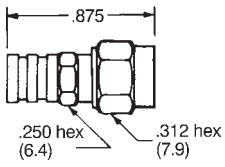


MDC4029-( )

To	Suffix
SMC Male Jack	-1
SMC Female Plug	-2
SMB Male Jack	-3
SMB Female Plug	-4
75 ohm screw-on Male Jack	-5
75 ohm screw-on Female Plug	-6
75 ohm snap-on Male Jack	-7
75 ohm snap-on Female Plug	-8

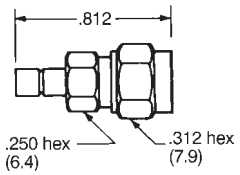
SMA to SMB Adapters

SMA to SMB Female



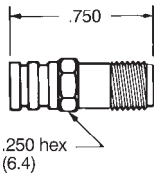
MDC3038S

SMA Male to SMB Male



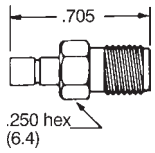
MDC3037S

SMA Female to SMB Female



MDC3034S

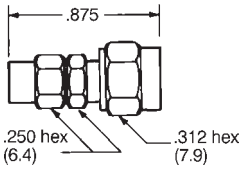
SMA Female to SMB Male



MDC3033S

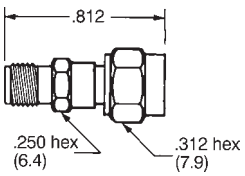
SMA to SMC Adapters / Frequency: DC-10GHz / VSWR: 1.15 max / Material is Passivated Stainless Steel

SMA Male to SMC Female



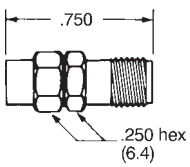
MDC3040S

SMA Male to SMC Male



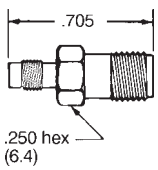
MDC3039S

SMA Female to SMC Female



MDC3036S

SMA Female to SMC Male



MDC3035S

All units are 50 ohms unless specified otherwise.
Material & Finish: Nickel Plated Brass.
SMA: Stainless Steel Passivated or Gold Plated per applicable MIL specs.
Example: MDC4022-3 is a front mount BNC bulkhead jack to SMB male jack.

Note: SMB, SMC plugs have female contact. SMA plugs have male contact.
For Precision Stainless Steel Construction, add "X" to basic part number. Example: MDC 4022X-( ).
For Gold Plated Finish: For MDC4000 Series, add "G" to basic part number. Example: MDC4022G-( ).
For MDC3000 Series, drop the "S" suffix. Example: MDC3040

MIDISCO

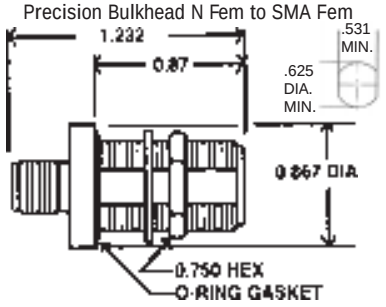
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Coaxial Adapters

Unique, and Popular Adapters

Popular Precision Bulkhead Adapter

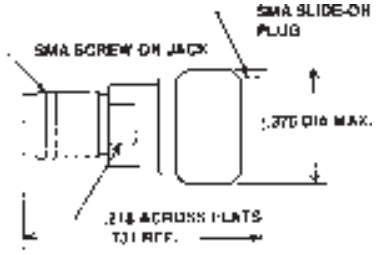
Precision Bulkhead N Fem to SMA Fem



XBNF-SF-S

Quick Connect or Connector Saver

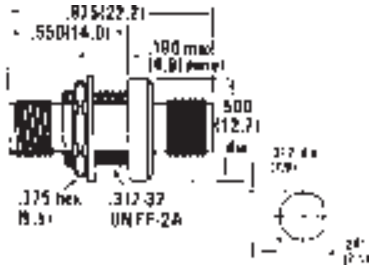
Quick Connect SMA Male to SMA Fem



QSM-SF-S

Hermetically Sealed Intra Series Adapter

Hermetically Sealed Bulkhead SMA Fem to SMA Fem



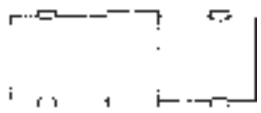
HBSF-SF-S

Coaxial Adapters

Standard Adapters

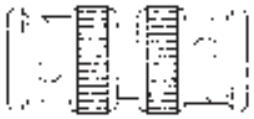
BNC 75 ohm Adapters

BNC Female to BNC Female



CBF-BF-75

BNC Male to BNC Male



CBM-BM-75

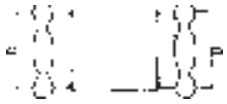
Type F Adapters

Type F Female to Type F Female



CFF-FF

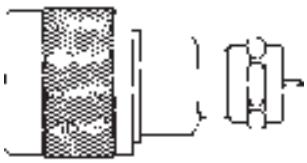
Type F Male to Type F Male



CFM-FM

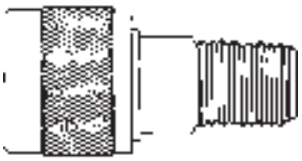
Type N to Type F Adapters

Type N Male to Type F Male



CNM-FM

Type N Male to Type F Female



CNM-FF

Type N Female to Type F Male



CNF-FM

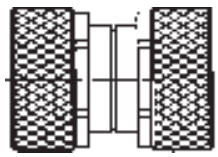
Type N Female to Type F Female



CNF-FF

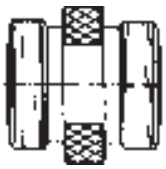
7/16 DIN Adapters

7/16 DIN Male to 7/16 DIN Male



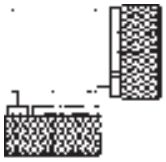
716M-716M

7/16 DIN Female to 7/16 DIN Female



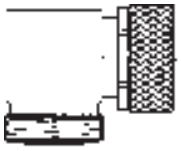
716F-716F

Right Angle 7/16 DIN Male to 7/16 DIN Male



R716M-716M

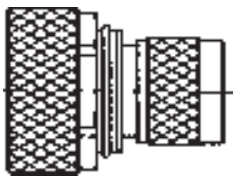
Right Angle 7/16 DIN Male to 7/16 DIN Female



R716M-716F

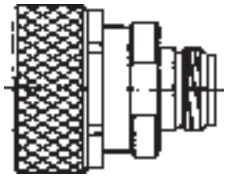
7/16 DIN to Type N Adapters

7/16 DIN Male to Type N Male



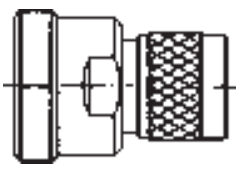
716M-NM

7/16 DIN Male to Type N Female



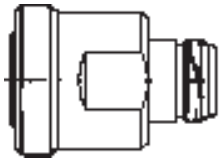
716M-NF

7/16 DIN Female to Type N Male



716F-NM

7/16 DIN Female to Type N Female



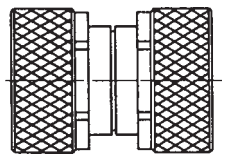
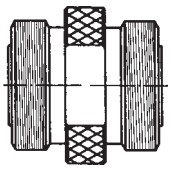
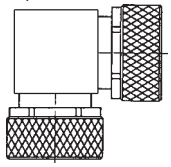
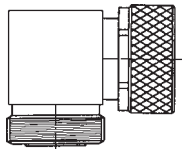
716F-NF

7/16 cable assemblies in additon to adapters

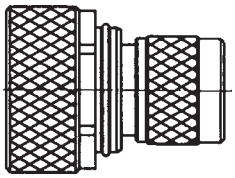
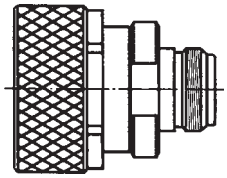
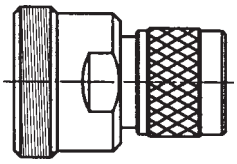
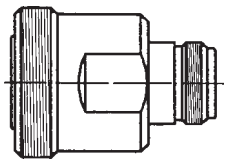
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SC, SMA, SMB, SMC, SSMA, SSMB, TNC, UHF, 2.4mm, 3.5mm, 7mm, 7/16 DIN

7/16 DIN Adapters

7/16 DIN Male to 7/16 DIN Male	7/16 DIN Female to 7/16 DIN Female	Right Angle 7/16 DIN Male to 7/16 DIN Male	Right Angle 7/16 DIN Male to 7/16 DIN Female
			
716M-716M	716F-716F	R716M-716M	R716M-716F

7/16 DIN to Type N Adapters

7/16 DIN Male to Type N Male	7/16 DIN Male to Type N Female	7/16 DIN Female to Type N Male	7/16 DIN Female to Type N Female
			
716M-NM	716M-NF	716F-NM	716F-NF

Adapto-Kits

For complete series adaptation — SMA, SMB, SMC, N, TNC, BNC, GR874

The MIDISCO Adapto-Kit consists of a hanging display board with spring clips which holds a total of 15 inter- and intra-series adapters. Kits are available in N, TNC, BNC, SMA, SMB, SMC, and GR874 Series. This enables the technician to adapt from one series to all of the other series. Replacement adapters are available. Delivery from stock.

Each Adapto-Kit consists of one (1) of each of the following

Kit No. AK-SMB		Adapter
From	To	P/N
SMB Male	SMB Male	MDC6234
SMB Female	SMB Female	MDC6237
SMB Male	SMC Female	MDC3042
SMB Male	N Male	MDC4024-3
SMB Male	TNC Male	MDC4027-3
SMB Male	BNC Male	MDC4021-3
SMB Male	SMA Male	MDC3037
SMB Male	SMC Male	MDC3041
SMB Male	SMA Female	MDC3033
SMB Female	SMC Male	MDC3045
SMB Female	N Male	MDC4024-4
SMB Female	TNC Male	MDC4027-4
SMB Female	BNC Male	MDC4021-4
SMB Female	SMA Male	MDC3038
SMB Female	SMC Female	MDC3044

Kit No. AK-SMC		Adapter P/N
From	To	
SMC Male	SMC Male	MDC8134
SMC Female	SMC Female	MDC8137
SMC Male	SMB Female	MDC3045
SMC Male	N Male	MDC4024-1
SMC Male	TNC Male	MDC4027-1
SMC Male	BNC Male	MDC4021-1
SMC Male	SMB Male	MDC3039
SMC Male	SMB Male	MDC3041
SMC Male	SMB Female	MDC3035
SMC Female	SMB Male	MDC3042
SMC Female	N Male	MDC4024-2
SMC Female	TNC Male	MDC4027-2
SMC Female	BNC Male	MDC4021-2
SMC Female	SMA Male	MDC3040
SMC Female	SMB Female	MDC3044

Kit No. AK-SMA		Adapter
From	To	P/N
SMA Male	SMA Male	SM-SM
SMA Female	SMA Female	SF-SF
SMA Male	SMA Female	SM-SF
SMA Male	N Male	NM-SM
SMA Male	N Female	NF-SM
SMA Male	TNC Male	TM-SM
SMA Male	TNC Female	TF-SM
SMA Male	BNC Male	BM-SM
SMA Male	BNC Female	BF-SM
SMA Female	N Male	NM-SF
SMA Female	N Female	NF-SF
SMA Female	TNC Male	TM-SF
SMA Female	TNC Female	TF-SF
SMA Female	BNC Male	BM-SF
SMA Female	BNC Female	BF-SF

Kit No. AK-N		Adapter
From	To	P/N
N Male	N Male	NM-NM
N Female	N Female	NF-NF
N Male	N Female	NM-NF
N Male	SMA Male	NM-SM
N Male	SMA Female	NM-SF
N Male	TNC Male	NM-TM
N Male	TNC Female	NM-TF
N Male	BNC Male	NM-BM
N Male	BNC Female	NM-BF
N Female	SMA Male	NF-SM
N Female	SMA Female	NF-SF
N Female	TNC Male	NF-TM
N Female	TNC Female	NF-TF
N Female	BNC Male	NF-BM
N Female	BNC Female	NF-BF

Kit No. AK-TNC		Adapter
From	To	P/N
TNC Male	TNC Male	TM-TM
TNC Female	TNC Female	TF-TF
TNC Male	TNC Female	TM-TF
TNC Male	SMA Male	TM-SM
TNC Male	SMA Female	TM-SF
TNC Male	N Male	NM-TM
TNC Male	N Female	NF-TM
TNC Male	BNC Male	BM-TM
TNC Male	BNC Female	BF-TM
TNC Female	SMA Male	TF-SM
TNC Female	SMA Female	TF-SF
TNC Female	N Male	NM-TF
TNC Female	N Female	NF-TF
TNC Female	BNC Male	BM-TF
TNC Female	BNC Female	BF-TF

Kit No. AK-BNC		Adapter
From	To	P/N
BNC Male	BNC Male	BM-BM
BNC Female	BNC Female	BF-BF
BNC Male	BNC Female	BM-BF
BNC Male	SMA Male	BM-SM
BNC Male	SMA Female	BM-SF
BNC Male	N Male	NM-BM
BNC Male	N Female	NF-BM
BNC Male	TNC Male	BM-TM
BNC Male	TNC Female	BM-TF
BNC Female	SMA Male	BF-SM
BNC Female	SMA Female	BF-SF
BNC Female	N Male	NM-BF
BNC Female	N Female	NF-BF
BNC Female	TNC Male	BF-TM
BNC Female	TNC Female	BF-TF

Quantity	Kit No. AK-874		Adapter P/N
	From	To	
2	GR874	BNC Female	874-BF
2	GR874	BNC Male	874-BM
1	GR874	C Female	874-CF
1	GR874	C Male	874-CM
1	GR874	HN Female	874-HNF
1	GR874	HN Male	874-HNM
3	GR874	N Female	874-NF
3	GR874	N Male	874-NM
1	GR874	SMA Female	874-SF
1	GR874	SMA Male	874-SM
1	GR874	TNC Female	874-TF
1	GR874	TNC Male	874-TM
2	GR874	UHF Female	874-UF
2	GR874	UHF Male	874-UM
1	GR874	Banana Jacks	874-2BPJ

Additional Items Included:

Quantity	Item	P/N
1	G874 Tee Adapter	874T
1	G874 Right angle Adapter	R874
1	G874 3ft. patch cord to Banana plugs	874-72-BP-36

AK-874 Notes:

All components housed in a rugged case.

All GR874 connectors are the non-locking type.

Banana Plugs: one connected to the center conductor; one connected to the braid through a 5" pigtail.

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Coaxial Adapters

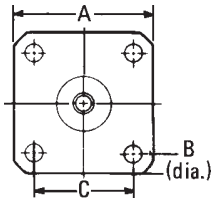
Standard & Precision — BNC, C, CPC (blind male), F, GR874, GR900, HN, MCX, N,

Features

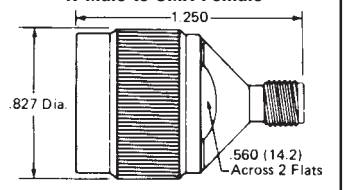
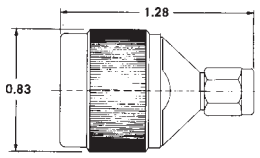
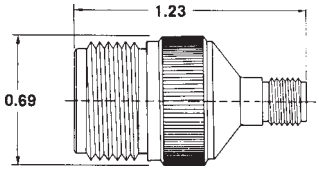
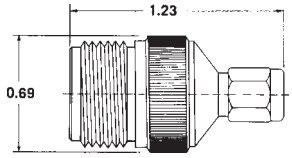
- Low VSWR
- Broadband coverage
- Simplified numbering
- Precision construction
- Smallest size for best performance
- Bulkhead and panel types
- Straight or right angle types
- Radius (bent) configurations
- Performance to 26 GHz and up
- Delivery from stock

Precision inter and intra series adapters, with performance to 26 GHz and beyond, appear on the following pages. Construction is in accordance with MIL-C-39012 and MIL-A-55339, where applicable. In most cases, material is stainless steel passivated or gold plated, remaining consistent with that normally specified in that connector series.

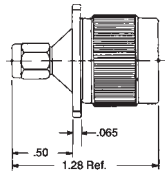
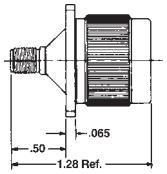
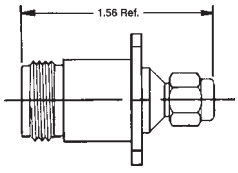
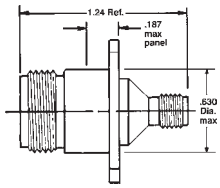
For lower frequency applications, see the MIDISCO standard series adapters in another section of this catalog. Additional adapters, not shown here, are usually from stock. Custom adapters are also available.



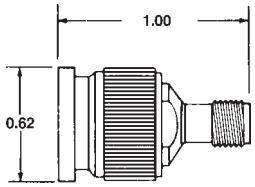
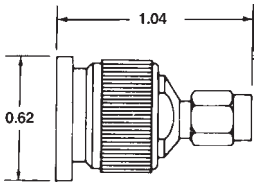
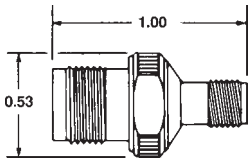
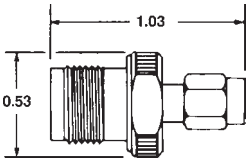
Frequency: DC-18GHz / VSWR: 1.25 GHz (max) / Material is Passivated Stainless Steel

N Male to SMA Female	N Male to SMA Male	N Female to SMA Female	N Female to SMA Male
			
XNM-SF	XNM-SM	XNF-SF	XNF-SM

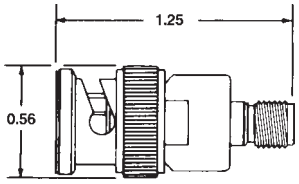
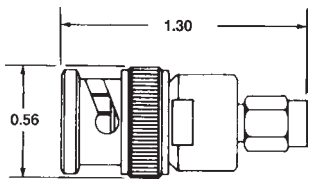
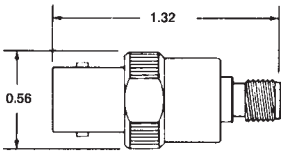
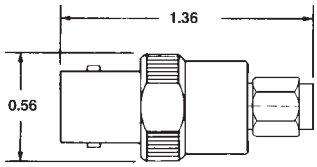
Frequency: DC-18GHz / VSWR: 1.25 GHz (max) / Material is Passivated Stainless Steel

Panel Mount N Male to SMA Male	Panel Mount N Male to SMA Female	Panel Mount N Female to SMA Male	Panel Mount N Female to SMA Female
 A=1.000 B=.125 C=.719	 A=1.000 B=.125 C=.719	 A=1.000 B=.125 C=.719	 A=1.000 B=.125 C=.719
XPNM-SM	XPNM-SF	XPNF-SM	XPNF-SF

Frequency: DC-15GHz / VSWR: 1.15 GHz (max) / Material is Passivated Stainless Steel

TNC Male to SMA Female	TNC Male to SMA Male	TNC Female to SMA Female	TNC Female to SMA Male
			
XTM-SF	XTM-SM	XTF-SF	XTF-SM

BNC is Brass with Bright Alloy Finish / SMA is Passivated Stainless Steel

BNC Male to SMA Female	BNC Male to SMA Male	BNC Female to SMA Female	BNC Female to SMA Male
			
XBM-SF	XBM-SM	XBF-SF	XBF-SM

Note: Dimensions are for reference and are subject to change.

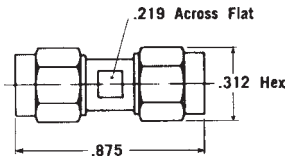
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SC, SMA, SMB, SMC, SSMA, SSMB, TNC, UHF, 2.4mm, 3.5mm, 7mm, 7/16 DIN

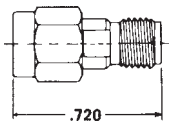
Frequency: DC-18GHz / VSWR: 1.15 GHz (max) / Material is Passivated Stainless Steel

SMA Male to SMA Male



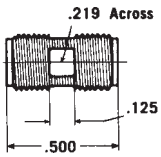
SM-SM-S

SMA Male to SM Female



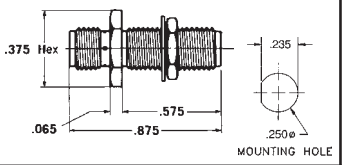
SM-SF-S

SMA Female to SMA Female



SF-SF-S

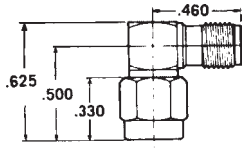
Bulkhead SMA Female to SMA Female



BSF-SF-S

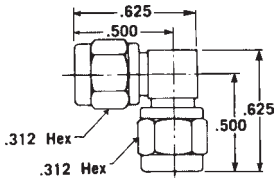
Frequency: DC-18GHz / VSWR: 1.20 GHz (max)
Material is Passivated Stainless Steel

Right Angle SMA Male to SMA Female



RSM-SF-S

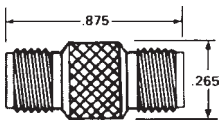
Right Angle SMA Male to SMA AMale



RSM-SM-S

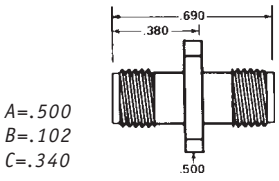
Frequency: DC-18GHz / VSWR: 1.15 GHz (max)
Material is Passivated Stainless Steel

SMA Female to SMA Female with Knurl



MDC3125S

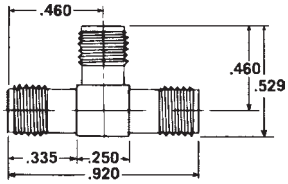
SMA Female Panel Adapter



MDC3145S / MDC3145S-2 (2 Hole)

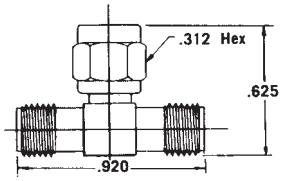
VSWR Typically 2:1 / Material is Passivated Stainless Steel

SMA Tee — Female-Female-Female



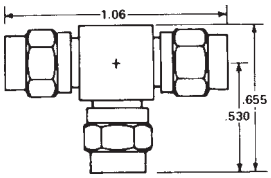
SF-SF-SF-S

SMA Tee — Female-Male-Female



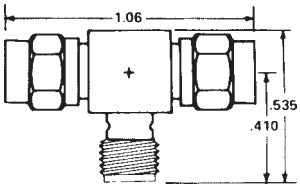
SF-SM-SF-S

SMA Tee — Male-Male-Male



SM-SM-SM-S

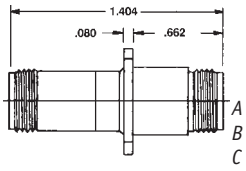
SMA Tee — Male-Female-Male



SM-SF-SM-S

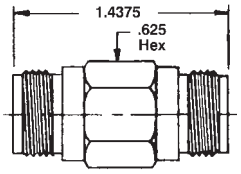
Frequency: DC-18GHz / VSWR: 1.15 max / Material is Passivated Stainless Steel

Panel Mount N Female to N Female



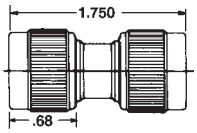
XPNF-NF

N Female to N Female



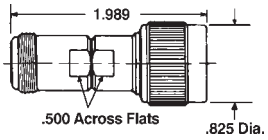
XNF-NF

N Male to N Male



XNM-NM

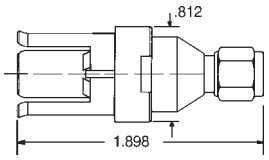
N Male to N Female



XNM-NF

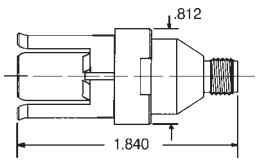
Material is Passivated Stainless Steel

GR874 to SMA Male †



874-SM

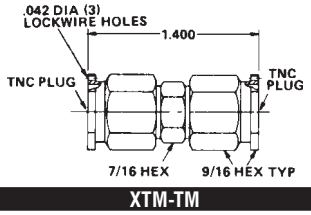
GR874-SMA Female †



874-SF

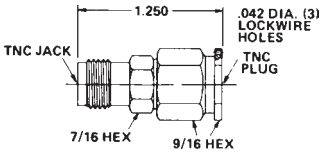
Freq: DC-18 GHz / VSWR: 1.25 max / Material is Passivated Stainless Steel

TNC Male to TNC Male



XTM-TM

TNC Male to TNC Female



XTM-TF-S

† *874 Adapters are available to BNC, C, HN, N, TNC, UHF, and other series.*
All dimensions are reference and are subject to slight changes.
See page 11 for A, B, & C flange dimensions.

