

Frequency Mixer

TUF-5LH+

Level 10 (LO Power +10dBm) 20 to 1500 MHz



Generic photo used for illustration purposes only

CASE STYLE: B02

+RoHS Compliant

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

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 50mW |
| IF Current | 40mA |

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

Pin Connections

| | |
|-------------|---|
| LO | 4 |
| RF | 1 |
| IF | 2 |
| GROUND | 3 |
| CASE GROUND | 3 |

Features

- low conversion loss, 6.9 dB typ.
- excellent L-R isolation, 42 dB typ.
- wideband, 20 to 1500 MHz
- rugged welded construction

Applications

- VHF/UHF
- satellite distribution
- cellular
- GSM

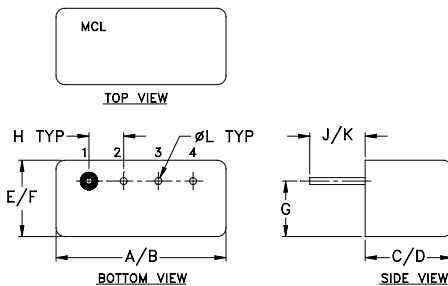
Electrical Specifications

| FREQUENCY (MHz) | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | | IP3 @ CENTER BAND (dBm) | | | |
|-----------------|----------------------|----------------------|----|----|----------------------|----|----|-------------------------|----|---|----|
| | | L | M | U | L | M | U | | | | |
| 20-1500 | 6.9 | 53 | 40 | 42 | 40 | 25 | 30 | 18 | 22 | 8 | 14 |

1 dB COMP.: +5 dBm typ.

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]
m = mid band [$2f_L$ to $f_U/2$]

Outline Drawing



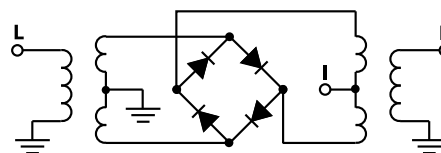
Outline Dimensions (inch/mm)

| | | | | | |
|-------|-------|------|------|------|-------|
| A | B | C | D | E | F |
| .480 | .500 | .240 | .255 | .210 | .230 |
| 12.19 | 12.70 | 6.10 | 6.48 | 5.33 | 5.84 |
| G | H | J | K | L | wt |
| .16 | .100 | .14 | .20 | .020 | grams |
| 4.06 | 2.54 | 3.56 | 5.08 | 0.51 | 1.9 |

Typical Performance Data

| Frequency (MHz) | Conversion Loss (dB) | Isolation L-R (dB) | Isolation L-I (dB) | VSWR RF Port (:1) | VSWR LO Port (:1) |
|-----------------|----------------------|--------------------|--------------------|-------------------|-------------------|
| | | | | | |
| 20.00 | 5.60 | 62.84 | 53.91 | 1.43 | 2.57 |
| 50.00 | 5.38 | 57.81 | 46.30 | 1.32 | 2.51 |
| 100.00 | 5.25 | 52.60 | 40.86 | 1.31 | 2.50 |
| 158.75 | 5.20 | 49.11 | 38.29 | 1.34 | 2.38 |
| 200.00 | 5.25 | 47.45 | 36.98 | 1.48 | 2.28 |
| 297.50 | 5.37 | 44.43 | 34.13 | 1.59 | 2.36 |
| 436.25 | 5.54 | 42.14 | 31.89 | 1.91 | 2.34 |
| 500.00 | 5.74 | 41.47 | 30.68 | 2.36 | 2.36 |
| 575.00 | 5.89 | 40.90 | 30.02 | 2.49 | 2.36 |
| 713.75 | 6.61 | 40.16 | 28.61 | 2.97 | 2.45 |
| 750.00 | 6.80 | 39.71 | 28.48 | 3.40 | 2.46 |
| 760.00 | 6.83 | 39.62 | 28.42 | 3.53 | 2.48 |
| 852.50 | 7.07 | 39.30 | 28.00 | 3.80 | 2.56 |
| 991.25 | 6.99 | 38.97 | 26.26 | 3.86 | 2.67 |
| 1000.00 | 7.07 | 38.98 | 26.16 | 3.95 | 2.70 |
| 1130.00 | 7.19 | 35.93 | 24.11 | 3.91 | 2.73 |
| 1222.50 | 7.02 | 38.98 | 22.14 | 3.77 | 2.73 |
| 1361.25 | 6.88 | 39.21 | 19.23 | 3.65 | 2.77 |
| 1453.75 | 6.78 | 38.09 | 16.51 | 3.54 | 2.78 |
| 1500.00 | 6.66 | 37.95 | 16.08 | 3.47 | 2.77 |

