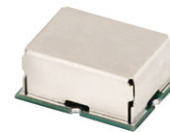


High IP3

Frequency Mixer

Level 10 (LO Power +10 dBm) 450 to 740 MHz

HJK-72LH+



CASE STYLE: TTT881
PRICE: \$15.95 ea. QTY. (1-9)

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

The +Suffix has been added in order to identify 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	+18 dBm

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

Pin Connections

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

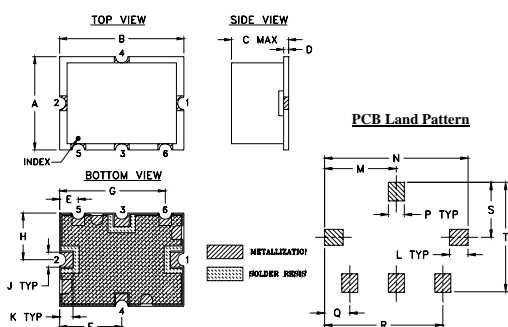
Features

- high IP3, 22 dBm typ.
- excellent L-R isolation, 45 dB typ.;
- L-I isolation, 40 dB typ.
- protected by US Patent 6,807,407

Applications

- base stations
- communication systems
- cellular
- mobile radio service
- paging
- wireless microphones

Outline Drawing

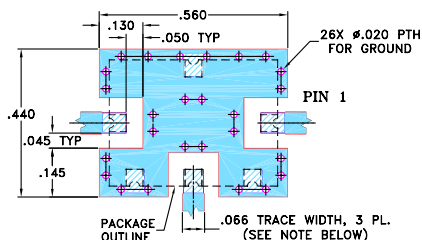


Suggested Layout, Tolerance to be within ±.002

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 R04350B 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

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Electrical Specifications

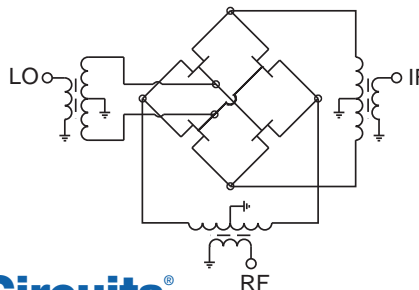
FREQUENCY (MHz)			CONVERSION LOSS* (dB)			RF in at 1dB Compr (dBm)	IP3 (dBm)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)	
RF	LO	IF	Typ.	σ	Max.	Typ.	Typ.	Typ.	Min.	Typ.	Min.
450-670	520-740	30-500	7.3	0.1	8.8	+10	22	45	32	40	29

*Conversion Loss at IF=70 MHz.

Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R	Isolation L-I	VSWR RF Port	VSWR LO Port	IP3 (dBm)
RF MHz	LO MHz	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
450.10	520.10	7.51	44.59	42.35	2.15	2.99	21.66
460.10	530.10	7.53	44.86	43.08	2.13	2.61	21.88
470.10	540.10	7.51	45.19	44.24	2.13	2.29	22.21
480.10	550.10	7.41	44.79	44.17	2.11	2.02	23.11
490.10	560.10	7.49	45.28	44.44	2.11	1.79	22.45
500.10	570.10	7.37	46.06	44.11	2.10	1.60	22.91
510.10	580.10	7.28	45.72	43.02	2.10	1.46	24.11
520.10	590.10	7.29	45.25	42.65	2.10	1.35	23.25
530.10	600.10	7.30	46.08	41.18	2.10	1.28	23.09
540.10	610.10	7.42	45.93	40.39	2.10	1.27	23.94
550.10	620.10	7.44	45.88	39.71	2.09	1.31	23.36
560.10	630.10	7.34	45.95	38.73	2.08	1.38	23.93
590.10	660.10	7.28	46.28	37.05	2.10	1.68	22.79
620.10	690.10	7.29	46.10	35.88	2.14	2.02	21.73
670.10	740.10	7.51	44.40	34.83	2.19	2.57	20.40

