

# Wideband Frequency Mixer

## HJK-272MH+

Level 13 (LO Power +13 dBm) 600 to 2700 MHz



Generic photo used for illustration purposes only

CASE STYLE: TTT881

### 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

- wide band, 600 to 2700 MHz
- good L-R isolation, 37 dB typ.
- protected by US Patent 6,807,407

### Applications

- base stations
- communication systems
- cellular
- PCS
- DCS
- radar

**+RoHS Compliant**

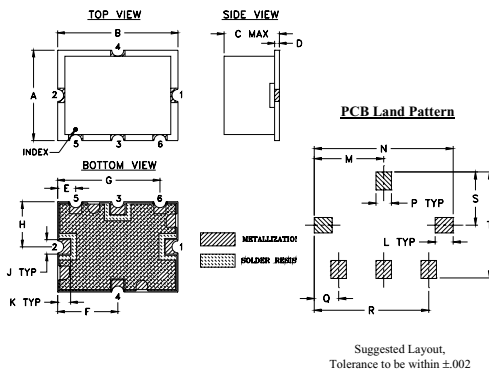
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500

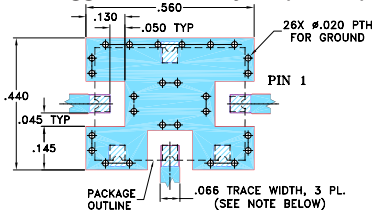
### Outline Drawing



### 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)



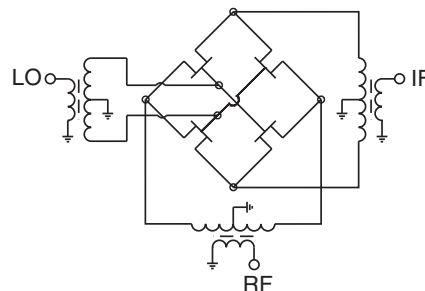
### Electrical Specifications at 25°C

Parameter	Min.	Typ.	Max.	Unit
Frequency Range, RF/LO	600	—	2700	MHz
Frequency Range, IF	10	—	1000	MHz
Conversion Loss	—	7.4	9.0	dB
LO to RF Isolation	28	37	—	dB
LO to IF Isolation	20	27	—	dB
IP3	—	21	—	dBm
RF Input Power at 1 dB Compression	—	+16	—	dBm

### Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)
RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
597.00	627.00	7.44	37.11	36.89	2.58	4.40	22.10
642.50	672.50	7.28	38.22	36.20	2.43	4.39	22.41
733.50	763.50	7.00	39.37	37.18	2.19	4.23	22.27
824.50	854.50	6.88	53.10	35.57	2.04	4.08	22.12
900.00	930.00	6.83	55.81	31.90	1.96	3.94	22.33
1047.00	1077.00	6.68	50.14	29.64	1.88	3.57	21.18
1120.50	1150.50	6.64	45.95	28.86	1.78	3.38	21.47
1267.50	1297.50	6.68	43.96	28.54	1.70	3.09	21.73
1341.00	1371.00	6.70	44.91	29.03	1.67	3.00	21.54
1414.50	1444.50	6.80	47.05	29.45	1.62	2.97	22.02
1561.50	1591.50	7.09	45.49	30.79	1.62	3.07	23.43
1671.75	1701.75	7.26	48.74	32.45	1.49	3.20	23.21
1745.25	1775.25	7.04	50.07	34.48	1.34	3.31	21.92
1818.75	1848.75	6.94	48.54	36.93	1.23	3.40	21.27
1965.75	1995.75	6.75	43.78	40.52	1.08	3.51	21.23
2039.25	2069.25	6.73	42.71	40.82	1.06	3.51	21.12
2186.25	2216.25	6.73	42.66	37.01	1.14	3.40	20.68
2333.25	2363.25	6.92	57.54	33.28	1.31	3.14	21.18
2640.00	2670.00	7.38	44.82	28.76	1.72	2.71	21.95
2800.00	2830.00	7.83	41.68	28.65	1.94	2.58	21.76

