

Surface Mount Frequency Mixer

Level 17 (LO Power +17 dBm) 80 to 2500 MHz

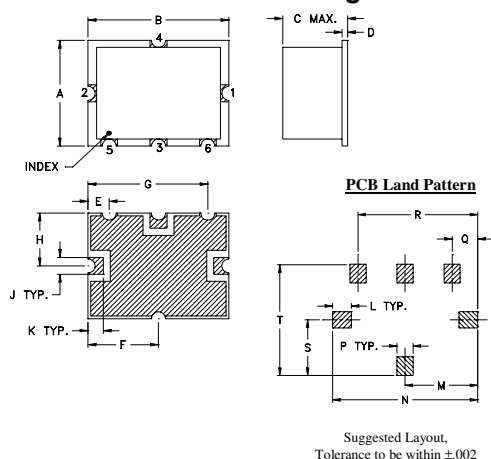
Maximum Ratings

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

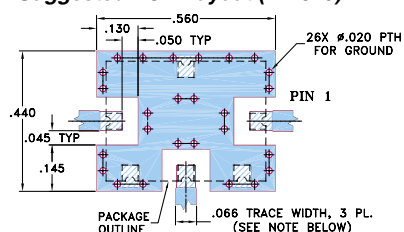
Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	
.375	.500	.23	.020	.075	.250	.425	.187	.050	
9.53	12.70	5.84	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)



Features

- wide bandwidth, 80 to 2500 MHz
- low conversion loss, 6.4 dB typ.
- high IP3, 30 dBm typ.
- good L-R isolation, 37 dB typ.; & L-I isolation, 36 dB typ.

Applications

- cellular
- PCN
- ISM/GPS
- satellite distribution

SYM-25DHW+ SYM-25DHW



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)
		Mid-Band m	Total Range			L	M	U	L	M	U	
LO/RF	IF											
f_L - f_U		$\bar{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
80-2500	DC-1000*	6.4	.40	8.0	8.6	46	29	37	25	35	20	38

1 dB COMP.: +14 dBm typ.

*Conversion loss increases up to 6 dB higher as IF frequency decreases from 5MHz to DC.

L = low range [f_L to 10 f_L]
m = mid band [$2f_L$ to $f_U/2$]

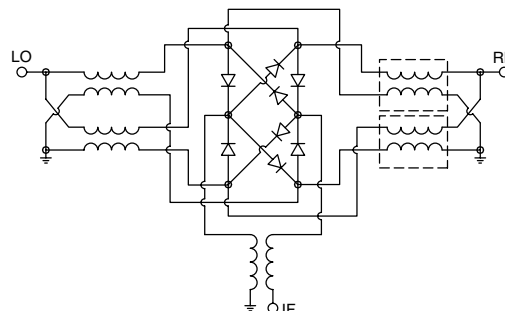
M = mid range [10 f_L to $f_U/2$]

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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
80.10	150.10	6.19	62.25	39.40	1.17	1.51
100.10	170.10	6.03	66.01	39.41	1.17	1.50
200.10	270.10	6.10	72.25	39.13	1.19	1.50
300.10	370.10	6.10	64.46	39.58	1.21	1.51
400.10	470.10	6.06	55.78	40.34	1.27	1.49
500.10	570.10	6.10	53.22	40.62	1.35	1.48
653.04	723.04	6.18	53.66	41.52	1.52	1.36
736.86	806.86	6.23	55.60	41.42	1.62	1.28
820.69	890.69	6.21	51.51	39.18	1.75	1.25
904.51	974.51	6.22	50.02	37.99	1.90	1.23
1000.10	1070.10	6.18	49.68	37.39	2.07	1.21
1239.81	1309.81	6.49	43.82	35.23	2.48	1.10
1407.45	1393.63	6.66	42.30	34.95	2.58	1.07
1500.10	1477.45	6.59	41.52	35.19	2.68	1.06
1742.75	1570.10	6.78	40.80	36.78	2.88	1.10
1826.57	1812.75	7.01	48.77	43.06	3.13	1.26
2000.10	1896.57	7.22	52.54	46.82	2.90	1.32
2329.51	2231.86	7.68	44.22	40.04	2.26	1.56
2413.34	2399.51	7.54	39.54	34.12	1.97	1.70
2500.10	2483.34	7.55	38.42	32.57	1.86	1.74

Electrical Schematic



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Performance Charts

SYM-25DHW+ SYM-25DHW

