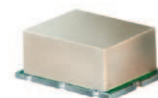


High IP3 Frequency Mixer

Level 17 (LO Power +17 dBm) 5 to 1800 MHz

SYM-18H+
SYM-18H



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

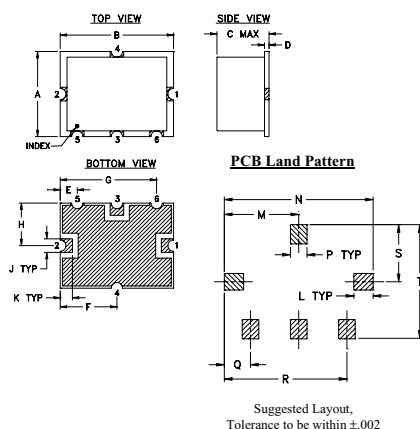
• Applications

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.

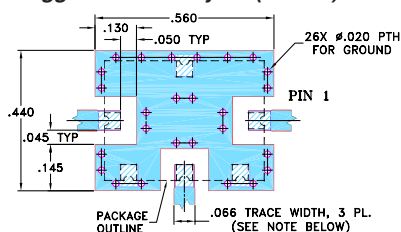
Outline Drawing



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 Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)
LO/RF	IF	Mid-Band m		Total Range Max.		L		M		U		L		M		U		
		$\overline{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	
5-1800	10-1500*	5.75	.10	7.6	8.9	50	28	45	35	40	24	39	22	50	30	30	22	30

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

*Conversion loss measured at IF frequency between 10 and 1300 MHz

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

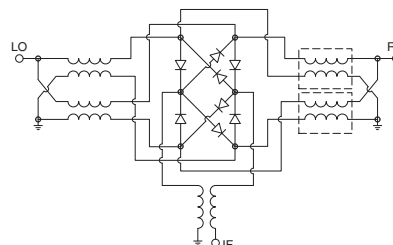
M = mid range [$10 f_L$ to $f_U/2$]

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
5.00	35.00	5.61	50.30	38.90	1.58	1.80
8.00	38.00	5.53	50.90	39.40	1.36	1.78
10.00	40.00	5.56	51.30	39.60	1.31	1.78
50.00	80.00	5.41	55.80	42.20	1.22	1.77
100.00	130.00	5.39	54.70	44.40	1.25	1.73
110.48	140.48	5.34	53.80	44.10	1.29	1.74
220.45	250.45	5.68	48.00	48.90	1.43	1.73
330.43	360.43	5.61	45.10	53.30	1.55	1.59
440.40	470.40	5.72	44.40	52.20	1.76	1.50
500.00	530.00	5.55	44.30	48.10	1.80	1.51
550.38	580.38	5.65	45.40	48.00	1.94	1.39
660.35	690.35	5.82	47.50	43.10	2.08	1.33
770.33	800.33	6.21	50.80	40.00	2.30	1.32
880.30	910.30	6.46	52.20	38.70	2.35	1.25
990.28	1020.28	6.72	53.70	37.60	2.52	1.22
1000.00	1030.00	6.57	52.40	37.70	2.61	1.21
1100.25	1130.25	6.39	46.80	36.10	2.52	1.23
1210.23	1240.23	6.72	42.30	33.40	2.43	1.24
1320.20	1350.20	6.96	38.90	31.20	2.40	1.25
1800.00	1830.00	7.39	32.00	30.20	2.30	1.88

