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Find the *Mini-Circuits GK-3* at our website: ***Click HERE***

Coaxial

Frequency Mixer

ZAD-1+

Level 7 (LO Power +7 dBm) 0.5 to 500 MHz



CASE STYLE: M22

Connectors	Model	Price	Qty.
BNC	ZAD-1+	$43.95 ea.	(1-9)
BRACKET (OPTION "B")		$5.00	(1+)
BRACKET (OPTION "BR")		$1.50	(1+)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

Coaxial Connections

LO	1
RF	3
IF	2

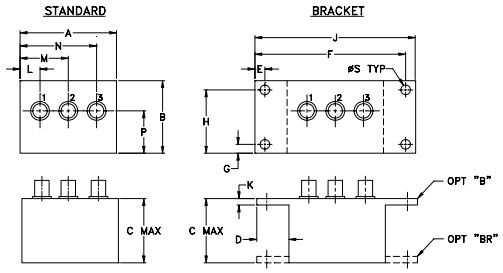
Features

- low conversion loss, 5.24 dB typ.
- high L-R isolation, 45 dB typ.
- rugged shielded case

Applications

- VHF/UHF
- instrumentation

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
2.25	1.38	1.24	.50	.150	3.100	.138	1.238
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45

J	K	L	M	N	P	S	wt
3.25	.10	.40	1.15	1.86	.64	.150	grams
82.55	2.54	10.16	29.21	47.24	16.26	3.81	74.0

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
		Mid-Band m			Total Range	L		M		U		L		M		U	
LO/RF f_L-f_U	IF	$\overline{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.5-500	DC-500	5.24	0.10	7.0	8.5	50	45	45	30	35	25	45	35	40	25	30	20

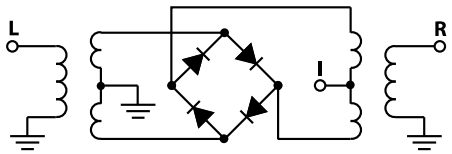
1 dB COMP.: +1 dBm typ.

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]
m= mid band [2f_L to f_U/2]

Typical Performance Data

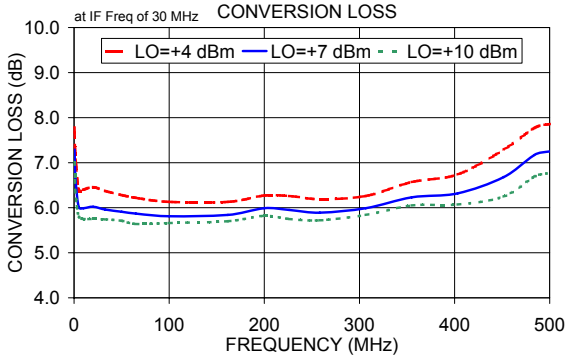
Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
0.50	30.50	7.29	>67.00	>67.00	1.21	1.98
1.00	31.00	6.89	>67.00	62.73	1.03	1.93
2.00	32.00	6.49	>67.00	61.28	1.02	1.96
5.00	35.00	6.01	>67.00	60.55	1.06	1.86
10.00	40.00	5.99	>67.00	59.37	1.10	1.83
20.00	50.00	6.02	>67.00	59.08	1.13	1.87
32.73	62.73	5.96	59.27	57.92	1.15	1.88
50.00	80.00	5.91	56.01	56.08	1.19	1.91
64.95	94.95	5.87	53.83	54.11	1.23	1.91
100.00	70.00	5.81	49.90	49.45	1.29	1.92
161.63	131.63	5.84	44.60	43.60	1.35	1.91
200.00	170.00	5.99	41.47	40.82	1.42	1.99
226.08	196.08	5.95	40.62	39.96	1.49	1.99
258.31	228.31	5.89	39.44	37.84	1.56	1.99
306.65	276.65	5.99	37.26	36.42	1.65	2.03
354.99	324.99	6.23	34.94	34.34	1.74	2.16
403.33	373.33	6.32	33.70	33.77	1.81	2.20
451.66	421.66	6.68	33.66	33.23	1.93	2.27
483.89	453.89	7.17	34.17	34.46	2.00	2.25
500.00	470.00	7.25	34.51	34.41	2.03	2.26

