

Plug-In Frequency Mixer

SRA-8+

Level 7 (LO Power +7 dBm) 0.0005 to 10 MHz



Generic photo used for illustration purposes only

CASE STYLE: A01

+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 | 8 |
| RF | 1 |
| IF | 3,4 [^] |
| GROUND | 2,5,6,7 |

[^] pins must be connected together externally

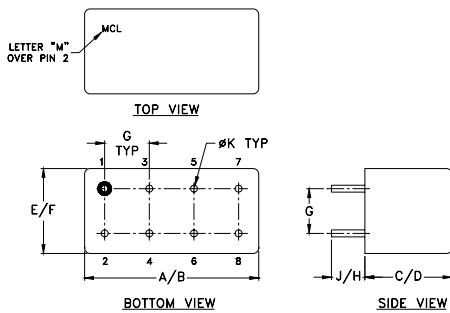
Features

- excellent conversion loss, 5.69 dB typ.
- high L-R isolation, 50 dB typ. L-I isolation, 50 dB typ.
- rugged welded construction
- hermetic

Applications

- IF signal processing
- AM broadcasting radio

Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F |
|-------|-------|------|-------|-------|-------|
| .770 | .800 | .385 | .400 | .370 | .400 |
| 19.56 | 20.32 | 9.78 | 10.16 | 9.40 | 10.16 |
| G | H | J | K | wt | |
| .200 | .20 | .14 | .031 | grams | |
| 5.08 | 5.08 | 3.56 | 0.79 | 5.2 | |

Electrical Specifications

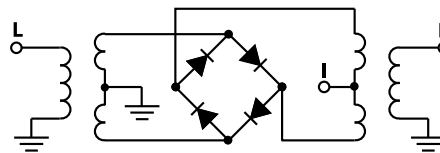
| FREQUENCY (MHz) | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | | | | | | | | | | |
|----------------------|--|----------------------|-----|-----|----------------------|------|------|------|------|------|------|------|----|----|----|----|
| | | L | M | U | L | M | U | | | | | | | | | |
| LO/RF $f_L - f_U$ | Mid-Band m \bar{X} σ Max. | Total Range Max. | | | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | | | | |
| .0005-10 | DC-10 | 5.69 | .11 | 7.5 | 8.5 | 60 | 50 | 40 | 45 | 35 | 60 | 50 | 50 | 40 | 45 | 35 |

1 dB COMP.: +1 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 $f_U/2$]

Typical Performance Data

| Frequency (MHz) | | Conversion Loss (dB) | Isolation L-R (dB) | Isolation L-I (dB) | VSWR RF Port (:1) | VSWR LO Port (:1) |
|-----------------|------|----------------------|--------------------|--------------------|-------------------|-------------------|
| RF | LO | LO +7dBm | LO +7dBm | LO +7dBm | LO +7dBm | LO +7dBm |
| 0.001 | 3.00 | 5.26 | 71.79 | 72.81 | 1.41 | 3.30 |
| 0.002 | 3.00 | 4.96 | 75.56 | 77.65 | 1.37 | 2.70 |
| 0.005 | 3.01 | 4.92 | 73.77 | 80.99 | 1.38 | 2.54 |
| 0.01 | 3.01 | 4.88 | 71.40 | 77.86 | 1.37 | 2.46 |
| 0.02 | 3.02 | 4.84 | 71.49 | 76.56 | 1.37 | 2.41 |
| 0.05 | 3.05 | 4.84 | 72.03 | 78.05 | 1.38 | 2.32 |
| 0.10 | 3.10 | 4.79 | 71.80 | 78.10 | 1.38 | 2.29 |
| 0.20 | 3.20 | 4.88 | 71.48 | 77.93 | 1.38 | 2.21 |
| 0.50 | 3.50 | 4.86 | 71.98 | 77.73 | 1.37 | 2.10 |
| 0.70 | 3.70 | 4.83 | 71.60 | 76.54 | 1.37 | 1.98 |
| 1.00 | 4.00 | 4.88 | 71.65 | 75.42 | 1.37 | 1.95 |
| 1.43 | 4.43 | 4.91 | 71.81 | 71.58 | 1.37 | 1.94 |
| 2.00 | 5.00 | 4.91 | 72.01 | 69.03 | 1.36 | 1.96 |
| 2.86 | 5.86 | 4.97 | 71.64 | 64.97 | 1.37 | 2.01 |
| 4.29 | 7.29 | 5.16 | 71.16 | 59.46 | 1.36 | 2.03 |
| 5.00 | 8.00 | 5.17 | 71.48 | 58.01 | 1.36 | 2.02 |
| 6.43 | 9.43 | 5.18 | 70.78 | 54.45 | 1.36 | 1.98 |
| 7.14 | 4.14 | 5.21 | 70.73 | 53.39 | 1.36 | 1.94 |
| 8.57 | 5.57 | 5.23 | 70.34 | 50.80 | 1.36 | 1.92 |
| 10.00 | 7.00 | 5.22 | 70.10 | 48.53 | 1.35 | 1.90 |