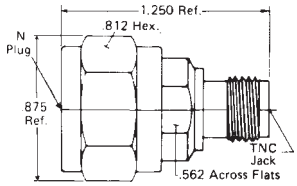
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Coaxial Adapters

Standard & Precision — BNC, C, CPC (blind male), F, GR874, GR900, HN, MCX, N,

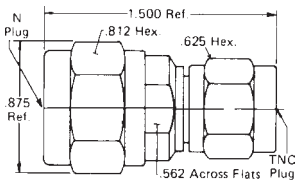
Material is Passivated Stainless Steel

N Male to TNC Female



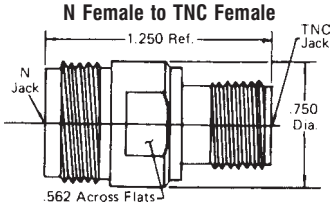
XNM-TF

N Male to TNC Male



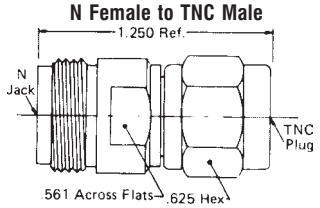
XNM-TM

N Female to TNC Female



XNF-TF

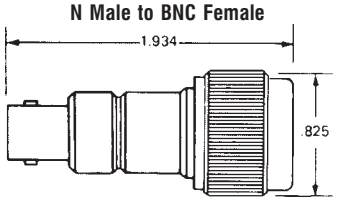
N Female to TNC Male



XNF-TM

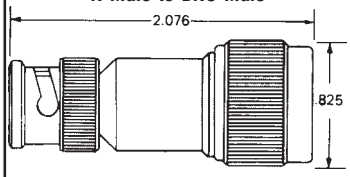
Type N: Passivated Stainless Steel / BNC: Nickel Plated Brass

N Male to BNC Female



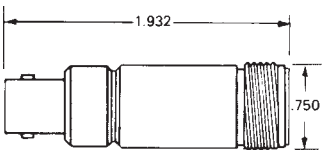
XNM-BF

N Male to BNC Male



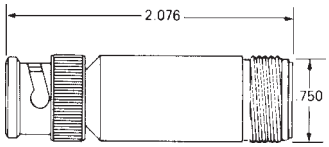
XNM-BM

N Female to BNC Female



XNF-BF

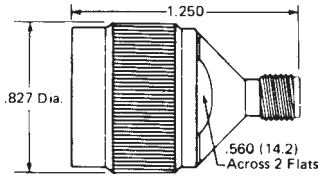
N Female to BNC Male



XNF-BM

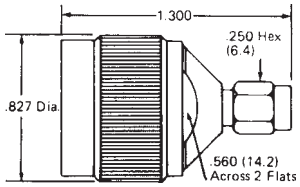
Frequency: DC-18GHz / VSWR: 1.30 max / Material is Passivated Stainless Steel

N Male to SSMA Female



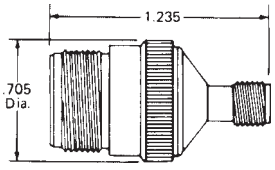
MDC7905

N Male to SSMA Female



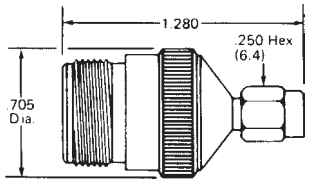
MDC7911

N Female to SSMA Male



MDC7906

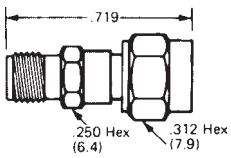
N Female to SSMA Female



MDC7912

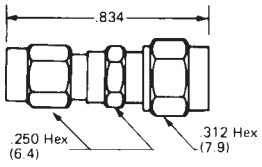
Frequency: DC-26GHz / VSWR: 1.30 (max) GHz / Material is Passivated or Gold Plated Stainless Steel

SMA Male to SSMA Female



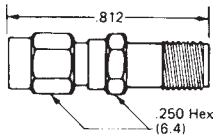
MDC3100

SMA Male to SSMA Male



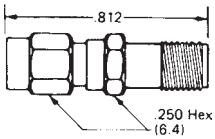
MDC3314

SMA Female to SSMA Female



MDC3313

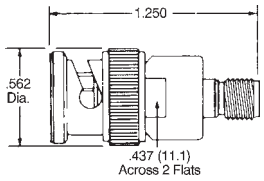
SMA Female to SSMA Male



MDC3312

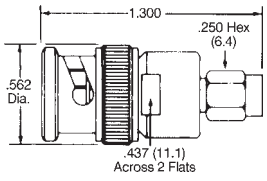
BNC: Nickel Plated Brass / SSMA: Passivated Stainless Steel

BNC Male to SSMA Female



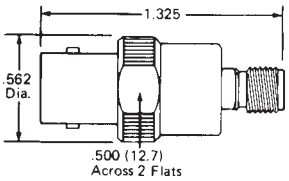
MDC7903

BNC Male to SSMA Male



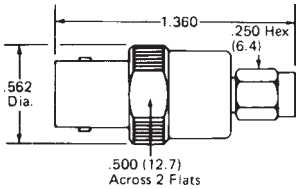
MDC7909

BNC Female to SSMA Female



MDC7904

BNC Female to SSMA Male



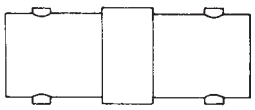
MDC7910

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SC, SMA, SMB, SMC, SSMA, SSMB, TNC, UHF, 2.4mm, 3.5mm, 7mm, 7/16 DIN

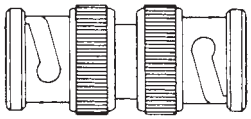
BNC 75 ohm Adapters

BNC Female to BNC Female



BF-BF-75

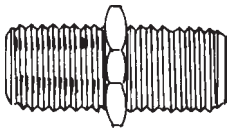
BNC Male to BNC Male



BM-BM-75

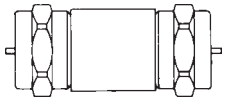
Type F Adapters

Type F Female to Type F Female



FF-FF

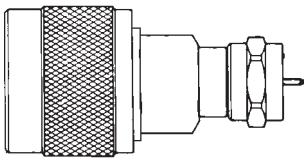
Type F Male to Type F Male



FM-FM

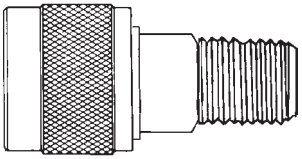
Type N to Type F Adapters

Type N Male to Type F Male



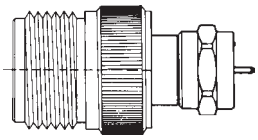
NM-FM

Type N Male to Type F Female



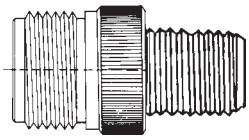
NM-FF

Type N Female to Type F Male



NF-FM

Type N Female to Type F Female



NF-FF

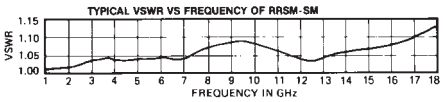
Radius Swept 90º Adapters & Connectors

N - TNC - SMA

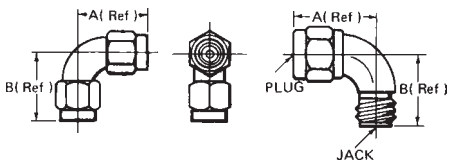
Features

- One piece center conductor
- Low VSWR to 18 GHz
- BeCu or Stainless construction
- SMA, N, or TNC
- Specials available
- Low susceptibility to vibration and shock
- Delivery from stock

MIDISCO swept adapters and connectors consist of a bent section that houses a one-piece center conductor. This design eliminates the vibration and shock failures that could occur if there were a solder joint. Superior VSWR to 18 GHz is inherent in the design.



Model	Adapter Ends		Dimensions - in. (mm) A	B
RRNM-NM-S	N Plug	N Plug	1.094 (27.8)	1.084 (27.5)
RRNM-NF-S	N Plug	N Jack	1.109 (28.2)	1.000 (25.4)
RRSM-SM-S	SMA Plug	SMA Plug	0.550 (14.0)	0.550 (14.0)
RRSM-SF-S	SMA Plug	SMA Jack	0.550 (14.0)	0.460 (11.7)
RRTM-TM-S	TNC Plug	TNC Plug	1.060 (26.9)	1.060 (26.9)
RRTM-TF-S	TNC Plug	TNC Jack	0.953 (24.2)	1.060 (26.9)



Model	Description	A	B	Fig.
MDC0451S	Extended contact with .590 insulator	1.017	0.590	1
MDC0452S	SMA female (jack) solder pot as per Fig. 2	0.488	0.090	1
MDC0453S	Extended contact & insulator	0.612	0.100	1
MDC0454S	Contact flush with insulator	0.522	0.210	1
MDC0455S	Multi-purpose	1.212	0.710	1
MDC0456S	Flush insulator, extended contact	0.747	0.000	1
MDC0457S	Flush insulator, extended contact	0.511	0.000	1

Model	Description	A	B	Fig.
MDC0458S	Plug with solder pot(.030D x.125deep)	0.488	0.090	2
MDC0459S	Plug with straight contact	0.687	0.100	2
MDC0460S	Plug for RG55, 142, 223 cable	0.960	0.780	3
MDC0461S	Plug for 0.141 (RG402) cable	0.812	0.625	3
MDC0462S	Plug for 0.085 (RG405) cable	0.712	0.525	3
MDC0463S	Plug, extended contact, 0.590 insulator per Fig.1	1.017	0.590	2

NOTE: To order gold plated units, do not include -S in part number.

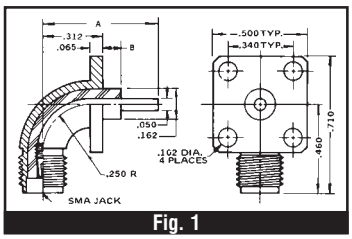


Fig. 1

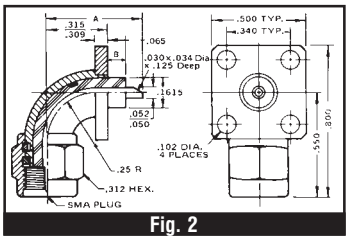


Fig. 2

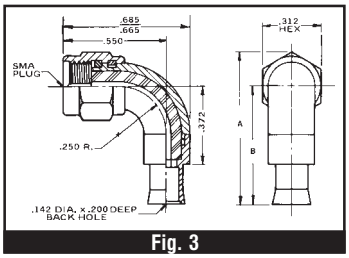


Fig. 3

MIDISCO

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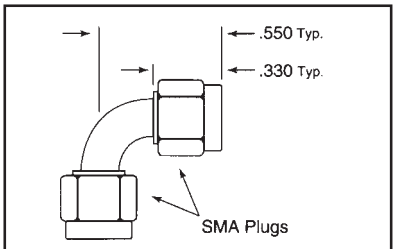
Woken Technology Inc. Tel:886-3-3979900 Fax:886-3-3979911

Swept Right Angle Adapter Assembly

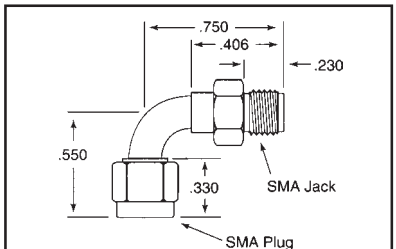
Features

- Economical and dependable alternative
- Low VSWR to 18 GHz as applicable
- Available with MIDISCO Snake or Ultra Flex Cable
- SMA, SMB, SMC, N & TNC
- Specials & mixed series avaliable
- Delivery from stock

MIDISCO Swept Right Angle Adapters Assemblies consist of either the MIDISCO Snake 0.141 dia. flexible semi-rigid cable, or MIDISCO Ultra-Flex, 0.141 dia. ultra-flexible coaxial cable combined with low profile connectors. This provides the user with an alternative to swept adapters and provide better electrical performance than standard types. MIDISCO swept adapter assemblies offer an economical and dependable alternative with typical VSWR of 1.17:1 to 18 GHz for SMA types. Additional types including bulkhead, panel (flange), and other series connectors are also available, usually from stock to 3 days.



RCSM-SM / RUSM-SM



RCSM-SF / RUSM-SF

Model	Adapter Ends		Coaxial Cable Type
RCSM-SM	SMA Plug	SMA Plug	MIDISCO Snake 0.141 dia. Flexible Semi-Rigid Cable
RCSF-SF	SMA Jack	SMA Jack	
RCSM-SF	SMA Plug	SMA Jack	
RCNM-NM	N Plug	N Plug	
RCNF-NF	N Jack	N Jack	
RCNM-NF	N Plug	N Jack	
RCTM-TM	TNC Plug	TNC Plug	
RCTF-TF	TNC Jack	TNC Jack	
RCTM-TF	TNC Plug	TNC Jack	
RUSM-SM	SMA Plug	SMA Plug	MIDISCO Ultra-Flex 0.141 dia. Ultra Flexible Coaxial Cable
RUSF-SF	SMA Jack	SMA Jack	
RUSM-SF	SMA Plug	SMA Jack	
RUNM-NM	N Plug	N Plug	
RUNF-NF	N Jack	N Jack	
RUNM-NF	N Plug	N Jack	
RUTM-TM	TNC Plug	TNC Plug	
RUTF-TF	TNC Jack	TNC Jack	
RUTM-TF	TNC Plug	TNC Jack	

For Bulkhead types, add "B" to basic part number. Example: RCSM-BSF
For Panel Mount types, add "P" to basic part number. Example: RCSM-PSF

Coaxial to Waveguide Adapters

1.12 - 26.5 GHz

Features

- VSWR typ. < 1.3
- Insertion loss typ. < 0.15
- SMA, N, or 7mm connectors
- Connectors per MIL-C-39012
- Aluminum, Brass, Copper material
- Standard finish: golden chromate with black paint
- Fast Delivery

Ordering Information

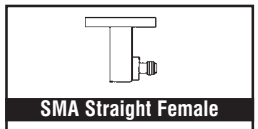
Please specify connector, material, and flange type.

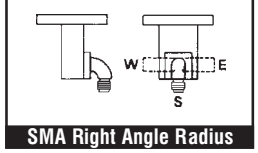
Code †	Connector Type		Material		Flange
N	Type N female	A	Aluminum	1	Cover
SM	SMA female	B	Brass	2	Choke
RRSM	Radius right angle SMA female	C	Copper	3	CPRF
7	7mm	X	Special	4	CPRG
SMM	SMA male			6	CMR
				5	Special

X (Connector type), M (Material), & F (Flange) to be selected by customer.
Example: SM-900-A-1 is a WR90 to SMA Female aluminum adapter with a cover flange.

MIDISCO Coaxial to Waveguide Adapters are available as standard items in fourteen common waveguide sizes and with a choice of five connector styles. Standard material is aluminum and finish is golden chromate with black paint.

Freq (GHz)	Waveguide Size	Model Number †	VSWR (typ.)	Insertion Loss (dB typ.)
1.12-1.70	WR650	*x-650-m-f*	1.3	.15
1.70-2.60	WR430	*x-430-m-f*	1.3	.15
2.20-3.25	WR340	*x-340-m-f*	1.3	.15
2.60-3.95	WR284	*x-284-m-f*	1.3	.15
3.30-4.90	WR229	*x-229-m-f*	1.3	.15
3.95-5.85	WR187	*x-187-m-f*	1.3	.15
4.90-7.05	WR159	*x-159-m-f*	1.3	.15
5.85-8.20	WR137	*x-137-m-f*	1.3	.15
7.00-11.00	WR112	*x-112-m-f*	1.3	.15
7.05-10.00	WR102	*x-102-m-f*	1.3	.15
8.20-12.40	WR90	*x-900-m-f*	1.3	.15
10.00-15.00	WR75	*x-750-m-f*	1.4	.20
12.40-18.00	WR62	*x-620-m-f*	1.4	.20
18.00-26.50	WR42	*x-420-m-f*	1.5	.25


SMA Straight Female



SMA Right Angle Radius

Notes:

Right angle connector will be supplied in position "S" unless orientation is specified.
When inquiring, specify restricted frequency ranges whenever possible for better performance or lower cost.

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7mm Coaxial Adapters

Electrical (for mated pair 7mm connectors)	
Impedence	50 ohms
Frequency Range	0-18 GHz
VSWR	1.003 + 0.02f (GHz)
Insertion Loss	dB = 1 × f for adapter version 0.8 × f for connector version f is frequency in GHz
RF Leakage	< signal inside coaxial line by ratio > 120 dB †
Electrical Length	.693 inches (1.76 cm)
Contact Resistance	Inner: < 1.0 milliohm Outer: < 0.1 milliohm
Voltage Rating	1000 Vrms
Dielectric Withstanding Voltage (max)	2500 Vrms
Max Power (watts at sea level)	Above 1 MHz = 10 kW / $\sqrt{f}$ (MHz) Up to 1 MHz = 10 kW

† RF Leakage: Until satisfactory test methods are developed the maximum frequency of measurement is limited to 6.0 GHz.

Mechanical	
Mating	Sexless, coplanar by means of threaded ring housed within coupling nut
Life	> 5000 connect - disconnect operations

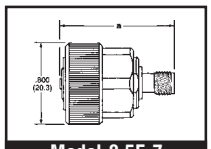
Environmental	
Thermal Limits	Storage: -67° to +158°F (-55° to 70°C) Operating: -55° to +91°F (13° to 33°C)
Humidity	20 to 80% RH
Pressure	590 to 780 mm Hg

Material	
Coupling Mechanism	Stainless Steel
Body	Gold Plated Beryllium Copper
Center Contact	Gold Plated Beryllium Copper
Dielectric Support	Air-polyphenlyene oxide composite
Clamping Components	Nickel Plated Brass
Crimp Ferrule	Nickel Plated Copper
Airline Inner and Outer Connectors	Gold Plated Tellurium Copper

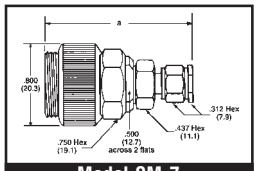
* These characteristics are typical and may not apply to all connectors

MIDISCO 7mm precision adapters have low VSWR over wide frequencies. Adapters are available from 7mm to N, TNC, BNC, SMA, SSMA, 3.5mm and 2.4mm. Specifications are shown for the adapter and for a mated pair of 7mm connectors alone. The connectors as well as the adapters are available from stock.

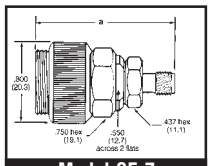
Adapter Ends	Dimensions, in. (mm) A	Maximum VSWR to 18 GHz	MIDISCO Number
7mm - 2.4mm Plug	1.420 (36.1)	1.01 +0.004f (GHz)	2.4M-7
7mm - 2.4mm Jack	1.420 (36.1)	1.01 +0.004f (GHz)	2.4F-7
7mm - SSMA Plug	1.300 (33.0)	1.01 +0.005f (GHz)	SSM-7
7mm - SSMA Jack	1.380 (35.0)	1.01 +0.005f (GHz)	SSF-7
7mm - N Jack	1.672 (42.5)	1.01 +0.002f (GHz)	NF-7
7mm - N Plug	1.813 (46.0)	1.01 +0.002f (GHz)	NM-7
7mm - TNC Jack	1.609 (40.9)	1.01 +0.006f (GHz)	TF-7
7mm - TNC Plug	1.750 (44.5)	1.01 +0.006f (GHz)	TM-7
7mm - BNC Jack	1.609 (40.9)	1.035 @4GHz	BF-7
7mm - BNC Plug	1.719 (43.7)	1.035 @4GHz	BM-7
7mm - 3.5mm Plug	1.567 (39.8)	1.02 +0.0025f (GHz)	3.5M-7
7mm - 3.5mm Jack	1.483 (37.7)	1.02 +0.0025f (GHz)	3.5F-7
7mm - SMA Jack	1.31 (33.3)	1.02 +0.0025f (GHz)	SF-7
7mm - SMA Plug	1.39 (35.3)	1.02 +0.0025f (GHz)	SM-7



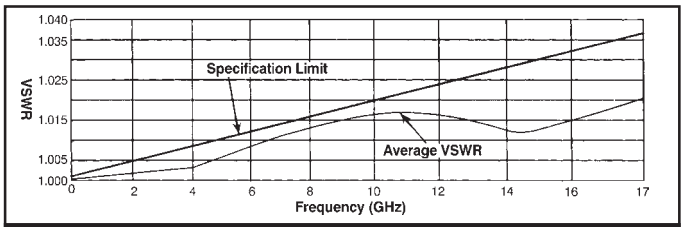
Model 3.5F-7
7mm to 3.5mm Jack



Model SM-7
7mm & SMA Plug



Model SF-7
7mm to SMA Jack



Connector pairs are tested and certified to have a VSWR less than the limit shown by the following curve.

7mm Accessories

Airlines - Attenuators - Terminations - Connectors

Features

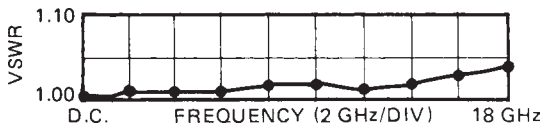
- Precision 7mm (APC-7) connectors
- Frequency DC to 18 GHz
- VSWR is 1.006 + 0.002f(GHz)
- Impedance is 50 ohms ±0.1
- Rugged precise construction

MIDISCO 7mm Airline 50 ohm laboratory reference standards are primarily used with Time Domain Reflectometers. They can accurately establish knowledgeable wavelengths when Smith Chart plotting very precise measurements. Construction as per the requirements of the APC-7 connector (see above) plus stainless steel tubing.

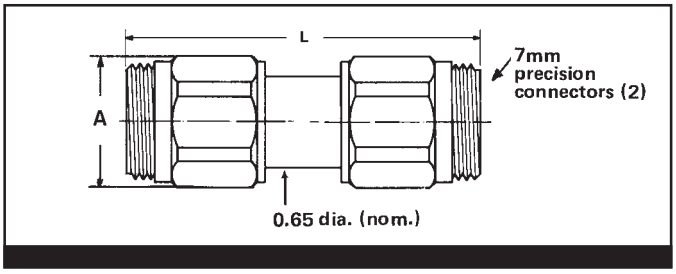
Fluted or hex knurled coupling nuts are standard.

Other accessories, shown elsewhere in this catalog, include 7mm adapters, attenuators, and terminations.

Model	Description	Length "L"	Electrical Length
MDC1014-5	Airline Assembly	2.600 (66.04)	2.689 (68.30)
MDC1014-2	Airline Assembly	3.406 (86.51)	3.248 (82.49)
MDC1014-6	Airline Assembly	3.600 (91.44)	3.685 (93.60)
MDC1014-0	Airline Assembly	4.344 (110.34)	4.185 (106.30)
MDC1014-1	Airline Assembly	6.030 (153.16)	5.870 (149.09)
MDC1014-3	Set of all five above		
131-1051	APC-7 Connector	0.922 (23.4)	0.693 (17.6)



f denotes frequency in GHz*



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874 Adapters

High Performance

Features

- 50 ohms impedance
- hermaphrodite, can connect with other 874
- Available in many different configurations
- Locking and non-locking versions
- Delivery from stock

MIDISCO 874 connectors have excellent electrical performance, and any two can be mated. This connector is available in both the non locking and the high performance locking versions. The 874 connectors offer SWR performance superior to any cable with which they can be used and therefore add no significant reflections when used in cabled measurement set-ups.

874-BF	874 to BNC Female Jack Adapter
874-BF-75	75 Ohm 874 to BNC Female Jack Adapter
874-BM	874 to BNC Male Plug Adapter
874-CF	874 to C Female Plug Adapter
874-CM	874 to C Male Adapter
874-CRMDJ	874 to Microdot Female Jack
874-CRMDP	874 to Microdot Male Plug
874-HNF	874 to HN Female Jack Adapter
874-HNM	874 to HN Male Plug Adapter
874-NF	874 to N Female Jack Adapter
874-NM	874 to N Male Plug Adapter
874-QMDJ	874 to Microdot Female Jack
874-QMDP	874 to Microdot Male Plug
874-SCM	874 to SC Male Plug Adapter
874-SF	874 to SMA Female Jack Adapter
874-SM	874 to SMA Male Plug Adapter
874-TF	874 to TNC Female Jack Adapter
874-TM	874 to TNC Male Plug Adapter
874-UF	874 to UHF Female Jack Adapter
874-UM	874 to UHF Male Plug Adapter
874-2BPJ	874 to Banana Female Jacks
874L-BF	Locking 874 to BNC Female Jack Adapter
874L-BM	Locking 874 to BNC Male Plug Adapter
874L-NM	Locking 874 to N Male Plug Adapter
874L-SF	Locking 874 to SMA Female Jack Adapter
874L-TF	Locking 874 to TNC Female Jack Adapter
874T	874 Tee Adapter
874TL	Locking 874 T Adapter
R874	874 Right Angle Adapter
874-72-BP-36	874 3 foot patch cord to Banana Plugs



Kit number AK-874

*A selection of 874 products are packaged in a rugged travel case. The 874 connectors are non-locking type.

Qty	Desc.	Part #
2	874 to BNC Female Jack Adapter	874-BF
2	874 to BNC Male Plug Adapter	874-BM
1	874 to C Female Plug Adapter	874-CF
1	874 to C Male Adapter	874-CM
1	874 to HN Female Jack Adapter	874-HNF
1	874 to HN Male Plug Adapter	874-HNM
3	874 to N Female Jack Adapter	874-NF
3	874 to N Male Plug Adapter	874-NM
1	874 to SMA Female Jack Adapter	874-SF
1	874 to SMA Male Plug Adapter	874-SM
1	874 to TNC Female Jack Adapter	874-TF
1	874 to TNC Male Plug Adapter	874-TM
2	874 to UHF Female Jack Adapter	874-UF
2	874 to UHF Male Plug Adapter	874-UM
1	874 to Banana Female Jacks	874-2BPJ
1	874 Tee Adapter	874-T
1	874 Right Angle Adapter	R874
1	874 3 ft patch cord to Ban. Plugs	874-72-BP-36

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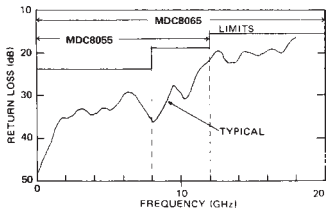
Coaxial Attenuators

SMA

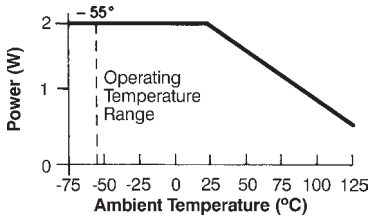
Features

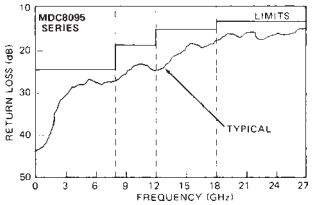
- Meets or exceeds all applicable MIL Specs
- 50 Ohms impedence
- Rugged -55° to +125° operating temperature
- All attenuation values available
- Calibration chart at nominal cost
- Phase track ±5° typical between units
- Smallest models made
- Low VSWR
- Extremely flat over frequency
- Delivery from stock

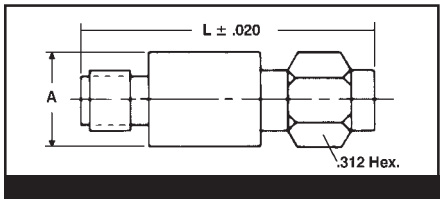
MIDISCO SMA attenuators are ruggedly constructed to all military specifications where applicable; including MIL-A-3933 and MIL-C-39012. A sufficient selection is included here for various frequency applications. Each performs well within the specified limit from -65°C to +125°C. The MDC7065 series will handle higher input power for some attenuation values. All models will handle 2 watts at +25°C derated to 0.5 watts at +125°C. Higher power models and other attenuation values are available. Upper frequency models use a thin-film laser trimmed attenuation element on a ceramic substrate. MDC1012, 1055 and 1065 have square bodies that technicians desire for the laboratory; all others are round. Calibration data is available at extra cost. Double male or female specified by the suffix "M" or "F". All models shown below are in stock. Additional frequency ranges are available.



