

Surface Mount Frequency Mixer

Level 7 (LO Power +7 dBm) 5 to 1000 MHz

RMS-2D+
RMS-2D



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, 40 dB typ.
- conversion loss, 6.81 dB typ.
- small size, 0.25"x0.31"x0.2"

Applications

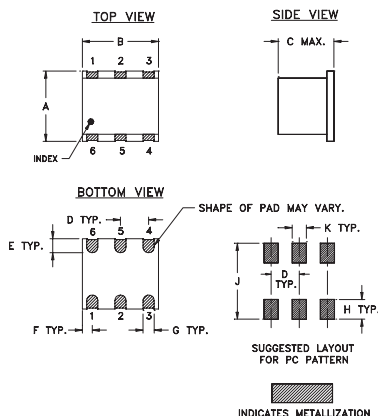
- ISM/GSM
- cellular

CASE STYLE: TT240
PRICE: \$7.25 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.

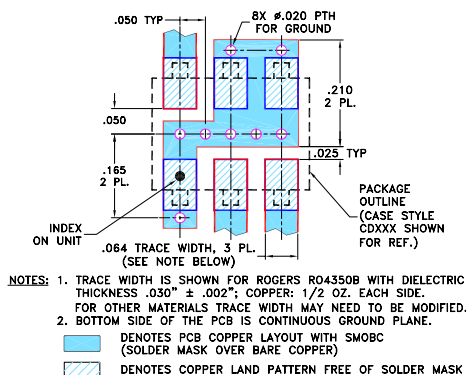
Outline Drawing



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)



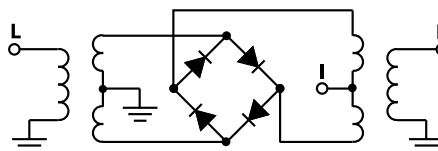
Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)		
LO/RF	IF	$\bar{X}$	σ	Max.	Total Range Max.	L		M		U		L		M		U				
f_L - f_U						Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.		Typ.	Min.
5-1000	DC-1000					6.81	.06	8.0	10.0	59	40	40	30	33	22	55	30		40	22
1 dB COMP.: +1 dBm typ. For phase detection, DC output positive with in-phase RF & LO.						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]														

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	7.12	75.17	69.37	1.43	2.92
10.00	40.00	7.00	69.29	68.39	1.32	2.76
20.00	50.00	7.00	62.94	64.44	1.28	2.74
50.00	80.00	7.04	55.85	57.67	1.28	2.69
95.45	65.45	7.03	50.26	52.12	1.29	2.57
100.00	70.00	7.00	49.77	51.68	1.31	2.52
185.91	155.91	6.96	44.92	47.38	1.33	2.53
200.00	170.00	6.95	44.30	46.93	1.38	2.57
276.36	246.36	6.93	41.76	44.24	1.46	2.60
366.82	336.82	6.92	39.46	41.10	1.50	2.60
457.27	427.27	6.84	38.05	38.81	1.53	2.61
487.42	457.42	6.90	37.64	37.61	1.57	2.60
500.00	470.00	6.87	37.67	37.54	1.67	2.69
547.73	517.73	6.89	37.15	36.85	1.78	2.67
638.18	608.18	6.96	35.79	35.08	1.87	2.67
728.64	698.64	7.11	34.44	33.63	1.91	2.65
819.09	789.09	7.48	33.73	32.36	2.03	2.77
909.55	879.55	7.84	34.09	30.24	2.16	2.86
969.85	939.85	8.11	33.57	28.96	2.26	2.89
1000.00	970.00	8.28	34.04	28.80	2.30	2.88