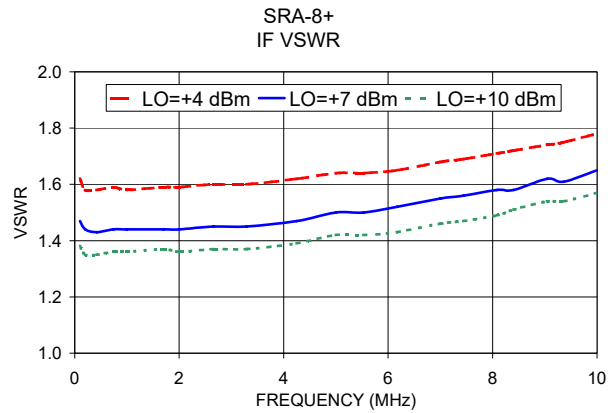
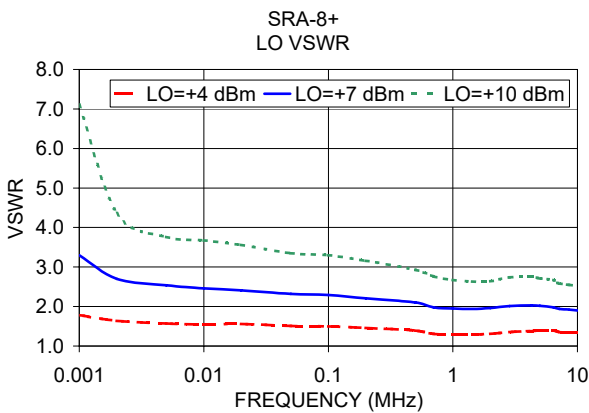
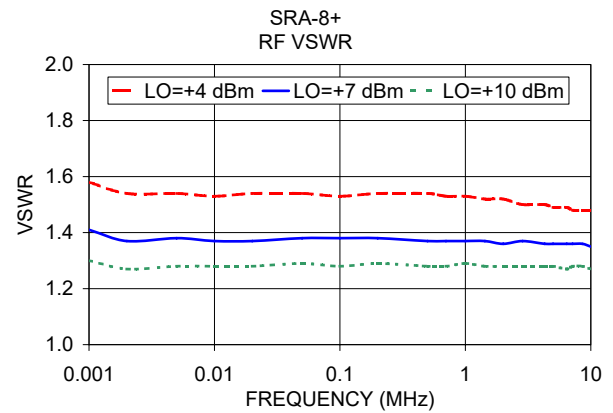
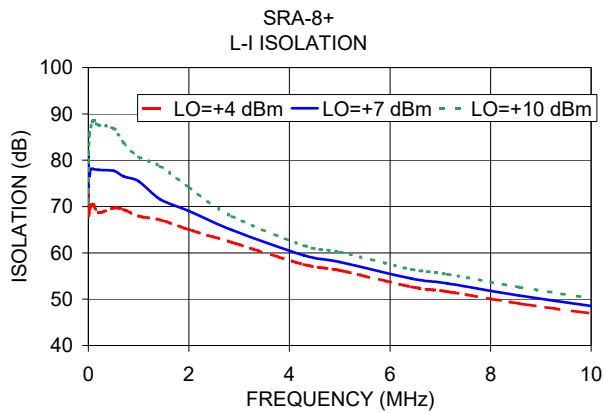
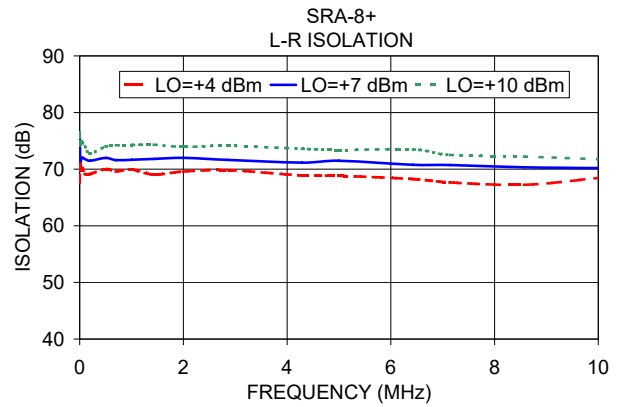
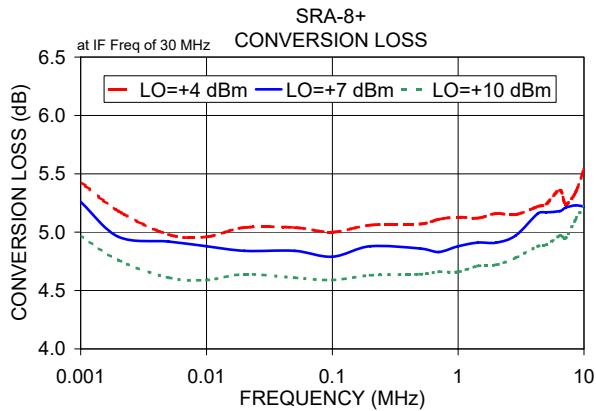
Electrical Schematic



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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp





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-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

