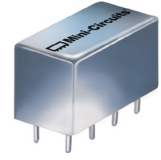


Plug-In

Frequency Mixer

Level 23 (LO Power +23 dBm) 100 to 2500 MHz

RAY-11+



CASE STYLE: A01

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	350mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

LO	1
RF	8
IF	3
GROUND	2,5,6,7
CASE GROUND	2,5,6,7
DO NOT USE	4

Features

- excellent conversion loss, 6.23 dB typ.
- very wideband, 100 to 2500 MHz
- rugged welded construction
- hermetically sealed

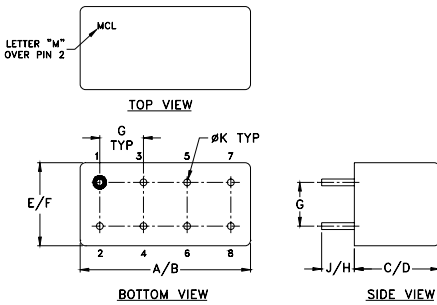
Applications

- wireless communication
- GPS
- ISM/PCS/UMTS
- satellite distribution

+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	
.770	.800	.385	.400	.370	.400	
19.56	20.32	9.78	10.16	9.40	10.16	
G	H	J	K		wt	
.200	.20	.14	.031		grams	
5.08	5.08	3.56	0.79		5.2	

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF f_L - f_U	IF	Mid-Band m		Total Range Max.	9.0	L		M		U		L		M		U	
		\bar{X}	σ			Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
100-2500	DC-500	6.23	0.21	9.0	9.0	35	25	32	25	32	25	14	10	20	10	20	10

1 dB COMP.: +15 dBm typ.

L = low range [f_L to $10 f_L$]

M = mid range [$10 f_L$ to $f_U/2$]

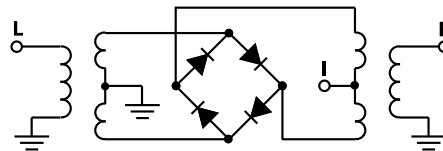
U = upper range [$f_U/2$ to f_U]

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 +23dBm	LO +23dBm	LO +23dBm	LO +23dBm	LO +23dBm
100.00	130.00	6.80	57.63	42.09	2.26	2.35
200.00	230.00	6.92	51.54	42.54	2.58	2.14
332.26	362.26	6.89	47.39	38.02	2.84	2.00
500.00	530.00	6.39	47.64	31.79	3.10	1.64
564.52	534.52	6.40	47.27	29.16	2.98	1.59
796.77	766.77	7.84	48.68	25.70	2.58	1.47
1000.00	970.00	7.12	43.65	20.91	2.08	2.39
1029.03	999.03	7.09	42.35	20.20	2.15	2.24
1200.00	1170.00	6.60	40.57	18.33	2.39	2.37
1250.00	1220.00	6.54	40.50	18.94	2.33	2.92
1261.29	1231.29	6.61	40.48	19.06	2.59	2.98
1416.13	1386.13	8.12	40.54	19.84	3.18	2.70
1570.97	1540.97	8.52	38.53	21.16	3.66	1.85
1803.23	1773.23	7.98	37.48	23.58	2.29	1.34
2000.00	1970.00	7.79	36.62	26.62	2.04	1.47
2035.43	2005.48	7.71	36.57	27.20	2.18	1.60
2200.00	2170.00	7.86	36.32	28.35	2.83	2.41
2345.16	2315.16	7.50	36.12	26.61	2.85	2.63
2472.58	2392.58	7.31	36.72	25.92	2.74	2.75
2500.00	2470.00	7.10	38.10	26.17	2.29	2.90

