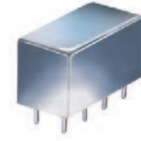


Plug-In

Frequency Mixer

RAY-11+

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



CASE STYLE: A01
PRICE: \$79.45 ea. QTY (1-9)

+ 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	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

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.	Total Range Max.	L		M		U		L		M		U	
		\bar{X}	σ			Max.	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 $f_U/2$]

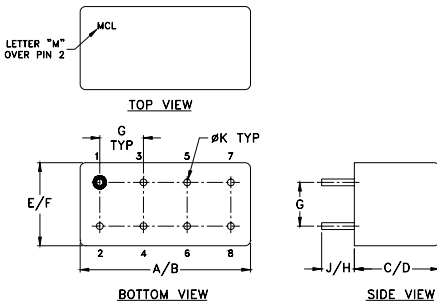
U = upper range [$f_U/2$ to f_U]

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

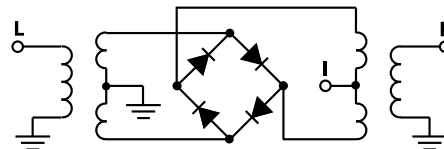
Outline Drawing



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 Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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.

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