

Wideband Frequency Mixer

HJK-272H+

Level 17 (LO Power +17 dBm) 600 to 2700 MHz



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

- wideband
- good L-R isolation, 35 dB typ.
- compression, 3 dB higher than LO power
- protected by US Patent 6,807,407

Applications

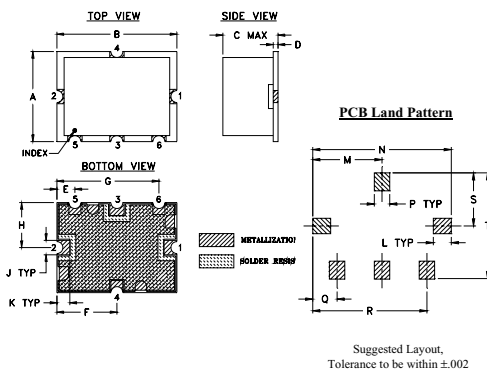
- base stations
- communication systems
- cellular
- PCS
- DCS
- radar

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

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 | — | 7.7 | 8.9 | dB |
| LO to RF Isolation | 28 | 35 | — | dB |
| LO to IF Isolation | 17 | 23 | — | dB |
| IP3 | — | 25 | — | dBm |
| RF Input Power at 1 dB Compression | — | +20 | — | dBm |

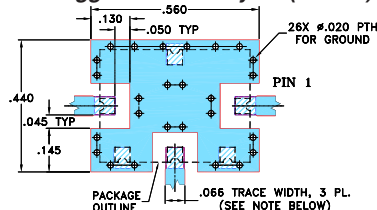
Outline Drawing



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 | grams | |
| 1.78 | 6.86 | 13.72 | 1.52 | 2.41 | 11.30 | 5.28 | 10.54 | 0.8 | |

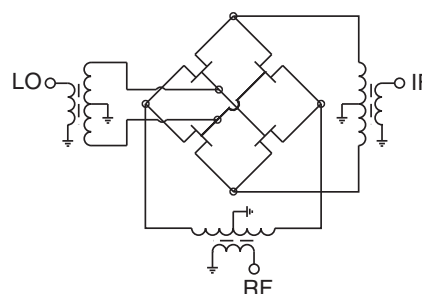
Demo Board MCL P/N: TB-12 Suggested PCB Layout (PL-079)



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 +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | |
| 597.00 | 627.00 | 7.24 | 38.44 | 37.32 | 2.32 | 4.33 | 24.89 | | | | | |
| 642.50 | 672.50 | 7.08 | 39.44 | 36.29 | 2.27 | 4.33 | 25.35 | | | | | |
| 688.00 | 718.00 | 6.97 | 39.38 | 35.75 | 2.14 | 4.25 | 25.80 | | | | | |
| 779.00 | 809.00 | 6.79 | 46.14 | 43.45 | 1.94 | 4.04 | 25.09 | | | | | |
| 824.50 | 854.50 | 6.74 | 50.27 | 35.58 | 1.86 | 3.95 | 25.34 | | | | | |
| 936.75 | 966.75 | 6.61 | 53.04 | 30.83 | 1.77 | 3.68 | 26.11 | | | | | |
| 1010.25 | 1040.25 | 6.55 | 48.00 | 29.10 | 1.74 | 3.51 | 25.28 | | | | | |
| 1194.00 | 1224.00 | 6.55 | 40.81 | 27.69 | 1.62 | 3.14 | 25.46 | | | | | |
| 1267.50 | 1297.50 | 6.56 | 41.12 | 27.60 | 1.57 | 3.06 | 25.49 | | | | | |
| 1414.50 | 1444.50 | 6.69 | 43.94 | 28.29 | 1.47 | 2.99 | 25.60 | | | | | |
| 1561.50 | 1591.50 | 6.94 | 44.87 | 29.44 | 1.48 | 3.11 | 27.63 | | | | | |
| 1635.00 | 1665.00 | 7.33 | 47.81 | 31.00 | 1.49 | 3.21 | 27.84 | | | | | |
| 1708.50 | 1738.50 | 7.14 | 51.44 | 32.67 | 1.37 | 3.29 | 26.97 | | | | | |
| 1855.50 | 1885.50 | 6.81 | 45.18 | 35.94 | 1.15 | 3.44 | 25.87 | | | | | |
| 1929.00 | 1959.00 | 6.76 | 42.62 | 36.96 | 1.12 | 3.47 | 24.81 | | | | | |
| 2002.50 | 2032.50 | 6.69 | 40.99 | 35.71 | 1.14 | 3.45 | 24.94 | | | | | |
| 2112.75 | 2142.75 | 6.63 | 39.28 | 32.41 | 1.22 | 3.37 | 24.91 | | | | | |
| 2259.75 | 2289.75 | 6.81 | 46.55 | 28.70 | 1.40 | 3.13 | 25.52 | | | | | |
| 2400.00 | 2430.00 | 6.99 | 45.78 | 27.16 | 1.57 | 2.91 | 25.43 | | | | | |
| 2560.00 | 2590.00 | 7.25 | 38.37 | 24.84 | 1.79 | 2.64 | 25.51 | | | | | |
| 2720.00 | 2750.00 | 7.65 | 35.04 | 23.95 | 2.00 | 2.52 | 25.38 | | | | | |

