

# Coaxial Frequency Mixer

## ZAD-6+

Level 7 (LO Power +7 dBm) 0.003 to 100 MHz



CASE STYLE: M22

Connectors Model  
**BNC** ZAD-6+  
**BRACKET (OPTION "B")**  
**BRACKET (OPTION "BR")**

**+RoHS Compliant**  
 The +Suffix identifies 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

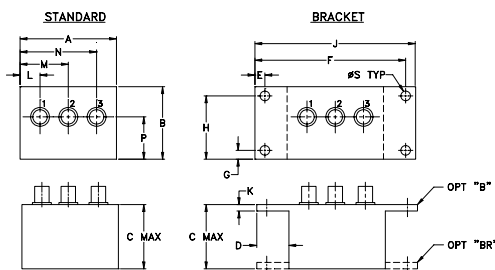
### Features

- low conversion loss, 4.65 dB typ.
- good L-R isolation, 45 dB typ., L-I isolation, 40 dB typ.
- rugged shielded case

### Applications

- VHF
- AM radio
- 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

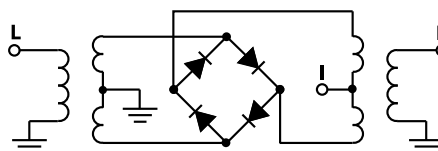
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)									
		LO/RF		IF		L		M		U		L		M		U	
$f_c - f_u$	$\bar{X}$ $\sigma$ Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.003-100	DC-100	4.65	0.08	7.5	8.5	60	50	45	30	35	25	60	45	40	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)	VSWR RF Port (:1)	Frequency (MHz)		Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO Port (:1)
RF	LO			LO	LO			
		LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
0.25	30.25	4.69	1.18	0.25	87.94	69.25	2.72	
0.50	30.50	4.70	1.21	2.20	88.51	67.15	2.60	
1.00	31.00	4.72	1.23	5.13	80.05	62.74	2.56	
2.00	32.00	4.71	1.23	10.00	74.49	58.28	2.48	
4.00	34.00	4.72	1.25	30.00	65.04	46.76	2.43	
6.00	36.00	4.75	1.26	35.00	61.86	45.54	2.42	
8.00	38.00	4.77	1.25	40.00	58.66	43.62	2.43	
10.00	40.00	4.77	1.24	45.00	62.82	41.15	2.44	
15.00	45.00	4.75	1.24	49.00	62.74	40.69	2.45	
19.00	49.00	4.72	1.23	53.00	59.34	40.12	2.47	
23.00	53.00	4.69	1.20	57.00	55.11	40.91	2.50	
31.00	61.00	5.04	1.19	61.00	51.93	41.11	2.55	
39.00	69.00	5.21	1.17	65.00	50.11	39.64	2.58	
51.00	81.00	5.29	1.22	69.00	48.56	38.35	2.62	
61.00	91.00	5.51	1.37	73.00	47.39	36.57	2.65	
67.00	97.00	5.71	1.44	81.00	45.06	33.06	2.70	
70.00	100.00	5.80	1.46	85.00	44.27	31.87	2.74	
85.00	115.00	5.84	1.41	92.50	43.42	30.32	2.89	
92.50	122.50	5.90	1.24	96.25	43.22	30.02	2.98	
100.00	130.00	5.93	1.12	100.00	42.87	30.05	3.06	

