

Surface Mount Frequency Mixer

Level 13 (LO Power +13 dBm) 800 to 4200 MHz

RMS-42MH+ RMS-42MH



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

- wide frequency range, 800-4200 MHz
- conversion loss, 5.3 dB typ.
- small size, 0.25"x0.31"x0.2"

Applications

- satellite communications
- receivers/transmitters

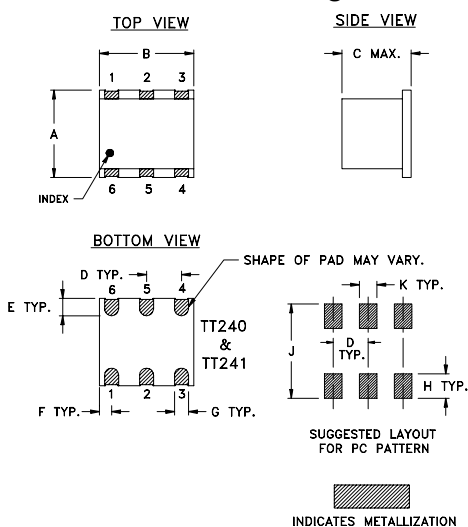
CASE STYLE: TT240

PRICE: \$24.95 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.

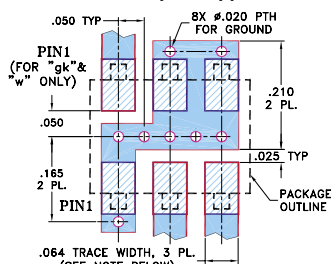
Outline Drawing



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)
"w" loc. of pin 1 applies.



- 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)
LO/RF	IF	Mid-Band m			Total Range Max.	L		U		L		U		
		\bar{X}	σ	Max.		Typ.	Min.	Typ.	Min.	Typ.	Min.			
800-4200	DC-800	5.3	.20	9.0	10.8	35	25	28	17	18	10	15	7	19

1 dB COMP.: +9 dBm typ.

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

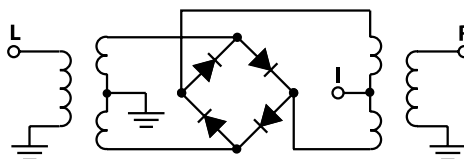
L = 800-1200MHz
m = 1000-2000MHz

U = 2100-4200MHz

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 +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
10.00	40.00	7.94	20.28	21.61	2.29	2.30
20.00	50.00	7.65	27.98	29.30	1.39	1.76
200.00	170.00	7.32	31.88	32.33	1.38	1.54
295.00	265.00	7.53	32.40	33.77	1.48	1.47
500.00	470.00	7.77	31.96	33.79	1.65	1.42
722.50	692.50	7.70	32.05	32.52	1.88	1.42
1000.00	970.00	7.67	32.59	29.95	2.09	1.45
1150.00	1120.00	7.63	32.84	29.21	2.18	1.37
1435.00	1405.00	6.82	35.06	28.00	2.18	1.47
1577.50	1547.50	7.65	34.54	27.23	2.08	1.58
1862.50	1832.50	7.75	36.03	27.46	1.96	1.73
2005.00	1975.00	8.44	34.15	27.88	2.05	1.95
2290.00	2260.00	8.70	30.53	30.66	2.44	2.32
2500.00	2470.00	8.40	31.06	30.74	2.78	2.05
2717.50	2687.50	8.50	29.50	31.68	3.21	2.02
3000.00	2970.00	8.07	33.65	32.53	3.16	1.58
3145.00	3115.00	7.62	33.58	31.08	3.37	1.34
3500.00	3470.00	7.57	32.49	26.48	3.33	1.23
3857.50	3827.50	7.73	28.41	24.34	2.13	1.96
4200.00	4170.00	8.84	29.31	25.00	1.19	2.35

Electrical Schematic



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Performance Charts