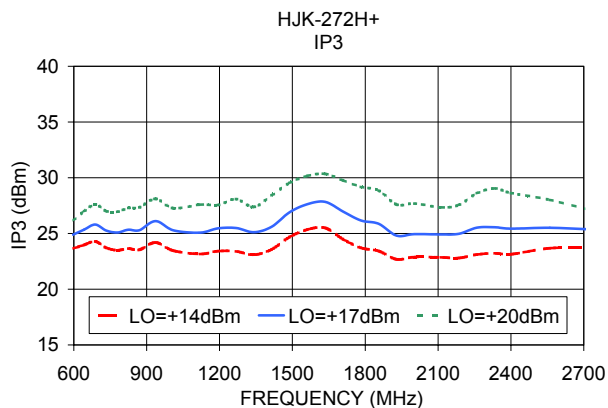
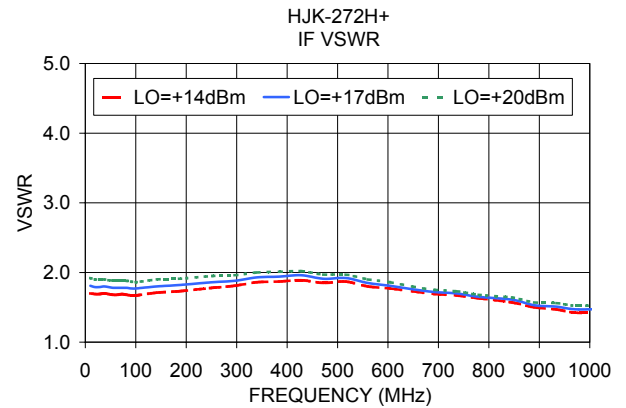
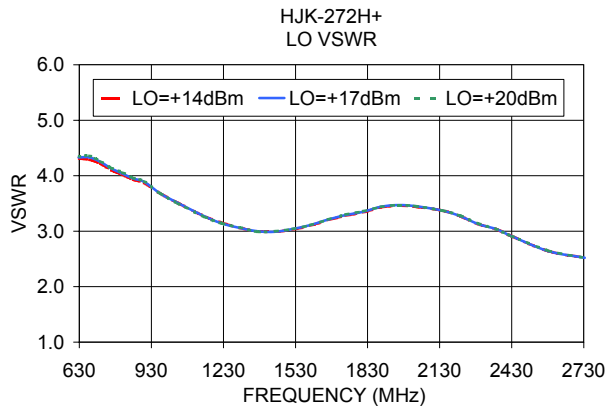
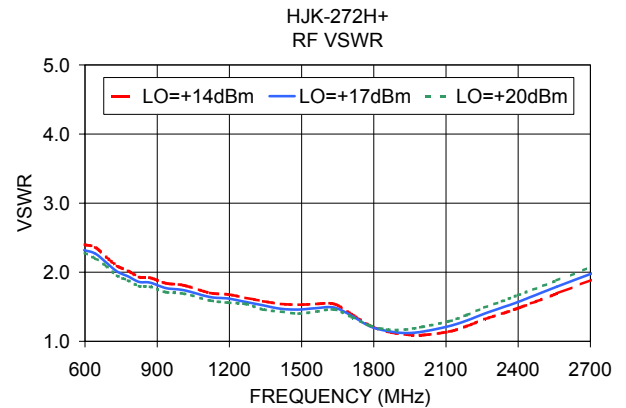
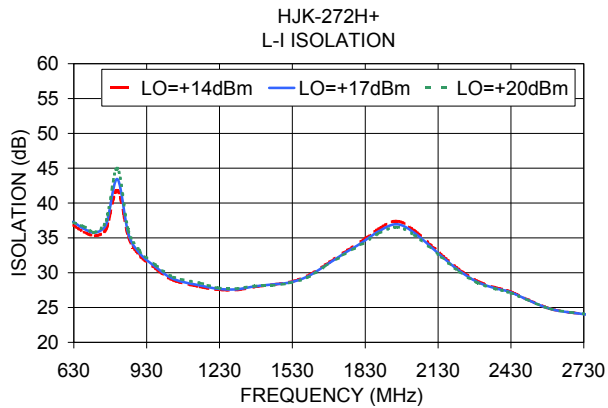
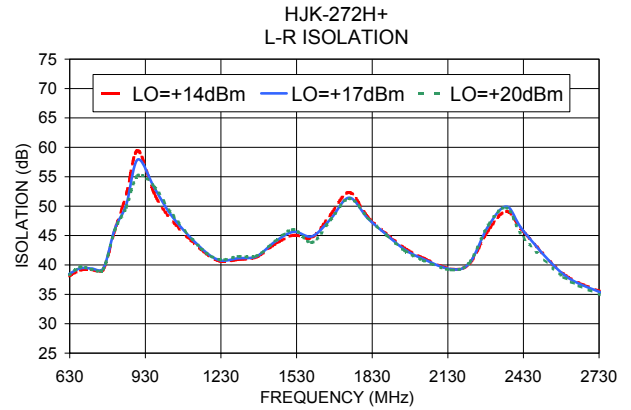
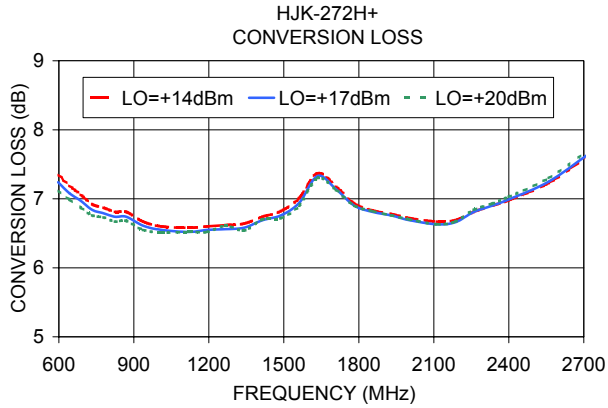
Electrical Schematic



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.
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