Electrical Schematic

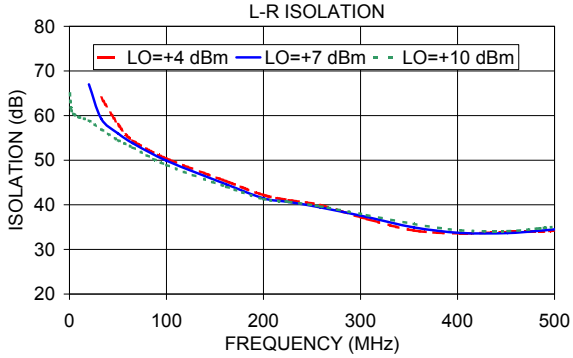


Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. **2.** Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. **3.** The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

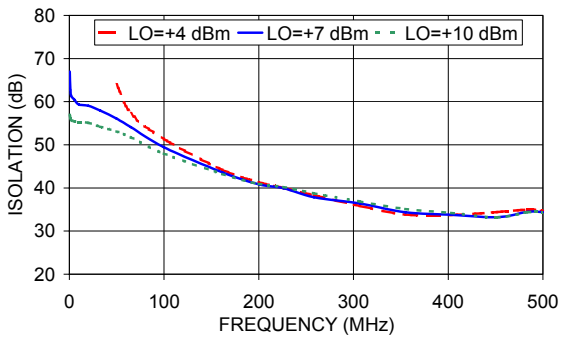
ZAD-1+
at IF Freq of 30 MHz CONVERSION LOSS



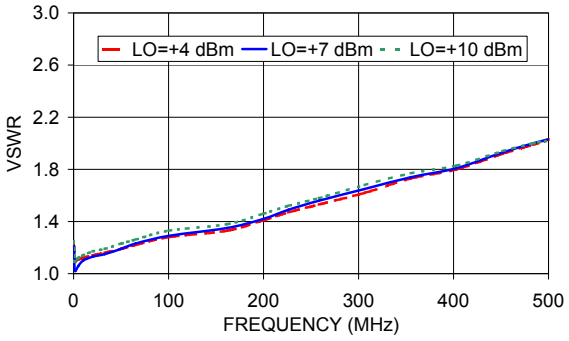
ZAD-1+
L-R ISOLATION



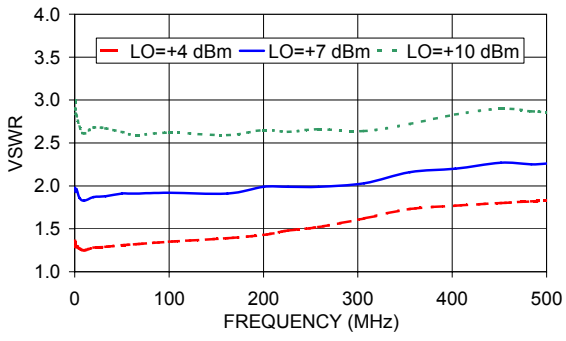
ZAD-1+
L-I ISOLATION



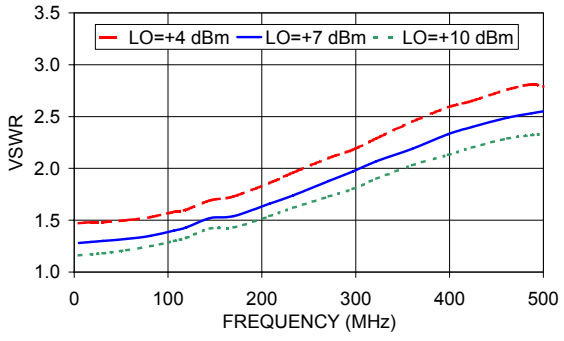
ZAD-1+
RF VSWR



ZAD-1+
LO VSWR



ZAD-1+
IF VSWR



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