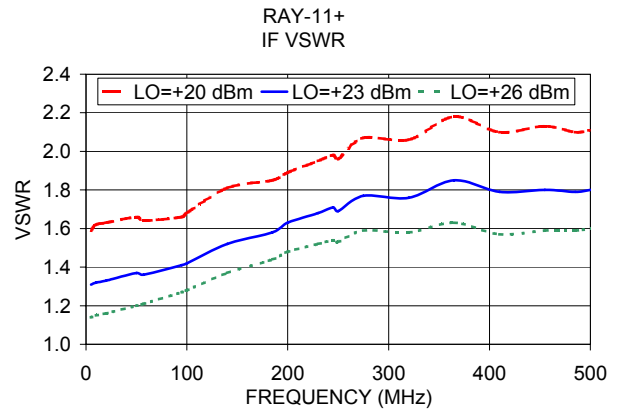
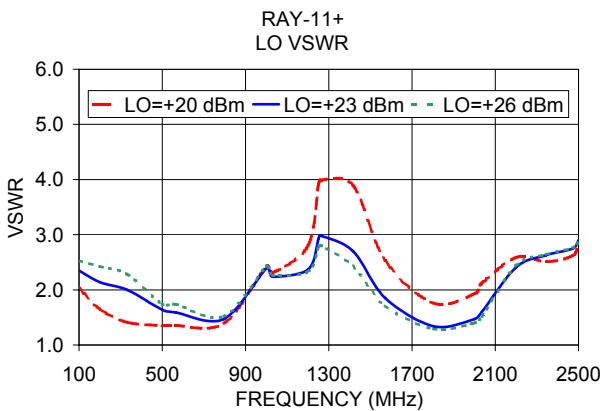
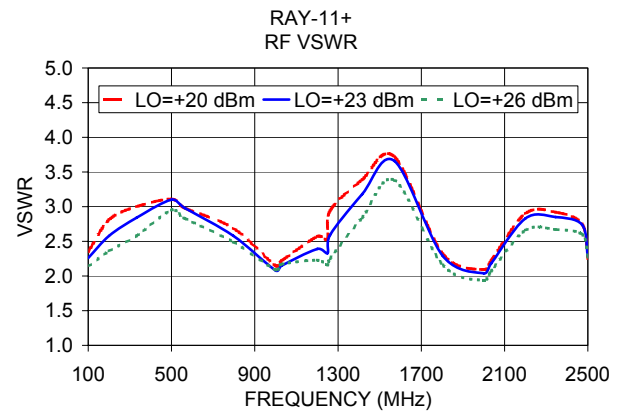
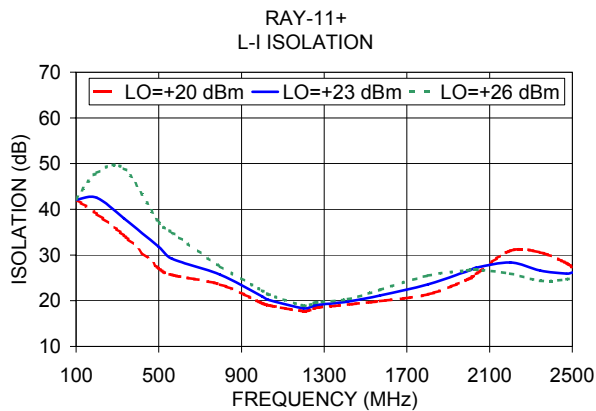
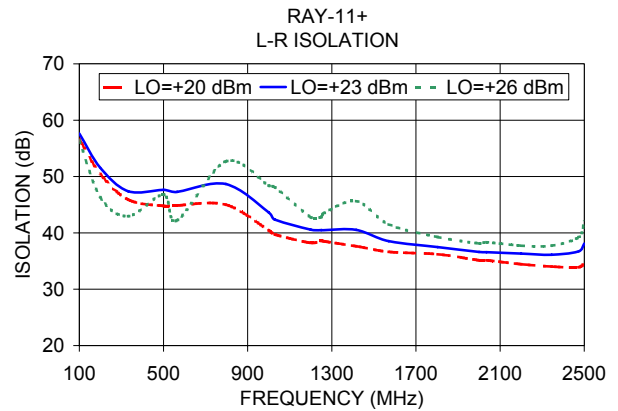
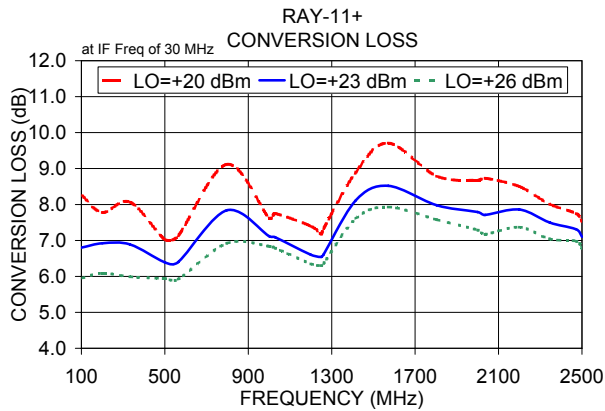
Electrical Schematic



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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