

# High IP3 Frequency Mixer

Level 17 (LO Power +17 dBm) 1250 to 1700 MHz

## HJK-172H+



CASE STYLE: TTT881  
PRICE: \$9.95 ea. QTY. (10)

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
LO & RF Power	+20 dBm

Permanent damage may occur if any of these limits are exceeded.

### Pad Connections

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

### Features

- very high IP3, 33 dBm typ.
- good L-R isolation, 45 dB typ.
- compression, 3 dB higher than LO power
- protected by US Patent 6,807,407

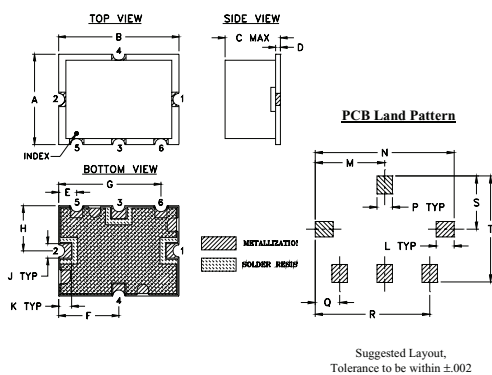
### Applications

- base stations
- communication systems
- cellular
- amateur Radio
- GPS

### Electrical Specifications at 25°C

Parameter	Min.	Typ.	Max.	Unit
Frequency Range, RF	1250	—	1700	MHz
Frequency Range, LO	1850	—	2300	MHz
Frequency Range, IF	300	—	900	MHz
Conversion Loss	—	7.5	8.8	dB
LO to RF Isolation	33	42	—	dB
LO to IF Isolation	22	31	—	dB
IP3	—	30	—	dBm
RF Input Power at 1 dB Compression	—	+20	—	dBm

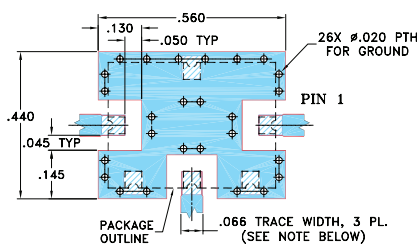
### Outline Drawing



### Outline Dimensions (inch)

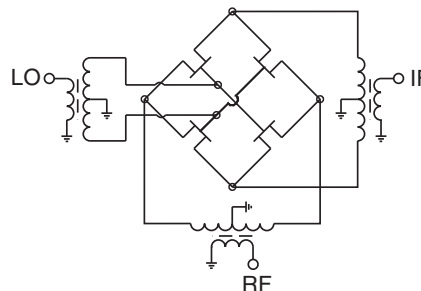
A	B	C	D	E	F	G	H	J	K
.38	.50	.23	.020	.075	.250	.425	.187	.050	.050
9.65	12.70	5.84	0.51	1.91	6.35	10.80	4.75	1.27	1.27
L	M	N	P	Q	R	S	T	wt.	
.070	.270	.540	.060	.095	.445	.208	.415		
1.78	6.86	13.72	1.52	2.41	11.30	5.28	10.54		0.8

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



1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  2. THE USE OF SOLDER MASK OVER THE GROUND AREA UNDER THE UNIT AS SHOWN IS RECOMMENDED TO PREVENT POTENTIAL SHORTING. IF USER CHOOSES TO EXPOSE METAL UNDER THE ENTIRE UNIT GROUND PAD FOR IMPROVED GROUNDING, IT IS RECOMMENDED A SOLDER MASK DAM BE APPLIED AROUND EACH GROUND PAD TO ENSURE FILLET AND CONNECTION AT GROUND PADS.
  3. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DEMOTES PCB COPPER LAYOUT WITH SHOPS (SOLDER P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

