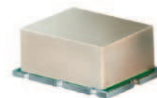


High IP3 Frequency Mixer

Level 17 (LO Power +17 dBm) 5 to 3000 MHz

SYM-30DHW+
SYM-30DHW



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

- wideband, 5 to 3000 MHz
- good L-R isolation, 40 dB typ.
- excellent L-I isolation, 44 dB typ.
- wide IF bandwidth, useable to 3 GHz
- high IP3, 26 dBm typ.

Applications

- CDMA
- GSM
- DCS
- PCN

CASE STYLE: TTT167
PRICE: \$10.95 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				
		$\overline{X}$	σ	Max.			Typ.	Min.	Typ.	Min.		Typ.	Min.	Typ.	Min.	Typ.	Min.	
5-3000	5-1500	6.5	.10	8.3	9.1	36	24	40	30	40	25	42	28	44	36	48	33	29

1 dB COMP.: +14 dBm typ.

*IP3 at 800-900 MHz and 1800-1900 MHz

L = low range [f_L to $10 f_L$]

m = mid band [$2 f_L$ to $f_U/2$]

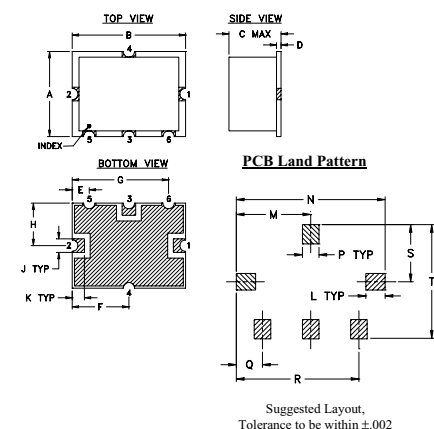
M = mid range [$10 f_L$ to $f_U/2$]

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
5.10	35.11	6.52	35.53	39.27	1.16	1.65
10.10	40.11	6.37	36.08	42.21	1.09	1.64
50.10	80.11	6.32	35.81	44.46	1.04	1.65
150.10	180.11	6.35	36.19	44.52	1.07	1.65
292.21	322.22	6.54	36.11	44.86	1.14	1.59
434.31	464.32	6.48	36.06	44.17	1.21	1.60
576.42	606.43	6.51	36.15	43.45	1.31	1.61
718.52	748.53	6.35	36.82	43.17	1.40	1.56
860.63	890.64	6.48	37.89	43.23	1.51	1.56
1002.73	1032.74	6.61	38.92	43.28	1.58	1.57
1144.84	1174.85	6.51	40.92	43.96	1.67	1.51
1286.94	1316.95	6.34	42.38	45.03	1.62	1.52
1429.05	1459.06	6.15	42.75	45.18	1.56	1.45
1600.10	1630.11	6.10	42.06	45.85	1.37	1.42
1815.49	1845.50	6.32	40.35	45.85	1.20	1.36
2030.87	2060.88	6.91	37.09	44.23	1.34	1.31
2246.25	2276.26	7.53	34.69	43.76	1.52	1.22
2461.64	2491.65	7.53	34.48	46.04	1.44	1.12
2677.02	2707.03	7.31	36.24	45.72	1.29	1.09
3000.10	3030.11	7.24	39.16	41.54	1.37	1.27

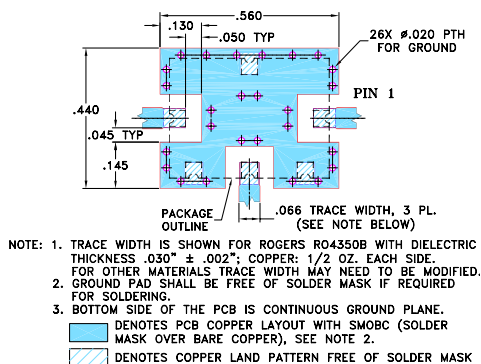
Outline Drawing



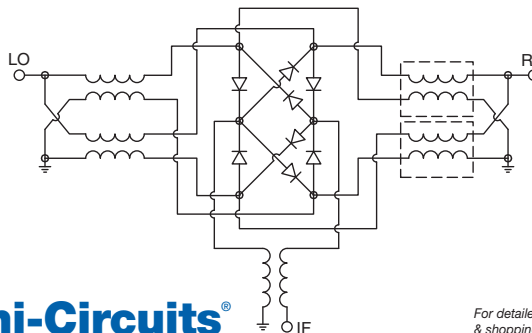
Outline Dimensions (inch mm)

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)



Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs
& shopping online see web site