Typical Temperature vs. Power Derating Chart







Freq Range (GHz)	DC-2.5	DC-4.0	DC-8.0	DC-12.4		DC-18.0			DC-26.5
Model	*MDC1012-dB	MDC8040-dB	MDC8030-dB	*MDC1055-dB	MDC8055-dB	*MDC1065-dB	MDC8065-dB	MDC7065-dB	MDC8095-dB
ATTENUATION AND MAXIMUM DEVIATION OVER THE ENTIRE FREQUENCY RANGE IN dB (Deviation is much tighter over narrower frequency segments - contact MIDISCO for data)	0-0.30	0-0.30	0-0.30	0-0.30	0-0.30	0-0.40	0-0.30	0-0.40	0-0.30
	1±0.30	1±0.30	1±0.30	1±0.30	1±0.30	1±0.30	1±0.30	1±0.65	1±0.50
	2±0.30	2±0.30	2±0.30	2±0.30	2±0.30	2±0.30	2±0.30	2±0.65	2±0.50
	3±0.30	3±0.30	3±0.30	3±0.30	3±0.30	3±0.30	3±0.30	3±0.70	3±0.50
	4±0.30	4±0.30	4±0.30	4±0.30	4±0.30	4±0.30	4±0.30	4±0.70	4±0.50
	5±0.30	5±0.30	5±0.30	5±0.30	5±0.30	5±0.30	5±0.30	5±0.80	5±0.60
	6±0.35	6±0.30	6±0.30	6±0.30	6±0.30	6±0.35	6±0.30	6±0.80	6±0.60
	7±0.35	7±0.30	7±0.30	7±0.35	7±0.30	7±0.35	7±0.40	7±0.80	7±0.60
	8±0.40	8±0.30	8±0.30	8±0.40	8±0.30	8±0.40	8±0.40	8±0.80	8±0.70
	9±0.45	9±0.30	9±0.30	9±0.45	9±0.30	9±0.45	9±0.40	9±0.90	9±0.70
	10±0.50	10±0.40	10±0.40	10±0.50	10±0.40	10±0.50	10±0.40	10±0.90	10±0.70
	11±0.50	11±0.50	11±0.50	11±0.50	11±0.50	11±0.50	11±0.50	11±0.90	11±0.75
	12±0.60	12±0.50	12±0.50	12±0.50	12±0.50	12±0.60	12±0.50	12±0.90	12±0.75
	13±0.60	13±0.50	13±0.50	13±0.50	13±0.50	13±0.60	13±0.50	13±1.00	13±0.75
	14±0.70	14±0.50	14±0.50	14±0.50	14±0.50	14±0.70	14±0.50	14±1.00	14±0.75
	15±0.70	15±0.50	15±0.50	15±0.50	15±0.50	15±0.70	15±0.50	15±1.00	15±0.75
	16±0.80	16±0.50	16±0.50	16±0.75	16±0.50	16±0.80	16±0.50	16±1.00	16±0.75
	17±0.80	17±0.50	17±0.50	17±0.75	17±0.50	17±0.80	17±0.50	17±1.00	17±0.75
	18±0.90	18±0.50	18±0.50	18±0.75	18±0.50	18±0.90	18±0.50	18±1.00	18±0.75
	19±0.90	19±0.50	19±0.50	19±0.75	19±0.50	19±0.90	19±0.50	19±1.00	19±0.75
	20±1.00	20±0.50	20±0.50	20±0.75	20±0.50	20±1.00	20±0.50	20±1.00	20±0.75
	30±1.50	30±0.60	30±0.60	30±1.25	30±0.60	30±1.25	30±0.60	30±1.20	30±1.00
	40±1.75	40±0.75	40±0.75	40±1.50	40±1.00	40±1.50	40±1.00	40±1.75	40±1.50
Length "L" (in.)	1.45 max (0-20dB) 2.15 max (30-40dB)	(0-12dB) 0.86 (13-40dB) 1.02	(0-12dB) 0.86 (13-40dB) 1.02	1.25 max all models	(0-12dB) 0.86 (13-40dB) 1.02	1.25 max all models	(0-12dB) 0.86 (13-40dB) 1.02	(0-19dB) 0.75 (20dB) 0.87 (30-40dB) 1.02	(0-12dB) 0.86 (13-40dB) 1.02
"A" (nom.)	*0.375 sq.	0.30 dia.	0.30 dia.	*0.375 sq.	0.30 dia.	*0.375 sq.	0.30 dia.	0.35 dia. max	0.30 dia.
Weight (oz.)	0.25	0.15	0.15	0.25	0.15	0.25	0.15	0.18	0.15
VSWR (max.) @f (GHz)	DC-1.0 (1.20) 1.0-2.5 (1.30)	DC-4.0 (1.15)	DC-4.0 (1.15) 4.0-8.0 (1.25)	DC-4.0 (1.15) 4.0-10.0 (1.30) 10.0-12.4 (1.35)	DC-8.0 (1.15) 8.0-12.4 (1.25)	DC-4.0 (1.15) 4.0-8.0 (1.30) 8.0-12.4 (1.35) 12.4-18.0 (1.40)	DC-8.0 (1.20) 8.0-12.4 (1.25) 12.4-18.0 (1.35)	DC-8.0 (1.20) 8.0-12.4 (1.25) 12.4-18.0 (1.35)	DC-8.0 (1.15) 8.0-12.4 (1.25) 12.4-18.0 (1.35) 18.0-26.5 (1.50)
Power	2 Watts average and 500 watts peak - maximum rated average power at 25°C ambient temperature that derates linearly to 1.25 watts at +75 and 0.5 watt at +125°.							2w Avg.(min) 200w peak	See MDC8065

* MDC1012R, MDC1055R and MDC1065R are available with 0.30 diameter round body indicated by suffix "R".

• ***NOTE:*** All SMA attenuators are Stainless Steel.

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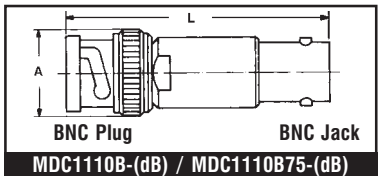
Coaxial Attenuators

Type BNC - N - TNC - 7 mm

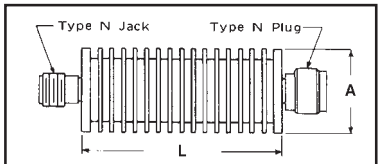
Features

- 50 or 75 Ohm Impedance
- Up to 20W average power (higher available)
- Rugged brass or stainless construction
- Operating temperature -55°C to +125°C
- All attenuation values available
- Calibration chart at nominal cost
- Low VSWR and attenuation variation
- Good phase tracking
- Meets or exceeds all applicable MIL Specs
- Delivery from stock

MIDISCO attenuators are designed to exceed MIL-A-3933 and MIL-C-39012 where applicable. The high quality models shown here provide the user with a sufficient selection of attenuation values and frequency coverage to properly select for the application. Other attenuation values, different connector types such as SMS, SMC, SSMA and higher power models are available. Calibration charts may be purchased at nominal cost. Double male or female connector combinations are specified by the suff ix "M" or "F". All models shown below are in stock. Additional frequency ranges are available.

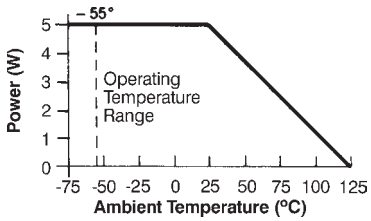


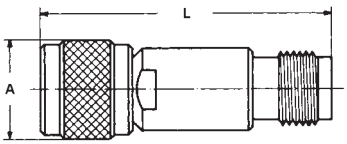
MDC1110B-(dB) / MDC1110B75-(dB)



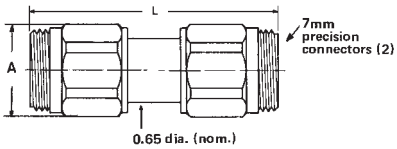
MDC1102-(dB) / MDC1102A-(dB)

Typical Temperature vs. Power Derating Chart for MDC5078S and MDC5079S Series





MDC1110N-(dB) MDC5078S-(dB)
MDC1110T-(dB) MDC5079S-(dB)
MDC1088S-(dB)



MDC1106-(dB)

Freq Range (GHz)	DC-500 MHz	DC-2.0			DC-4.0	DC-12.4			DC-18.0	
Connector Type	BNC	BNC	N	TNC	N	[1] TNC	N		N	7 mm
Model	MDC1110B75-(dB)	MDC1110B-(dB)	MDC1110N-(dB)	MDC1110T-(dB)	MDC1102A-(dB)	MDC1088S-(dB)	MDC5079S-(dB)	MDC1102-(dB)	MDC5087S-(dB)	MDC1106-(dB)
ATTENUATION AND MAXIMUM DEVIATION OVER THE ENTIRE FREQUENCY RANGE IN dB (Deviation is much tighter over narrower frequency segments - contact MIDISCO for data)	1±0.4	1±0.3	1±0.3	1±0.3		1±0.3	1±0.3		1±0.4	1±0.3
	2±0.4	2±0.3	2±0.3	2±0.3		2±0.3	2±0.3		2±0.4	2±0.3
	3±0.4	3±0.3	3±0.3	3±0.3	3±0.75	3±0.3	3±70.3	3±0.75	3±0.3	3±0.3
	4±0.4	4±0.4	4±0.4	4±0.4		4±0.3	4±0.3		4±0.3	4±0.3
	5±0.4	5±0.4	5±0.4	5±0.4		5±0.3	5±0.3		5±0.3	5±0.3
	6±0.4	6±0.4	6±0.4	6±0.4	6±0.75	6±0.3	6±0.3	6±0.75	6±0.3	6±0.3
	7±0.4	7±0.4	7±0.4	7±0.4		7±0.3	7±0.3		7±0.3	7±0.5
	8±0.4	8±0.4	8±0.4	8±0.4		8±0.4	8±0.3		8±0.3	8±0.5
	9±0.4	9±0.4	9±0.4	9±0.4		9±0.4	9±0.3		9±0.3	9±0.5
	10±0.4	10±0.4	10±0.4	10±0.4	10±0.75	10±0.5	10±0.5	10±0.75	10±0.5	10±0.5
	11±0.4	11±0.5	11±0.5	11±0.5		11±0.5	11±0.5		11±0.5	11±0.5
	12±0.4	12±0.5	12±0.5	12±0.5		12±0.6	12±0.5		12±0.5	12±0.5
	13±0.4	13±0.5	13±0.5	13±0.5		13±0.6	13±0.5		13±0.5	13±0.5
	14±0.4	14±0.5	14±0.5	14±0.5		14±0.6	14±0.5		14±0.5	14±0.5
	15±0.4	15±1.0	15±1.0	15±1.0		15±0.6	15±0.75		15±0.5	15±0.5
	16±0.4	16±1.0	16±1.0	16±1.0		16±0.7	16±0.75		16±0.5	16±0.5
	17±0.4	17±1.0	17±1.0	17±1.0		17±0.7	17±0.75		17±0.5	17±0.5
	18±0.4	18±1.0	18±1.0	18±1.0		18±0.8	18±0.75		18±0.5	18±0.5
	19±0.4	19±1.0	19±1.0	19±1.0		19±0.9	19±0.75		19±0.5	19±0.5
	20±0.4	20±1.0	20±1.0	20±1.0	20±0.75	20±1.0	20±0.75	20±0.75	20±0.5	20±0.5
	30±0.4	30±1.5	30±1.5	30±1.5	30±1.00	30±1.5	30±0.75	30±1.00	30±1.00	30±1.0
	40±0.4	40±1.5	40±1.5	40±1.5		40±2.0	40±0 75		40±1.00	40±1.0
		50±2.0	50±2.0	50±2.0		50±2.0	50±0.75		50±1.25	50±1.5
		60±2.5	60±2.5	60±2.5		60±2.5	60±1:20		60±1.50	60±1.5
Length "L" (in.)	1.40	1.40	2.50	2.30	3.20	1.80	2.28	3.20	2.28	2.20 (thru 20dB)
"A"(nom.)	0.58 dia.	0.58 dia.	0.82 dia.	0.63 dia.	1.50 dia.	0.63 dia.	0.83 dia.	1.50 dia.	0.83 dia.	0.87 dia.
Material & Finish		Brass - Nickel or Silver plated			Stainless Steel & Black Anodize	Brass - Nickel plated	Stainless Steel	Stainless Steel & Black Anodize	Stainless Steel	
Weight (oz.)	1.40	1.40	2.8	1.40	6.0	1.8	2.6	6.0	2.6	5.0
Impedence (ohms)	75	50	50	50	50	50	50	50	50	50
VSWR (max.) @f (GHz)	DC-0.5 (1.30)	DC-2.0 (1.25)			DC-4.0 (1.20)	DC-4.0 (1.15) 4.0-8.0 (1.25) 8.0-12.4 (1.28)	DC-4.0 (1.15) 4.0-8.0 (1.20) 8.0-12.4 (1308)	DC-4.0 (1.20) 4.0-8.0 (1.25) 8.0-12.4 (1.35)	DC-4.0 (1.15) 4.0-8.0 (1.20) 8.0-12.4 (1.25) 12.4-18.0 (1.40)	DC-18.0 1.07+0.015f (GHz)
Power	1 Watt Average 1 kW Peak	2 Watts Average; 200 W Peak			20 watts Avg. 1 kW peak @+25°C	2 watts Avg. 500 W peak @+25°C	5 watts Avg. 500 W peak @+25°C	20 watts Avg. 1 kW peak @+25°C	5 watts Avg. 500 W peak @+25°C	2 watts Avg. 100 W peak @+40°C
Oper. Temp. Range	-55° to +125°C									

* *Higher values may be slightly longer.*
Available in Stainless Steel version up to 18 GHz (MDC1088SX, etc.) consult MIDISCO.
Note: BNC attenuators - DC-4.0 GHz also available; Model MDC1051-(dB)

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Rotary Attenuators

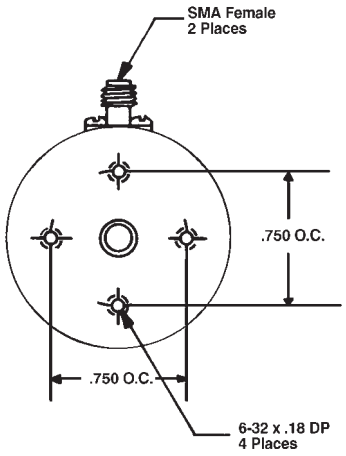
50 & 75 Ohm

Features

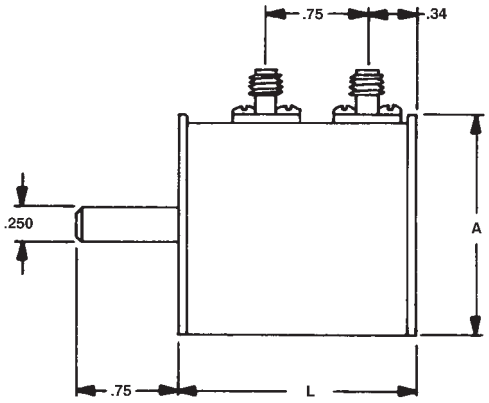
- Rugged Construction
- SMA, BNC, N, or F connectors
- Excellent electrical performance
- Dual Concentric Types Available
- Low Cost
- Delivery From Stock

MIDISCO Rotary Step Attenuators are available in sufficient variety to satisfy most requirements. Rugged construction (MDC2017S-117 has a life design of 100,000 cycles minimum) is apparent in all models. Other connector types may be ordered as well as dual concentric types in 50 and 75 ohms. Delivery is from stock.

Model	Frequency Range (MHz)	Impedence Nom (ohms)	Attenuation Range	VSWR / Insertion Loss Max vs. Frequency		Attenuation Accuracy (± dB Max)			Power Avg (W)	L (in.)	A (in.)
MDC2017S-49 [1]	DC-1000	50	0 to 1dB [4] 0.1dB steps	DC-1000 1.2/0.7dB	1000-2000 N/A	DC-30 0.01	30-500 0.03	500-1000 0.05	2	2.00	1.50
MDC2017S-264 [1]	DC-2000	50	0 to 1dB [4] 0.1dB steps	1.2/0.7dB	1.3/1.0dB	0.01	0.03	0.05	2	2.00	1.50
MDC2017S-40 [1]	DC-2000	50	0 to 10dB [4] 1dB steps	1.2/0.2dB	1.4/0.4dB	DC-1000 0.2	1000-2000 0.4		1	2.00	1.50
MDC2017S-50 [1,7]	DC-2000	50	0 to 70dB [4] 10dB steps	1.2/0.3dB	1.4/0.5dB	DC-500 0.5 or 1%	500-1000 0.5 or 2%	1000-2000 0.5 or 3% [3]	1	2.70	1.50
MDC2017S-64 [1]	DC-1000	50	0 to 100dB [4] 10dB steps	1.2/0.3dB	N/A	DC-500 0.5 or 1%	500-1000 0.5 or 2% [3]		1	2.70	1.50
MDC2017S-104 [6]	DC-2000	50	0 to 10dB [4] 1dB steps	1.2/0.2dB	1.4/0.4dB	DC-1000 0.2	1000-2000 0.4		1	1.83	1.28
MDC2017S-105 [8]	DC-2000	50	0 to 60dB [4] 10dB steps	1.2/0.3dB	1.4/0.5dB	DC-500 0.5 or 1%	500-1000 0.5 or 2%	1000-2000 0.5 or 3% [3]	1	2.40	1.28
MDC2017S-117 [8,9]	DC-1200	50	0 to 100dB [5] 10dB steps	1.3/0.2dB	DC-1200	DC-1200 1.5%			1	2.30	1.28
MDC2017S-184 [8]	DC-4000	50	0 to 10dB [4] 1dB steps	DC-2000 1.3/0.25dB	2000-4000 1.5/0.4dB	DC-1000 0.2	1000-2000 0.3	2000-4000 0.4	0.3	1.75	1.63
MDC2717B-27 [2]	DC-500	75	0 to 1dB [5] 0.1dB steps	1.3/0.7dB	(DC-500)	DC-30 0.01	30-300 0.02	300-500 0.03	1	2.40	1.87
MDC2717B-23 [2]	DC-500	75	0 to 10dB [5] 1dB steps	1.3/0.4dB	(DC-500)	DC-30 0.2	30-300 0.2	300-500 0.3	1	2.40	1.87
MDC2717B-22 [2]	DC-500	75	0 to 70dB [5] 10dB steps	1.3/0.4dB	(DC-500)	DC-30 0.2	30-300 0.5	300-500 1.0	1	3.00	1.87







NOTES:

[1] SMA Female connectors are standard. Change S to B for BNC.
[2] BNC Female connectors are standard. Change B to F for Type F.
[3] Whichever is greater of the two is applicable.
[4] The attenuation increases with clockwise rotation.
[5] The attenuation increases with counterclockwise rotation.
[6] MDC2017S-104 available with same specifications; L= 1.83"; 0.77" between centerline of connectors; SMA only.
[7] MDC2017S-105 available (0-60dB only) with same specifications; L= 2.40"; 1.36" between centerline of connectors; SMA only.
[8] Available in SMA only; 0.75" between centerline of connectors.
[9] Shaft length of MDC2017S-117 is 0.62".
All Models have a Peak Power Rating of 1 KW, except MDC2017S-184 which is 800 W.
Indexing is 30 degrees, stopping at maximum & minimum.
Operating Temperature Range is -20°C to +85°C.

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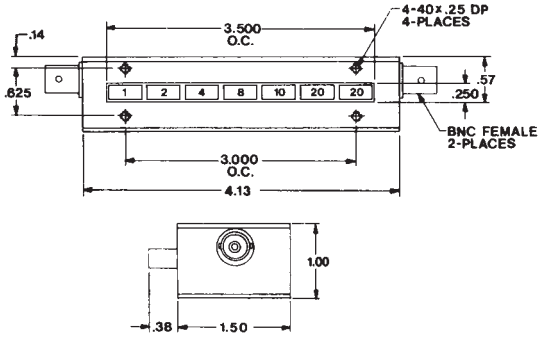
Pushbutton Attenuators

50 & 75 Ohm

Features

- Wide Attenuation Range
- Close Attenuation Accuracy
- 75 or 50 Ohm
- Rugged Construction
- -20°C to + 85°C Operating Temperature
- Delivery from stock

MIDISCO Pushbutton Attenuators are available In four models; two that are 50 Ohm, DC-750 MHz and two types of 75 Ohm, DC-500 MHz. By selecting the proper combination of pushbuttons, the user can have 0.5 or 1 dB steps through 45.5 dB or 65 dB. All models can handle 1 Watt average power, are well constructed, moderately priced and in stock.



Model	Frequency Range (MHz)	Impedance Nom (ohms)	Attenuation Range	Attenuation Steps (dB)	VSWR (max) vs. Frequency			Insertion Loss (max)	Attenuation Accuracy (± dB max)				Power Avg (W)
					DC-100	100-500	500-750		DC-100	100-300	300-500	500-750	
MDC2018B-22	DC-750	50	0 to 65dB 1dB steps	1, 2, 4, 8, 10, 20 & 20	1.1	1.25	1.4	1dB @ 500Mhz	0.3	0.5	0.8	1.3	1
MDC2018B-23	DC-750	50	0 to 45.5dB 0.5dB steps	0.5, 1, 2, 4, 8, 10 & 20	1.1	1.25	1.4	1dB @ 500Mhz	0.2	0.3	0.5	0.75	1
					DC-100	100-300	300-500						
MDC2718B-22 [1]	DC-500	75	0 to 65dB 1dB steps	1, 2, 4, 8, 10, 20 & 20	1.1	1.2	1.3	1dB @ 500Mhz	0.3	0.5	0.8	N/A	1
MDC2178B-23 [1]	DC-500	75	0 to 45.5dB 0.5dB steps	0.5, 1, 2, 3, 8, 10 & 20	1.1	1.2	1.3	1dB @ 500Mhz	0.2	0.3	0.5	N/A	1

Notes:
[1] BNC Female connectors are standard. Change "B" to "F" for Female connectors.
Operating Temperature Range is -20°C to +85°C.

Coaxial Accessories

Resistive Terminations — Caps

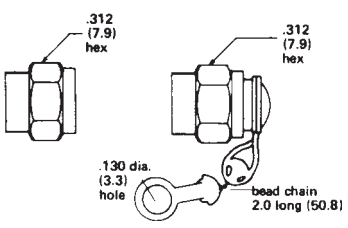
Features

- Sturdy Construction
- All Applicable MIL-Specs
- Special Impedances Available
- Other Connector Types Available
- With or Without Bead Chains
- Tarnish Resistant
- Rated @ 500VRMS (as applicable)
- Delivery from stock

The accessories shown below are typical of the most popular types of Terminators and Dust Caps. In addition, MIDISCO has similar items with UHF, HN, C, SMB, SMC, and many other types of connector configurations. By adding the suffix "-C" a bead chain may be specified. The user should also be aware of the precision types of Coaxial Terminations and Shorts which may be found in other sections of this catalog.

Model	Connector	Description
MDC1026M-B-(ohms)	BNC Male	25, 50, 75, 93, 100, 150 or 600 ohm Resistive Termination 1%, 1/2 watt
MDC1027M-B	BNC Male	Male Dust Cap-Non Shorting for protection of BNC Females
MDC1027F-B	BNC Female	Female Dust Cap-Non Shorting for protection of BNC Males
MDC1026M-T-(ohms)	TNC Male	25, 50, 75, 93, 100, 150 or 600 ohm Resistive Termination 1%, 1/2 watt
MDC1027M-T	TNC Male	Male Dust Cap-Non Shorting for protection of TNC Females
MDC1027F-T	TNC Female	Female Dust Cap-Non Shorting for protection of TNC Males
MDC1026M-N-(ohms)	N Male	25, 50, 75, 93, 100, 150 or 600 ohm Resistive Termination 1%, 1/2 watt
MDC1027M-N	N Male	Male Dust Cap-Non Shorting for protection of N Females
MDC1027F-N	N Female	Female Dust Cap-Non Shorting for protection of N Males
MDC1026M-S	SMA Male	25, 50, 75, 93, 100, 150 or 600 ohm Resistive Termination 1%, 1/2 watt
MDC1027M-S	SMA Male	Male Dust Cap-Non Shorting for protection of SMA Females
MDC1027F-S	SMA Female	Female Dust Cap,Non Shorting for protection of SMA Males

SMA Male Dust Caps



MDC1027M-S MDC1027M-S-C

Notes:
Suffix "-C" for a Bead Chain.
SMA Accessories are Passivated Stainless Steel; all others are Brass with Bright Alloy finish

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Coaxial Terminations

Type SMA - SSMA - 2.4 mm - 7 mm

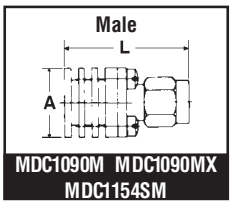
Features

- Connectors per MIL-C-39012
- Constructed per all applicable MIL-Specs
- Low VSWR
- DC up to 50 GHz
- Small size
- Lightweight
- Operating temperature -55°C to +125°C
- 50 ohms impedance
- RF leakage 90 dB min
- Snap on/off SMA type available - MDC1075Q
- Quick disconnect (MDC1075Q) - 500 cycle durability
- Most available with bead chain - (Suffix "-C")
- Delivery from stock

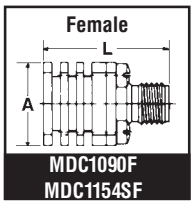
MIDISCO high precision coaxial terminations were designed for broad frequency coverage at reasonable cost. Each model meets the applicable interface parameters of MIL-C-39012. A sufficient selection is offered to permit the user to choose the correct model for the application considering VSWR, power and size versus cost.

The "Q" model is actually a snap-on SMA type termination for laboratory or system use, that will snap on to any SMA female connector with excellent detent characteristics. The MDC1075QC (with bead chain) is very useful on front panels where it must be removed repeatedly. The quick-disconnect SMA termination finds great use in laboratory testing including phase matching.

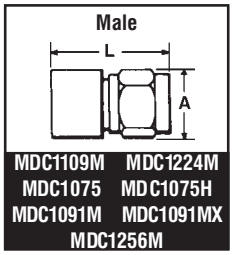
Higher power terminations are available. The models shown here are in stock.



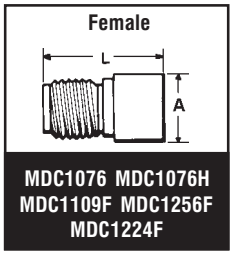
MDC1090M MDC1090MX MDC1154SM



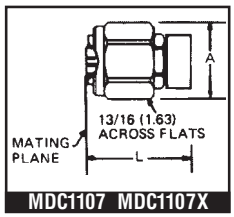
MDC1090F MDC1154SF



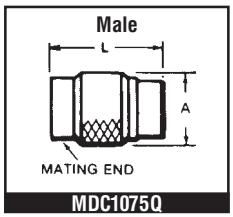
MDC1109M MDC1224M MDC1075 MDC1075H MDC1091M MDC1091MX MDC1256M



MDC1076 MDC1076H MDC1109F MDC1256F MDC1224F



MDC1107 MDC1107X



MDC1075Q

Model Number	Connector Type	Power @ 25°C		VSWR (max) @ Frequency (GHz)						L (in) (max)	A (in) (max)	Material & Finish	Weight (oz)
		Avg. (W)	Peak (kW)	DC-4	4-8	8-12	12-18	18-26	26 - Above				
MDC1075	SMA Male	1	1.0	1.05	1.10	1.15	1.20			0.55	0.31 dia.	Stainless Steel Passivated	0.12
MDC1075H		2	1.5				1.25			0.65			0.15
MDC1091MX		1	1.0	1.03	1.04	1.08	1.15	1.35		0.33			0.08
MDC1091M				1.05	1.06	1.09				0.35			0.09
MDC1090M		5	2.0	1.20	1.30	1.40				0.90	0.50 sq.	Stainless Steel Passivated Coupling Nut Black Anodized Aluminum Body	0.90
MDC1090MX			4.0	1.15	1.15	1.25	1.25			1.35	0.75 dia.		1.10
MDC1256M			2.0	1.10		1.20	1.35			1.50	0.75 dia.		0.43
MDC1154SM		15								2.00	1.25 dia.		0.90
MDC1075Q	SMA Male Snap-On	1		1.08	1.13	1.17	1.23			0.55	0.38 dia.	Beryllium Copper Gold Plated	0.13
MDC1076	SMA Female	1	1.0	1.05	1.10	1.15	1.20	1.35		0.52	0.31 dia.	Stainless Steel Passivated	0.08
MDC1076H		2		1.08	1.12	1.20	1.30	1.40		0.44	0.28 hex		0.06
MDC1090F		5	2.0	1.20	1.30	1.40				0.76	0.50 sq.	Stainless Steel Passivated Coupling Nut Black Anodized Aluminum Body	0.89
MDC1090FX			4.0	1.15	1.15	1.25	1.25			0.90	0.75 dia.		1.09
MDC1256F			2.0	1.10	1.15	1.20	1.35			1.30	0.50 dia.		0.43
MDC1154SF		15								1.90	1.25 dia.		0.90
MDC1109M	SSMA Male	0.5	1.0	1.05	1.10	1.12	1.15	1.35	1.45 to 30 GHz	0.45	0.25 hex	Stainless Steel Passivated	0.07
MDC1109F	SSMA Female									0.43	0.31 dia.		0.06
MDC1124M	2.4 mm Male	0.5	1.0	1.05	1.10	1.12	1.15	1.35	1.50 to 50 GHz	0.50	0.31 hex	Stainless Steel Coupling Nut Tellurium Copper Nickel Plated Body	0.09
MDC1124F	2.4 mm Female									0.49	0.31 dia.		0.08
MDC1107	7 mm	2	0.3			1.10	1.25			1.50	0.82 dia.	Stainless Steel Passivated	1.50
MDC1107X				1.03	1.03	1.04	1.06						

For additional specifications, see 7mm section of catalog or MIL-C-39012 as applicable or request complete data sheet
Some high precision types are specified at 9 in-lbs. torque.
For a bead chain, add suffix "-C" to Model Number. Example: MDC1075-C.
Other finishes are available, please consult MIDISCO.
Engagement force for MDC1075Q or MDC1075Q-C is 10lbs. axial.

