

# Coaxial Frequency Mixer

Level 7 (LO Power +7 dBm) 5 to 2000 MHz

## ZAD-11+



CASE STYLE: M22

### 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, 7.12 dB typ.
- wideband, 5 to 2000 MHz
- rugged shielded case

### Applications

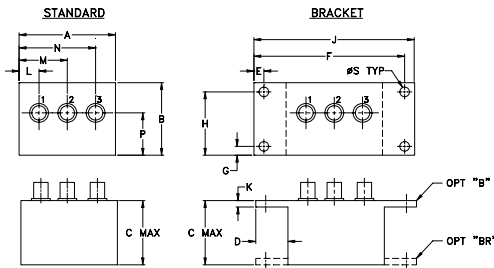
- VHF/UHF
- cellular
- satellite distribution
- GPS
- instrumentation

Connectors	Model
BNC	ZAD-11+
<b>BRACKET (OPTION "B")</b>	
<b>BRACKET (OPTION "BR")</b>	

### +RoHS Compliant

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

### 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	Mid-Band		Total Range		L		M		U		L		M		U		
$f_L$ - $f_U$	$\bar{X}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
5-2000	10-600	7.12	0.12	8.5	9.0	50	45	35	25	30	20	45	40	30	20	25	15	

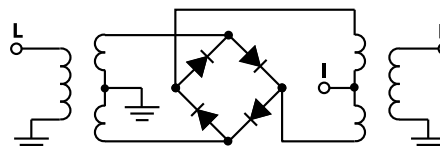
1 dB COMP.: +1 dBm typ.

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
5.00	35.00	5.85	46.19	>67.00	3.19	3.03
10.00	40.00	5.88	46.23	>67.00	2.54	2.69
20.00	50.00	6.11	46.26	>67.00	2.45	2.70
50.00	80.00	6.37	45.89	>67.00	2.62	2.61
100.00	70.00	6.25	44.70	64.66	2.96	2.46
200.00	170.00	6.62	41.17	55.90	3.21	2.31
311.92	281.92	6.71	38.72	50.11	3.31	2.27
465.39	435.39	7.06	37.94	46.15	3.42	2.13
618.85	588.85	7.40	38.38	45.38	3.19	2.08
772.31	742.31	7.53	38.07	45.67	2.96	1.93
849.04	819.04	7.22	37.13	43.78	2.41	1.73
1000.00	970.00	7.05	36.28	38.27	2.10	1.58
1156.00	1126.00	6.76	35.18	43.23	1.86	1.45
1386.20	1356.20	7.53	41.65	38.52	2.12	1.17
1462.90	1432.90	7.62	41.43	41.57	2.27	1.17
1500.00	1470.00	7.48	41.94	42.71	2.19	1.32
1616.40	1586.40	6.96	43.41	43.97	2.08	1.39
1800.20	1770.00	6.79	41.03	38.23	1.87	1.59
1923.30	1893.30	6.64	38.49	30.27	1.79	1.70
2000.00	1970.00	6.69	39.35	27.98	1.67	1.74

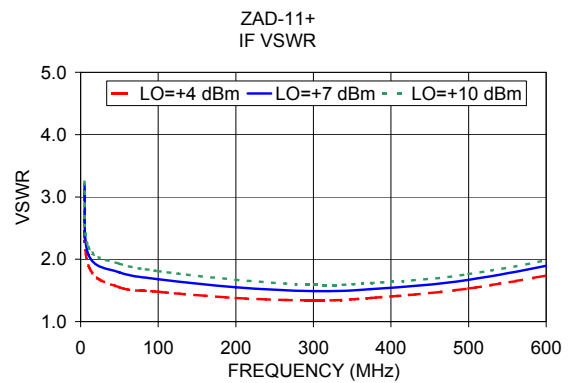
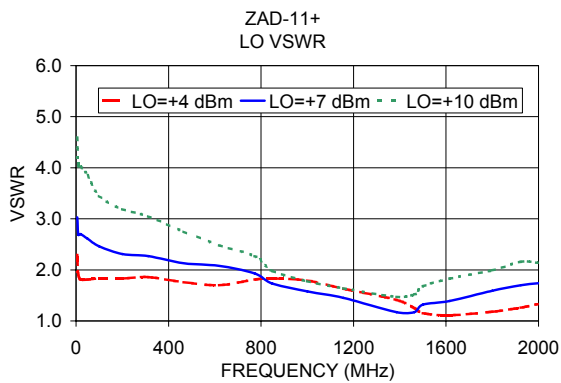
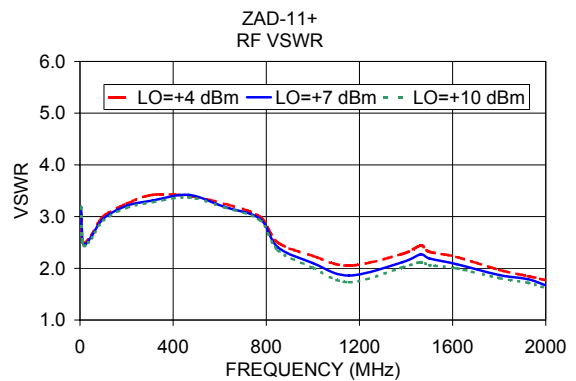
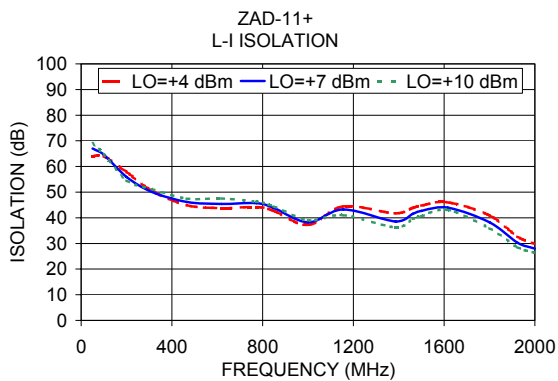
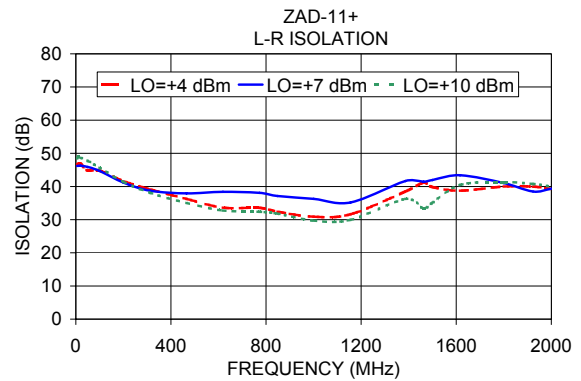
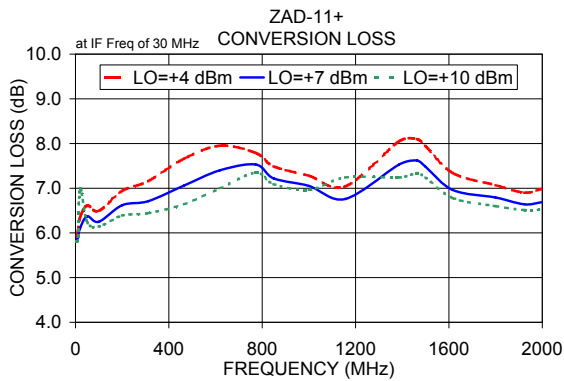
### Electrical Schematic



### Notes

- 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.
- 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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