Electrical Schematic



For detailed performance specs & shopping online see web site

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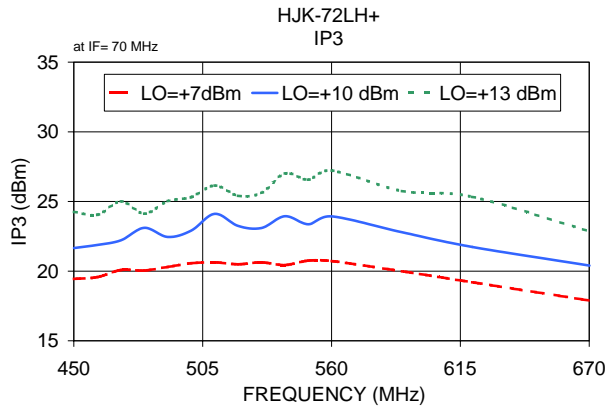
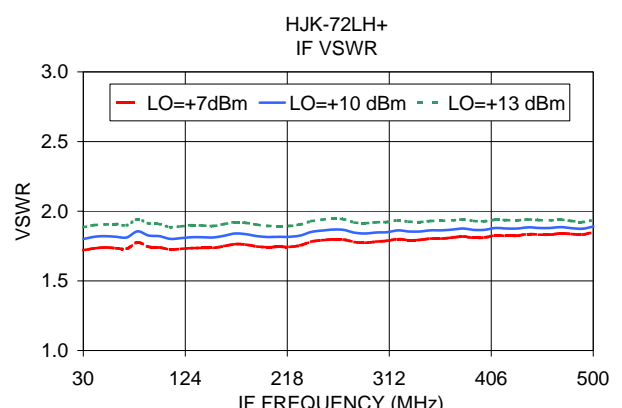
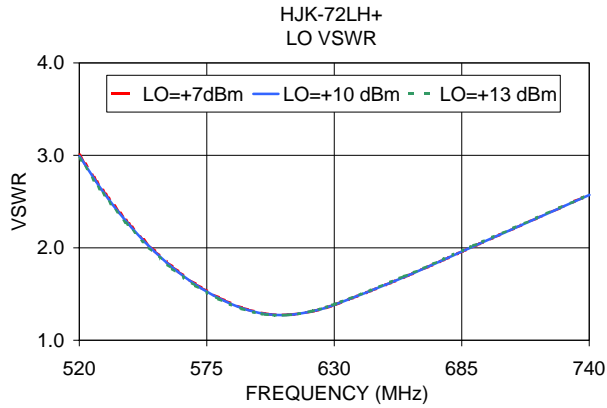
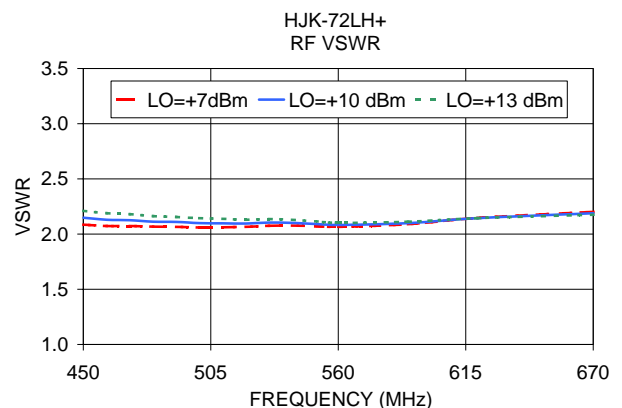
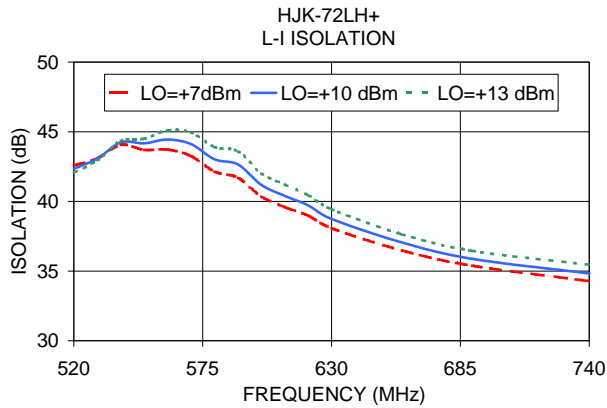
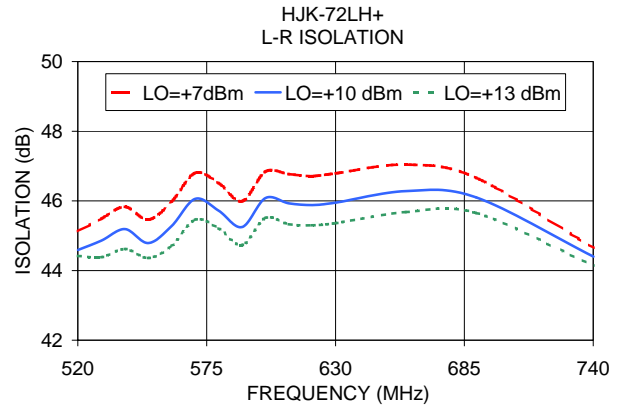
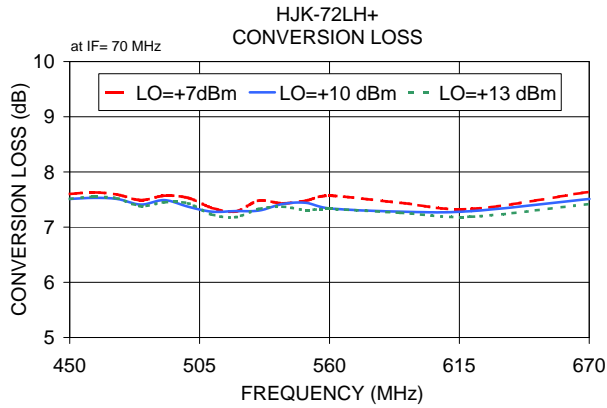
IF/RF MICROWAVE COMPONENTS

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Performance Charts

HJK-72LH+



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