Electrical Schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

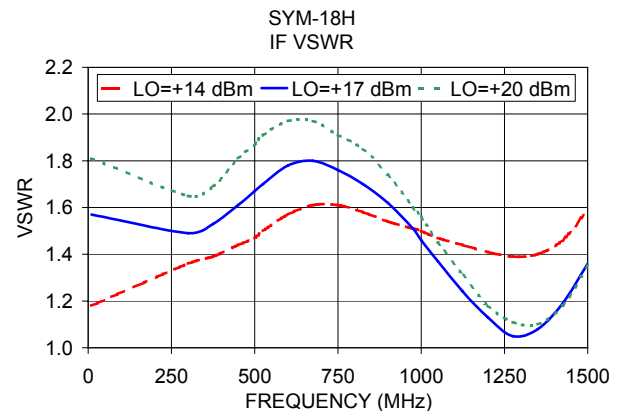
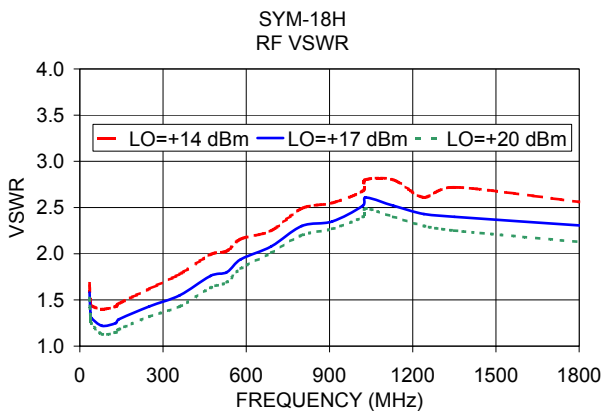
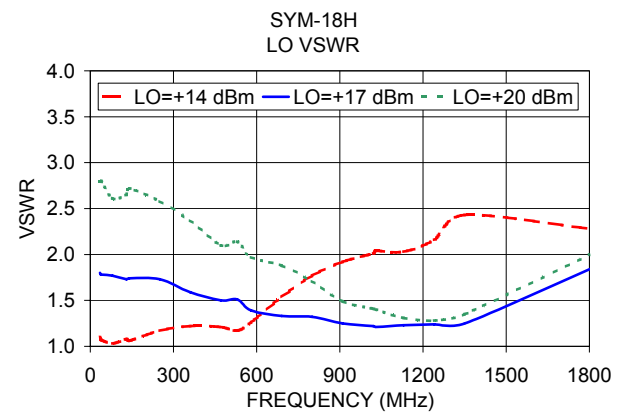
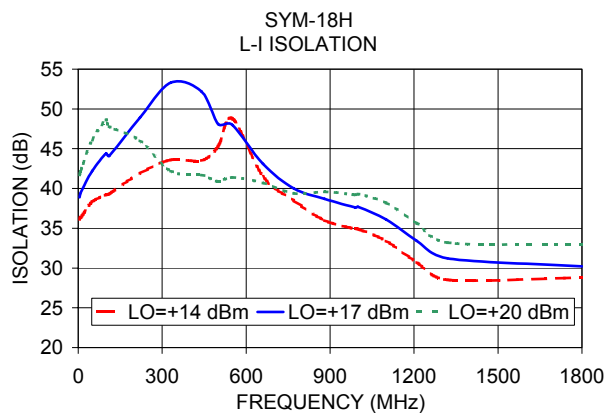
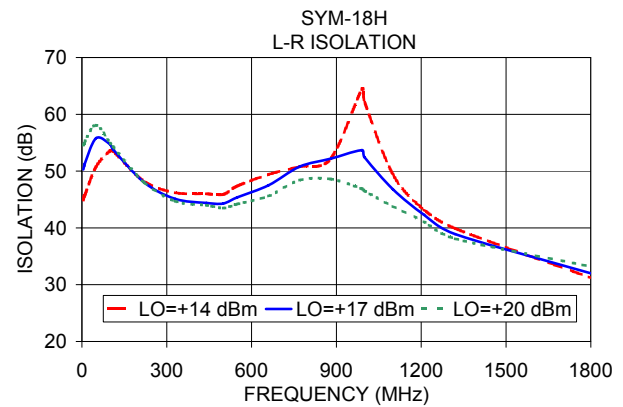
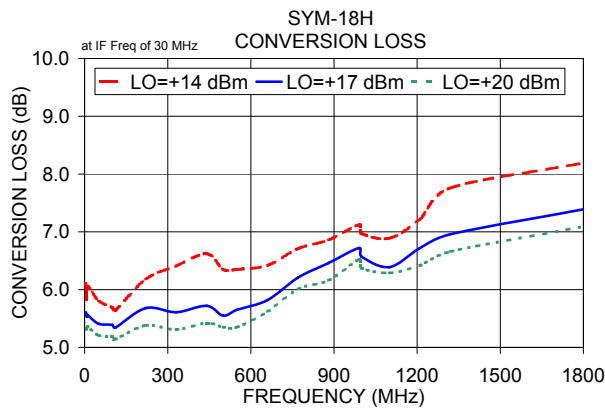
For detailed performance specs
& shopping online see web site

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-18H+ SYM-18H



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& shopping online see web site