

High IP3

Frequency Mixer

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

HJK-72LH+



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

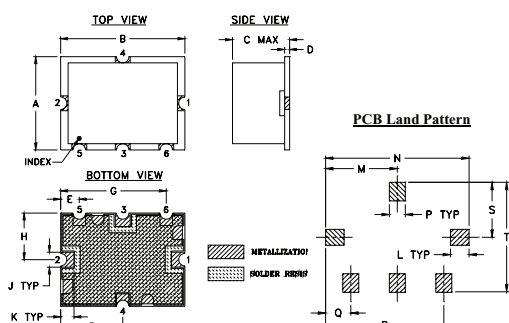
CASE STYLE: TTT881

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

+RoHS Compliant

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

Outline Drawing



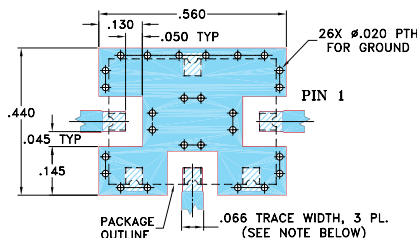
Suggested Layout,
Tolerance to be within ±.002

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. 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.

Electrical Specifications

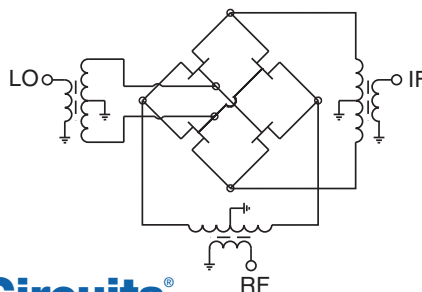
FREQUENCY (MHz)			CONVERSION LOSS* (dB)			RF in at 1dB Compr (dBm)	IP3 (dBm)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)	
RF	LO	IF	Typ.	σ	Max.	Typ.	Typ.	Typ.	Min.	Typ.	Min.
450-670	520-740	30-500	7.3	0.1	8.8	+10	22	45	32	40	29

*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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