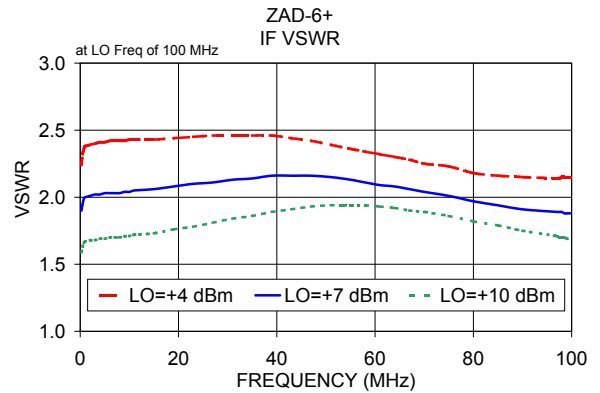
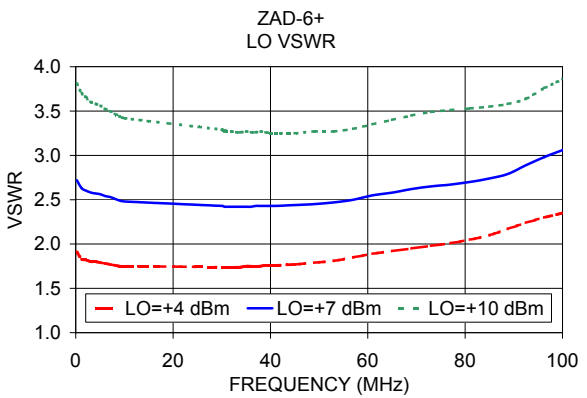
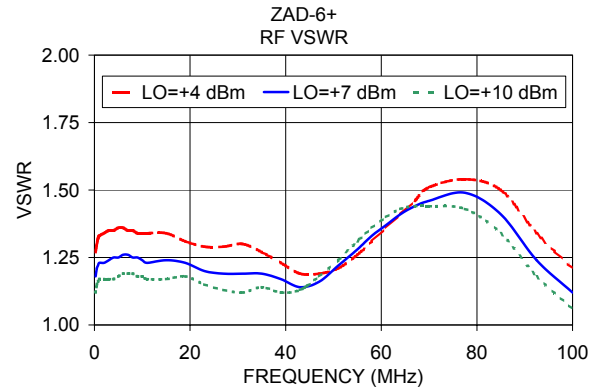
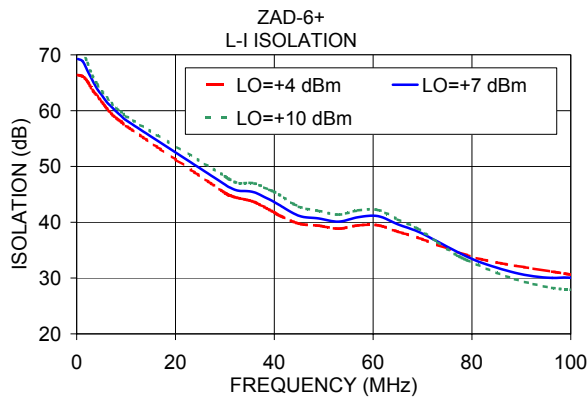
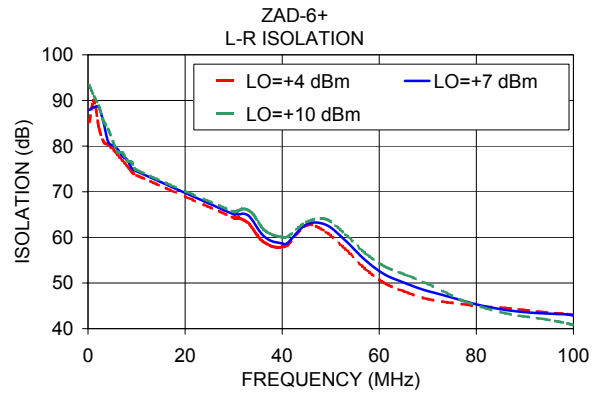
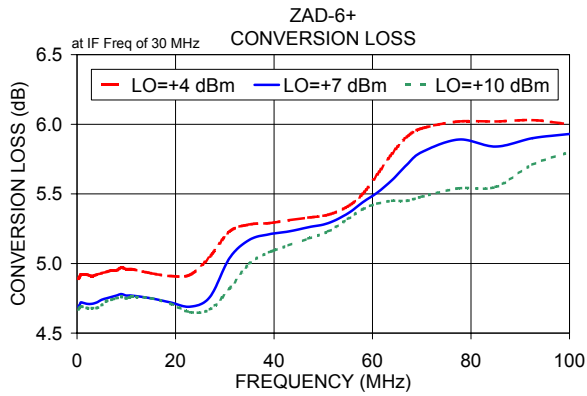
### Electrical Schematic



### 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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