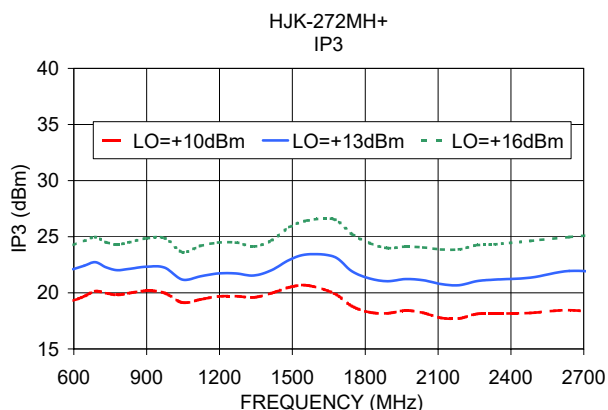
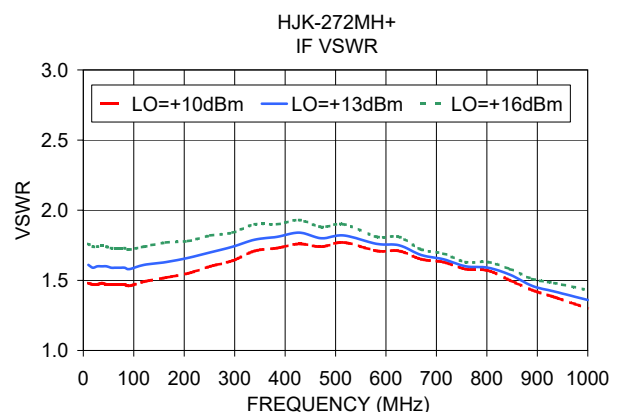
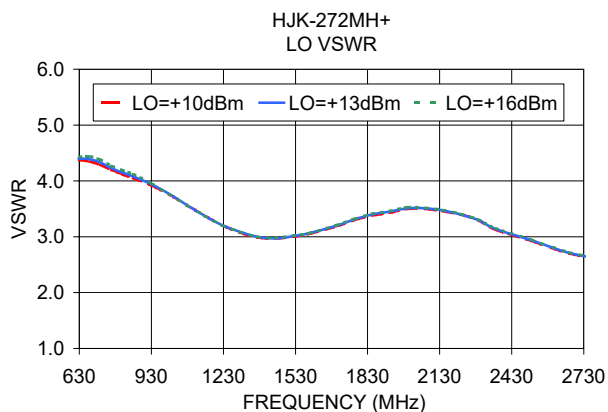
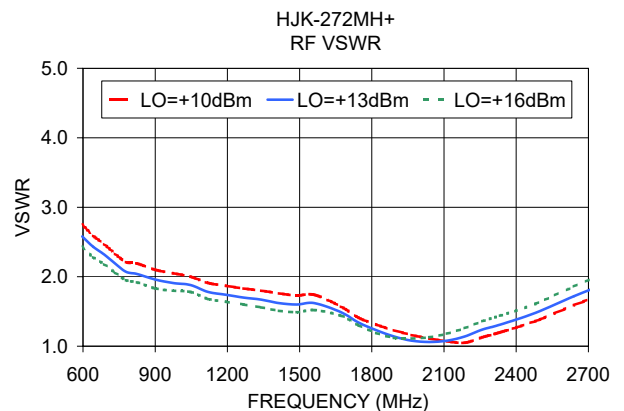
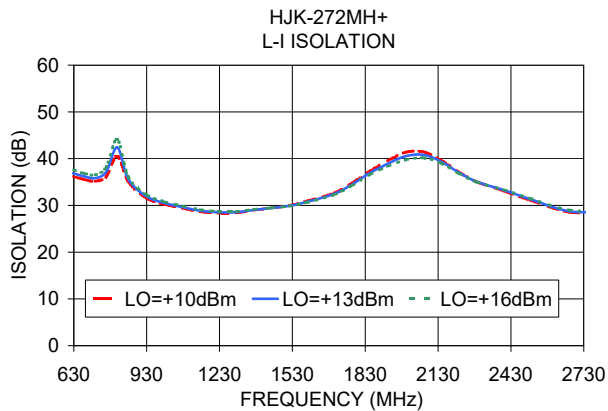
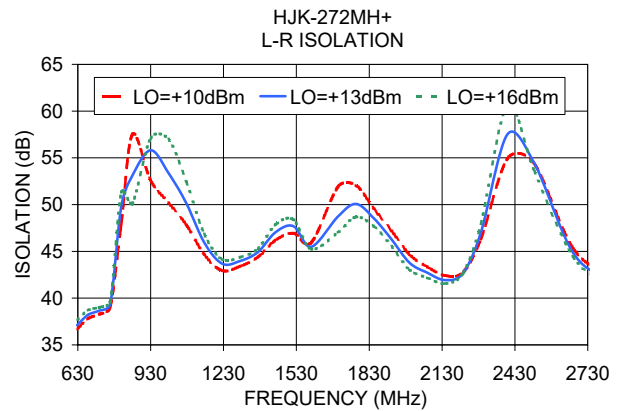
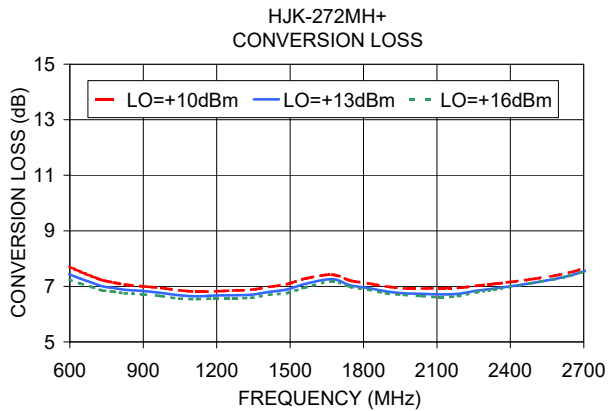
### Electrical Schematic



### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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