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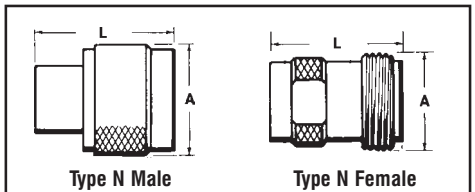
Coaxial Terminations

Type N - TNC - BNC - SMB - SMC

Features

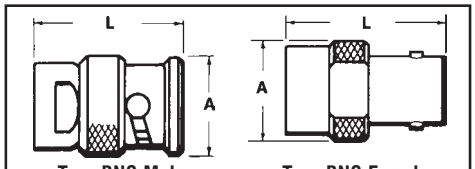
- Construction per all applicable MIL-Specs
- Interface per MIL-C-39012
- Low VSWR
- Small size
- DC to 18 GHz
- Lightweight
- 50 ohms (other impedance available)
- Operating temperature -55°C to +125°C
- RF leakage 90 dB minimum
- Some precision models in brass or stainless
- Higher power models available
- Most available with bead chain (Suffix "-C")
- SMB (snap on) and SMC terminations shown
- Delivery from stock

MIDISCO coaxial terminations in the series shown below were designed for optimum performance in the smallest package possible. The parameters for cost consideration when making a selection include connector type, frequency range, power handling and reflection coefficient (VSWR). The range of models shown is sufficient for laboratory & systems applications. Construction is in accordance with all applicable military specifications and the connector interface is per MIL-C-39012. Some of the stainless steel "X" models shown are available in brass, indicated by dropping the "X". Most models shown can be obtained with a bead chain (add suffix "-C") for panel mounting, etc. Higher power and models selected for narrow frequency applications may be ordered; the models shown are in stock.



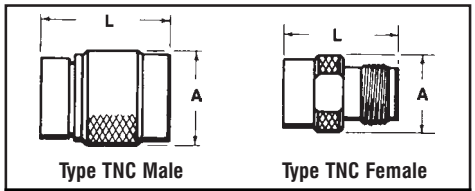
Type N Male — MDC1042M, MDC1042MX, MDC1024NM

Type N Female — MDC1042F, MDC1042FX



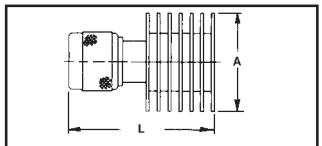
Type BNC Male — MDC1043M

Type BNC Female — MDC1043F



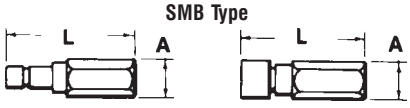
Type TNC Male — MDC1044M, MDC1044MX, MDC1024TM

Type TNC Female — MDC1044F, MDC1044FX



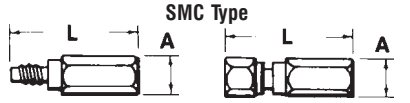
MDC1103 Series
MDC1154 Series
MDC1175 Series

SMB Type



Snap-on MDC1001BM — Snap-on MDC1001BF

SMC Type



10-32 Thread MDC1001CM — 10-32 Thread MDC1001CF

Model Number	Connector Type	Power @ 25°C Avg. (W)	Power @ 25°C Peak (kW)	VSWR (max) @ Frequency (GHz) DC-4	VSWR (max) @ Frequency (GHz) 4-8	VSWR (max) @ Frequency (GHz) 8-12	VSWR (max) @ Frequency (GHz) 12-18	L (in) (max)	A (in) (dia.)	Material & Finish	Weight (oz)
MDC1042M	N Male	2	1.0	1.10	1.10	1.15	1.25	0.98	0.80	Brass with Bright Alloy	1.43
MDC1042MX											
MDC1024NM							1.20	1.50		Stainless Steel Passivated	1.57
MDC1103NX		5	2.0		1.15	1.20	1.30	1.85	1.02	Stainless Steel Connector with Black Anodized Aluminum Body	1.79
MDC1154NM		15	2.0	1.15	1.20	1.25		2.50	1.25		3.37
MDC1175NM		40	7.5	1.20	1.30	1.41		5.06	1.66		10.00
MDC1175NF	N Female	40	7.5	1.20	1.30	1.41		4.91	1.66	Stainless Steel Connector with Black Anodized Aluminum Body	10.00
MDC1154NF		15	2.0	1.15	1.20	1.25	1.30	2.50	1.25		3.30
MDC1103NFX		5	2.0	1.10	1.15	1.20	1.30	1.80	0.75		1.72
MDC1042F		2	1.0	1.10	1.10	1.15		0.98	0.65	Brass with Bright Alloy	1.30
MDC1042FX							1.40				
MDC1044M	TNC Male	2	1.0	1.10	1.10	1.15		0.82	0.60	Brass with Bright Alloy	1.03
MDC1044MX							1.40				
MDC1024TM							1.20	1.50		Stainless Steel Passivated	1.40
MDC1103TX		5	2.0	1.15	1.20	1.25	1.30	1.80	1.02	Stainless Steel Connector with Black Anodized Aluminum Body	1.51
MDC1154TM		15						2.30	1.38		2.82
MDC1154TF	TNC Female	15	2.0	1.15	1.20	1.25	1.30	2.30	1.38	Stainless Steel Connector with Black Anodized Aluminum Body	2.74
MDC1103TFX		5	2.0	1.10	1.15	1.20	1.30	1.90	0.75		1.44
MDC1044F		2	1.0	1.10	1.10	1.15		0.88	0.56	Brass with Bright Alloy	0.96
MDC1044FX							1.40				
MDC1043M	BNC Male	2	1.0	1.10	1.15			0.83	0.56	Brass with Bright Alloy	1.02
MDC1103BX		5	2.0	1.15	1.25	-	-	1.65	1.02	Stainless Steel Connector with Black Anodized Aluminum Body	1.93
MDC1154BM		15						2.10	1.25		2.30
MDC1154BF	BNC Female	15	2.0	1.15	1.25	-	-	2.15	1.25	Same as Above	2.15
MDC1043F		2	1.0	1.10	1.15			0.88	0.57	Brass with Bright Alloy	0.90
MDC1001BM	SMB Male	0.5	0.2	1.20	1.35	-	-	0.85 (1)	0.23	Brass with Bright Alloy	0.08
MDC1001BF	SMB Female										
MDC1001CM	SMC Male	0.5	0.2	1.20	1.30	-	-	0.85 (1)	0.23	Brass with Bright Alloy	0.08
MDC1001CF	SMC Female										

[1] *Smaller models are available*

MDC1103BX, 1103NX, and 1103TX available with nickel plated brass connectors; drop "X" from part number.

For a bead chain, add suffix "-C" to Model Number. Example" MDC1042M-C.

The power chain ratings shown are at +25°C, although some will provide the same performance up to 75°C.

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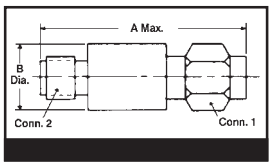
D.C. Block

0.10 to 18GHz — Type N, TNC, SMA, & 7mm

Features

- 0.10 to 18 GHz
- Connectors per MIL-C-39012
- Stainless steel
- Maximum loss at 18 GHz: 0.50 dB
- Maximum VSWR at 18 GHz: 1.35
- Impedance: 50 ohms
- Insertion loss at 1 KHz: 65 dB
- Voltage (main line): 200 volts
- Temperature (operating)
  - -55°C to +125°C (inside)
  - -20°C to +100°C (inside/outside)
- Delivery from stock

MIDISCO MDC1181 inside blocks have capacitance in series with the center conductor which prevents the flow of DC current through the center conductor. MDC1182 inside/outside DC blocks has capacitance in series with both the outer and inner conductors. This prevents the flow of DC current and suppresses ground or audio interference signals in both conductors while permitting RF power to flow uninterrupted. The insertion loss over the frequency range for all SMA models is 0.5 dB maximum; the other models are slightly less. At 1 KHz all models have an insertion loss greater than 65 dB. All models are in stock.



Part Number	Type	VSWR @ F (GHz) 0.1-8	2.5-8	8-12.4	12.4-18	Connectors 1	2	Dimensions (Ref.) A	B
MDC1181S	Inside		1.2	1.25	1.35	SMA (M)	SMA (F)	0.88	0.28
MDC1181M	Inside		1.2	1.25	1.35	SMA (M)	SMA (M)	0.98	0.28
MDC1181F	Inside		1.2	1.25	1.35	SMA (F)	SMA (F)	0.78	0.28
MDC1181N	Inside	1.2		1.25	1.35	N (M)	N (F)	1.80	0.62
MDC1181NM	Inside	1.2		1.25	1.35	N (F)	N (M)	1.85	0.56
MDC1181NF	Inside	1.2		1.25	1.35	N (M)	N (F)	2.00	0.56
MDC1182-S12	In/Out	1.2		1.25		SMA (M)	SMA (F)	2.30	0.85
MDC1182-S18	In/Out	1.2		1.25	1.35	SMA (M)	SMA (F)	2.30	0.85
MDC1182A-S18	In/Out	1.2		1.25	1.35	SMA (M)	SMA (F)	1.10	0.50
MDC1182-N12	In/Out	1.2		1.25		N (M)	N (F)	2.75	1.00
MDC1182-N18	In/Out	1.2		1.25	1.35	N (M)	N (F)	1.75	1.00
MDC1182A-N18	In/Out	1.2		1.25	1.35	N (M)	N (F)	1.95	0.50
MDC1182-T18	In/Out	1.2		1.25	1.35	TNC (M)	TNC (F)	2.10	0.80
MDC1182-712	In/Out	1.2		1.25		7mm	7mm	3.25	1.00
MDC1182-718	In/Out	1.2		1.25	1.35	7mm	7mm	3.25	1.00

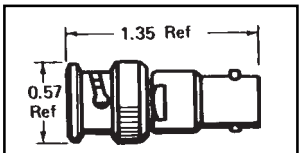
Feed-Thru Terminations

Type BNC & SMA

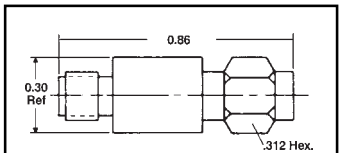
Features

- Impedance 50 ohms ±1%
- MDC1079B available in 75, 93, 150, 600 ohms and other impedances.
- Average power 2 watts.
- Connectors: BNC male/female
  - Finish: Bright alloy
  - Material: Brass
- Connectors: SMA male/female
  - Finish: Passivated
  - Material: Stainless steel
- Other connector types available
- Frequency DC-500 MHz
- VSWR 1.1 (DC-250MHz) 1.2 (250-500MHz)
- Delivery from stock

MIDISCO Coaxial Feed-Thru Termination Model MDC1079 is ideal for terminating pulse microwave or UHF instruments in their own characteristic impedance. Each unit can be supplied with either a BNC male and female connector on a brass body (MDC1079B) or SMA male and female on a stainless steel body (MDC1079S). To maintain a good laboratory appearance, each SMA unit is passivated and each BNC unit has a bright alloy finish.



MDC1079B-50



MDC1079S

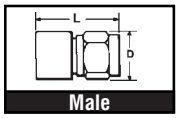
Coaxial Shorts

Type SMA - N - TNC - BNC

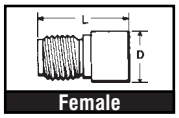
Features

- Stainless steel passivated or Brass with Bright alloy finish
- Short lengths
- Available with bead chains (suffix "-C")
- Connectors per MIL-C-39012
- SMA-N-TNC-BNC
- Plugs or Jacks
- Delivery from stock

MIDISCO coaxial fixed shorts are used as phase references when calibrating equipment. At exactly one-half wavelength from the connection point the maximum amplitude appears. Each model is designed to produce a reflection coefficient that is approximately equal to one. They are also available with bead chains and delivery is from stock.



Male



Female

Model Number	Type	D (Ref.)	L (Ref.)	Material
MDC1025M-S	SMA Male	0.31	0.33	Stainless Steel
MDC1025F-S	SMA Female	0.31	0.48	
MDC1025MX-N	N Male	0.78	0.69	
MDC1025MX-T	TNC Male	0.59	0.70	
MDC1025M-T	TNC Male	0.59	0.70	Brass with Bright Alloy Finish
MDC1025F-T	TNC Female	0.50	0.58	
MDC1025M-N	N Male	0.78	0.69	
MDC1025F-N	N Female	0.78	0.75	
MDC1025M-B	BNC Male	0.59	0.70	
MDC1025F-B	BNC Female	0.50	0.58	

Note: with Bead Chain add suffix "-C"

MIDISCO

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Ultra-Flex

For Hand Formed Semi-Flexible Cable Assemblies

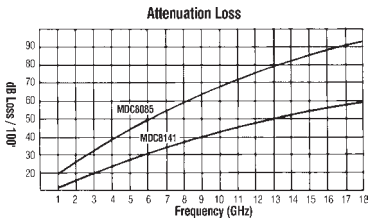
Features

- No bending tools required
- Ultra-flexibility
- 100% shielded
- Many connector possibilities
- Low insertion loss
- Cable spools & cable assemblies available to 100 feet
- Perfect for prototypes
- Excellent for laboratory
- May be purchased without connectors
- Dielectric material: Teflon (TFE)
- Outer jacket: Silver coated copper covered steel
- Shield: Tin filled copper braid, 100% coverage
- Velocity of propagation: 70% nominal
- Delivery one week (or less)

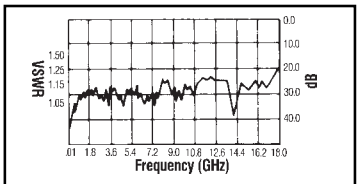
MIDISCO Ultra-Flex coaxial cable and assemblies eliminate the need for tooling normally required to form semi-rigid assemblies. This cable series is extremely flexible, can be shaped and reshaped by hand, and supplied with most of the standard connector types. The 100% shielded cable has a copper-tin composition outer jacket, teflon insulator and a silver coated copper over steel center conductor. Both 50 ohm versions, the 0.085 diameter (MDC8085) and 0.141 diameter (MDC8141) types have excellent electrical performance to 20 GHz and above at temperatures to 200°C. A 75 ohm version (MDC8084) is also available.

These assemblies are perfect for prototype and production applications, especially when there are close quarters that don't permit pre-bending. The low loss, good VSWR ultra- flexibility and wide connector selection make them useful in the test laboratory. Connectors are also available separately. Delivery is one week.

Performance



Cable Type	Impedence ohms (nom)	Cable O.D.	Dielectric O.D.	Shield ohms/K'	Conductor O.D.	Capacitance pF/ft (nom)	Attenuation (loss) @ Freq. (MHz) dB/100ft.										Bend Radius	
							50	100	200	400	700	1000	4000	7000	10000	18000	min.	suggstd.
MDC8141	50	0.141	0.118	4.5	0.0365	29.3	2.4	3.5	5.0	7.6	10.0	13.0	30.0	41.0	50.0	73.0	.500	.750
MDC8085	50	0.083	0.064	10.2	0.0201	29.3	4.5	6.5	9.2	13.0	17.0	22.0	44.0	58.0	70.0	105.0	.125	.250
MDC8084	75	0.084	0.065	10.2	0.0113	19.3	4.5	6.6	10.0	15.0	21.0	26.0	60.0	82.0	110.0	—	.125	.250



Typical VSWR — MDC8141 Cable
10 foot Cable Assembly
with SMA (M) Connectors

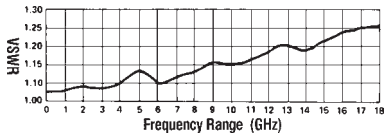
Cable Assembly Ordering Information

Insert Cable Type chosen into part number formula: ConnectorA—Cable—ConnectorB—Length(inches)
Example: SM-8085-BF-27 is a 27 inch assembly with an SMA male and BNC female connectors using MDC8085 cable. For further information, please contact MIDISCO.
See the Coaxial Cable Assemblies section for cable assemblies available from stock.

Connectors

Semi-Rigid, Ultra-Flex, & Snake — Type N & SMA

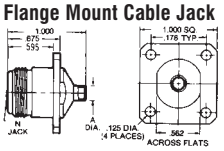
Mated pair MDC1523-1 & MDC1526-1



The MIDISCO cable assembly department designed two versatile, very small SMA plugs, model MDC1141S for 0.141 dia. (RG402) and MDC1085S for 0.085 dia. (RG405) semi-rigid cable. Each are small enough to allow for tight bends, have retractable coupling nuts, by means of snap off "C" rings, that eliminate blind mating and are self facing and assemble easily and quickly. MDC1141S is also designed to be used with Rebendable SNAKE MDC5141 and Ultra-Flex MDC8141. MDC1085S. in addition to standard semi-rigid cable, is for use with SNAKE MDC5085 and Ultra-Flex MDC8085. Both types are assembled to the cable with a single soldering operation. Standard versions have a gold plated body and stainless finish (passivated) coupling nut. For gold plating all over, drop the "S" suffix (example MDC1141).

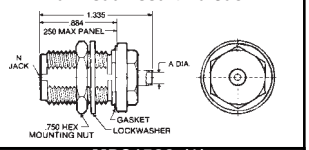
MIDISCO's precision N connectors for semi-rigid, and similar type coaxial cable, use mode-free design techniques that provide excellent VSWR to 18 GHz. Straight, bulkhead and panel jacks and straight plugs accommodate 0.085, 0.141 and 0.250 diameter semi-rigid cable and the complementary SNAKE and Ultra-Flex coaxial cable. All are easy-to-assemble direct solder types.

Flange Mount Cable Jack



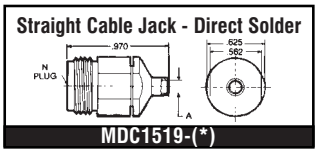
MDC1524-(*)

Bulkhead Feed-thru Jack



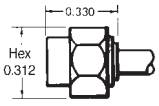
MDC1526-(*)

Straight Cable Jack - Direct Solder



MDC1519-(*)

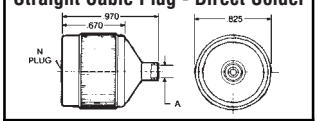
SMA Plug Direct Solder



MDC1141 uses insulator and center contact of cable
MDC1085 supplied with insulator and contact

MDC1085S MDC1141S

Straight Cable Plug - Direct Solder



MDC1523-(*)

Suffixes: "-1" for 0.141 (RG402) Semi-Rigid Cable; "-2" for 0.085 (RG405) Semi-Rigid Cable; "-3" for 0.250 (RG401) Semi-Rigid Cable; "-4" for RG174, 188, 316 flexible cable (slightly different dimensions and assembly)

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Adapto-Cable Kits

SMA - SMB - SMC - N - TNC - BNC

Features

- Permits connections without adapters
- Available in various cable types
- Kits may be ordered with different lengths
- Re-bendable semi rigid types
- Less expensive than if purchased individually
- High quality connectors per MIL-C-39012
- Cable per MIL-C-17 as applicable
- Quality assembly techniques
- Bulkhead or Panel (flange) connectors available
- Right angle connectors when required
- Special Kits or individual assemblies obtainable
- FAST delivery—usually one week

MIDISCO Adapto-Cable Kits are similar in nature to the Adapto-Kits which provide the user with coaxial adapters for complete series adaptation at a more reasonable cost than ordering separately. The Adapto-Cable Kits consist of an assortment of eight cable assemblies with various popular combinations of connectors that are commonly found in the field or laboratory. Each Kit may be purchased in one of several coaxial cable types and cable lengths as shown. When specifying, add the cable series and the length desired to the part number for each kit type you are ordering.

Bulkhead (hex-nut) or panel (flange) mount connectors are available. If the semi-rigid types are to be formed for system applications or used in a laboratory environment, MDC5141 (0.141 dia) or MDC5085 (0.085 dia) rebendable semi-rigid cable, shown in this catalog, or the new Ultra-Flex types should be specified instead of RG402 or RG405 respectively. Standard Kit lengths are shown, however, other lengths and cable types can be obtained as a kit or as individual cable assemblies. Delivery is normally one week.

CKA - (Cable Series) - L	
BNC Male	BNC Male
BNC Male	BNC Female
BNC Male	N Male
BNC Male	TNC Male
BNC Male	SMA Male
BNC Male	SMB Male
BNC Male	SMC Male
BNC Female	BNC Female

CKB - (Cable Series) - L	
N Male	N Male
N Male	N Female
N Male	BNC Male
N Male	TNC Male
N Male	SMA Male
N Male	SMB Male
N Male	SMC Male
N Female	N Female

CKC - (Cable Series) - L	
TNC Male	TNC Male
TNC Male	TNC Female
TNC Male	N Male
TNC Male	BNC Male
TNC Male	SMA Male
TNC Male	SMB Male
TNC Male	SMC Male
TNC Female	TNC Female

CKD - (Cable Series) - L	
SMA Male	SMA Male
SMA Male	SMA Female
SMA Male	N Male
SMA Male	BNC Male
SMA Male	TNC Male
SMA Male	SMB Male
SMA Male	SMC Male
SMA Female	SMA Female



CKF - (Cable Series) - L	
N Male	BNC Male
N Male	BNC Female
N Male	BNC Male
N Male	BNC Female
BNC Male	BNC Male
BNC Male	BNC Female
BNC Male	TMC Male
TNC Female	TNC Male

CKG - (Cable Series) - L	
SMA Male	SMA Male
SMA Male	SMA Female
SMA Male	SMB Male
SMA Male	SMB Female
SMB Male	SMB Female
SMB Male	SMB Male
SMB Female	SMB Female
SMB Female	SMA Female

CKE - (Cable Series) - L	
SMB Male	SMB Male
SMB Male	SMB Female
SMC Male	SMC Male
SMC Male	SMC Female
SMB Male	SMC Female
SMC Male	SMB Female
SMC Female	SMC Female
SMB Female	SMB Female

CKH - (Cable Series) - L	
SMA Male	SMA Male
SMA Male	SMA Female
SMA Male	SMC Male
SMA Male	SMC Female
SMC Male	SMC Female
SMC Male	SMC Male
SMC Female	SMC Female
SMA Female	SMA Female

Note: Please insert the desired cable series for each ADAPTO-CABLE KIT ordered into the Kit Model Number. Also select the length you wish each cable to be and substitute that length for "L" in the Kit Model Number. EXAMPLE: CKC-58-48 is Kit Model CKC; all cables use RG58 cable and each one is 48 inches overall length.

Cable Series: RG55, 58, 59, 62, 141, 142, 174, 178, 180, 188, 195, 196, 214, 223, 316, 400, 402, 405, MDC5085, MDC5141, and Ultra-Flex series MDC8084, MDC8085 and MDC8141. Please note that not every cable series is available in every kit model due to connector restrictions and MIDISCO may request to substitute a similar cable type where necessary for that connector only.

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Coaxial Lightning & EMP Protectors

DC to 2.5 GHz

Features

- Lightning or EMP protection
- Low VSWR
- Bilateral protection
- 5kA through 20kA Devices
- Compact size
- Low Price
- Fast delivery

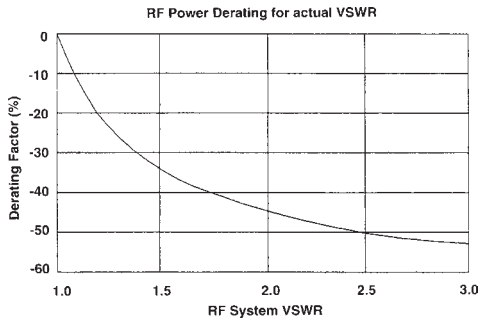
The MIDISCO series of coaxial protectors provides better RF performance in a smaller package than competitive products. This innovative design is extremely cost competitive. The MIDISCO protectors operate over the full frequency range (0-2.5 GHz †) in a single unit and protect from transients in both directions. This series can accommodate 5kA, or 20kA replaceable protective elements. Applications include transmitters, receivers, video lines, high speed data lines, and security systems.

Transient Response

Nominal Protector Voltage	V dynamic (@5kV/µsec)	Max Current (8×20µs) 10 pulses	Let through energy 50 ohm system [1]
	Lightning Application [2]		(mJ)
90	800	20 kA	0.70
145	600	20 kA	0.30
230	650	20 kA	0.25
350	800	20 kA	0.70
470	1200	20 kA	2.20
600	1500	20 kA	4.40
800	1900	10 kA	9.00
1000	2200	10 kA	14.00
	EMP Application [3]		(µJ)
200	800	5 kA	5.1
250	800	5 kA	5.1
500	12300	5 KA	22.0

[1] Data given for 50 ohm systems. For 75 ohm systems, multiply by 0.66. For 90 ohm systems, multiply by 0.55.
[2] Lightning let through is based on the 6kV/3kA Bi-waveform per ANSI C62.41
[3] Let through energy based on the MIL-STD 461 6kV 5×200ns waveform.
[4] RF power is also limited by the connector capability.

Nominal Protector Voltage	Max RF Power (watts) 50 ohm system [1,4]
90	37
145	96
200	182
230	241
250	285
350	558
470	1006
500	1139
600	1640
500	2915
1000	4555



RF Power Capacity

Pulse Lifetime

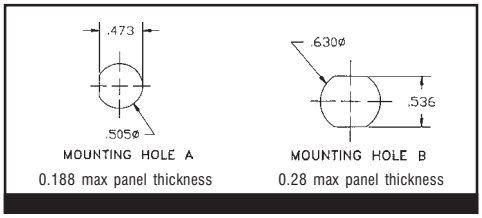
Pulse lifetime @ 500 amps peak 10 × 1000 µs pulse.

Discharge Pulses

Lightning application: >500 times
EMP application: >200 times

Electrical Performance (Typ.)

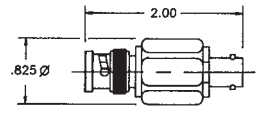
Frequency (MHz)	Insertion Loss (dB)	VSWR (50 ohm)
100	0.02	1.02
200	0.03	1.05
500	0.05	1.08
1000	0.08	1.10
1200	0.10	1.15
2000	0.17	1.20
2500	0.20	1.25



Ordering Information:

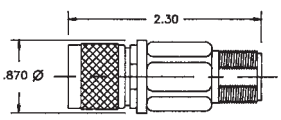
Protector Voltage (xx): Divide required protection voltage by 10 (use 09 for 90V and 99 for 1000V)
Style Modifier (y): W=Weatherproof; S=Standard.
Example: Model MDC7803-50-S is a standard N male to N female protector with a protector voltage of 500 Volts.

BNC Male to BNC Female



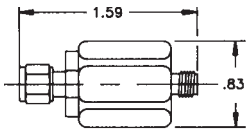
M7801-xx-y

N Male to N Female



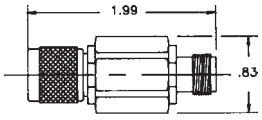
M7803-xx-y

SMA Male to SMA Female



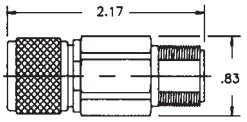
M7810-xx-y

TNC Male to TNC Female



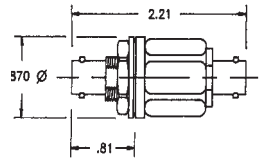
M7806-xx-y

UHF Male to UHF Female



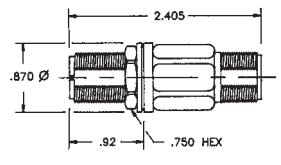
M7808-xx-y

BNC Bulkhead to BNC Female
Mounting Hole A



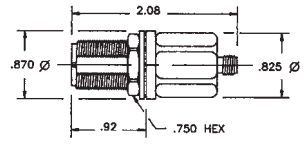
M7802-xx-y

N Bulkhead Female to N Female
Mounting Hole B



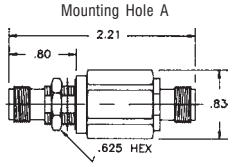
M7804-xx-y

N Bulkhead Female to SMA Female
Mounting Hole B



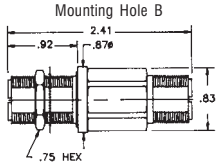
M7805-xx-y

TNC Bulkhead Female to TNC Female
Mounting Hole A



M7807-xx-y

UHF Bulkhead Female to UHF Female
Mounting Hole B



M7809-xx-y

† ***UHF connectors:*** *frequency range DC-500 MHz*

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Coaxial Hybrids (90°)

0.5 to 18 GHz (Standard & Multi-Octave)

Features

- Miniature Size
- High isolation
- Low VSWR
- 0.5-18GHz
- Octave and Multi-Octave Bandwidth
- Operating temp. 105°C (125°C storage)
- Qualified to MIL environments
- RF shielded
- Stripline construction
- Delivery from stock

MIDISCO Series MDC 7200 coaxial hybrids are used for non reflective PIN attenuators, switching networks, digital phase shifters, bi-phase modulators, antenna feed networks, double port reflective gain amplifiers, mixers, paralleled amplifiers, power dividers, as well as combiners. When you apply a signal to one of the ports of a 90° hybrid, that signal is equally divided at the two opposite ports with a relative phase shift of 90°. Upon terminating the opposite ports, high isolation is obtained between the two adjacent ports. These characteristics display the versatility of the 90° Hybrid. Note the various applications shown in the diagrams below. All units have high isolation, low VSWR and meet MIL environments. Delivery is from stock.

