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TECHNOLOGY GROUP

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Coaxial

Directional Coupler

50Ω 5 to 1000 MHz

ZX30-12-4-S+



Generic photo used for illustration purposes only

CASE STYLE: FL905

Connectors	Model
SMA	ZX30-12-4-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

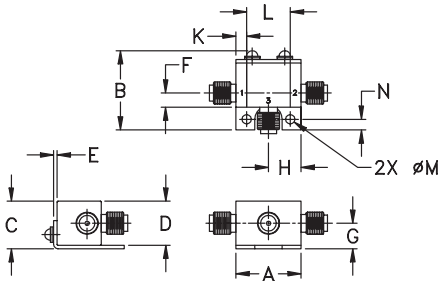
Features

- very flat coupling
- very broad, multi-octave
- all welded construction
- protected by U.S Patents 6,140,887 & 6,784,521 & 6,790,049

Applications

- VHF/UHF
- communications receivers & transmitters
- cellular
- instrumentation

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.74	.90	.54	.50	.04	.16	.29
18.80	22.86	13.72	12.70	1.02	4.06	7.37

H	J	K	L	M	N	wt
.37	--	.122	.496	.106	.122	grams
9.40	--	3.10	12.60	2.69	3.10	20.0

Directional Coupler Electrical Specifications (T_{AMB}= 25°C)

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS[1] (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U			L	MU
f_L-f_U	Nom.	Typ. Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
5-1000	12.0±0.5	±0.3	0.7	1.0	0.85	1.0	0.9	1.4	35	28	25	20	20	13	1.15	0.5	1.0

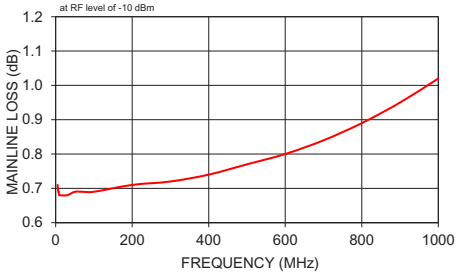
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U= upper range [f_U/2 to f_U]

1. Mainline loss includes theoretical power loss at coupled port.

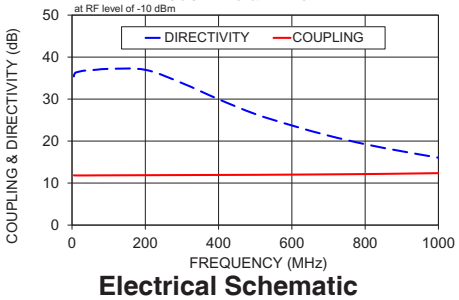
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In	Return Loss (dB) Out	Return Loss (dB) Cpl
5.00	0.71	11.86	35.40	22.64	33.41	20.06
8.00	0.69	11.83	36.14	23.06	36.92	20.62
10.00	0.68	11.82	36.32	23.20	38.67	20.80
50.00	0.69	11.83	36.87	23.58	54.57	21.25
100.00	0.69	11.85	37.20	23.75	54.41	21.28
200.00	0.71	11.88	36.97	24.03	42.79	21.20
400.00	0.74	11.94	29.96	24.56	33.53	20.33
600.00	0.80	12.02	23.72	24.68	28.55	18.76
800.00	0.89	12.15	19.26	24.44	24.79	16.99
1000.00	1.02	12.37	16.05	23.85	22.08	15.31

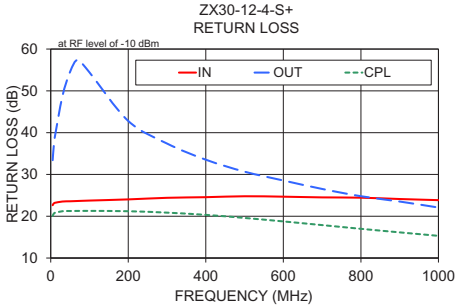
ZX30-12-4-S+
MAINLINE LOSS



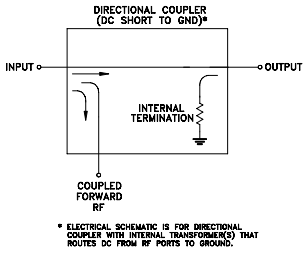
ZX30-12-4-S+
COUPLING & DIRECTIVITY



ZX30-12-4-S+
RETURN LOSS



Electrical Schematic



Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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