

# Surface Mount Frequency Mixer

Level 17 (LO Power +17 dBm) 100 to 1370 MHz

## SYM-14H+ SYM-14H



CASE STYLE: TTT167  
PRICE: \$9.95 ea. QTY (1-9)

### 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

### Features

- wide bandwidth, 100 to 1370 MHz
- low conversion loss, 6.5 dB typ.
- high IP3, 30 dBm typ.
- excellent match LO VSWR, 1.25:1 typ.; RF VSWR, 1.6:1 typ.
- good L-R isolation, 36 dB typ.

### Applications

- cellular
- UHF TV
- ISM

**+ 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

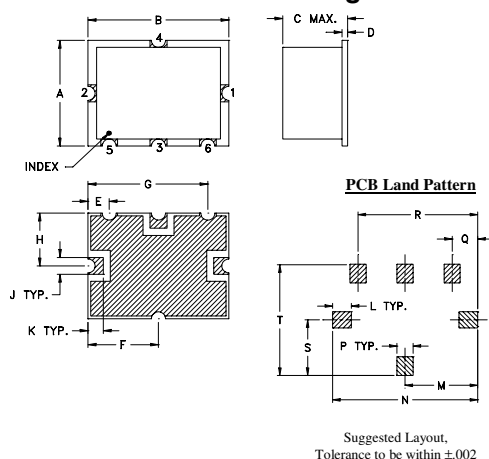
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	IP3 at center band (dBm)
LO/RF $f_L - f_U$	Mid-Band m $\bar{X}$ $\sigma$ Max. Total Range Max.	Typ. Min.	Typ. Min.	Typ.
100-1370 10-1000	6.5 .20 7.4 8.9	36 28	30 24	30

1 dB COMP.: +14 dBm typ.  
m=mid band ( $2f_L$  to  $f_U/2$ )

### 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
100.00	130.00	5.64	40.30	44.40	1.21
190.71	220.71	5.86	38.80	40.50	1.33
200.00	230.00	5.82	38.70	39.70	1.32
281.42	311.42	5.94	37.70	36.90	1.39
372.14	402.14	5.98	37.30	34.70	1.51
400.00	430.00	5.98	36.80	33.90	1.51
462.85	492.85	6.05	36.50	33.60	1.59
553.57	583.57	6.01	36.20	31.50	1.76
600.00	630.00	6.02	36.50	31.30	1.85
644.28	674.28	6.15	36.20	29.80	1.89
735.00	765.00	6.43	36.60	29.60	1.96
825.71	855.71	6.45	36.00	29.70	1.99
916.42	946.42	6.66	36.00	30.50	2.08
1000.00	1030.00	6.23	36.50	30.60	2.06
1007.14	1037.14	6.38	36.60	30.70	2.03
1097.85	1127.85	6.36	40.50	31.20	2.06
1188.57	1218.57	6.52	43.10	32.50	1.94
1279.28	1309.28	6.89	41.80	34.80	2.06
1340.00	1370.00	7.18	42.30	38.20	2.06
1370.00	1400.00	7.34	42.10	39.80	2.10

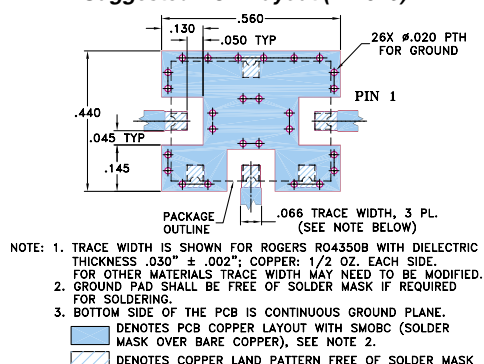
### Outline Drawing



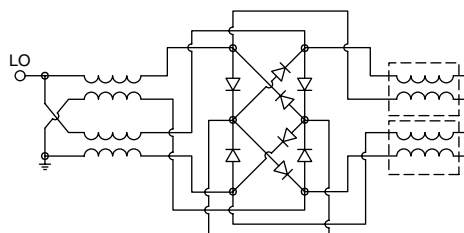
### Outline Dimensions (inch)

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)



### Electrical Schematic



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# Performance Charts

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