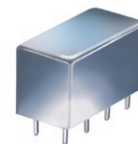


Frequency Mixer

Level 23 (LO Power +23 dBm) 0.07 to 200 MHz

RAY-3+



CASE STYLE: A01

PRICE: \$45.20 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

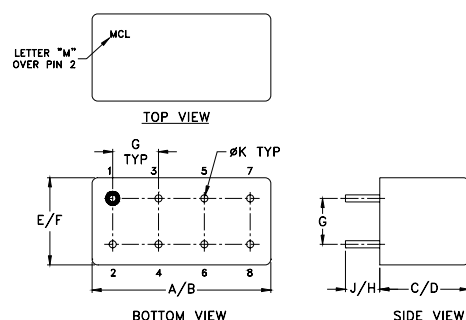
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	350mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

LO	8
RF	1
IF	3,4^
GROUND	2,5,6,7
CASE GROUND	2

^pins must be connected together externally

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	

Features

- excellent conversion loss, 5.53 dB typ.
- high isolation 40 dB typ. L-R & L-I
- rugged welded construction
- hermetically sealed

Applications

- VHF
- defense & federal communications
- aviation & maritime communications

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band		Total		L	M	U				L	M	U			
f_L - f_U		$\bar{X}$	σ	Max.	Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.07-200	DC-200	5.53	0.08	7.5	8.0	55	45	40	30	30	25	55	45	40	30	30	20

1 dB COMP: +15 dBm typ.

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

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

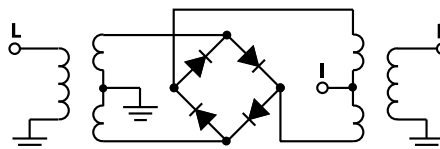
U = upper range [$f_U/2$ to f_U]

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
0.07	30.07	5.77	55.55	56.68	1.17	2.42
0.20	30.20	5.58	53.15	57.09	1.18	2.40
1.00	31.00	5.29	52.74	57.07	1.18	2.23
5.00	35.00	5.23	52.57	56.88	1.17	2.21
20.00	50.00	5.27	52.28	56.59	1.17	2.19
34.54	64.54	5.24	51.27	54.69	1.16	2.20
48.33	78.33	5.26	48.91	51.06	1.15	2.20
62.12	92.12	5.28	46.28	47.85	1.15	2.27
69.01	99.01	5.29	44.38	45.65	1.14	2.27
82.80	52.80	5.28	42.67	43.88	1.13	2.28
96.59	66.59	5.28	41.29	41.90	1.13	2.25
103.48	73.48	5.25	39.95	40.89	1.13	2.14
117.27	87.27	5.28	39.22	39.90	1.12	2.10
131.06	101.06	5.29	39.37	39.78	1.12	2.17
144.85	114.85	5.34	38.04	37.10	1.12	2.25
158.63	128.63	5.43	36.70	33.79	1.12	2.29
165.53	135.53	5.47	36.49	31.41	1.13	2.22
179.32	149.32	5.47	36.22	30.50	1.14	2.16
193.10	163.10	5.54	36.47	29.43	1.16	2.18
200.00	170.00	5.51	36.43	29.00	1.16	2.21

Electrical Schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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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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