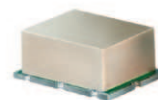


Frequency Mixer

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

SYM-25DHW+ SYM-25DHW



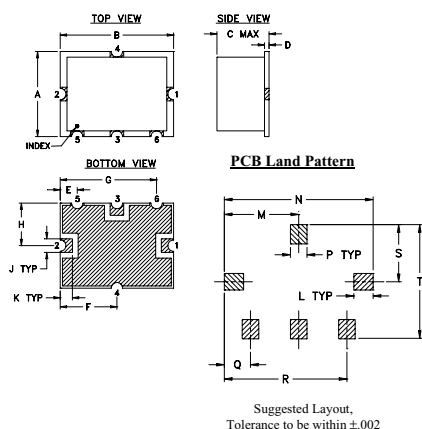
Maximum Ratings

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

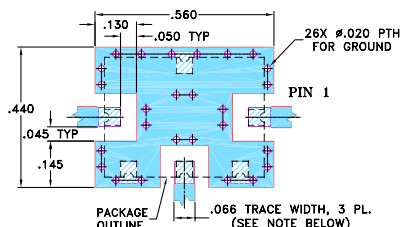
Outline Drawing



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

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

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

+ 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	IF	Mid-Band m		Total Range Max.		L	M	U	L	M	U	L	M	U				
		$\bar{X}$	σ	Max.	Range Max.													
		Typ.	Min.	Typ.	Min.										Typ.	Min.	Typ.	
80-2500	DC-1000*	6.4	.40	8.0	9.0	46	29	37	25	35	20	38	26	33	24	36	20	30

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 $f_U/2$]

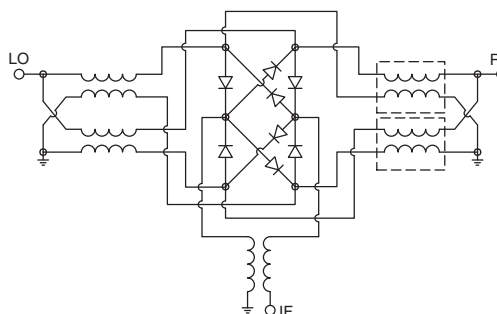
M = mid range [10 f_L to $f_U/2$]

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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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

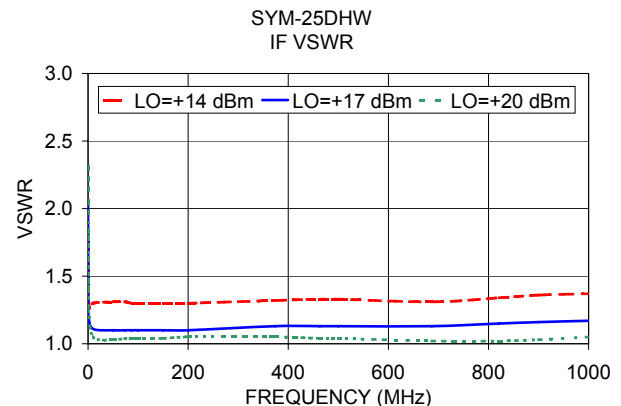
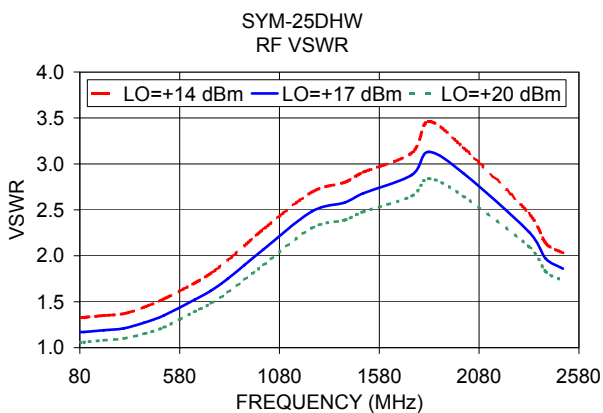
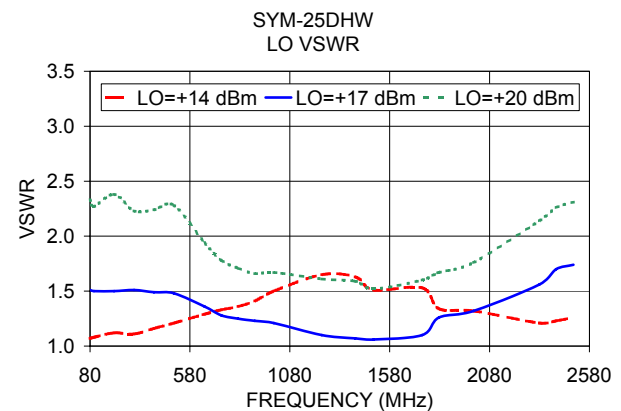
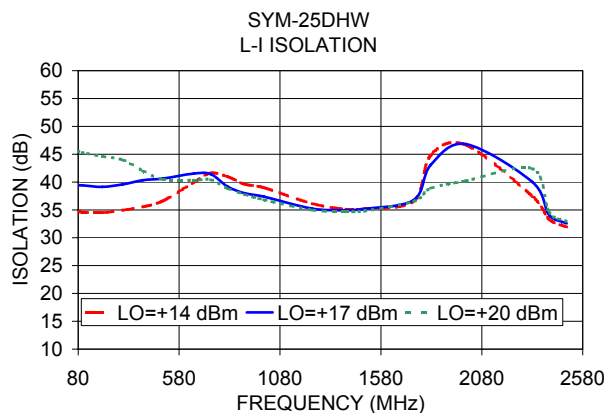
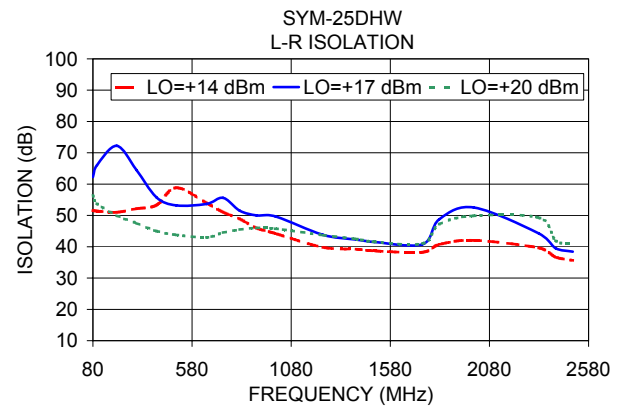
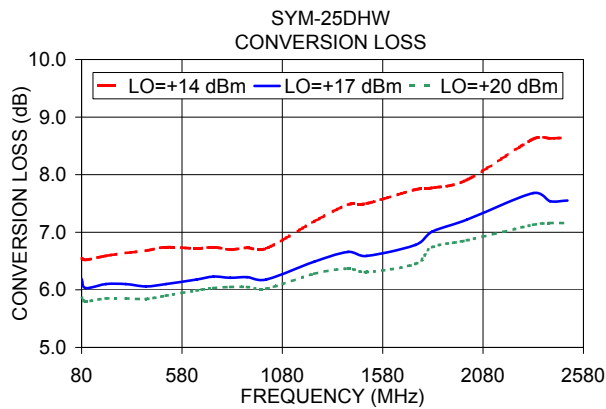
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For detailed performance specs
& shopping online see web site

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Performance Charts

SYM-25DHW+ SYM-25DHW



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& shopping online see web site