

# Surface Mount Frequency Mixer

## RMS-2U+ RMS-2U

Level 7 (LO Power +7 dBm) 10 to 1000 MHz



### Maximum Ratings

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

### Pin Connections

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

### Features

- excellent L-R isolation, 40 dB typ.
- conversion loss, 6.79 dB typ.
- small size, 0.25"x0.31"x0.2"

### Applications

- cellular
- ISM/GSM

CASE STYLE: TT240  
PRICE: \$11.45 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.

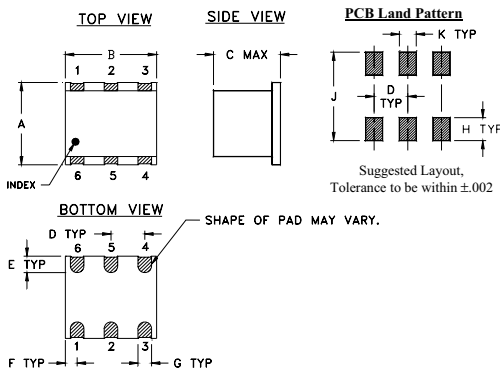
### Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)				
		LO/RF		IF		Total Range		L		M		U			Typ.			
$f_L - f_U$	$\bar{X}$ $\sigma$ Max.	Max.	9.5	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.				
10-1000	10-750	6.79	.16	8.0	9.5	55	40	40	30	30	25	55	30	35	25	30	22	10

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  $f_U$ ]

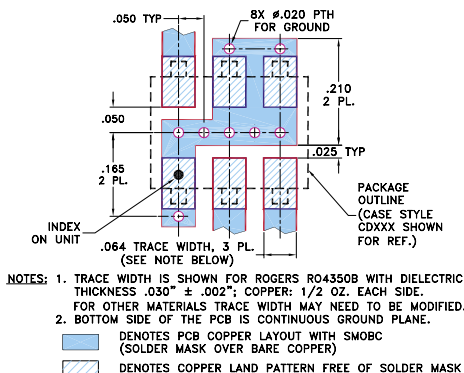
### Outline Drawing



### Outline Dimensions (inch/mm)

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

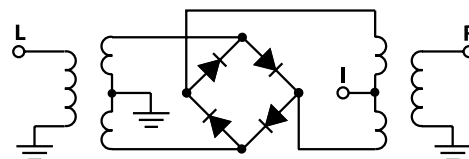
Demo Board MCL P/N: TB-03  
Suggested PCB Layout (PL-052)



### 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
10.00	40.00	5.69	55.08	57.44	1.73	2.45
20.00	50.00	5.78	53.83	52.73	1.63	2.59
39.12	69.12	5.90	51.99	47.22	1.61	2.49
50.00	80.00	5.88	51.27	45.11	1.63	2.47
68.24	98.24	5.83	49.27	42.51	1.67	2.44
100.00	70.00	5.82	46.22	39.55	1.72	2.43
126.47	96.47	5.90	44.61	37.77	1.81	2.44
155.59	125.59	6.04	43.33	35.95	1.87	2.40
230.00	170.00	6.28	42.36	34.23	1.89	2.35
242.94	212.94	6.39	42.52	32.47	1.97	2.33
301.18	271.18	6.60	42.44	31.27	2.12	2.29
330.29	300.29	6.58	42.50	30.71	2.25	2.25
388.53	358.53	6.70	42.62	29.23	2.31	2.23
446.77	416.77	6.58	38.36	28.68	2.47	2.21
500.00	470.00	6.61	35.52	27.43	2.20	2.29
592.35	562.35	6.89	34.35	28.33	2.43	2.28
708.82	678.82	7.34	34.65	29.18	2.57	2.29
796.18	766.18	7.61	30.87	28.03	2.83	2.31
912.65	882.65	7.98	29.10	26.37	3.03	2.30
1000.00	970.00	8.28	28.18	24.07	3.42	2.32

### Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

REV. B  
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## Performance Charts