Terminology

Coupling Loss - True loss measured from input port to 0° relative phase output port (Note: DC open circuit between input port and coupled output port).

Thru Loss - True loss measured from input port to -90° relative phase output port (Note: DC short circuit between input port and thru output port).

Isolation - Attenuation measured between two output ports when remaining ports are terminated in 50 ohms.

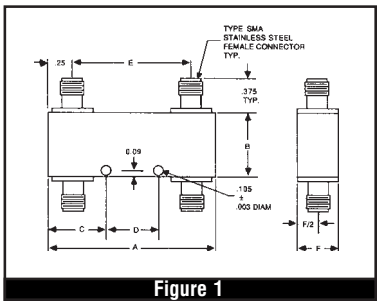


Figure 1

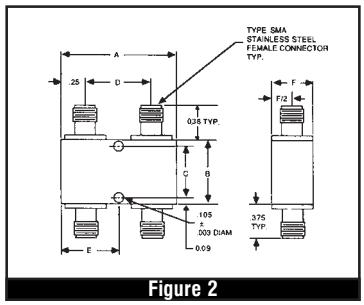
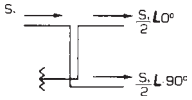
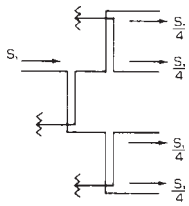


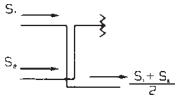
Figure 2



2 Way Power Divider

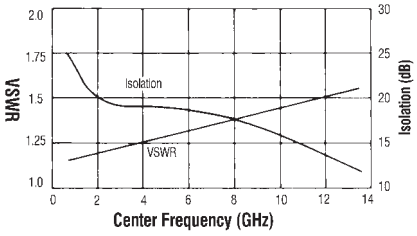


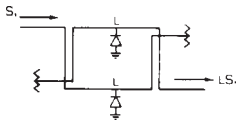
4 Way Power Divider



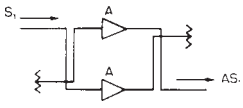
Signal Combiner (3dB Loss)

Octave band VSWR and isolation specifications as a function of center frequency

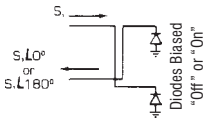




Non Reflective Pin Attenuator



Paralled Amplifiers



Bi-Phase Modulator

Model Number	Freq. Range (GHz)	Coupling † or Thru Loss (dB)	Frequency Sensitivity (dB)	VSWR (max.)	Isolation (dB) min	Input Power Average (W)	Input Power Peak (kW)	Figure	A	B	C	D	E	F
Octave Models														
MDC7223	0.5-1	3.1 ±0.6	±0.5	1.10	28	50	3	1	3.060	0.500	0.840	1.370	2.560	0.380
MDC7224	1-2	3.1 ±0.6	±0.5	1.10	28	50	3	1	1.780	0.500	0.640	0.500	1.280	0.380
MDC7225	2-4	3.1 ±0.6	±0.5	1.20	22	50	3	2	1.150	0.500	0.314	0.580	0.660	0.380
MDC7266	2.6-5.2	3.1 ±0.6	±0.5	1.25	20	50	3	2	1.000	0.500	0.314	0.500	0.500	0.380
MDC7226	4-8	3.2 ±0.7	±0.5	1.30	18	50	3	2	1.000	0.500	0.314	0.500	0.500	0.380
MDC7227	6-12.4	3.2 ±0.7	±0.5	1.35	18	50	3	2	1.000	0.500	0.314	0.500	0.500	0.380
MDC7288	7.5-16	3.4 ±0.9	±0.6	1.45	15	40	2	2	1.000	0.580	0.392	0.500	0.500	0.380
MDC7228	12-18	3.4 ±1.0	±0.7	1.50	15	40	1	2	1.000	0.580	0.392	0.500	0.500	0.380
Multi-Octave Models														
MDC7267	2-8	3.3 ±0.80	±0.40	1.30	17	30	3	1	2.600	0.750	0.670	1.260	2.030	0.440
MDC7277	4-12.4	3.3 ±0.80	±0.40	1.40	15	20	2	1	1.720	0.600	0.610	0.500	1.220	0.380
MDC7278	7-18	3.5 ±1.25	±0.75	1.50	13	20	1	2	1.000	0.580	0.392	0.500	0.500	0.380

† *Includes frequency sensitivity.*

Dimensions are in inches

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Directional Couplers

0.5 to 18 GHz (Standard Bandwidths)

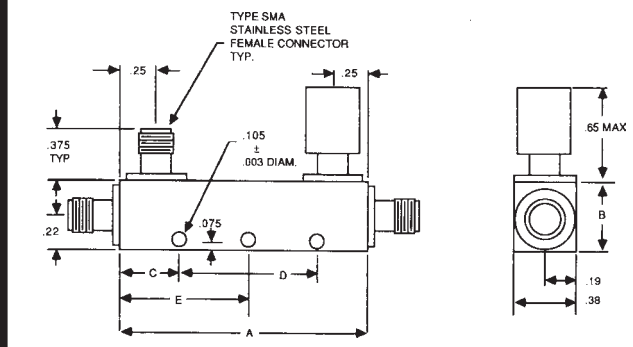
Features

- Ultra-miniature
- Stripline construction
- Full frequency bandwidth
- High directivity
- Low VSWR
- RF Shielded
- 105°C operating temperature
- Meets MIL environments
- Type N connector models available
- Available from stock

MIDISCO directional couplers of the MDC 6200 Series either meet or exceed the performance shown over the full frequency bandwidth. Each ultra-miniature unit is high quality stripline construction and has an operating temperature range of -55°C to +105°C. For broader bandwidths and multi-octave couplers, see MIDISCO Series 2000 and 4200. Type N connector models are available. All units are available from stock.

Outline	A	B	C	D	E
1	3.10	.50	.80	1.50	-
2	3.10	.55	.80	1.50	-
3	1.78	.50	.42	.94	-
4	1.78	.55	.42	.94	-
5	1.16	.50	.41	.34	-
6	1.16	.55	.41	.34	-
7	1.00	.50	-	-	.50
8	1.00	.55	-	-	.50
9	1.00	.60	-	-	.50

Dimensions in inches



Model No.	Frequency Range (Ghz)	Coupling † (dB)	Freq. Sens. (dB)	Insertion Loss (dB)		Directivity (dB min.)	VSWR max.		Power			Outline Dwg. No.
				Excl. Cpld Pwr	True		Primary Line	Secondary Line	Avg. Incident (W)	Avg. Refld. (W)	Peak (kW)	
MDC6223-6	0.5-1.0	6 ±1.00	±0.60	0.20	1.80	25	1.15	1.15	50	2	3	1
MDC6223-10	0.5-1.0	10 ±1.25	±0.75	0.20	0.80	25	1.10	1.10	50	5	3	1
MDC6223-20	0.5-1.0	20 ±1.25	±0.75	0.15	0.20	25	1.10	1.10	50	50	3	1
MDC6223-30	0.5-1.0	30 ±1.25	±0.75	0.15	0.20	25	1.10	1.10	50	50	3	2
MDC6224-6	1.0-2.0	6 ±1.00	±0.60	0.20	1.80	25	1.15	1.15	50	2	3	3
MDC6224-10	1.0-2.0	10 ±1.25	±0.75	0.20	0.80	25	1.10	1.10	50	5	3	3
MDC6224-20	1.0-2.0	20 ±1.25	±0.75	0.15	0.20	25	1.10	1.10	50	50	3	3
MDC6224-30	1.0-2.0	30 ±1.25	±0.75	0.15	0.20	25	1.10	1.10	50	50	3	4
MDC6225-6	2.0-4.0	6 ±1.00	±0.60	0.20	1.80	22	1.15	1.15	50	2	3	5
MDC6225-10	2.0-4.0	10 ±1.25	±0.75	0.20	0.80	22	1.15	1.15	50	5	3	5
MDC6225-20	2.0-4.0	20 ±1.25	±0.75	0.15	0.20	22	1.15	1.15	50	50	3	5
MDC6225-30	2.0-4.0	30 ±1.25	±0.75	0.15	0.20	22	1.15	1.15	50	50	3	6
MDC6266-6	2.6-5.2	6 ±1.00	±0.60	0.20	1.80	20	1.25	1.25	50	2	3	7
MDC6266-10	2.6-5.2	10 ±1.25	±0.75	0.20	0.80	20	1.25	1.25	50	5	3	7
MDC6266-20	2.6-5.2	20 ±1.25	±0.75	0.20	0.25	20	1.25	1.25	50	50	3	7
MDC6266-30	2.6-5.2	30 ±1.25	±0.75	0.20	0.20	20	1.25	1.25	50	50	3	8
MDC6226-6	4.0-8.0	6 ±1.00	±0.60	0.25	1.90	20	1.25	1.25	50	2	3	7
MDC6226-10	4.0-8.0	10 ±1.25	±0.75	0.25	0.90	20	1.25	1.25	50	5	3	7
MDC6226-20	4.0-8.0	20 ±1.25	±0.75	0.25	0.30	20	1.25	1.25	50	50	3	7
MDC6226-30	4.0-8.0	30 ±1.25	±0.75	0.25	0.25	20	1.25	1.25	50	50	3	8
MDC6227-6	7.0-12.4	6 ±1.00	±0.50	0.30	2.00	17	1.30	1.30	50	2	3	7
MDC6227-10	7.0-12.4	10 ±1.00	±0.50	0.30	1.00	17	1.30	1.30	50	5	3	7
MDC6227-20	7.0-12.4	20 ±1.00	±0.50	0.30	0.35	17	1.30	1.30	50	50	3	7
MDC6227-30	7.0-12.4	30 ±1.00	±0.50	0.30	0.30	17	1.30	1.30	50	50	3	8
MDC6288-6	7.5-16.0	6 ±1.10	±0.60	0.60	2.00	12	1.35	1.40	50	2	2	7
MDC6288-10	7.5-16.0	10 ±1.25	±0.75	0.60	1.00	12	1.35	1.40	50	5	2	7
MDC6288-20	7.5-16.0	20 ±1.25	±0.75	0.50	0.50	15	1.35	1.40	50	50	2	9
MDC6288-30	7.5-16.0	30 ±1.25	±0.75	0.50	0.50	15	1.35	1.40	50	50	2	9
MDC6228-6	12.4-18.0	6 ±1.00	±0.50	0.60	2.20	15	1.30	1.40	50	2	1	7
MDC6228-10	12.4-18.0	10 ±1.00	±0.50	0.60	1.20	15	1.30	1.40	50	5	1	7
MDC6228-20	12.4-18.0	20 ±1.00	±0.50	0.50	0.55	15	1.30	1.40	50	50	1	9
MDC6228-30	12.4-18.0	30 ±1.00	±0.50	0.50	0.50	15	1.30	1.40	50	50	1	9

† *Includes Frequency Sensivity*

Dimensions are in inches

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Directional Couplers

Broadband & Multi-Octave

Features

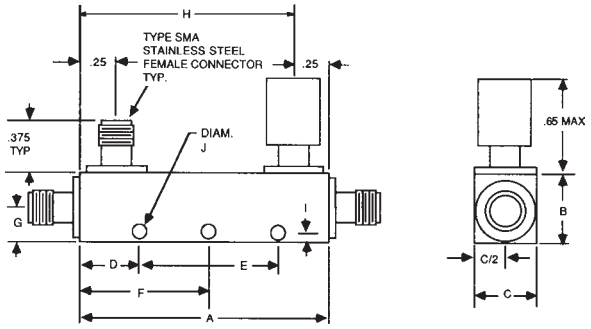
- Ultra-miniature
- Broadband
- SMA connectors
- High directivity
- Low VSWR
- Meets MIL environments
- 105°C operating temperature
- RF Shielded
- Stripline construction
- Type N connector models available
- Available from stock

MIDISCO Series MDC 2000 and MDC 4200 broadband and multi-octave directional couplers are designed for test and ECM equipment where more than standard frequency bandwidths are required. Each model is miniature, lightweight, and able to meet stringent environmental requirements. Construction is stripline and designed to meet MIL-E-5400 & MIL-E-16400 environments. Type N connector models available. All units are available from stock.

Outline	A	B	C	D	E	F	G	H	I	J
1	3.60	.53	.38	.5	2.60	-	.22	3.35	.075	.105
2	3.60	.60	.38	.5	2.60	-	.22	3.35	.075	.105
3	2.90	.68	.38	.45	2.00	-	.34	2.65	.15	.148
4	2.90	.60	.38	.45	2.00	-	.22	2.65	.075	.105
5	1.78	.68	.38	.45	.875	-	.34	1.53	.15	.148
6	1.78	.60	.38	.45	.875	-	.22	1.53	.075	.148
7	1.22	.54	.38	.42	.375	-	.22	.97	.075	.105
8	1.22	.60	.38	.42	.375	-	.22	.97	.075	.105
9	1.00	.50	.38	-	-	.50	.22	.75	.075	.105
10	4.40	.60	.38	.50	3.40	-	.24	4.15	.075	.105
11	3.47	.70	.38	.74	2.00	-	.26	3.22	.10	.105
12	1.36	.60	.38	.43	.50	-	.26	1.11	.09	.105
13	3.47	.70	.50	.74	2.00	-	.26	3.22	.34	(1)
14	2.10	.70	.38	.55	1.00	-	.26	1.85	.10	.105
15	2.10	.70	.38	.55	1.00	-	.26	1.85	.09	.105
16	1.36	.66	.38	.43	.50	-	.26	1.11	.09	.105

(1) 2-56 NC-28 × .12

Dimensions in inches



Model No.	Frequency Range (GHz)	Coupling† (dB)	Freq. Sens. (dB)	Insertion Loss (dB)		Directivity (dB) min		VSWR max		Power			Outline Dwg. No.
				Excl. Cpld. Pwr.	True			Primary Line	Secondary Line	Avg. Incident (W)	Avg. Reflected (W)	Peak (kW)	
MDC2044-6	0.5-2	6±1.0	±0.75	0.35	2.00	23		1.20	1.20	50	2	3	1
MDC2044-10		10±1.0	±0.75	0.35	0.90	23		1.20	1.20	50	5	3	1
MDC2044-20		20±1.0	±0.75	0.35	0.40	23		1.20	1.20	50	50	3	2
MDC2055-6	1-4.0	6±1.0	±0.5	0.35	2.00	23		1.20	1.20	50	2	3	3
MDC2055-10		10±1.0	±0.5	0.35	0.90	23		1.20	1.20	50	5	3	3
MDC2055-20		20±1.0	±0.5	0.40	0.45	23		1.20	1.20	50	50	3	4
MDC2066-6	2-8	6±1.0	±0.3	0.50	2.20	20		1.25	1.25	50	2	3	5
MDC2066-10		10±1.0	±0.3	0.35	1.00	20		1.25	1.25	50	5	3	5
MDC2066-20		20±1.0	±0.4	0.40	0.45	20		1.25	1.25	50	50	3	6
MDC2077-6	4-12.4	6±1.0	±0.3	0.50	2.20	17		1.30	1.30	50	2	2	7
MDC2077-10		10±1.0	±0.3	0.50	1.20	17		1.30	1.30	50	5	2	7
MDC2077-20		20±1.0	±0.4	0.50	0.55	17		1.30	1.30	50	50	2	8
MDC2089-10	7-18	10±1.25	±0.75	0.60	1.10	15		1.35	1.40	50	5	1	9
MDC4245-10	0.6-4	10±1.0	±0.75	0.40	0.90	18		1.25	1.30	50	5	3	10
						1-12.4	12.4-18						
MDC4259-10	1-18 ‡	10±1.0	±0.5	0.90	1.50	15	12	1.40	1.50	25	5	1	11
MDC4259-16		16±1.0	±0.5	0.80	0.90	15	12	1.40	1.50	25	20	1	13
MDC4259-20		20±1.0	±0.5	0.85	0.90	15	12	1.40	1.50	25	25	1	13
						2-12.4	12.4-18						
MDC4269-6	2-18 ‡	6±1.0	±0.5	0.90	2.00	15	12	1.35	1.50	25	2	1	14
MDC4269-10		10±1.0	±0.5	0.60	1.00	15	12	1.35	1.50	25	5	1	14
MDC4269-16		16±1.0	±0.5	0.80	0.90	15	12	1.35	1.40	25	20	1	15
MDC4269-20		20±1.0	±0.5	0.80	0.90	15	12	1.35	1.40	25	25	1	15
						4-12.4	12.4-18						
MDC4279-6	4-18	6±1.0	±0.5	0.90	2.00	15	12	1.35	1.40	25	2	1	12
MDC4279-10		10±1.0	±0.5	0.80	1.00	15	12	1.35	1.40	25	5	1	12
MDC4279-20		20±1.0	±0.5	0.60	0.70	15	12	1.40	1.40	25	25	1	16

† *Indicates frequency sensitivity*
‡ *Coupling relative to output power*

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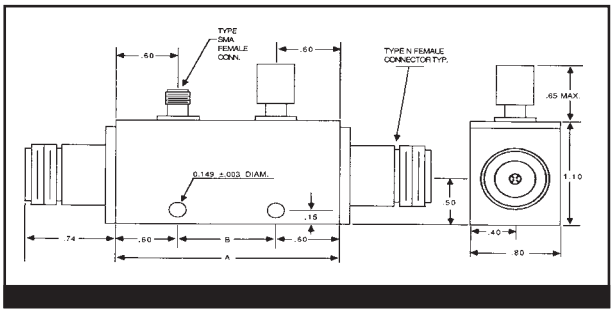
Directional Couplers

High Power/600 Watts CW 10kW pk

Features

- 600 watts CW, 10 kW peak
- Wide bandwidths
- Small size
- Flat with frequency
- RF shielded
- Custom coupling values (30-50dB)
- Fast delivery

MIDISCO high power directional couplers, series MDC2300 and MDC3300 are available in any coupling value between 30dB and 50dB (substitute for "X" in part number). The frequency sensitivity is included in the coupling value. High power couplers find use in leveling circuits, VSWR protection, and transmitter carrier power monitors. Primary line connectors are normally Type N female, with SMA Female on the coupled port. Other connector types are available on special order. The couplers are flat with frequency and have good directivity.



Model Number	Freq. Range (GHz)	Coupling † (dB)	Frequency Sensitivity (dB)	Insertion Loss (dB) max	Directivity (dB) min	VSWR max Primary Line	A	B
MDC2344-X	0.5-2	X±1.0	±0.75	0.2	18	1.15	6.00	4.80
MDC2324-X	1-2	X±1.0	±0.75	0.2	18	1.15	3.50	2.30
MDC2325-X	2-4	X±1.0	±0.75	0.2	18	1.15	2.50	1.30
MDC3354-X	1-4	X±1.0	±0.70	0.2	15	1.15	3.85	2.65
MDC2366-X	2.6-5.2	X±1.0	±0.75	0.2	18	1.20	2.50	1.30
MDC2326-X	4-8	X±1.0	±0.75	0.2	18	1.30	2.00	0.80
MDC3355-X	1.5-4.5	X±1.0	±0.60	0.2	18	1.20	3.50	2.30
MDC3366-X	2-8	X±1.0	±0.60	0.2	16	1.30	3.00	1.80
MDC2327-X	7-11	X±1.0	±0.50	0.2	16	1.30	2.00	0.80
MDC2377-X	5-11	X±1.0	±0.50	0.2	15	1.30	2.00	0.80
MDC3377-X	4-12	X±1.0	±0.60	0.2	15	1.30	2.50	1.30
MDC2357-35	1-11	35±1.5	±1.50	0.2	15	1.30	3.85	2.65

† X to be selected by customer. Frequency sensitivity to be included in coupling.
Primary line connectors Type N Female.
Other connector types available on special order.
Coupled port SMA Female. Dimensions are in inches.

Directional Couplers

Dual High Power

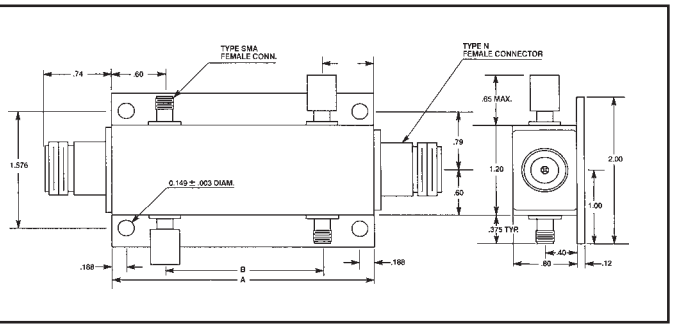
Features

- 600 watts CW, 10 kW peak
- Wide bandwidths
- Small size
- Flat with frequency
- RF shielded
- Custom coupling values (30dB to 50dB)
- Fast devlivery

MIDISCO dual directional couplers, series MDC2100 are available in any coupling value between 30dB and 50dB (substitute for "X" in part number). The frequency sensitivity is included in the coupling value. Dual high power directional couplers are built to give forward and reverse power monitoring capabilities in a package matching our MDC2300-MDC3300 series couplers. Forward and reverse coupling values can be independently selected. Primary line connectors are normally Type N female, with SMA female on the coupled port. Other connector types are available on special order. The couplers are flat with frequency and have good directivity. If both coupled ports are intended for monitoring forward power, change the suffix "B" to "C" when ordering. (i.e. MDC2125C-30)

Custom versions of this series are available with 3 or more coupled ports. Custom frequency requirements are easily met.

Model Number	Frequency Range (GHz)	Coupling † (dB)	Frequency Sensitivity (dB)	Insertion Loss (dB)	Directivity (dB)	VSWR max Pri. Line	Outline Dimensions A	B
MDC2144B-X	0.5-2	X±1.0	±0.75	0.4	18	1.20	6.00	4.80
MDC2124B-X	1.2	X±1.0	±0.75	0.4	18	1.20	3.50	2.30
MDC2125B-X	2-4	X±1.0	±0.75	0.4	18	1.20	2.50	1.30
MDC2154B-X	1-4	X±1.0	±0.60	0.4	15	1.20	3.85	2.65
MDC2163B-X	2.6-5.2	X±1.0	±0.75	0.4	18	1.25	2.50	1.30
MDC2126B-X	4-8	X±1.0	±0.75	0.4	18	1.35	2.00	0.80
MDC2155B-X	1.5-4.5	X±1.0	±0.60	0.4	18	1.25	3.50	2.30
MDC2166B-X	2-8	X±1.0	±0.60	0.4	16	1.35	3.00	1.80
MDC2127B-X	7-11	X±1.0	±0.50	0.5	16	1.35	2.00	0.80
MDC2177B-X	5-11	X±1.0	±0.50	0.5	15	1.35	2.00	0.80
MDC2178B-X	4-12	X±1.0	±0.60	0.5	15	1.35	2.50	1.30
MDC2157B-35	1-11	35±1.5	±1.50	0.5	15	1.35	3.85	2.65



† X to be selected by customer (30dB to 50 dB). Frequency sensitivity to be included in coupling.

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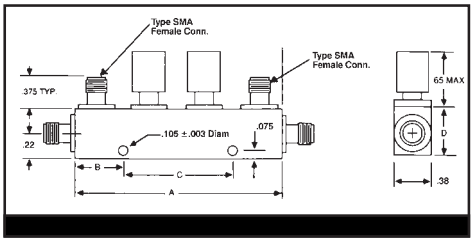
Directional Couplers

Dual Miniature

Features

- Etched teflon fiberglass stripline
- Miniature size
- High directivity
- MIL-SPEC construction
- Low VSWR
- RF shielded
- Resistance soldered SMA connectors
- Connectors per MIL-C-39012
- Delivery from Stock

MIDISCO Series MDC 3200 are stripline constructed dual directional couplers that have a variety of applications. These miniature devices, available in 10, 20, and 30 dB, have good directivity, tight coupling, and frequency sensitivity. When used in a reflectometer application, the reflected and incident power can be simultaneously monitored. When either incident or reflected power is monitored from two isolated ports, it is used as a dual in-line coupler. Special coupling values may be ordered. All standard values are available from stock.

