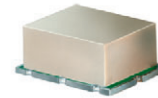


High IP3 Frequency Mixer

HJK-21+ HJK-21

Level 7 (LO Power +7 dBm) 1850 to 1910 MHz



Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
LO & RF Power	+16 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.
- compression, 3 dB higher than LO power

CASE STYLE: TTT167
PRICE: \$10.95 ea. QTY (1-9)

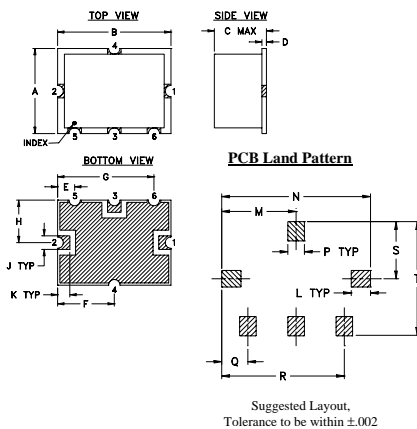
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Applications

- base stations
- communication systems
- PCS

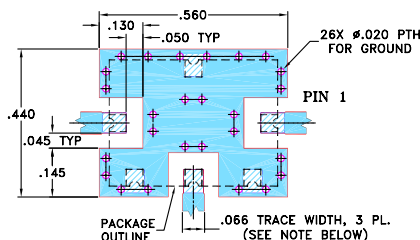
Outline Drawing



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)



- 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

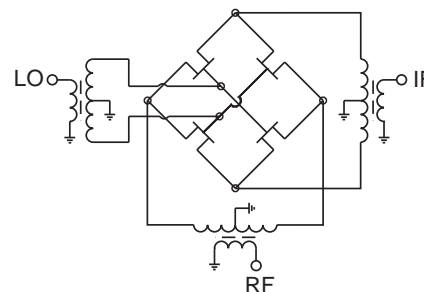
Electrical Specifications

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.
1850-1910	2090-2150	180-300	7.5	0.3	9.5	+10	22	28	18	19	13

Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)
RF MHz	LO MHz	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
1850.00	2090.00	7.47	28.31	18.52	1.75	3.30	22.30
1856.00	2096.00	7.48	28.39	18.54	1.77	3.40	22.60
1862.00	2102.00	7.46	28.37	18.60	1.79	3.55	22.62
1868.00	2108.00	7.46	28.39	18.64	1.78	3.66	22.49
1874.00	2114.00	7.48	28.58	18.62	1.76	3.73	22.04
1880.00	2120.00	7.51	28.78	18.54	1.74	3.74	21.48
1886.00	2126.00	7.55	28.94	18.47	1.75	3.74	21.32
1898.00	2138.00	7.64	29.01	18.54	1.77	3.86	21.15
1904.00	2144.00	7.66	29.01	18.64	1.78	3.85	21.33
1910.00	2150.00	7.68	29.21	18.71	1.76	3.86	21.30

