

Surface Mount Frequency Mixer

RMS-11F+ RMS-11F

Level 7 (LO Power +7dBm) 350 to 2000 MHz



Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

LO	1
RF	4
IF	5
GROUND	2,3,6

Features

- excellent L-R isolation, 36 dB typ.
- conversion loss, 55 dB typ.
- small size, 0.25"x0.31"x0.2"

Applications

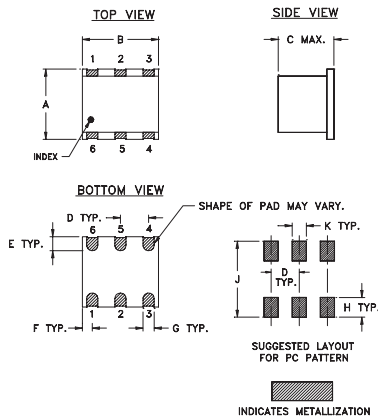
- GSM
- GPS
- PCS
- satellite distribution

CASE STYLE: TT240
PRICE: \$6.25 ea. QTY (1-9)

+ RoHS compliant in accordance
with EU Directive (2002/95/EC)

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

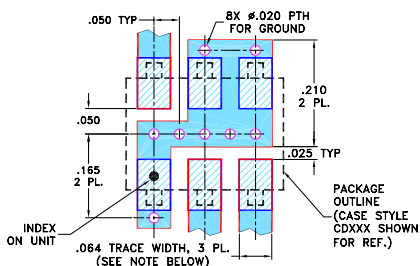
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.250	.31	.20	.100	.050	.055
6.35	7.87	5.08	2.54	1.27	1.40
G	H	J	K		wt
.040	.070	.270	.050		grams
1.02	1.78	6.86	1.27		0.50

Demo Board MCL P/N: TB-03 Suggested PCB Layout (PL-052)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Specifications

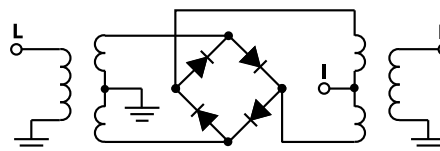
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)				
		L		M		U		L		M		U						
$f_L - f_U$	\bar{X} σ Max.	Total Range		Typ. Min.		Typ. Min.		Typ. Min.		Typ. Min.		Typ. Min.		Typ.				
350-2000	DC-400	5.5	.20	7.0	9.2	37	26	36	20	32	20	22	14	29	20	28	20	12

1 dB COMP: +1 dBm typ. L = 350-750 MHz M = 750-1000 MHz U = 1000-2000 MHz
m = 350-1000 MHz

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
350.00	380.00	4.65	36.37	19.43	2.22	3.48
383.67	413.67	4.63	36.83	19.55	2.12	3.31
417.35	447.35	4.67	38.11	20.39	2.23	3.24
451.02	481.02	4.68	39.27	20.76	2.31	3.21
484.69	514.69	4.61	40.31	21.53	2.49	3.20
552.04	582.04	4.69	40.08	23.23	2.89	3.16
619.39	649.39	4.86	38.80	25.64	3.33	3.17
700.00	730.00	5.08	38.87	28.43	3.73	3.25
720.41	750.41	5.03	39.51	29.35	3.81	3.43
754.08	784.08	5.06	40.27	30.58	3.83	3.34
855.10	885.10	5.48	45.01	42.88	3.50	3.43
1000.00	1030.00	6.00	47.36	33.91	2.12	3.56
1124.49	1154.49	6.85	36.96	29.41	1.26	3.79
1292.86	1262.86	6.99	35.46	29.97	2.50	3.51
1427.55	1397.55	6.54	41.21	27.91	3.59	3.42
1562.24	1532.24	6.52	41.00	27.02	4.61	3.39
1696.94	1666.94	7.61	38.30	26.09	5.43	3.16
1797.96	1767.96	7.75	36.56	25.61	5.81	3.01
1898.98	1868.98	8.07	35.37	25.71	5.65	2.81
2000.00	1970.00	8.43	34.77	26.20	5.59	2.59

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

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