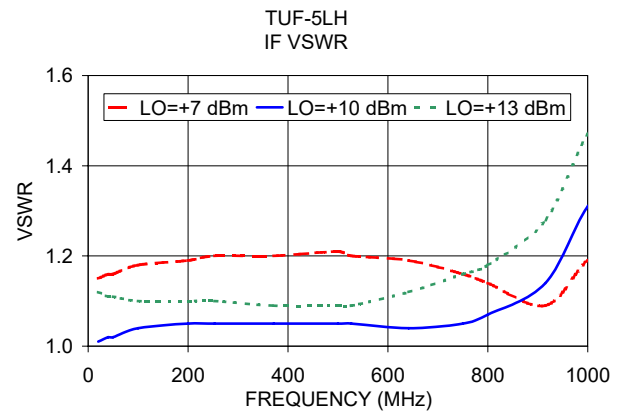
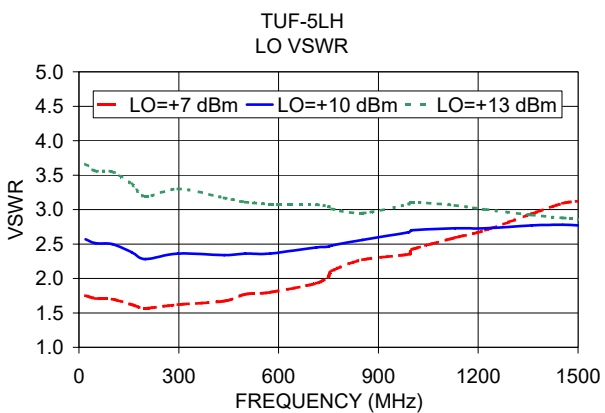
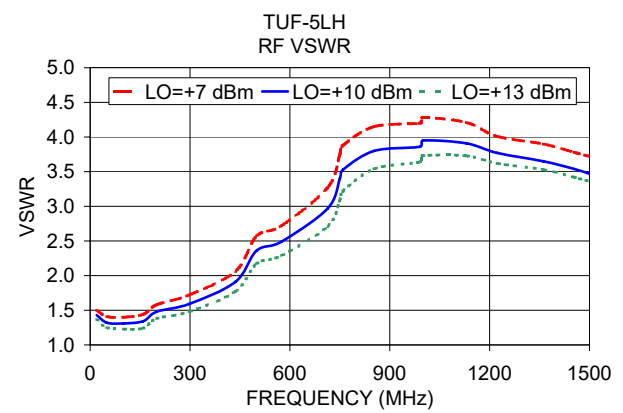
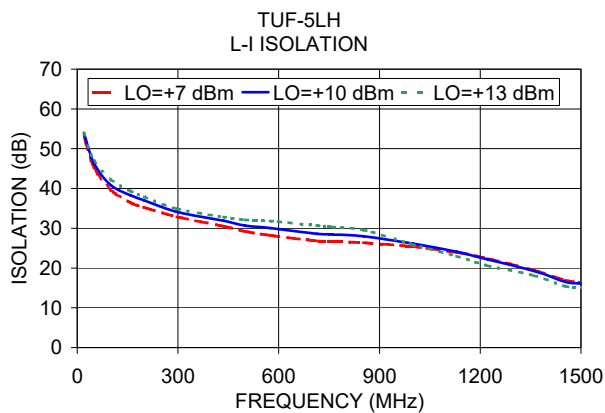
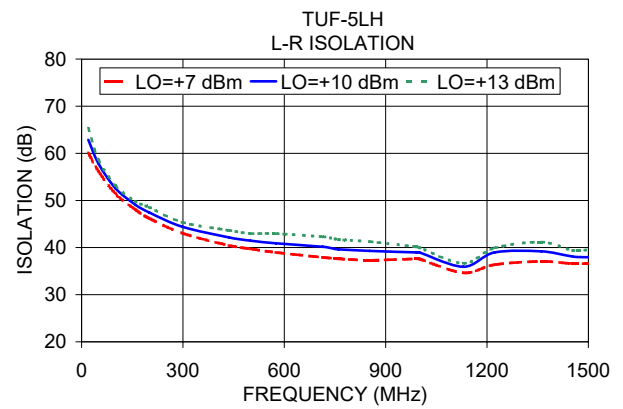
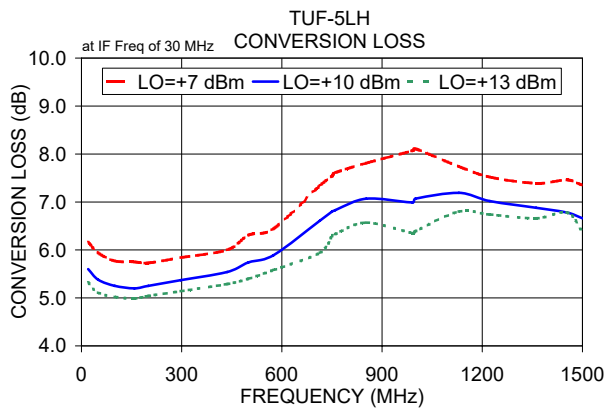
Electrical Schematic



Notes

- 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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