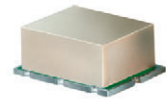


High IP3 Frequency Mixer

Level 17 (LO Power +17 dBm) 1400 to 2400 MHz

SYM-24DH+
SYM-24DH



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	2
RF	1
IF	3
GROUND	4,5,6

Features

- low conversion loss, 7.0 dB typ.
- high IP3, 29 dBm typ.
- good L-R isolation, 32 dB typ.; & L-I isolation, 36 dB typ.

Applications

- base stations
- cellular
- communications
- DCS
- PCS

CASE STYLE: TTT167

PRICE: \$9.95 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

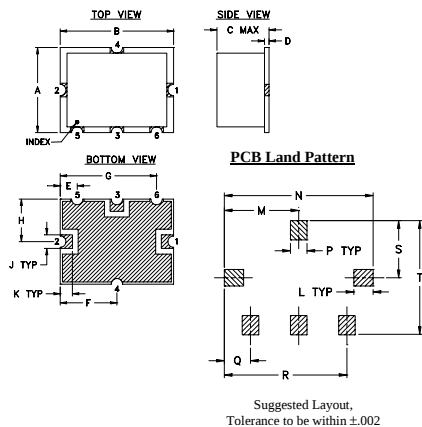
FREQUENCY (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	Mid-Band m	Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.
f_L - f_U		$\overline{X}$	σ					
1400-2400	10-250	7.0	.20	9.3	32 22	36 23		29

1 dB COMP.: +14 dBm typ.

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
1400.00	1430.00	6.43	34.31	47.72	2.53	1.09
1418.18	1448.18	6.38	34.13	48.31	2.49	1.08
1436.36	1466.36	6.52	33.90	49.48	2.48	1.06
1454.55	1484.55	6.56	33.73	49.50	2.46	1.04
1490.91	1520.91	6.42	33.42	50.50	2.38	1.02
1527.27	1557.27	6.39	33.23	51.77	2.25	1.01
1563.64	1593.64	6.48	32.99	51.26	2.17	1.03
1600.00	1630.00	6.35	32.79	50.00	2.03	1.05
1671.88	1701.88	6.49	32.33	50.20	1.86	1.08
1715.63	1745.63	6.45	32.12	50.44	1.81	1.09
1737.50	1767.50	6.59	32.09	49.78	1.81	1.10
1759.38	1789.38	6.70	32.03	49.47	1.78	1.11
1803.13	1833.13	6.70	32.25	48.37	1.81	1.13
1846.88	1876.88	7.05	32.45	48.05	1.84	1.15
1890.63	1920.63	7.16	32.55	46.45	1.90	1.17
1934.38	1964.38	7.38	32.81	45.93	1.94	1.20
1956.25	1986.25	7.52	32.91	45.18	1.96	1.21
2000.00	2030.00	7.53	33.09	44.01	2.02	1.23
2166.67	2196.67	8.12	34.12	39.40	2.04	1.28
2400.00	2430.00	8.08	33.99	37.27	2.08	1.35

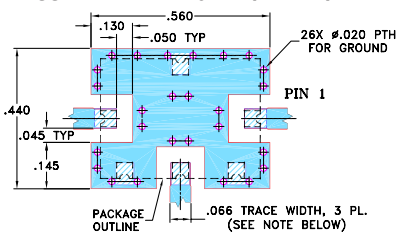
Outline Drawing



Outline Dimensions (inch/mm)

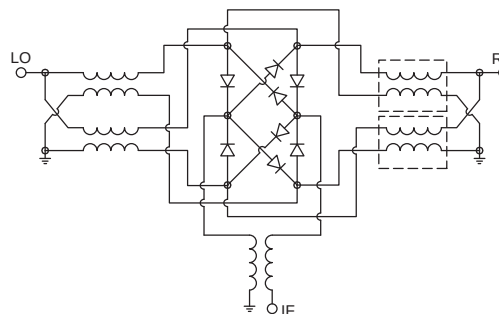
A	B	C	D	E	F	G	H	J	K
.38	.50	.23	.020	.075	.250	.425	.187	.050	.050
9.65	12.70	5.84	0.51	1.91	6.35	10.80	4.75	1.27	1.27
L	M	N	P	Q	R	S	T	wt.	
.070	.270	.540	.060	.095	.445	.208	.415	grams	
1.78	6.86	13.72	1.52	2.41	11.30	5.28	10.54	0.8	

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.
4. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER), SEE NOTE 2.
5. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

For detailed performance specs
& shopping online see web site

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Performance Charts

SYM-24DH+ SYM-24DH