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

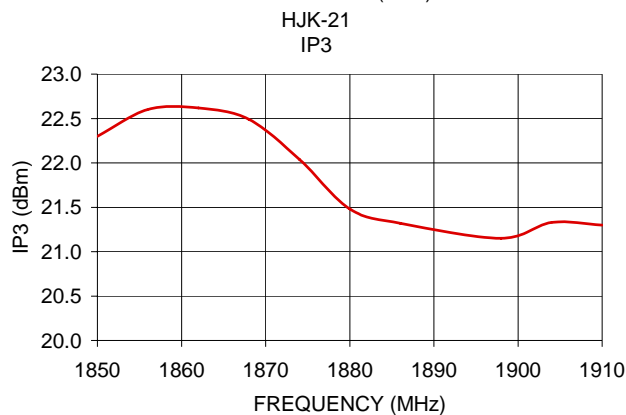
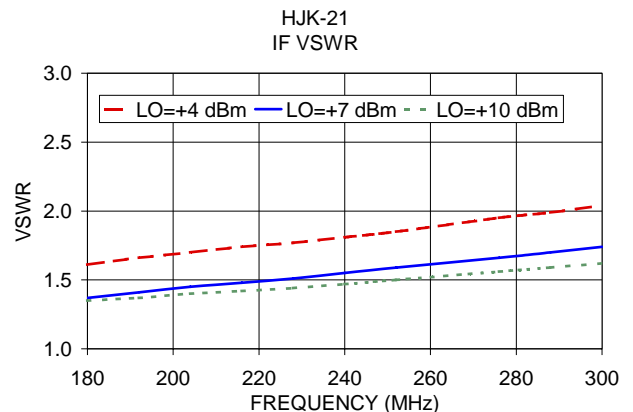
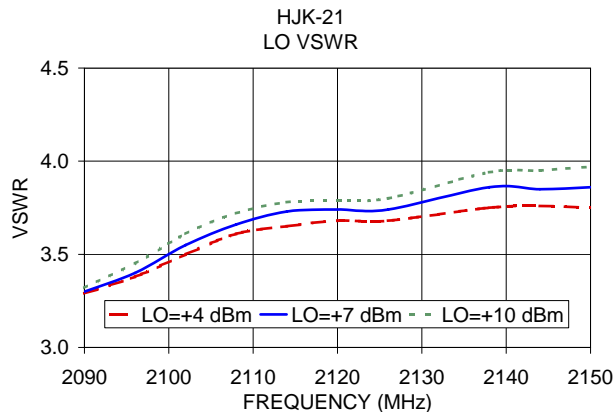
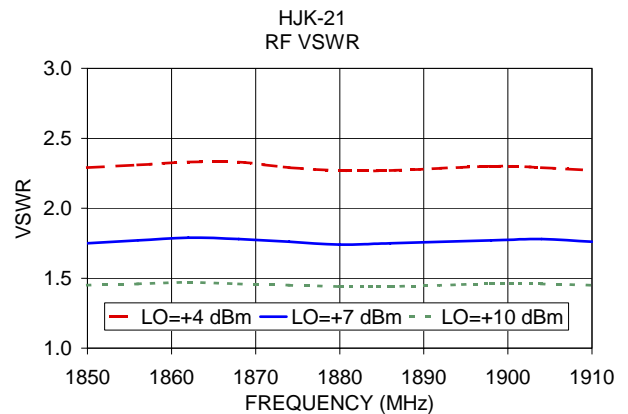
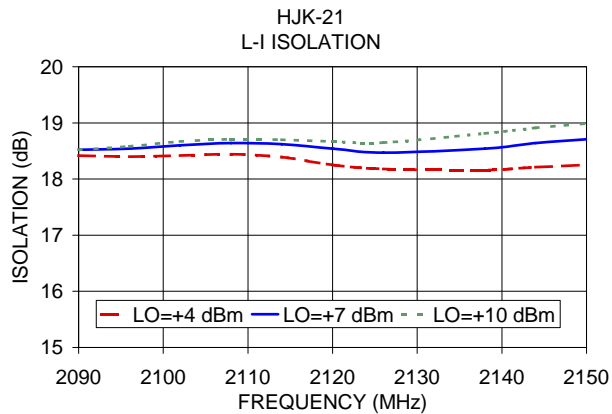
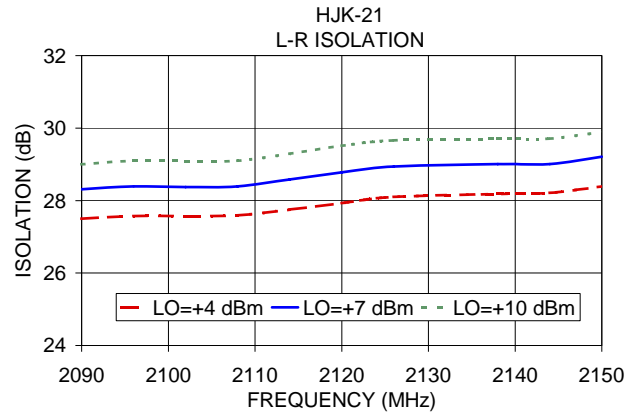
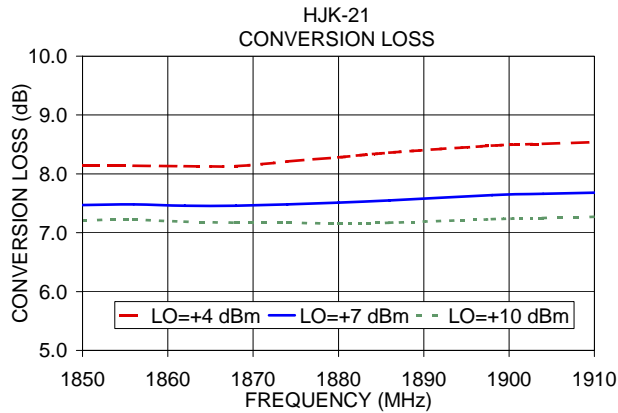
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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Performance Charts

HJK-21+ HJK-21



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IF/RF MICROWAVE COMPONENTS

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