### Electrical Schematic



**Mini-Circuits®**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

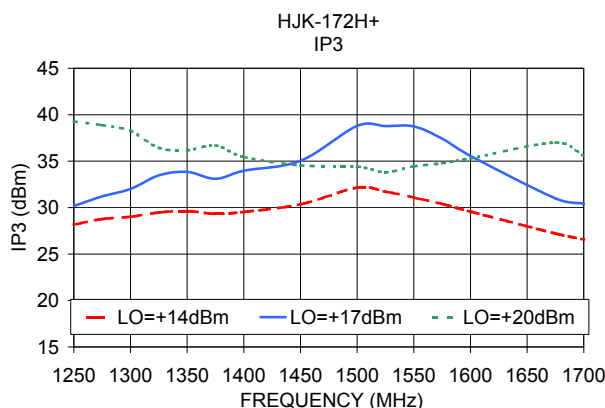
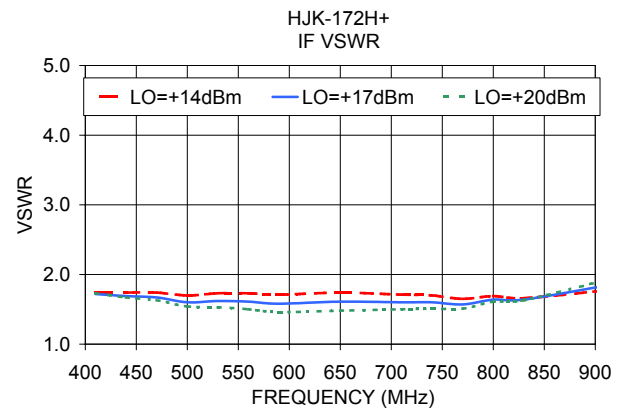
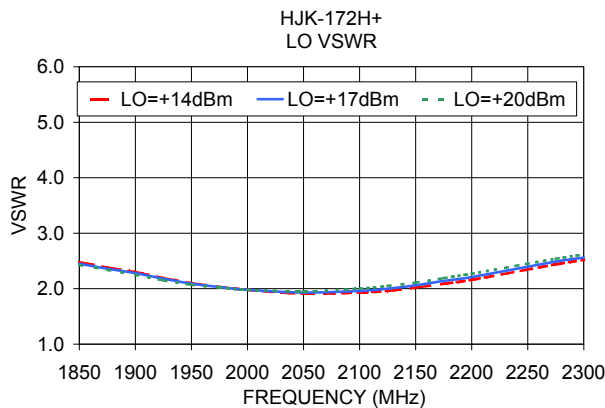
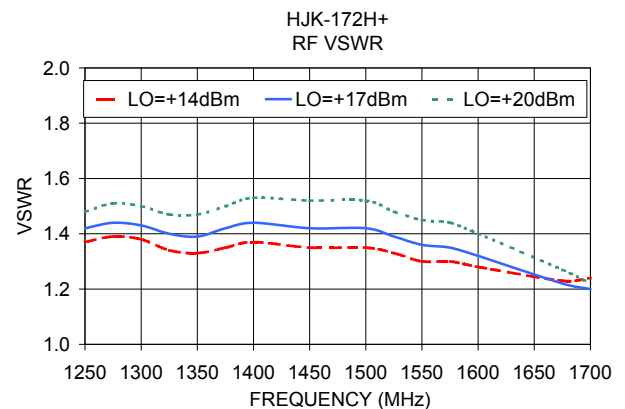
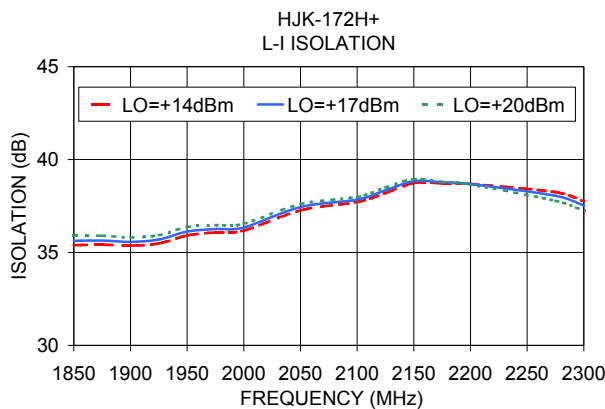
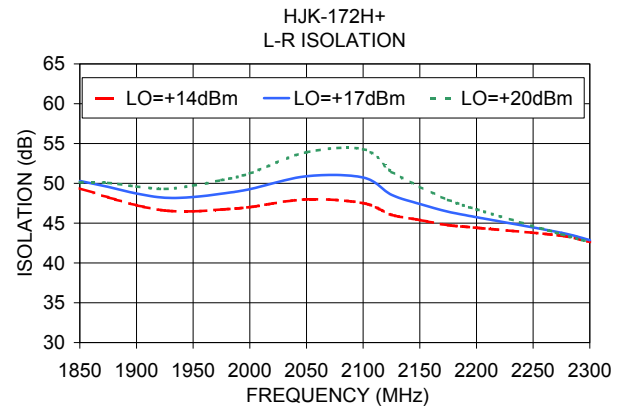
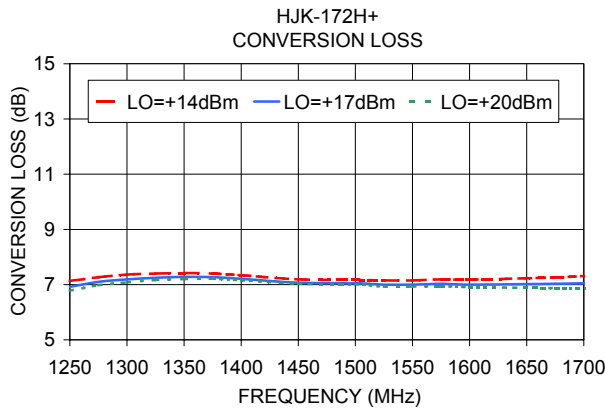
IF/RF MICROWAVE COMPONENTS [www.minicircuits.com](http://www.minicircuits.com)

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# Performance Charts

# HJK-172H+



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

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