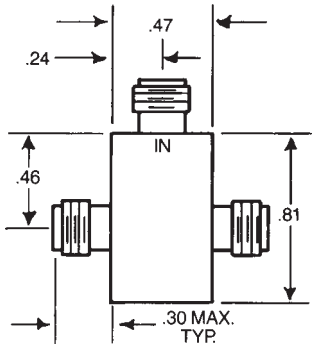


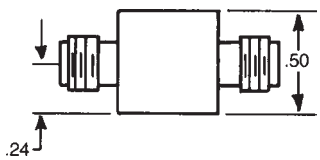
Model Number	Freq. Range (GHz)	Coupling † (dB)	Frequency Sensitivity (dB)	Insertion Loss (dB) max - True	Directivity (dB) min	VSWR (max) Pri. Line	VSWR (max) Sec. Line	A	B	C	D
MDC3223-21	0.5-1	10±1.25	±0.80	1.50	22	1.15	1.10	6.30	0.80	4.70	0.50
MDC3223-22		20±1.25		0.50				6.30	0.80	4.70	0.50
MDC3223-23		30±1.25		0.40				6.30	0.80	4.70	0.55
MDC3224-21	1-2	10±1.25	±0.80	1.50	22	1.15	1.10	3.66	0.42	2.82	0.50
MDC3224-22		20±1.25		0.50				3.66	0.42	2.82	0.50
MDC3224-23		30±1.25		0.40				3.66	0.42	2.82	0.55
MDC3225-21	2-4	10±1.25	±0.80	1.50	20	1.20	1.15	2.42	0.41	1.60	0.50
MDC3225-22		20±1.25		0.50				2.42	0.41	1.60	0.50
MDC3225-23		30±1.25		0.40				2.42	0.41	1.60	0.55
MDC3266-21	2.6-5.2	10±1.25	±0.80	1.50	18	1.30	1.25	2.10	0.50	1.10	0.50
MDC3266-22		20±1.25		0.50				2.10	0.50	1.10	0.50
MDC3266-23		30±1.25		0.40				2.10	0.50	1.10	0.55
MDC3226-21	4-8	10±1.25	±0.80	1.70	18	1.35	1.25	2.10	0.50	1.10	0.50
MDC3226-22		20±1.25		0.50				2.10	0.50	1.10	0.50
MDC3226-23		30±1.25		0.40				2.10	0.50	1.10	0.55
MDC3227-21	7-12.4	10±1.25	±0.60	1.90	16	1.35	1.30	2.10	0.50	1.10	0.50
MDC3227-22		20±1.25		0.70				2.10	0.50	1.10	0.50
MDC3227-23		30±1.25		0.60				2.10	0.50	1.10	0.55
MDC3228-21	8-16	10±1.25	±0.80	2.20	15	1.40	1.40	2.10	0.50	1.10	0.50
MDC3228-22		20±1.25		1.00				2.10	0.50	1.10	0.60
MDC3228-23		30±1.25		1.00				2.10	0.50	1.10	0.60
MDC3288-21	12.4-18	10±1.25	±0.60	2.20	15	1.40	1.40	2.10	0.50	1.10	0.50
MDC3288-22		20±1.25		1.00				2.10	0.50	1.10	0.60
MDC3288-23		30±1.25		1.00				2.10	0.50	1.10	0.60

†Includes Frequency Sensitivity *Dimensions are in inches.*

Power Dividers

Hi-Performance — "T" Configuration (DC-18GHz)





Model Number	Connectors	VSWR (max) DC-10	VSWR (max) 10-18	Insertion Loss (dB) DC-10GHz	Insertion Loss (dB) DC-18GHz	Amplitude Balance DC-4	Amplitude Balance 4-10	Amplitude Balance 10-18	Input Power
MDC2R06	SMA Female (3)	1.25	1.35	6 +1.20 / -0.20	6+1.50 / -0	0.20	0.40	0.50	1 watt max

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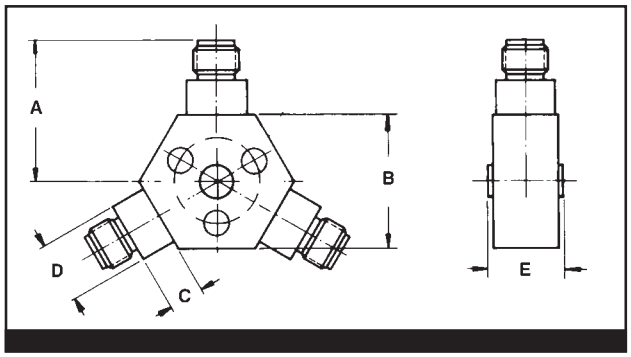
Power Dividers

Resistive

Features

- Broadband
- Miniature and lightweight
- Other connectors optional
- Meets MIL-E-5400/MIL-STD-202
- Impedance: 50 ohms
- -55 °C to +125 °C
- 1 W-CW, 1 kW-PK

MIDISCO broadband resistive power dividers have excellent stability over temperature and output power symmetry over frequency with a division of 6 dB from matched ports. Input and output is interchangeable and phase difference is nominally ±2" between output ports. SMA connectors are stainless steel, other connectors and the housing are brass, nickel plated. Calibrated data is available. Delivery on some models is from stock.



Model Number	Connectors			Max VSWR / Insertion Loss (dB)				Dimensions-typ. (inches)				
	Type	Male	Female	DC-8	8-12.4	12.4-48	18-26.5	A	B	C	D	E
MDC1191F3	SMA	0	3	1.25/6.5	1.25/7.0	1.60/7.5	1.70/8.5	0.80	0.75	0.20	0.35	0.42
MDC1191F2	SMA	1	2	1.25/6.5	1.25/7.0	1.60/7.5	1.70/8.5	0.85	0.65	0.20	0.35	0.42
MDC1191M3	SMA	3	0	1.25/6.5	1.25/7.0	1.60/7.5	1.70/8.5	1.00	0.75	0.20	0.35	0.42
MDC1192F3	SMA	0	3	1.25/6.5	1.25/7.0	1.60/7.5	—	0.80	0.75	0.20	0.35	0.42
MDC1192F2	SMA	1	2	1.25/6.5	1.25/7.0	1.60/7.5	—	0.85	0.75	0.20	0.35	0.42
MDC1192M3	SMA	3	0	1.25/6.5	1.25/7.0	1.60/7.5	—	1.00	0.65	0.20	0.35	0.42
MDC1193F3	Type N	0	3	DC-4GHz 1.35/6.5				1.20	1.25	0.30	0.63	0.67
MDC1194F3	BNC	0	3	DC-2GHz 1.25/6.2				1.40	1.25	0.20	0.50	0.67

Insertion Loss is specified as between one input and one output arm.
This series of MIDISCO resistive power dividers are delta configured — 3 resistors end to end in a triangle tied to a common output.

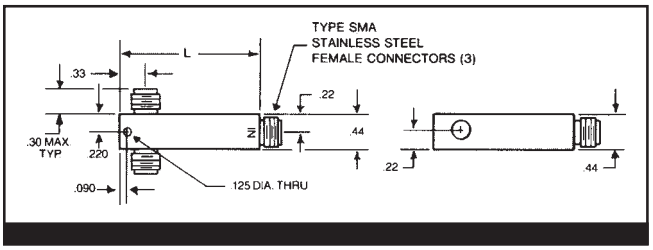
Power Dividers

Isolated In-Phase 2 Way — Ultra Broadband "T" Configuration

Features

- Very broadband in a single package
- Excellent phase balance
- Low cost
- Small size & weight
- High Isolation
- Delivery from stock

MIDISCO Ultra-Broadband power dividers offer either 1-20GHz or 2-26.5 GHz in a single package. Featuring high isolation and low insertion loss, both models are very small but ruggedly constructed. Both may also be used as combiners and have SMA female connectors.



Model Number	Freq. Range (GHz)	Insertion Loss (dB) max	Amplitude Balance (dB) max	Phase Balance (deg) max	VSWR		Isolation (dB) min	Input Power (W) max	Length (L) (inches)
					Input	Output			
MDC2P06	1-1.5	0.50	0.20	1	1.70:1	1.50:1	10	10	1.75
	1.5-2	0.50	0.20	1	1.60:1	1.40:1	15	10	1.75
	2-4	0.40	0.20	1	1.50:1	1.30:1	20	10	1.75
	4-8	0.50	0.20	1.5	1.50:1	1.40:1	17	10	1.75
	8-15	0.80	0.30	2	1.70:1	1.50:1	15	10	1.75
	15-16	0.80	0.30	3	1.70:1	1.60:1	15	10	1.75
	16-18	0.90	0.40	4	1.80:1	1.90:1	14	10	1.75
	18-20	1.10	0.40	4	2.00:1	2.00:1	7	10	1.75
MDC2P86	2-2.5	0.30	0.30	2	1.50:1	1.20:1	15	10	1.50
	2.5-20	1.00	0.40	4	1.30:1	1.30:1	20	10	1.50
	20-26.5	1.50	0.40	6	1.50:1	1.50:1	15	10	1.50

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Power Dividers

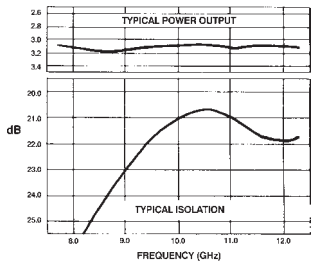
Isolated In-Phase 2 Way — DC-26.5GHz

Features

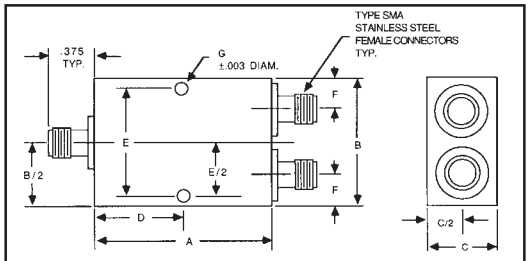
- Use as divider or combiner
- Low insertion loss & VSWR
- Flat frequency response
- Excellent phase and amplitude tracking
- High isolation
- RF shielded
- Constructed to exceed MIL-E-5400 & MIL-E-16400
- Type N connector models available
- Delivery from stock

MIDISCO miniature stripline power dividers provide high isolation in-phase division of input power between output ports. These low VSWR units are contained within precision machined housings that are designed to provide high RF shielding and eliminate unwanted RF modes.

Standard models have three SMA female connectors. Other frequency ranges, 4, 8 or 16 way configurations, and different connector types are available.



Model Number	Freq. Range (GHz)	Insertion Loss (dB) max	Amplitude Balance (dB) max	Phase Balance (deg) max	VSWR max		Isolation	Input Power (W) Load VSWR			Outline Dwg. No.
					Input	Output		1.2	2.0	∞	
MDC2223	0.5-1	0.20	0.2	2.0	1.20	1.10	22	30	20	1	4
MDC2224	1-2	0.25	0.2	3.0	1.25	1.20	22	30	20	1	2
MDC2225	2-4	0.30	0.2	4.0	1.30	1.30	20	30	10	1	2
MDC2245A	0.5-4	0.50	0.2	4.0	1.30	1.20	20	30	10	1	6
MDC2263	3-5	0.35	0.2	4.0	1.30	1.30	20	30	10	1	2
MDC2226	4-8	0.35	0.2	4.0	1.30	1.30	20	30	10	1	1
MDC2266	2-8	0.40	0.2	4.0	1.35	1.35	20	30	10	1	3
MDC2227	7-12.4	0.40	0.2	4.0	1.30	1.35	20	30	10	1	1
MDC2288	12-18	0.60	0.2	5.0	1.35	1.40	20	30	10	1	1
MDC2289	8-18	0.60	0.2	5.0	1.35	1.40	20	30	10	1	1
MDC2290	6-18	1.00	0.2	5.0	1.50	1.50	18	30	10	1	5
MDC2269	2-18	1.00	0.3	5.0	1.50	1.50	17	30	10	1	5



Outline	A	B	C	D	E	F	G
1	1.00	1.00	0.50	0.50	0.64	0.25	.104
2	1.50	1.50	0.50	0.75	1.31	0.25	.104
3	2.00	1.50	0.50	1.00	1.31	0.25	.104
4	1.50	2.50	0.50	0.53	2.31	0.75	.104
5	1.62	1.00	0.38	0.75	0.85	0.25	.104
6	3.00	1.50	0.50	1.50	0.66	0.25	.125

Power Dividers

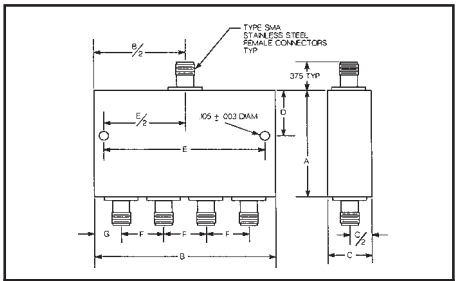
Isolated In-Phase 4 Way — 0.5-18GHz

Features

- Low VSWR, insertion loss
- Flat frequency response
- Excellent phase and amplitude tracking
- Wide bandwidth
- Useable as combiner
- RF shielded
- Constructed to exceed MIL-E-5400 & MIL-E-16400
- Type N connector models available
- Delivery from stock

MIDISCO miniature stripline power dividers provide high isolation in-phase division of input power between output ports. These low VSWR units are contained within precision machined housings that are designed to provide high RF shielding and eliminate unwanted RF modes.

Standard models have five SMA Female connectors. Other frequency ranges, 2, 8, or 16 way configurations, and different connector types are available.



Model Number	Freq. Range (GHz)	Insertion Loss (dB) max	Amplitude Balance (dB) max	Phase Balance (deg) max	VSWR max		Isolation (dB) min	Input Power (W) Load VSWR			Outline Dwg. #
					Input	Output		1.2	2.0	∞	
MDC2423	0.5-1	0.40	0.4	4.0	1.30	1.20	20	30	20	3	7
MDC2424	1-2	0.60	0.3	5.0	1.60	1.35	20	30	20	3	5
MDC2425	2-4	0.60	0.6	6.0	1.50	1.50	18	30	10	1	4
MDC2463	3-5	0.50	0.3	4.0	1.35	1.30	20	30	10	1	2
MDC2426	4-8	0.40	0.3	4.0	1.40	1.25	20	30	10	1	3
MDC2466	2-8	0.80	0.4	7.0	1.50	1.40	16	30	10	1	8
MDC2427	7-12.4	1.00	0.6	6.0	1.50	1.50	16	30	10	1	1
MDC2488	12-18	1.50	0.6	6.0	1.50	1.50	18	30	10	1	3
MDC2489	8-18	1.50	0.6	6.0	1.50	1.50	18	30	10	1	3
MDC2469	2-18	2.00	0.6	6.0	1.60	1.50	14	30	10	1	6

Outline	A	B	C	D	E	F	G
1	1.28	2.75	0.50	0.64	2.06	0.69	0.34
2	1.78	2.75	0.50	0.89	2.06	0.69	0.34
3	2.00	2.00	0.38	1.00	1.70	0.50	0.25
4	2.20	2.65	0.50	1.10	2.45	0.65	0.35
5	2.50	2.75	0.38	1.25	2.50	0.69	0.34
6	2.85	2.00	0.38	.95/1.9	1.70	0.50	0.25
7	3.40	3.60	0.50	1.70	3.40	1.00	0.30
8	3.70	4.00	0.50	1.85	3.70	1.10	0.35

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Power Dividers

Isolated In-Phase 8 Way — 0.74-18GHz

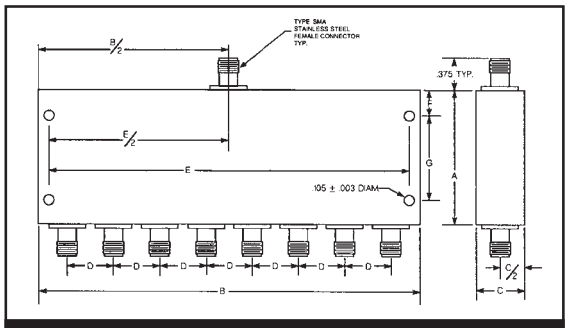
Features

- Low VSWR, insertion loss
- Flat frequency response
- Excellent phase and amplitude tracking
- Wide bandwidth
- Useable as combiner
- RF shielded
- High isolation
- Constructed to exceed MIL-E-5400 & MIL-E-16400
- Delivery from stock

MIDISCO miniature stripline power dividers provide high isolation in-phase division of input power between output ports. These low VSWR units are contained within precision machined housings that are designed to provide high RF shielding and eliminate unwanted RF modes.

Standard models have nine SMA Female connectors. Other frequency ranges, 2, 4, or 16 way configurations, and different connector types are available.

Model Number	Freq. Range (GHz)	Insertion Loss (dB) max	Amplitude Balance (dB) max	Phase Balance (deg) max	VSWR max Input	VSWR max Output	Isolation (dB) min	Input Power (W) Load VSWR 1.2	Input Power (W) Load VSWR 2.0	Input Power (W) Load VSWR ∞	Outline Dwg. #
MDC2823A	.74-.96	0.5	0.2	3.0	1.40	1.20	20	30	10	1	4
MDC2824A	1.3-1.76	0.4	0.2	4.0	1.35	1.20	19	30	10	1	2
MDC2825	2-4	1.0	0.4	5.0	1.60	1.30	18	30	10	1	2
MDC2863A	3.6-4.3	0.8	0.4	5.0	1.35	1.35	20	30	10	1	3
MDC2826	4-8	0.8	0.8	6.0	1.30	1.35	20	30	10	1	2
MDC2826A	5.5-8.0	0.7	0.3	6.0	1.75	1.25	20	30	10	1	1
MDC2827	7.0-12.4	0.8	0.6	6.0	1.55	1.45	16	30	10	1	1
MDC2888	12-18	1.5	0.6	6.0	1.60	1.50	15	30	10	1	1
MDC2889	8-18	2.0	0.6	6.0	1.60	1.50	15	30	10	1	1

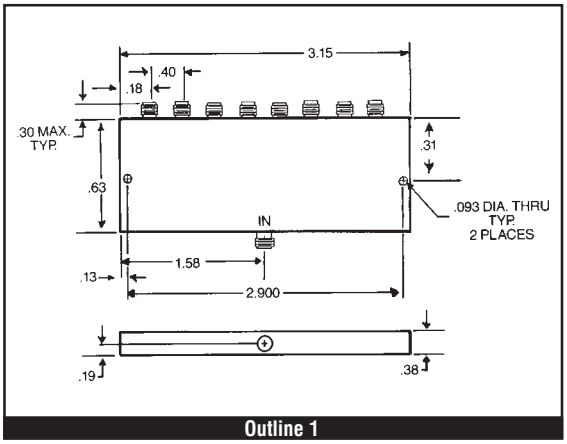


Outline	A	B	C	D	E	F	G
1	2.40	4.00	0.38	0.50	3.80	0.30	1.80
2	2.45	5.20	0.38	0.60	4.95	0.48	1.50
3	3.50	5.20	0.38	0.60	5.00	1.80	—
4	3.80	5.50	0.50	0.69	5.10	0.50	2.60

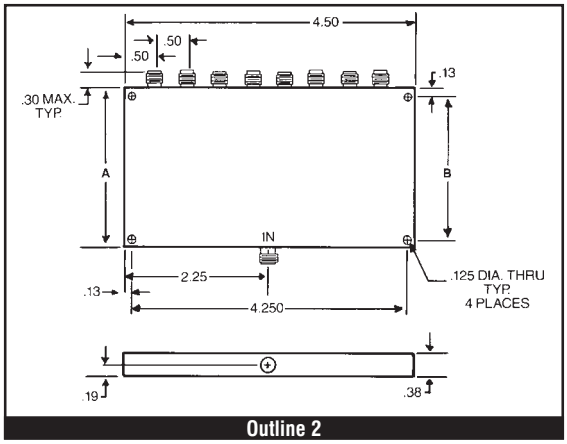
Power Dividers

Broadband & Multi-Octave — 0.2 MHz - 18 GHz

Model Number	Freq. Range (MHz)	Insertion Loss (dB) max	Amplitude Balance (dB) max	Phase Balance (deg) max	VSWR max Input	VSWR max Output	Isolation (dB) min	Input Power (W) max	Outline Dwg. #	A	B
M8P65	2-200	1.30	0.20	6.0	1.30	1.30	23	1.5	1	-	-
M8P66	5-500	1.50	0.20	6.0	1.30	1.30	23	1.5	1	-	-
M8P43	500-2000	1.50	0.30	6.0	1.40	1.25	20	30	2	2.50	2.25
M8P46	500-4000	1.80	0.50	2.0	1.50	1.50	20	30	2	4.50	4.25
M8P44	2000-8000	1.25	0.30	6.0	1.40	1.30	20	30	2	4.50	4.25
M8P32	6000-18000	1.50	0.50	5.0	1.70	1.70	15	30	2	4.50	4.25



Outline 1



Outline 2

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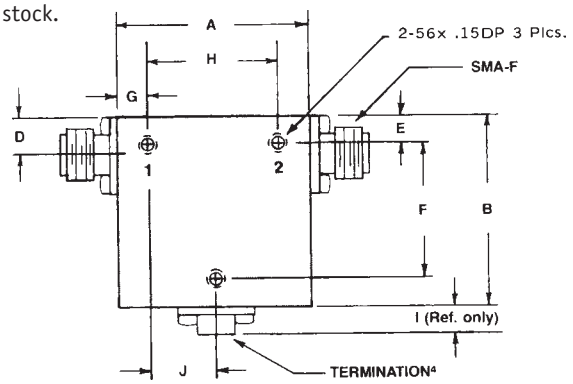
Isolators / Circulators

Single Junction - Octave/Broadband - High Performance Narrow Band

Features

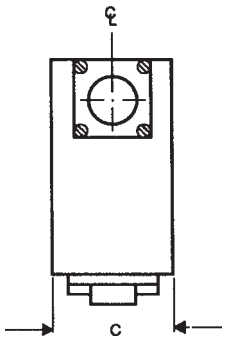
- Small size
- SMA female connectors standard
- Optional removable connectors for assembly integration
- Nickel plated
- SMA male connectors and other types available
- Dual Junction devices available
- Delivery from stock

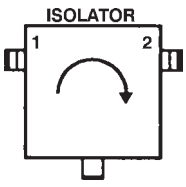
MIDISCO standard isolators and circulators are available in selected frequency ranges from 0.50 to 40.0 GHz. Standard are SMA female connectors but other types are available. Each model is nickel plate finish with chem film per MIL-C-5 5 4 1 B class 3. Test data may be ordered. Dual Junction devices are available. Standard units are in stock.

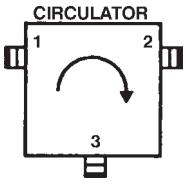


Outline No.	A	B	C	D	E	F	G	H	I	J
1	1.58 (4.01)	1.62 (4.11)	0.70 (1.78)	0.25 (0.63)	0.25 (0.63)	1.265 (3.213)	0.10 (0.25)	1.380 (3.505)	0.15 (0.29)	0.690 (1.750)
2	1.25 (3.17)	1.25 (3.17)	0.70 (1.78)	0.25 (0.63)	0.25 (0.63)	0.900 (2.286)	0.10 (0.25)	1.050 (2.667)	0.15 (0.29)	0.525 (1.330)
3	1.00 (2.54)	1.00 (2.54)	0.50 (1.27)	0.26 (0.66)	0.25 (0.63)	0.675 (1.715)	0.10 (0.25)	0.800 (2.032)	0.15 (0.29)	0.400 (1.020)
4	0.86 (2.18)	0.98 (2.49)	0.50 (1.27)	0.25 (0.63)	0.25 (0.63)	0.625 (1.587)	0.10 (0.25)	0.660 (1.676)	0.15 (0.29)	0.330 (0.840)
5	0.50 (1.27)	0.70 (1.78)	0.50 (1.27)	0.25 (0.63)	0.18 (0.46)	0.455 (1.156)	0.08 (0.20)	0.340 (0.864)	0.15 (0.29)	0.170 (0.430)
6	0.62 (1.57)	0.78 (1.98)	0.50 (1.27)	0.25 (0.63)	0.25 (0.63)	0.425 (1.079)	0.10 (0.25)	0.420 (1.067)	0.15 (0.29)	0.210 (0.530)
7	1.58 (4.01)	1.62 (4.11)	0.72 (1.90)	0.26 (0.66)	0.26 (0.66)	1.265 (3.213)	0.10 (0.25)	1.380 (3.505)	0.15 (0.29)	0.690 (0.530)
8	1.25 (3.17)	1.25 (3.17)	0.72 (1.90)	0.26 (0.66)	0.26 (0.66)	0.900 (2.286)	0.10 (0.25)	1.050 (2.667)	0.15 (0.29)	0.525 (1.330)
9	0.50 (1.27)	0.58 (1.47)	0.38 (0.97)	0.19 (0.48)	0.19 (0.48)	— —	0.10 (0.25)	0.300 (0.762)	0.15 (0.29)	— —

Frequency [1] GHz	Model No. Isolator	Model No. Circulator	Isolation dB Typ.	Isolation dB Min	Insertion Loss dB Typ.	Insertion Loss dB Max.	VSWR Typ.	VSWR Max.	Size Inches (cm) Outline No.	Approx. Weight oz. (gm.)	Isolator Power (Watts)[2] Avg.	Isolator Power (Watts)[2] Peak	Operating Temperature Range °C
2.0-4.0	M3I2040	M3C2040	20	18	0.40	0.50	1.25	1.30	1	3.50 (100)	2	20	0 to +50
2.0-6.0	M3I2060	M3C2060	15	14	0.70	0.80	1.45	1.50	1	3.50 (100)	2	20	0 to +50
2.0-8.0	M3I2080	M3C2080	—	11	—	1.40	—	1.85	1	6.90 (195)	2	20	0 to +50
2.6-5.2	M3I2652	M3C2652	20	18	0.40	0.50	1.25	1.30	1	3.50 (100)	2	20	0 to +50
3.0-6.0	M3I3060	M3C3060	21	19	0.35	0.40	1.25	1.30	2	2.00 (60)	2	20	0 to +50
3.5-7.0	M3I3570	M3C3570	20	18	0.35	0.40	1.25	1.30	3	1.20 (35)	2	20	0 to +50
3.7-8.3	M3I3783	M3C3783	18	17	0.50	0.60	1.30	1.35	3	1.20 (35)	2	20	0 to +50
4.0-8.0	M3I4080	M3C4080	22	20	0.35	0.40	1.18	1.25	3	1.20 (35)	2	20	-10 to +60
6.0-12.4	M3I6012	M3C6012	19	17	0.50	0.60	1.30	1.35	6	1.00 (30)	2	20	-10 to +60
6.0-18.0	M3I6018	M3C6018	15	14	0.90	1.00	1.45	1.50	9	0.40 (11)	2	20	0 to +85
7.0-11.0	M3I7011	M3C7011	22	20	0.35	0.40	1.18	1.25	4	1.00 (30)	2	500	-30 to +85
7.0-12.4	M3I7012	M3C7012	21	20	0.35	0.40	1.22	1.25	5	1.00 (30)	5	500	-30 lo +85
7.0-18.0	M3I7018	M3C7018	16	15	0.90	1.00	1.45	1.50	5	0.90 (25)	2	30	-10 to +85
8.0-12.4	M3I8012	M3C8012	22	20	0.35	0.40	1.18	1.25	4	1.00 (30)	2	500	-30 to +85
8.0-16.0	M3I8016	M3C8016	19	17	0.50	0.60	1.30	1.35	5	0.90 (25)	2	30	-20 to +65
8.0-18.0	M3I8018	M3C8018	17	16	0.70	0.80	1.40	1.45	5	0.90 (25)	2	30	-10 to +85
8.0-20.0	M3I8020	M3C8020	—	15	0.70	1.00	—	1.45	5	0.90 (.25)	2	30	-10 to +85
10.0-20.0	M3I1020	M3C1020	17	16	0.60	0.70	1.35	1.40	5	0.90 (25)	2	30	-20 to +65
12.0-18.0	M3I1118	M3C1118	22	20	0.45	0.50	1.18	1.25	5	0.90 (25)	2	30	-20 to +65
18.0-26.5	M3I1826	M3C1826	20	18	0.70	0.80	1.35	1.40	5	0.90 (25)	2	30	-20 to +65
26.5-40.0*	M3I2640	M3C2640	15	14	0.80	1.00	1.45	1.50	5	0.90 (25)	2	30	-20 to +65
0.5-0.55	M3I0555	M3C0555	23	20	0.30	0.40	1.15	1.25	7	4.80 (135)	2	750	-20 to +65
0.525-0.6	M3I0560	M3C0560	23	20	0.30	0.40	1.15	1.25	7	4.80 (135)	2	750	-20 to +65
0.6-0.7	M3I0670	M3C0670	23	20	0.30	0.40	1.15	1.25	7	4.50 (129)	2	750	-20 to +65
0.7-0.8	M3I0780	M3C0780	23	20	0.30	0.40	1.15	1.25	7	4.50 (129)	2	750	-20 to +65
0.8-0.9	M3I0890	M3C0890	23	20	0.30	0.40	1.15	1.25	8	2.80 (80)	2	750	-20 to +65
0.95-1.225	M3I9525	M3C9525	22	20	0.35	0.40	1.18	1.25	8	2.80 (80)	2	500	-20 to +65
1.2-1.4	M3I0112	M3C0112	23	20	0.30	0.40	1.15	1.25	8	2.70 (76)	2	500	-20 to +65
1.4-1.6	M3I0116	M3C0116	23	20	0.30	0.40	1.15	1.25	8	2.00 (56)	2	500	-20 lo +65
1.6-1.8	M3I0118	M3C0118	23	20	0.30	0.40	1.15	1.25	3	2.00 (56)	2	350	-20 to +65
1.7-2.0	M3I0120	M3C0120	23	20	0.30	0.40	1.15	1.25	3	2.00 (56)	2	350	-20 to +65
2.0-2.3	M3I0223	M3C0223	23	20	0.30	0.40	1.15	1.25	3	2.00 (56)	2	350	-20 to +65
3.7-4.2	M3I3742	M3C3742	26	23	0.10	0.15	1.10	1.15	3	1.40 (39)	2	20	-30 to +65
4.4-5.0	M3I4450	M3C4450	26	23	0.10	0.15	1.10	1.15	3	1.40 (39)	2	20	-30 to +65
5.4-5.9	M3I5459	M3C5459	26	23	0.10	0.15	1.10	1.15	6	1.00 (29)	2	20	-30 to +65
5.9-6.4	M3I5964	M3C5964	26	23	0.10	0.15	1.10	1.15	6	1.00 (29)	2	20	-30 to +65
7.5-10.0	M3I7510	M3C7510	23	20	0.30	0.50	1.15	1 25	5	0.74 (21)	2	50	-30 to +65
7.7-8.4	M3I7784	M3C7784	26	23	0.15	0.20	1.10	1.20	5	0.74 (21)	2	50	-30 to +65
8.5-9.6	M3I8596	M3C8596	26	23	0.15	0.20	1.10	1.20	5	0.74 (21)	2	50	-30 to +65
9.2-10.5	M3I9211	M3C9211	26	23	0.15	0.20	1.10	1.20	5	0.74 (21)	2	50	-30 to +65
10.7-11.7	M3I1112	M3C1112	26	23	0.15	0.20	1.10	1.20	5	0.74 (21)	2	50	-30 to +65
11.7-12.7	M3I1213	M3C1213	26	23	0.15	0.20	1.10	1.20	5	0.74 (21)	2	50	-30 to +65
17.0-20.0	M3I1720	M3C1720	24	22	0.30	0.40	1.15	1.20	5	0.74 (21)	2	50	0 to +50
19.0-22.0	M3I1922	M3C1922	24	22	0.30	0.40	1.15	1.20	5	0.74 (21)	2	50	0 to +50
20.0-21.5	M3I2021	M3C2021	24	22	0.30	0.40	1.15	1.20	5	0.74 (21)	2	50	0 to +50
20.0-23.0	M3I2023	M3C2023	24	22	0.30	0.40	1.15	1.20	5	0.74 (21)	2	50	0 to +50







1. *Other frequencies available on request*
2. ***Consult factory for power handling capability of circulator.***
3. *Storage temperature range is -55°C to 100°C.*
4. *Connector and termination locations are interchangeable.*
5. *SMA Male connectors are available by adding suffix "M1", "M2", or "M3" for corresponding port number(s). Example: M3I8018M1*

** Supplied with "K" female connectors. K connector trademark of Wiltron Co.*

MIDISCO

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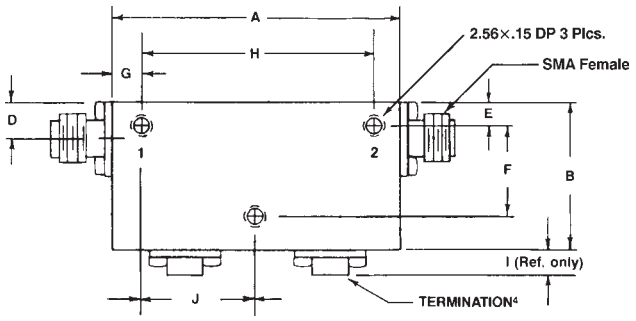
Isolators / Circulators

Dual Junction - Octave/Broadband - High Performance Narrow Band

Features

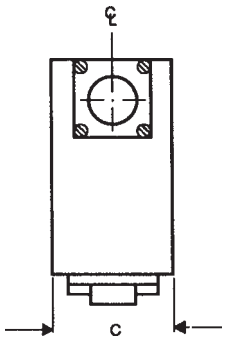
- Small size
- SMA female connectors standard
- Optional removable connectors for assembly integration
- Nickel plated
- SMA male connectors and other types available
- Single Junction devices available
- Delivery from stock

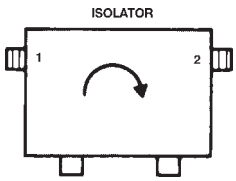
MIDISCO dual junction isolators and circulators are available in selected frequency ranges from 0.50 to 40.0 GHz. Standard are SMA female connectors but other types are available. Each model is nickel plate finish with chem film per MIL-C-5541B class 3. Test data may be ordered. Single junction devices are available. Standard units are in stock.