Electrical Schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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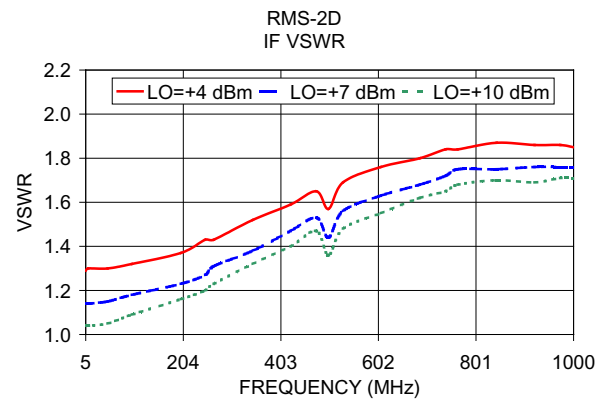
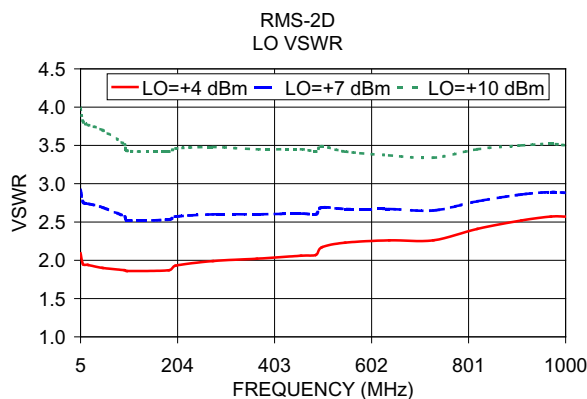
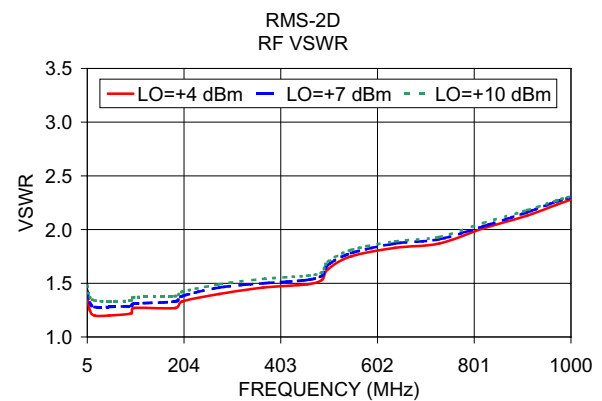
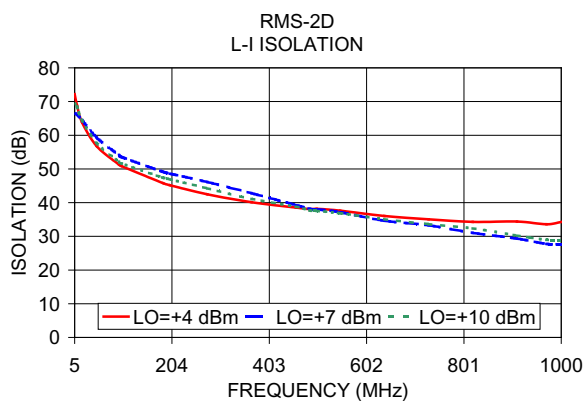
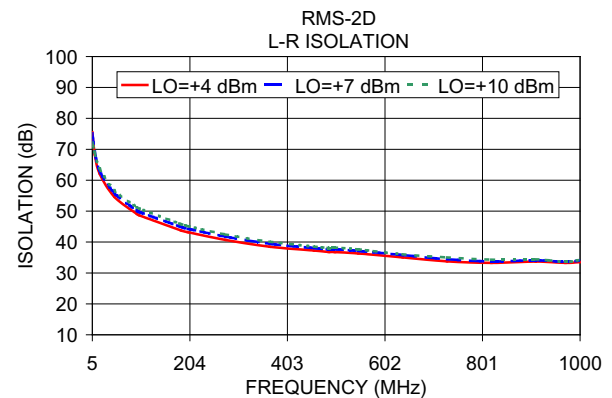
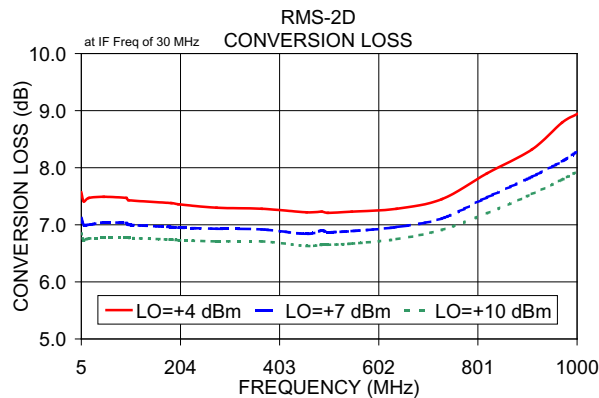
IF/RF MICROWAVE COMPONENTS

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-Circuits' 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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Performance Charts

RMS-2D+ RMS-2D



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