

Frequency Mixer

Level 3 (LO Power +3 dBm) 400 to 1400 MHz

RMS-5L+



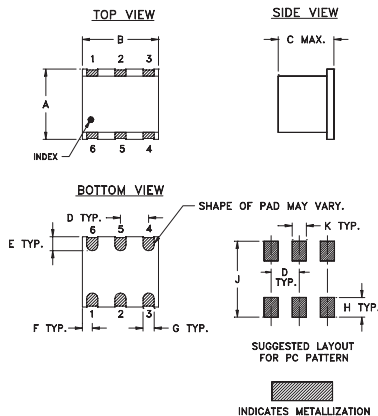
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
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

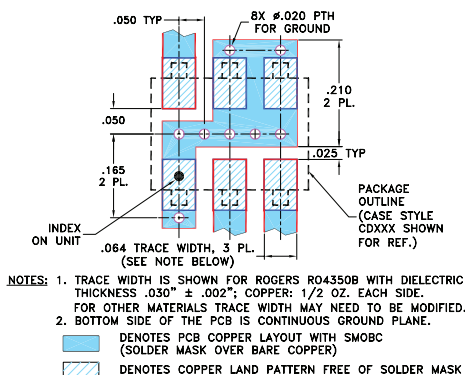
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.250	.31	.20	.100	.055	.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)



Features

- good conversion loss, 7.0 dB typ.
- small size, 0.25"x0.31"x0.2"
- wide bandwidth, 400-1400 MHz

Applications

- cellular
- ISM/GSM
- satellite distribution

CASE STYLE: TT240

PRICE: \$13.95 ea. QTY (1-9)

+RoHS Compliant

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

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.	Typ. Min.	Typ. Min.	Typ.
$f_L - f_U$				
400-1400 DC-800	7.0 0.2 9.8	22 14	22 6	9

1 dB COMP.: -3 dBm typ.

For phase detection, DC output positive with in-phase RF & LO.

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

m = mid band [$2 f_L$ to $f_U/2$]

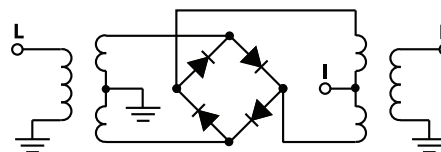
M = mid range [$10 f_L$ to $f_U/2$]