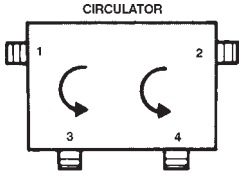


Outline No.	A	B	C	D	E	F	G	H	I	J
1	3.16 (8.03)	1.62 (4.11)	0.72 (1.90)	0.26 (0.66)	0.26 (0.66)	1.265 (3.213)	0.10 (0.25)	2.960 (7.518)	0.15 (0.29)	1.48 (3.76)
2	2.50 (6.35)	1.25 (3.17)	0.72 (1.90)	0.26 (0.66)	0.26 (0.66)	0.900 (2.286)	0.10 (0.25)	2.300 (5.842)	0.15 (0.29)	1.15 (2.92)
3	2.00 (5.08)	1.00 (2.54)	0.50 (1.27)	0.25 (0.63)	0.25 (0.63)	0.675 (1.715)	0.10 (0.25)	1.800 (4.572)	0.15 (0.29)	0.90 (2.29)
4	1.24 (3.15)	0.78 (1.98)	0.50 (1.27)	0.25 (0.63)	0.25 (0.63)	0.425 (1.079)	0.10 (0.25)	1.040 (2.642)	0.15 (0.29)	0.52 (1.32)
5	1.00 (2.54)	0.70 (1.78)	0.50 (1.27)	0.25 (0.63)	0.18 (0.46)	0.455 (1.156)	0.08 (0.20)	0.840 (2.134)	0.15 (0.29)	0.42 (1.07)
6	3.16 (8.03)	1.62 (4.11)	0.70 (1.78)	0.25 (0.63)	0.25 (0.63)	1.265 (3.213)	0.10 (0.25)	2.960 (7.518)	0.15 (0.29)	1.48 (3.76)
7	2.50 (6.35)	1.25 (3.17)	0.70 (1.78)	0.25 (0.63)	0.25 (0.63)	0.900 (2.286)	0.10 (0.25)	2.300 (5.842)	0.15 (0.29)	0.15 (0.29)
8	1.72 (4.37)	0.98 (2.49)	0.50 (1.27)	0.25 (0.63)	0.25 (0.63)	0.625 (1.587)	0.10 (0.25)	1.520 (3.861)	0.15 (0.29)	0.76 (1.93)

Frequency [1] GHz	Model No. Isolator	Model No. Circulator	Isolation dB Min Per Jct.	Insertion Loss dB Max. Per Jct.	VSWR Max.	Size Inches (cm) Outline No.	Approx. Weight oz. (gm.)	Isolator Power (Watts)[2] Avg.	Isolator Power (Watts)[2] Peak	Operating Temperature Range °C
2.0-4.0	M4I2040	M4C2040	18	0.50	1.30	6	6.9 (195)	2	20	0 to +50
2.0-6.0	M4I2060	M4C2060	14	0.80	1.50	6	6.9 (195)	2	20	0 to +50
2.0-8.0	M4I2080	M4C2080	11	1.40	1.85	6	6.9 (195)	2	20	-10 to +65
2.6-5.2	M4I2652	M4C2652	18	0.50	1.30	6	6.9 (195)	2	20	0 to +50
3.0-6.0	M4I3060	M4C3060	19	0.40	1.30	7	4.0 (115)	2	20	0 to +50
3.5-7.0	M4I3570	M4C3570	18	0.40	1.30	3	2.3 (65)	2	20	0 to +50
3.7-8.3	M4I3783	M4C3783	17	0.60	1.35	3	2.3 (65)	2	20	0 to +50
4.0-8.0	M4I4080	M4C4080	20	0.40	1.25	3	2.3 (65)	2	20	-10 to +60
6.0-12.4	M4I6012	M4C6012	17	0.60	1.35	4	1.9 (55)	2	20	-10 to +60
7.0-11.0	M4I7011	M4C7011	20	0.40	1.25	8	1.9 (55)	2	200	-30 to +85
7.0-12.4	M4I7012	M4C7012	20	0.40	1.25	8	1.9 (55)	5	500	-30 to +85
7.0-18.0	M4I7018	M4C7018	17	1.00	1.50	5	1.6 (45)	2	30	-10 to +85
8.0-12.4	M4I8012	M4C8012	20	0.40	1.25	8	1.9 (55)	2	200	-30 to +85
8.0-16.0	M4I8016	M4C8016	17	0.60	1.35	5	1.6 (45)	2	30	-20 to +65
8.0-18.0	M4I8018	M4C8018	16	0.80	1.45	5	1.6 (45)	2	30	-10 to +85
8.0-20.0	M4I8020	M4C8020	15	1.00	1.45	5	1.6 (45)	2	30	-20 to +65
10.0-20.0	M4I1020	M4C1020	16	0.70	1.40	5	1.6 (45)	2	30	-20 to +65
12.0-18.0	M4I1118	M4C1118	20	0.50	1.25	5	1.6 (45)	2	30	-20 to +65
18.0-26.5	M4I1826	M4C1826	18	0.80	1.40	5	1.6 (45)	2	30	-20 to +65
20.0-30.0*	M4I2030	M4C2030	18	0.70	1.40	5	1.6 (45)	2	30	-20 to +65
20.0-40.0*	M4I2004	M4C2004	13	1.20	1.60	5	1.6 (45)	2	30	-20 to +65
26.5-40.0*	M4I2640	M4C2640	14	1.00	1.50	5	1.6 145)	2	30	-20 to +65
0.5-0.55	M4I0555	M4C0555	20	0.40	1.25	1	9.3 (265)	2	750	-20 to +65
0.525-0.6	M4I0560	M4C0560	20	0.40	1.25	1	9.3 (265)	2	750	-20 to +65
0.6-0.7	M4I0670	M4C0670	20	0.40	1.25	1	8.9 (253)	2	750	-20 to +65
0.7-0.8	M4I0780	M4C0780	20	0.40	1.25	1	8.9 (253)	2	750	-20 to +65
0.8-0.9	M4I0390	M4C0890	20	0.40	1.25	2	5.5 (155)	2	750	-20 to +65
0.95-1.225	M4I9525	M4C9525	20	0.40	1.25	2	5.5 (155)	2	500	-20 to +65
1.2-1.4	M4I0112	M4C0112	20	0.40	1.25	2	5.2 (147)	2	500	-20 to +65
1.4-1.6	M4I0116	M4C0116	20	0.40	1.25	2	3.8 (101)	2	500	-20 to +65
1.6-1.8	M4I0118	M4C0118	20	0.40	1.25	3	3.8 (107)	2	350	-20 to +65
1.7-2.0	M4I0120	M4C0120	20	0.40	1.25	3	3.8 (107)	2	350	-20 to +65
2.0-2.3	M4I0223	M4C0223	20	0.40	1.25	3	3.8 (107)	2	350	-20 to +65
3.7-4.2	M4I3742	M4C3742	23	0.15	1.15	3	2.6 (73)	2	20	-30 to +65
4.4-5.0	M4I4450	M4C4450	23	0.15	1.15	3	2.6 (73)	2	20	-30 to +65
5.4-5.9	M4I5459	M4C5459	23	0.15	1.15	4	1.9 (53)	2	20	-30 to +65
5.9-6.4	M4I5964	M4C5964	23	0.15	1.15	4	1.9 (53)	2	20	-30 to +65
7.5-10.0	M4I7510	M4C7510	20	0.50	1.25	5	1.3 (37)	2	50	-30 to +65
7.7-8.4	M4I7784	M4C7784	23	0.20	1.20	5	1.3 (37)	2	50	-30 to +65
8.5-9.6	M4I8596	M4C8596	23	0.20	1.20	5	1.3 (37)	2	50	-30 to +65
9.2-10.5	M4I9211	M4C9211	23	0.20	1.20	5	1.3 (37)	2	50	-30 to +65
10.7-11.7	M4I1112	M4C1112	23	0.20	1.20	5	1.3 (37)	2	50	-30 to +65
11.7-12.7	M4I1213	M4C1213	23	0.20	1.20	5	1.3 37)	2	50	-30 to +65







1. *Other frequencies available on request*
2. ***Consult factory for power handling capability of circulator.***
3. *Storage temperature range is -55°C to 100°C.*
4. *Connector and termination locations are interchangeable.*
5. *SMA Male connectors are available by adding suffix "M1", "M2", "M3", or "M4" for corresponding port number(s). Example: M4I8018M1*

** Supplied with "K" female connectors. K connector trademark of Wiltron Co.*

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General Information

Delivery:
Stock items are shipped the same day. Typically within 72 hours for specials.

Standards:
Midisco uses a calibration system traceable to the National Bureau of Standards. Our Quality Assurance and Inspection system is in accordance with MIL-I-45208 and follows the guidelines of ISO-9000.

Terms:
Net 30 days upon approval. We accept major credit cards.

Specifications:
Subject to change without notice.

Shipping:
UPS is standard. For Federal Express and others please indicate your account number.

FOB:
Islandia, New York.

Prices:
All prices are subject to change without notice. Formal price quotations remain open for 30 days unless otherwise noted.

Source Inspection Surcharge:
A surcharge is placed on orders requiring source inspection.

Specifications:
Midisco reserves the right to make, without notice, modifications of the products described in this catalog without effecting the right to sell such products under orders based on the catalog description, if the modifications shall not materially effect performance.
We also reserve the right to withdraw from sale, without notice, any items described in our catalogs.

Repairs:
When returning items for any reason, please contact Midisco for shipping instructions and the RMA number which must be on the outside of the box.

For a copy of our full line catalog call today.

Coaxial Cable Assemblies

Midisco offers a broad range of standard coaxial cable assemblies in both flexible and semi-rigid type cables. Standard assemblies are offered in various lengths, with good prices and quick delivery. We also have High Performance cable assemblies which will meet or exceed your specifications.

The Ultra-Flex and Snake series of cables were generated by MIDISCO to be an effective replacement for semi-rigid. Tooling is not required for either series, nor are detailed drawings since both can be hand formed. Only the overall length need be specified.

To minimize delivery time and provide maximum cost effectiveness, Midisco will lay out cables within a customer furnished assembly, provide forming data suitable for subsequent manufacturing and completely adequate for customer preparation of formal assembly drawings, at nominal cost.

RF testing data of SWR (return loss) and insertion loss can be provided at modest cost. Typical delivery impact is 2-3 days.

Adapters

Every conceivable combination of inter and intra series adapter is available from Midisco. For lower frequency applications (to about 12 GHz), the cost effective standard series should be suitable. We also carry many Precision adapters for more demanding applications.

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Nominal Loss & Power Handling Characteristics

NOMINAL LOSS CHARACTERISTICS (DB/100 FEET):

FREQ (MHZ)	CABLE REFERENCE (SEE BELOW)															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	HP
10	0.86	0.41	1.35	1.2	1.1	0.9	0.9	1.2	3.8	3.8	—	0.04	—	—	—	—
50	1.50	1.00	3.0	3.1	2.3	1.9	2.1	2.7	6.5	7.9	—	0.09	—	—	—	—
100	2.20	1.4	4.3	4.8	3.3	2.8	3.0	3.9	8.9	11.5	2.00	0.13	5.90	3.25	3.8	—
200	3.20	2.1	6.0	7.0	4.7	3.7	4.3	5.5	12	15	2.75	0.18	8.20	4.60	5.3	—
400	4.60	3.1	8.8	10.0	6.7	5.2	6.1	8.0	17.5	20	4.15	0.28	10.15	6.65	7.5	—
1000	9.0	5.8	16.5	17.5	11.5	8.5	10.5	13.0	31	30	8.5	0.51	19.0	11.0	12.0	—
3000	19.0	13.0	36.0	38.0	25.5	18.4	23.5	26.0	64.3	58	13.0	—	34.0	20.5	25.0	—
5000	28.0	19.0	51.0	—	41.0	29.5	36.0	36.0	97	79	17.5	—	44.0	28.0	29.5	—
10000	47.0	31.0	85.0	—	—	—	—	62.0	185	133	27.0	—	67.0	43.0	42.0	—

AVERAGE POWER HANDLING CAPABILITY, WATTS CW , EXCEPT WHERE NOTED
(@ AMBIENT OF 40^0 C, SEA LEVEL. CENTER CONDUCTOR @ 80^0 C FOR POLYETHYLANE, 200^0 C FOR PTFE).

10	3700	6000	800	730	1300	1300	1150	9000	170	1250	—	130KW	—	—	—	—
50	1300	2000	310	280	480	480	420	3500	72	600	—	53KW	—	—	—	—
100	850	1200	205	180	310	310	280	2400	50	450	850	37KW	350	1100	2.4KW	—
200	540	800	137	125	200	200	180	1600	36	330	550	24KW	240	760	1.5KW	—
400	350	480	90	85	135	135	120	1100	25	240	360	17KW	165	520	1KW	—
1000	190	260	53	50	77	77	69	650	16	160	210	9.2KW	95	310	570	—
3000	95	120	28	25	40	40	35	350	—	80	115	—	50	160	290	—
5000	65	85	20	—	27	27	25	245	—	57	85	—	36	120	220	—
10000	37	50	10	—	—	—	—	140	—	30	60	—	26	76	150	—

CABLE REFERENCE FINDER (TYPE RG/U OR OTHER):

GROUP	CABLE(S)
A*	9, 9A, 9B, 11, 12, 13, 214, 216
B	14, 74, 217, 224, 293, 338
C	55, 55A, 55B, 223
D	58, 58B
E	59, 59A, 59B
F	62, 62A, 71, 71A
G	62B
H	140, 141, 141A. 142, 142B, 159, 302

GROUP	CABLE(S)
I	174, 174A
J	188, 188A, 316
K	SF214
L	234, 242
M	0.086 SEMIRIGID, SNAKE, ULTRA-FLEX, RG405
N	0.141 SEMIRIGID, SNAKE, ULTRA-FLEX, RG402
O	SF142B
HP	HIGH PERFORMANCE TO 26 GHZ, SEE DATA SHEETS FOR 8301, 8165, 8190, 8290, 8305, 8305S, 8305SP

* 10000 MHZ DATA NOT APPLICABLE TO RG11, 12, 13, 216

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Woken Technology Inc.
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PART NUMBER CONSTRUCTION

A - B - C - D

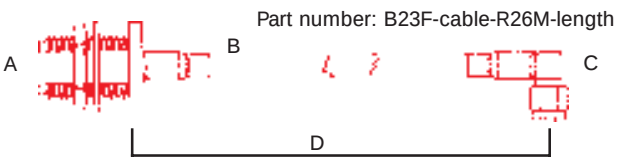
A First Connector
- 1st digit Connector Type Code
- 2nd & 3rd digit Connector Family Code
- 4th digit Connector Sex Code

B Cable Code

C Second Connector
- 1st digit Connector Type Code
- 2nd & 3rd digit Connector Family Code
- 4th digit Connector Sex Code

D Length in inches

Example



Part number: B23F-cable-R26M-length

Cable	Code
.084 dia. Ultra-Flex (75 Ohm)	8084
.085 dia. Ultra-Flex	8085
.141 dia. Ultra-Flex	8141
.034 dia. Snake*	5034
.047 dia. Snake*	5047
.086 dia. Snake (RG 405)*	5085
.141 dia. Snake (RG 402)*	5141
.250 dia. Snake *	5250
.034 dia. Snake aluminum outer*	5034A
.047 dia. Snake aluminum outer*	5047A
.086 dia. Snake (RG 405) aluminum outer*	5085A
.141 dia. Snake (RG 402) aluminum outer*	5141A
.250 dia. Snake aluminum outer*	5250A
Low Loss Flexible (18GHz)	8301
Low Loss Flexible (26.5GHz)	8165
Low Loss Flexible (18GHz)	8190
Low Loss Flexible (18GHz)	8290
Low Loss Flexible (18GHz)	8305
Low Loss Flexible (18GHz)	8305P
Low Loss Flexible (18GHz)	8305S
Low Loss Flexible (18GHz)	8305SP
RG 6/U	6
RG 8/U	8
RG 9/U (51 Ohm)	9
RG 11/U	11
RG 55/U	55
RG 58/U	58
RG 59/U (75 Ohm)	59
RG 62/U (93 Ohm)	62
RG 141/U	141
RG 142/U	142
RG 174/U	174
RG 178/U	178
RG 178 D	178D
RG 179/U (75 Ohm)	179
RG 187/U	187
RG 188/U	188
RG 196/U	196
RG 213/U	213
RG 214/U	214
RG 217/U	217
RG 223/U	223
RG 303/U	303
RG 316 D	316D
RG 316/U	316
RG 393	393
RG 400/U	400
SF 142	SF142
SF 214	SF214
LMR 200	L200
LMR 400	L400

*note that Snake has a copper outer jacket unless an aluminum outer is preferred (A). Snake has a PTFE dielectric with silver-plated copper or silver-plated copper clad steel conductors. Tin-plated or silver-plated copper jackets are also available. Call for details.

Connector Type	Code
Straight	S
Right Angle	R
Bulkhead	B
Insulated Bulkhead	I
Panel (Flange) -2 hole	2P
Panel (Flange) -4 hole	4P
Cable Terminator	C
Printed Wiring Board Terminator	W

Connector Family	Code
3.5 mm	01
7mm	02
7/16”	03
Alligator Clip - Black	04
Alligator Clip - Red	05
Banana Plug - Black	06
Banana Plug - Red	07
BNC	08
BNC Triax (2 Prong)	09
BNC Triax (3 Prong)	10
BNC Twin (2 Prong)	11
BNC Twin (3 Prong)	12
C	13
Cable Terminator	14
CMS	15
F	16
874 (add L for locking)	17 (add L for locking)
900	18
HN	19
LC	20
MCX	21
MMCX	22
N	23
SC	24
SHV	25
SMA	26
SMA Phase Adjustable	27
SMB	28
SMC	29
SSCMS	30
SSMA	31
SSMB	32
SSMC	33
TNC	34
UHF	35
MHV	36
Special	37

Connector Sex	Code
Female Jack	F
Male Plug	M
Reverse PolarityPlug	A
Reverse Polarity Jack	B
SMB, SSMB, SMC, SSMC, CMS, SCMS series	
Male Jack**	M
Female Plug**	F

**Please note that the sex is determined by the contact.

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Woken Technology Inc. Tel:886-3-3979900 Fax:886-3-3979911

Ultra-Flex

For Hand Formed Semi-Flexible Cable Assemblies

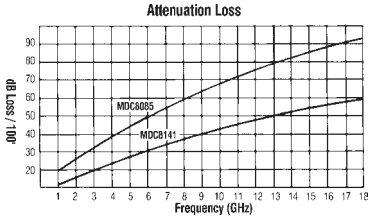
Features

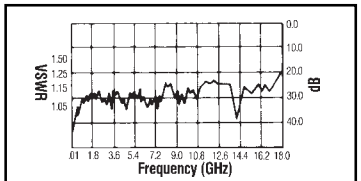
- No bending tools required
- Ultra-flexibility
- 100% shielded
- Many connector possibilities
- Low insertion loss
- Cable spools & cable assemblies available to 100 feet
- Perfect for prototypes
- Excellent for laboratory
- May be purchased without connectors
- Dielectric material: Teflon (TFE)
- Outer jacket: Silver coated copper covered steel
- Shield: Tin filled copper braid, 100% coverage
- Velocity of propagation: 70% nominal
- Delivery one week (or less)

MIDISCO Ultra-Flex coaxial cable and assemblies eliminate the need for tooling normally required to form semi-rigid assemblies. This cable series is extremely flexible, can be shaped and reshaped by hand, and supplied with most of the standard connector types. The 100% shielded cable has a copper-tin composition outer jacket, teflon insulator and a silver coated copper over steel center conductor. Both 50 ohm versions, the 0.085 diameter (MDC8085) and 0.141 diameter (MDC8141) types have excellent electrical performance to 20 GHz and above at temperatures to 200°C. A 75 ohm version (MDC8084) is also available.

These assemblies are perfect for prototype and production applications, especially when there are close quarters that don't permit pre-bending. The low loss, good VSWR ultra- flexibility and wide connector selection make them useful in the test laboratory. Connectors are also available separately. Delivery is one week.

Performance





Typical VSWR — MDC8141 Cable
10 foot Cable Assembly
with SMA (M) Connectors

Cable Type	Impedence ohms (nom)	Cable O.D.	Dielectric O.D.	Shield ohms/K'	Conductor O.D.	Capacitance pF/ft (nom)	Attenuation (loss) @ Freq. (MHz) dB/100ft.										Bend Radius	
							50	100	200	400	700	1000	4000	7000	10000	18000	min.	suggstd.
MDC8141	50	0.141	0.118	4.5	0.0365	29.3	2.4	3.5	5.0	7.6	10.0	13.0	30.0	41.0	50.0	73.0	.500	.750
MDC8085	50	0.083	0.064	10.2	0.0201	29.3	4.5	6.5	9.2	13.0	17.0	22.0	44.0	58.0	70.0	105.0	.125	.250
MDC8084	75	0.084	0.065	10.2	0.0113	19.3	4.5	6.6	10.0	15.0	21.0	26.0	60.0	82.0	110.0	—	.125	.250

Cable Assembly Ordering Information

Insert Cable Type chosen into part number formula: ConnectorA—Cable—ConnectorB—Length(inches)
Example: SM-8085-BF-27 is a 27 inch assembly with an SMA male and BNC female connectors using MDC8085 cable. For further information, please contact MIDISCO.
See the Coaxial Cable Assemblies section for cable assemblies available from stock.

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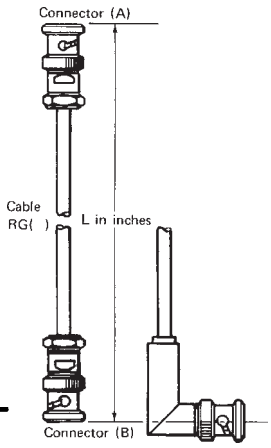
Coaxial Cable Assemblies

Test & Production Cables & Custom Adapters

Features

- MIL Spec cable and connectors where applicable
- Construction from sketch, print, black box or bent wire
- Precision bending & assembly techniques
- Reformable semi-rigid Mil spec SNAKE at no extra charge
- Ultra-Flex assemblies
- All connector types including SMA Phase Adjustable Flexible, semi-rigid, Snake or Twist cable types
- Custom made inexpensive hard to find adapters
- Panel (flange) or bulkhead (hex-nut) connectors
- Right angle or straight connectors
- Printed data available to 26.5 GHz
- Three day delivery of any configuration

MIDISCO cable assemblies and custom adapters are manufactured from drawings, sketches, and even wire coat hangers that are bent into shape and sent to our quick reaction shop. All connector types and coaxial cable sizes are stocked for fast assembly turnaround. Data can be supplied up to 26.5 GHz and completed assemblies can be delivered in three days.



Systems design may sometimes dictate the need for a different series connector at each end of the assembly, a right angle or perhaps a panel (flange) or bulkhead (hex-nut) type. The connector and cable types shown here are samples of what is available with quick delivery. They can be combined for a standard MIDISCO part number. Construction is in accordance with applicable military specifications. For prototype assemblies, we suggest the Ultra-Flex assemblies or the full MIL-spec SNAKE. See the ADAPTO-CABLE section for complete laboratory cable kits.

