

Surface Mount Frequency Mixer

Level 17 (LO Power +17 dBm) 1500 to 3600 MHz

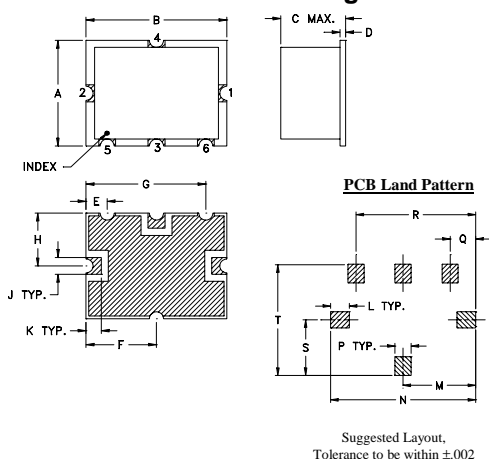
Maximum Ratings

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

Pin Connections

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

Outline Drawing

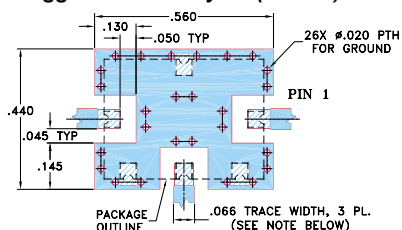


Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J
.38	.50	.15	.020	.075	.250	.425	.187	.050
9.65	12.70	3.81	0.51	1.91	6.35	10.80	4.75	1.27

K	L	M	N	P	Q	R	S	T	wt.
.050	.070	.270	.540	.060	.095	.445	.208	.415	grams
1.27	1.78	6.86	13.72	1.52	2.41	11.30	5.28	10.54	0.8

Demo Board MCL P/N: TB-12 Suggested PCB Layout (PL-079)



- NOTE: 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. GROUND PAD SHALL BE FREE OF SOLDER MASK IF REQUIRED FOR SOLDERING.
3. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER), SEE NOTE 2.
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

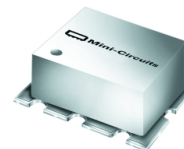
Features

- low conversion loss, 6.3 dB typ.
- good L-R isolation, 30 dB typ. & L-I isolation, 34 dB typ.
- high IP3, 25 dBm typ.

Applications

- ISM band
- PCS
- MMDS

SYM-36H+
SYM-36H



CASE STYLE: TTT167
PRICE: \$21.95 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.

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	Total						
f_L - f_U		\overline{X}	σ	Range Max.	Typ.	Min.	Typ.	Min.	
1500-3600	DC-600	6.3	.40	9.0	30	20	34	20*	25

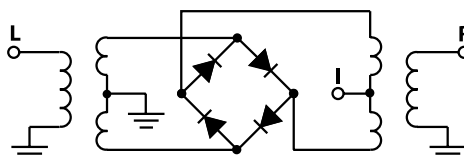
1 dB COMP.: +14 dBm typ.

* 15 dB min. over 1500-1800 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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
1500.00	1530.00	5.92	33.00	27.70	2.32	2.03
1770.00	1800.00	5.68	42.40	30.30	2.32	1.49
1950.00	1980.00	5.76	34.30	30.40	2.25	1.29
2000.00	2030.00	5.50	32.60	30.70	2.18	1.27
2090.00	2120.00	5.33	36.50	32.50	2.23	1.20
2200.00	2230.00	5.18	41.90	33.00	1.81	1.21
2300.00	2330.00	5.29	29.20	32.60	1.54	1.29
2410.00	2440.00	6.73	29.00	34.60	2.96	1.43
2500.00	2530.00	7.04	30.20	34.20	3.79	1.54
2570.00	2600.00	6.62	28.00	33.20	3.79	1.54
2700.00	2730.00	6.82	27.90	36.60	3.79	1.64
2890.00	2920.00	6.74	28.80	32.90	2.92	1.77
3000.00	3030.00	6.09	27.70	43.00	2.96	1.71
3050.00	3080.00	6.08	28.10	44.50	2.88	1.85
3200.00	3230.00	5.78	29.00	39.30	2.40	1.88
3370.00	3400.00	5.75	26.50	37.50	2.37	2.18
3500.00	3530.00	6.60	28.10	33.60	2.96	2.49
3530.00	3560.00	6.70	28.60	33.10	3.16	2.32
3570.00	3600.00	6.89	28.90	32.10	3.38	2.43

Electrical Schematic



Mini-Circuits®

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

INTERNET <http://www.minicircuits.com>



REV. C
M98898
SYM-36H
DJ/TD/CP/AM
060720
Page 1 of 2

Performance Charts