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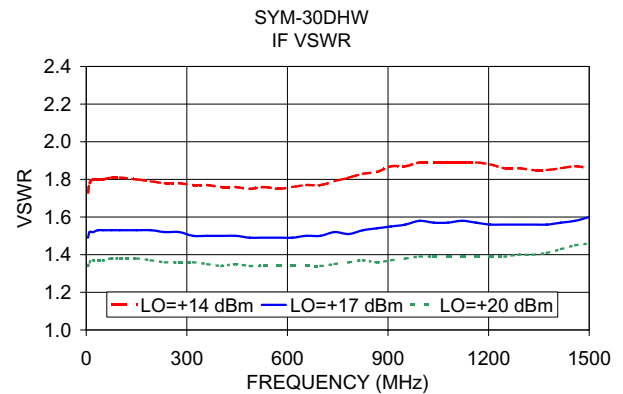
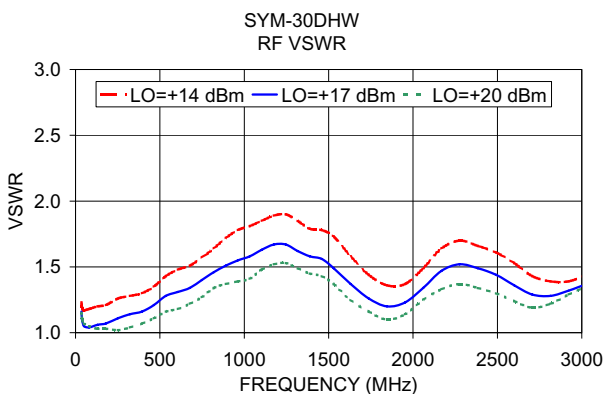
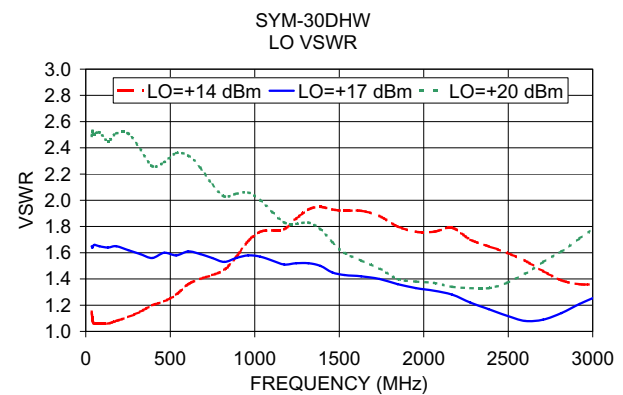
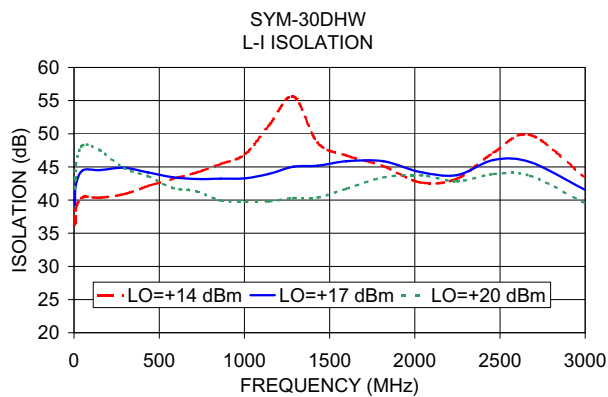
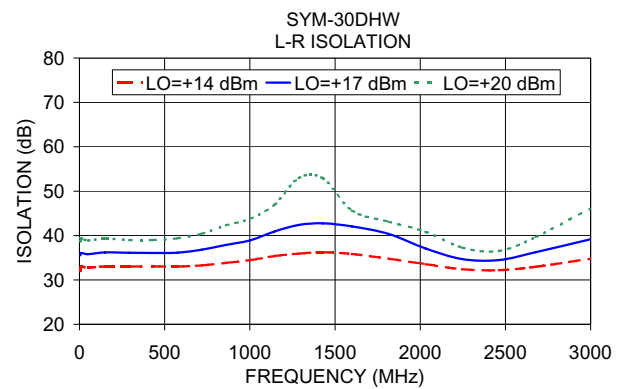
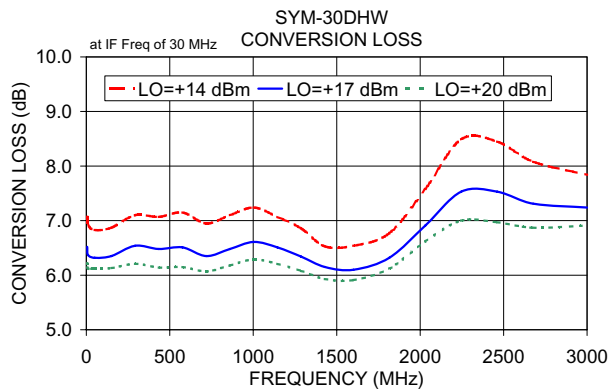
IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuits' applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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Performance Charts

SYM-30DHW+ SYM-30DHW



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