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

Typical Performance Data

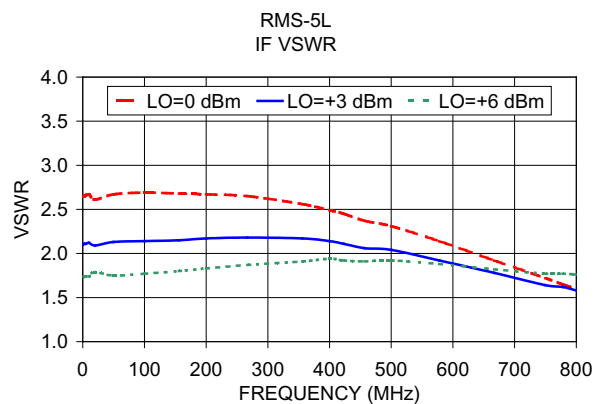
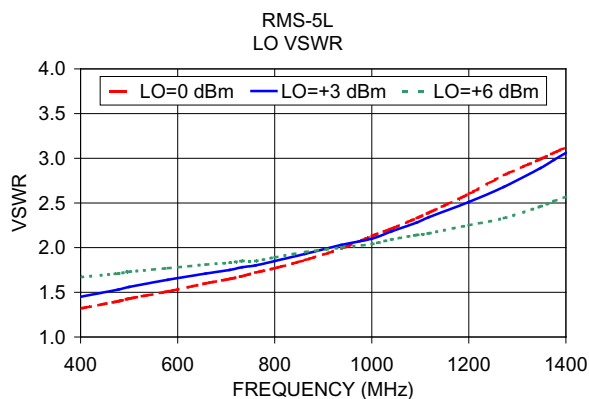
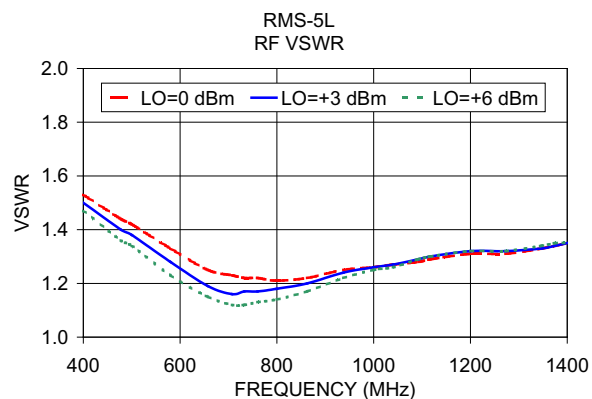
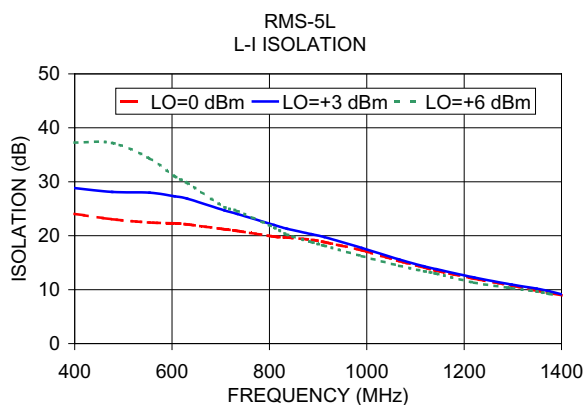
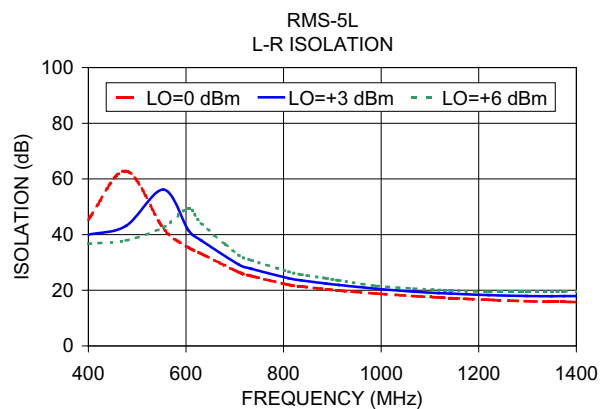
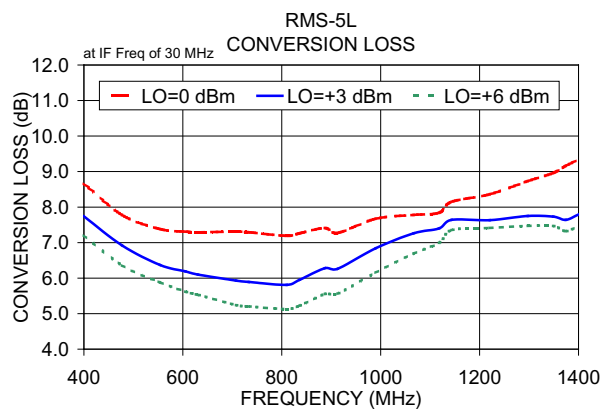
Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +3dBm	LO +3dBm	LO +3dBm	LO +3dBm	LO +3dBm
400.00	430.00	7.74	39.94	28.82	1.50	1.45
476.92	506.92	6.92	43.12	28.11	1.40	1.53
553.85	583.85	6.37	56.16	27.98	1.38	1.56
605.13	635.13	6.19	41.52	27.30	1.28	1.64
630.77	660.77	6.10	37.96	26.89	1.19	1.71
707.69	737.69	5.93	29.29	24.68	1.16	1.75
733.33	763.33	5.89	27.74	24.04	1.17	1.78
810.26	840.26	5.81	24.32	21.96	1.17	1.80
835.90	865.90	5.95	23.55	21.29	1.18	1.85
887.18	917.18	6.28	22.39	20.26	1.20	1.93
912.82	942.82	6.26	21.89	19.74	1.24	2.03
989.74	959.74	6.84	20.56	17.73	1.26	2.10
1066.67	1036.67	7.26	19.47	15.58	1.27	2.18
1117.95	1087.95	7.40	18.97	14.31	1.29	2.28
1143.59	1113.59	7.64	18.77	13.78	1.30	2.34
1220.51	1190.51	7.63	18.25	12.26	1.32	2.51
1297.44	1267.44	7.75	17.96	10.95	1.32	2.68
1348.72	1318.72	7.73	17.87	10.20	1.33	2.89
1374.36	1344.36	7.64	17.90	9.72	1.34	2.98
1400.00	1370.00	7.79	17.92	9.13	1.35	3.06

Electrical Schematic



Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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