Connector Types				Cable Types
Types	P/N	Types	P/N	
N Male	NM	SMA Male	SM	
N Female	NF	SMA Female	SF	RG55, RG58, RG59, RG62, RG141, RG142,
BNC Male	BM	SMB Male	SMBM	RG174, RG188, RG214, RG223, RG316
BNC Female	BF	SMB Female	SMBF	MIDISCO Snake MDC5085, MDC5141,
TNC Male	TM	SMC Male	SMCM	Ultra-Flex MDC8084, MDC8085, MDC8141, 0.085 and
TNC Female	TF	SMC Female	SMCF	0.141 Semi-Rigid. (RG405 and RG402 respectively), etc
		UHF Male	UM	

MIDISCO part numbers: *ConnectorA—RGxxx—ConnectorB—Length (in inches)*
Example: RNM-58-BF-36 is a 3-foot RG58 Cable Assembly with a right angle Type N Male and a BNC Female.
Prefix connector part number with "P" for panel mount, "B" for bulkhead, or "R" for right angle

Coaxial Cable Assemblies Available From Stock			
Model Number	Connector A	Connector B	Cable Type
BM-58-BM-"L"	BNC Male	BNC Male	RG58
SM-316-SM-"L"	SMA Male	SMA Male	RG316
SM-8085-SM-"L"	SMA Male	SMA Male	UltraFlex MDC8085
SM-8141-SM-"L"	SMA Male	SMA Male	UltraFlex MDC8141

Standard lengths (inches) available from stock: 12, 18, 24, 30, 36, 38, 48, and 60. Select letter for each cable and substiute that length for "L" in each cable assembly. Other lengths available; please contact MIDISCO.

Custom Semi-Rigid & Flexible Assemblies

Features

- Construction from print, sketch, black box or bent wire for fast prototype
- Precision bending
- Quality tooling, assembly and bending techniques
- Fast delivery from stocked cable and connectors
- Phase Adjustable Connectors available (see MIDISCO models MDC1089-2, 3)
- Testing to 26 GHz
- Prototype or production quantities

The MIDISCO custom cable assembly department will manufacture custom coaxial cable configurations to your exact specifications. Semi-rigid and rebendable semi-rigid types are available from 0.047 diameter to 0.325 diameter.



Prototypes are available within three days, working from a sketch, outfitting a black box or from a bent wire coat hanger. Each assembly can be tested on our network analyzer to 26 GHz if required. Phase adjustable connectors are maintained in inventory to satisfy quick reaction phase match requirements.

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Reformable Semi-Rigid Cable

MIDISCO Snake — Copper and Aluminum

Features

- Tighter bend radii than conventional cable
- Easier alignment of connector interface
- Better phase stability with temperature and flexing
- Coils to 100 feet or straight 5 foot lengths
- Fine performance with solder or crimp connectors
- Meets all MIL-C-17 requirements
- Delivery from stock



.141" Dia. Cable



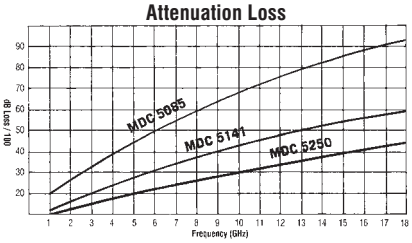
.086" Dia. Cable

When semi-rigid cables need to be formed and re-formed before or after the connectors have been attached, the MIDISCO-Snake will provide the flexibility without a significant effect on insertion loss,VSWR, or impedance.

These flexible semi-rigid cables are available in 0.034, 0.047, 0.085, 0.141, and 0.250 diameter and feature a soft OFHC copper or aluminum jacket and PTFE dielectric with silver-plated copper or silver-plated copper clad steel conductors. Tin-plated or silver-plated copper or aluminum jackets and many connector types are also available.

Performance

Attenuation Loss



Part Number	Impedence	Cable O.D.	Dielectric O.D.	Conductor O.D.	Min. Bend Radius	Corona Extnc. Voltage	Weight / 100ft.
MDC5034	50±1ohm	0.034 max	0.026 nom	0.0080 nom	0.050"	0.75kV 60Hz RMS	0.26
MDC5047	50±1ohm	0.047 max	0.037 nom	0.0113 nom	0.095"	1.00kV 60Hz RMS	0.45
MDC5085	50±1ohm	0.086 max	0.066 nom	0.0201 nom	0.137"	1.50kV 60Hz RMS	1.5
MDC5141	50±1ohm	0.141 max	0.117 nom	0.0362 nom	0.237"	1.90kV 60Hz RMS	3.5
MDC5250	50±1ohm	0.250 max	0.209 nom	0.0641 nom	0.312"	3.00kV 60Hz RMS	10.5

For aluminum jacketed semi-rigid cable, add suffix "A". Example: MDC5141A

Ordering Information

When ordering, complete the part numbers above by adding the following suffix: Suffix "C" for a silver plated copper conductor. Suffix "S" for a silver plated copper clad steel conductor. The further addition of "TP" or "SP" will signify whether the outer conductor is to be either tin plated or silver plated.
Available in straight lengths or coils.

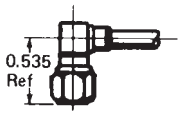
SMA Right Angle Bent Assembly

Features

- Lower VSWR than with mitred connectors
- Standard with 0.085 and 0.141 semi-rigid cable
- Saves assembly time
- Available with MIDISCO Snake Cable (Rebendable)
- Same or lower profile than right angle connectors
- Other types available
- Delivery from stock

MIDISCO bending techniques, combined with the ultra short SMA Plugs MDC 1141S for RG 402 (0.141) and MDC 1085S for RG 405 (0.085), eliminate the need for conventional mitred right angle semi-rigid cable connectors. The user specifies the cable type and length up to 60" and receive the connector already attached with a tight 901 bend at one end. Any lengths are available from stock.

Conventional Method



BENT CABLE METHOD

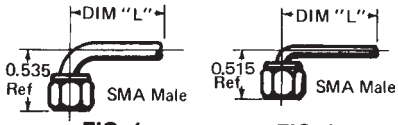
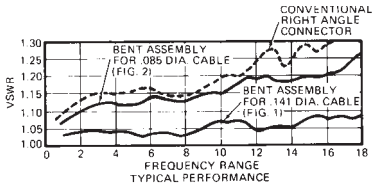


FIG. 1 0.141 Dia. FIG. 2 0.085 Dia.



Ordering Information:

MDC1052-"L" — part number for 0.141 cable
MDC1053-"L" — part number for 0.085 cable

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High Performance Cable Assemblies

Low Insertion Loss

MIDISCO HIGH PERFORMANCE FLEXIBLE CABLE ASSEMBLIES

"MORE POWER TO YOU"

Whether you are "coming" (receiving) or "going" (transmitting) MIDISCO's high performance cable assemblies will help you preserve your precious dBs. The low insertion loss makes these cable assemblies ideal for receiving systems where noise figure is a major consideration, while the power handling capabilities of the 8290 and 8305 series combined with their low loss make them extremely suitable for transmission applications. The entire line of MIDISCO high performance cable assemblies are rugged enough for the demanding repetitive use of engineering and production laboratories, as well as for permanent indoor and outdoor installations - anyplace where reliability, durability and performance are paramount. Most assemblies are available in lengths up to 100 feet or longer.
Summarized in table 1 are key parameters of some of MIDISCO's more popular types. Table 2 tabulates the insertion loss and VSWR of some standard lengths of MDC 8301 cable assemblies, including connector contributions. Figure 1 shows typical VSWR and insertion loss data for the MDC 8190 cable, while figure 2 shows the same data for the MDC 8165 cable.

Part numbers for high performance cables are constructed the same as for standard cables. The 18 GHz cable assemblies are available with SMA. type N, TNC and 7 mm connectors. 26.5 GHz assemblies are available with extended range SMA or 3.5 mm connectors. On the MDC 8165, the cable is an integral part of the connector resulting in better VSWR to 26.5 GHz (35 GHz when mated with a type "K" connector). Standard length tolerances for high performance cable assemblies are summarized below. Lengths are measured to the reference plane of straight connectors and the center line of right angle connectors.

Length	Tolerance
up to 1 foot	-0.25, + 0.50 inches
1 to 3 feet	-0.25, + 0.75 inches
3 to 6 feet	-0.50, + 1.0 inches
6 to 20 feet	-1.0, + 2.0 inches
greater than 20 feet	please call

USER CONSIDERATIONS: In estimating the total loss of an assembly, the user must consider the loss of the connectors, and the mismatch associated with both the VSWR of the cable assembly and the interfacing components at the next higher assembly. Connector losses are difficult to estimate. MIDISCO minimizes the loss by utilizing solder in addition to compression and clamping to fasten the outer conductor. Typical losses for straight connectors range from less than 0.05 dB per connector @ 2 GHZ to about 0.20 dB @ 26.5 GHz. Angle connectors typically run about 20-25% higher in insertion loss. Radius angle connectors however, have virtually the same VSWR and loss as straight connectors.

In critical RF and microwave applications, a cable assembly must be treated like any other component, and its' effect on end-to-end performance considered.. These features are particularly important in applications operating over a wide instantaneous bandwidth where the frequency dependent VSWR of the cable assembly and its' interacting components can cause unacceptable variations in composite P-P insertion loss (ie: gain flatness). To illustrate this, consider the examples below.

COMPONENT 1 VSWR	CABLE VSWR	COMPONENT 2 VSWR	WORST CASE GAIN/LOSS
1.5:1	N/A	1.5:1	+0.34/-0.35 dB
1.5:1	1.15:1	1.5:1	+0.45/-0.48 dB
1.5:1	1.5:1	1.5:1	+0.63/-0.71 dB

As can be seen, interconnecting cable performance can yield unexpected results to the unsuspecting user if their contributions are not considered during initial analysis. MIDISCO's high performance cable assemblies have inherentlly low VSWR and small fine grain variations, making them ideal for critcial applications at initial design or retrofitting.

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TABLE I HIGH PERFORMANCE CABLE SUMMARY

PARAMETER									
Cable Code	8402*	8301	8165	8190	8290	8305	8305P	8305S	8305SP
FREQ (GHZ)	DC-20	DC-18	DC-26.5	DC-26.5	DC-26.5	DC-18	DC-18	DC-18	DC-18
LOSS/100' DB									
@2GHZ	16.8	11.7	SEE CURVE	SEE CURVE	8.6	8.2	8.2	7.5	7.5
@10GHZ	42.2	27.2	SEE CURVE	SEE CURVE	21.2	20.4	20.4	18.7	18.7
@18 GHZ	60.9	37.6	SEE CURVE	SEE CURVE	31.1	29	29	26.8	26.8
SHIELDING	>90 DB	>100 DB	>90 DB	>90 DB	>90 DB	>90 DB	>90 DB	>90 DB	>90 DB
OD (IN) 0.2	0.163	0.200"	0.165	0.190	0.290	0.305	0.305	0.305	0.305
DIELECTRIC	PTFE	AIR/PTFE	PTFE	AIR/PTFE	AIR/PTFE	AIR/PTFE	AIR/PTFE	AIR/PTFE	AIR/PTFE
JACKET	FEP TEFLON	FEP TEFLON	FEP TEFLON	FEP TEFLON	FEP TEFLON	FEP TEFLON	POLYURETHANE	FEP TEFLON	POLYURETHANE
CONDUCTOR	STRANDED	SOLID	STRANDED	STRANDED	STRANDED	STRANDED	STRANDED	SOLID	SOLID
BEND RADIUS	0.200	1.0"	1.0"	1.0"	1.5"	1.7"	1.7"	1.8"	1.8"
WEIGHT	3 LB/100 FT	.4 OZ/FT	0.6 OZ/FT	0.6 OZ/FT	1.28 OZ/FT	1.44 OZ/FT	1.44 OZ/FT	1.44 OZ/FT	1.44 OZ/FT
TEMPERATURE	-65/200 C	-55/105C	-48/200C	-48/200C	-65/200C	-65/200C	-65/85C	-65/200C	-65/85C
CW POWER (WATTS)									
@.5 GHZ	600	1050	650	3000	6000	6000	6000	6000	6000
@1 GHZ	450	700	450	2000	4100	4100	4100	4100	4100
@2 GHZ	--	500	310	1550	2700	2700	2700	2700	2700
@4 GHZ	--	350	215	1000	2000	2000	2000	2000	2000
@6 GHZ	--	290	170	800	1700	1700	1700	1700	1700
@10 GHZ	120	215	150	600	1200	1200	1200	1200	1200
@12 GHZ	--	180	98	550	960	960	960	960	960
@18 GHZ	75	140	80	420	830	830	830	830	830

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*Also available in 0.100" jacket diameter as cable code 8405. Performance is similar to Midisco Ultra-Flex MDC8085 and Midisco Snake MDC5141, but with FEP outer jacket.

To order a High Performance cable assembly, construct the part number as follows:
First Connector- Cable Code- Second Connector-Length in inches
The Connector codes are on page 1.

TABLE II
MAXIMUM LOSS (DB) AND VSWR OF SELECTED MDC8301 CABLE ASSEMBLIES

	N MALE				TNC MALE				SMA MALE			
FREQ	12"	24"	36"	VSWR	12"	24"	36"	VSWR	12"	24"	36"	VSWR
DC-1	0.16	0.24	0.33	1.10:1	0.12	0.26	0.35	1.13:1	0.14	0.22	0.31	1.11:1
1 -2	0.22	0.35	0.47	1.15:1	0.16	0.36	0.49	1.17:1	0.19	0.32	0.44	1.13:1
2-4	0.32	0.49	0.67	1.20:1	0.23	0.51	0.69	1.21:1	0.26	0.45	0.63	1.16:1
4-6	0.38	0.6	0.82	1.25:1	0.28	0.62	0.85	1.23:1	0.34	0.55	0.78	1.23:1
6-12	0.54	0.85	1.17	1.30:1	0.39	0.88	1.22	1.28:1	0.49	0.8	1.12	1.27:1
12-18	0.65	1.04	1.43	1.35:1	0.5	1.12	1.53	1.35:1	0.6	0.99	1.38	1.36:1

High Performance Cable Assemblies

Typical Cable Performance

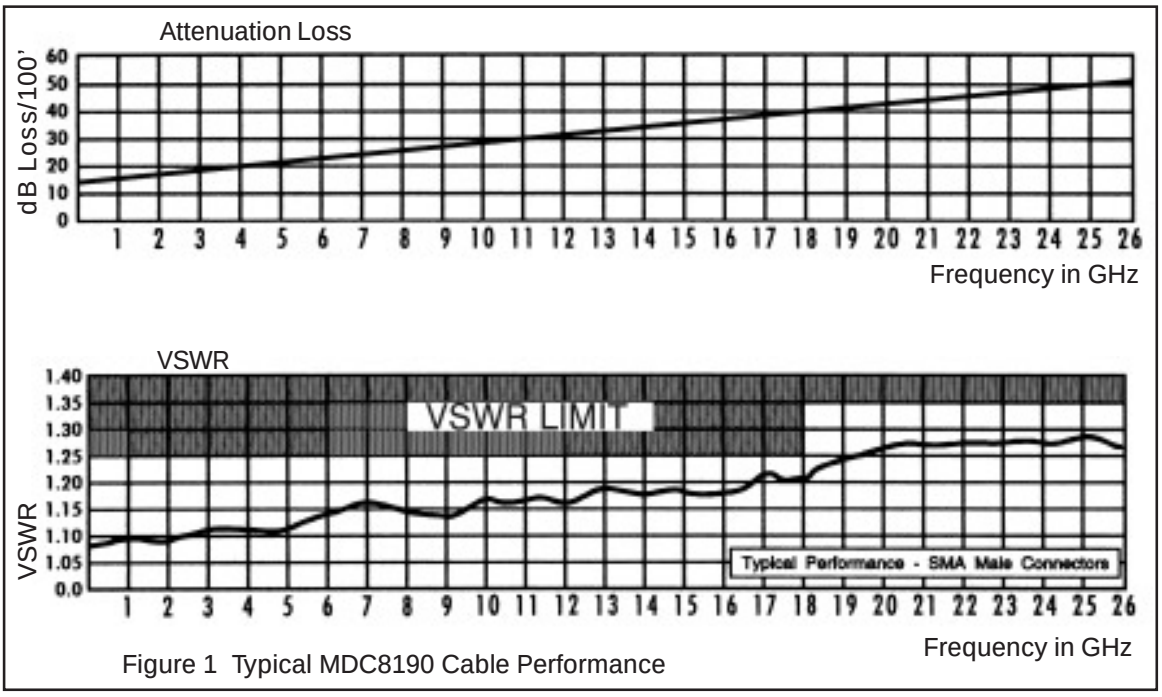


Figure 1 Typical MDC8190 Cable Performance

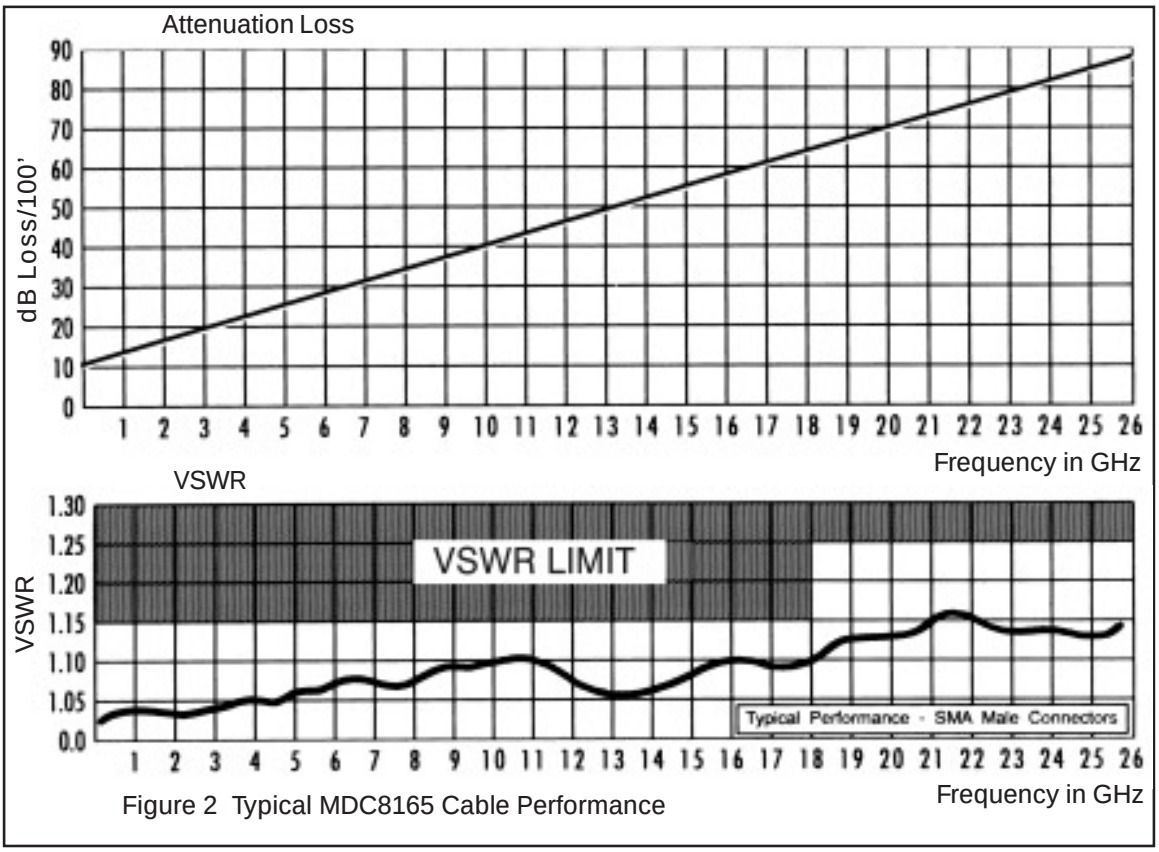


Figure 2 Typical MDC8165 Cable Performance

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Phase Adjustable Semi-Rigid Cable Assemblies

Mechanically Adjustable

Features

- Available as .141 dia. and .085 dia. semi-rigid assemblies
- Phase range = 10º x F(GHz)
- DC to 18 GHz, low VSWR
- Meets applicable paragraphs of MIL-STD-202

Specifications: Phase Adjustable SMA Connector

Electrical	
Phase Change	0.636º x F(GHz) per rev. of adjustment nut
Frequency	DC-18 GHz
VSWR	See Adapter section
Insertion Loss	0.08 x $F^{1/2}$ (GHz)
Impedance	50 ohms
Material	
Conductor	Gold plated BeCu
Body	Gold plated brass or BeCu
Adjusting nut	Nickel plated brass
Coupling nut	Passivated Steel
Insulator	TFE
Mechanical	
Mating	MIL-C-39012/55
Durability	500 cycles

A - B - C - D

A — First Connector
S27M for phase adjustable SMA Male Plug

B — Cable Code (choose one)
5141 (.141 Snake semi-rigid)
5085 (.085 Snake semi-rigid)

C — Second Connector (code lists on page 1)
1st digit Connector Type Code
2nd & 3rd digit Connector Family Code
4th digit Connector Sex Code

D — Length in inches

Phase Adjustable Semi Rigid Cable Assemblies

Mechanically Adjustable Cable Assemblies

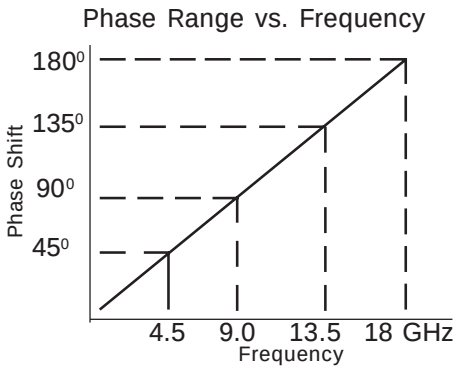
Midisco's mechanically adjustable semi-rigid cable assemblies provide the user a convenient, stable method of adjusting the phase (electrical length) of interconnecting cables at the end level. They offer a precise, yet simple means of phase adjustment for phased arrays, test equipment, instrument landing systems, and any application using phase matching techniques. They also find use in applications where a precise in-line electrical length is required.

A phase adjustable cable assembly replaces the labor intensive operation of cable trimming with the ease of mechanical screw adjustment. Once established, the phase setting for each cable is maintained by a connector locking nut. To compensate for system aging, the locking nut may be released, with a new adjustment made at any time.

Midisco phase adjustable cable assemblies are available with the phase adjustable SMA connector on one end, and a wide choice of connectors on the other end. These choices include type N, SMA, TNC, and 7 mm to name a few. Configurations available include right angle SMAs, and bulkheads in SMA, TNC, and N.

Electrical Performance

Midisco's phase adjustable cable assemblies, unlike other phase matching techniques, are broadband. They cover the frequency range to 18 GHz in a single assembly. Other phase matching methods with limited frequency range may require more than one unit, and hinder performance.



Phase Adjustable Cable Assembly Part Number Construction

Part numbers for Midisco's phase adjustable cable assemblies are constructed in a manner similar to that used on standard cables assemblies throughout this catalog.

example: S27M-5141-S26M-6 is a 6 inch long .141 Snake semi-rigid with the phase adjustable SMA Male Plug on one end, and a SMA Male Plug on the other. For additonal cable and connector options, please call.

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THE EFFECT OF VSWR ON TRANSMITTED POWER

Reference

VSWR	Return Loss (dB)	Trans. Loss (dB)	Volt. Refl. Coeff.	Power Tans. (%)	Power Refl. (%)
1.00	∞	.000	00	100.0	.0
1.01	46.1	.000	00	100.0	0
1.02	40.1	.000	01	100.0	.0
1.03	36.6	.001	01	100.0	0
1.04	34.2	002	.02	100.0	0
1.05	32.3	.003	.02	99.9	1
1.06	30.4	.004	.03	99.9	.1
1.07	29.4	005	.03	99.9	.1
1.08	28.3	006	.04	99.9	1
1.09	27.3	.008	.04	99.8	.2
1.10	26.4	010	.05	99.8	.2
1.11	25.7	012	.05	99.7	3
1.12	24.9	014	.06	99.7	.3
1.13	24.3	.016	.06	99.6	.4
1.14	23.7	019	07	99.6	.4
1.15	23.1	021	.07	99.5	.5
1.16	22.6	.024	.07	99.5	.5
1.17	22.1	.027	08	99.4	.6
1.18	21.7	.030	08	99.3	.7
1.19	21.2	033	09	99.2	8
1.20	20.8	.036	09	99.2	.8
1.21	20.4	.039	10	99.1	9
1.22	20.1	043	10	99.0	1.0
1.23	19.7	.046	.10	98.9	1.1
1.24	19.4	.050	.11	98.9	1.1
1.25	19.1	054	.11	98.8	1.2
1.26	18.8	058	.12	98.7	1.3
1.27	18.5	.062	.12	98.6	1.4
1.28	18.2	066	.12	98.5	1.5
1.29	17.9	070	.13	98.4	1.6
1.30	17.7	075	13	98.3	1.7
1.32	17.2	083	.14	98.1	1.9
1.34	16.8	.093	.15	97.9	2.1
1.36	16.3	.102	.16	97.7	2.3
1.38	15.9	.112	16	97.5	2.5
1.40	15.6	.122	.17	97.2	2.8
1.42	15.2	.133	17	97.0	3.0
1.44	14.9	.144	18	96.7	3.3
1.46	14.6	.155	.19	96.5	3.5
1.48	14.3	.166	19	96.3	3.7
1.50	14.0	.177	20	96.0	4.0
1.52	13.7	.189	21	95.7	4.3
1.54	13.4	.201	21	95.5	4.5
1.56	13.2	.213	22	95.2	4.8
1.58	13.0	.225	22	94.9	5.1
1.60	12.7	.238	23	94.7	5.3
1.62	12.5	.250	24	94.4	5.6
1.64	12.3	.263	.24	94.1	5.9
1.66	12.1	.276	.25	93.8	6.2
1.68	11.9	.289	.25	93.6	6.4
1.70	11.7	.302	.26	93.3	6.7
1.72	11.5	.315	.26	93.0	7.0
1.74	11.4	329	.27	92.7	7.3
1.76	11.2	.342	.28	92.4	7.6
1.78	11.0	.356	.28	92.1	7.9
1.80	10.9	370	.29	91.8	8.2
1.82	10.7	384	.29	91.5	8.5
1.84	10.6	.399	30	91.3	8.7
1.86	10.4	412	30	91.0	9.0
1.88	10.3	426	.31	90.7	9.3
1.90	10.2	.440	31	90.4	9.6
1.92	10.0	.454	32	90.1	9.9
1.94	9.9	.468	32	89.8	10.2
1.96	9.8	.483	.32	89.5	10.5
1.98	9.7	.497	.33	89.2	10.8
2.00	9.5	.512	33	88.9	11.1
2.50	7.4	681	.43	81.6	18.4
3.00	6.0	1.249	.50	75.0	25.0
3.50	5.1	1.603	.56	69.1	30.9
4.00	4.4	1.938	60	64.0	36.0
4.50	3.9	2.255	.64	59.5	40.5
5.00	3.5	2.553	.67	55.6	44.4
5.50	3.2	2.834	.69	52.1	47.9
6.00	2.9	3.100	.71	49.0	51.0
6.50	2.7	3.351	.73	46.2	53.8
7.00	2.5	3.590	.75	43.7	56.2
7.50	2.3	3.817	.76	41.5	58.5
8.00	2.2	4.033	78	39.5	60.5
8.50	2.1	4.240	79	37.7	62.3
9.00	1.9	4.437	80	36.0	64.0
9.50	1.8	4.626	81	34.5	65.5
10.00	1.7	4.807	82	33.1	66.9
11.00	1.6	5.149	.83	30.6	69.4
12.00	1.5	5.466	.85	28.4	71.6
13.00	1.3	5.762	86	26.5	73.5
14.00	1.2	6.042	.87	24.9	75.1
15.00	1.2	6.301	.88	23.4	76.6
16.00	1.1	6.547	.88	22.1	77.9
17.00	1.0	6.760	.89	21.0	79.0
18.00	1.0	7.002	.89	19.9	80.1
19.00	.9	7.212	.90	19.0	81.0
20.00	.9	7.413	.90	18.1	81.9
25.00	.7	8.209	.92	14.8	85.2
30.00	.6	9.036	.94	12.5	87.5

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