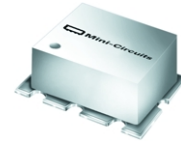


Frequency Mixer

Level 13 (LO Power +13dBm) 5 to 3000 MHz

SYM-30DMHW+ SYM-30DMHW



CASE STYLE: TTT167
PRICE: \$9.95 ea. QTY (10-49)

Features

- wide bandwidth, 5 to 3000 MHz
- good L-R isolation, 36 dB typ.
- excellent L-I isolation, 42 dB typ.
- triple balanced mixer

Applications

- CDMA
- GSM
- DCS
- PCN

+ RoHS compliant in accordance
with EU Directive (2002/95/EC)

See our web site for RoHS Compliance methodologies
and qualifications.

Mixer Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3@ center band Typ. (dBm)	E FACTOR
	Mid-Band m	Total Range	L	M	U	L	M	U												
	LO/RF f _L - f _U	IF	x	σ	Max.	Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.				
SYM-30DMHW	5-3000	5-1500	6.5	.10	8.4	9.3	36	25	39	30	34	23	41	27	42	33	45	30	22	0.9

1 dB COMP.: +9 dBm typ.

E = $(IP3(dBm) - LO Power(dBm))/10$

*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 range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]
m = mid band [$2f_L$ to $f_U/2$]

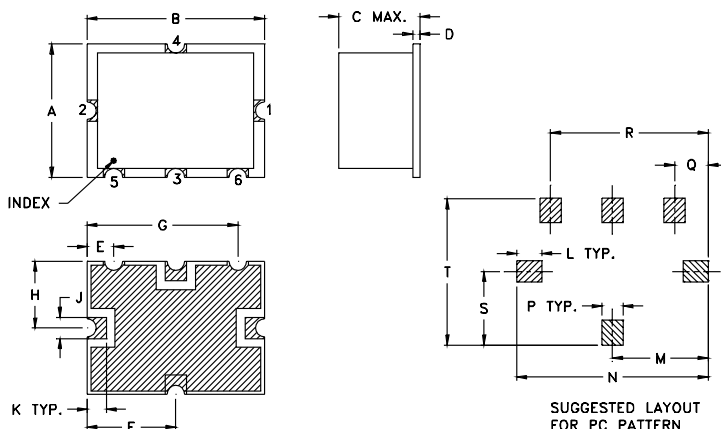
Pin Connections

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

Maximum Ratings

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

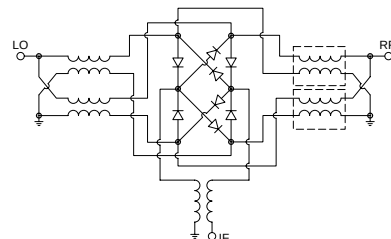
Outline Drawing



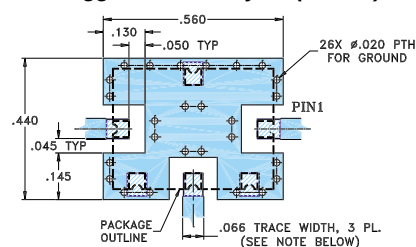
Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt. grams
.375	.500	.23	.020	.075	.250	.425	.187	.050	.050	.070	.270	.540	.060	.095	.445	.208	.415	.8
9.53	12.70	5.84	0.51	1.91	6.35	10.80	4.75	1.27	1.27	1.78	6.86	13.72	1.52	2.41	11.30	5.28	10.54	

electrical schematic



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



SYM-30DMHW+ SYM-30DMHW

Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF port (:1)	VSWR LO port (:1)
RF MHz	LO MHz	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
5.10	35.11	6.58	36.03	38.39	1.15	1.57
100.10	130.11	6.50	35.88	43.47	1.08	1.55
221.15	251.16	6.49	36.20	43.04	1.13	1.54
434.31	464.32	6.56	36.53	42.16	1.25	1.53
647.47	677.48	6.43	37.23	40.16	1.44	1.52
860.63	890.64	6.59	38.94	39.55	1.66	1.49
1002.73	1032.74	6.75	40.44	39.15	1.78	1.50
1215.89	1245.90	6.44	42.67	40.10	1.88	1.46
1429.05	1459.06	6.20	42.49	40.48	1.74	1.43
1500.10	1530.11	6.25	42.48	40.72	1.68	1.42
1600.10	1630.11	6.21	41.45	40.86	1.56	1.43
1815.49	1845.50	6.39	38.09	42.04	1.39	1.39
1923.18	1953.19	6.74	35.83	42.77	1.41	1.37
2030.87	2060.88	7.04	33.82	43.36	1.49	1.35
2138.56	2168.57	7.32	31.83	43.31	1.58	1.34
2246.25	2276.26	7.45	30.59	42.74	1.58	1.28
2461.64	2491.65	7.42	29.50	42.49	1.41	1.19
2677.02	2707.03	7.35	29.11	41.54	1.11	1.12
2892.41	2922.42	7.40	29.03	38.92	1.17	1.16
3000.10	3030.11	7.48	28.88	37.68	1.28	1.17

Performance Charts

