

# Plug-In Frequency Mixer

Level 13 (LO Power +13 dBm) 0.5 to 500 MHz

## Maximum Ratings

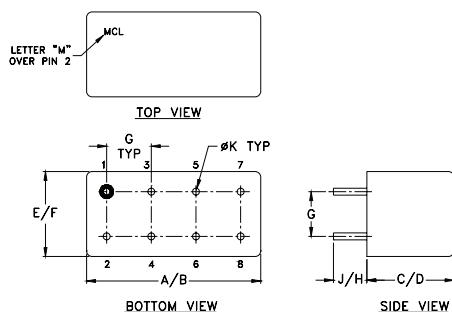
|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -55°C to 100°C |
| Storage Temperature                                             | -55°C to 100°C |
| RF Power                                                        | 200mW          |
| 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 |
| CASE GROUND | 2       |

^ pins must be connected together externally

## 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   |       |

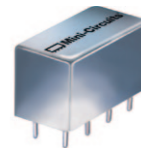
## Features

- excellent conversion loss, 5.65 dB typ.
- high L-R isolation, 45 dB typ. L-I isolation, 40 dB typ.
- rugged welded construction
- hermetic

## Applications

- VHF
- defense & federal communications
- FM broadcast radio

# SRA-1MH+



CASE STYLE: A01  
PRICE: \$19.20 ea. QTY (1-9)

## +RoHS Compliant

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

## Electrical Specifications

| FREQUENCY (MHz)        |        | CONVERSION LOSS (dB) |          |                        |      | LO-RF ISOLATION (dB) |      |      |      |      |      | LO-IF ISOLATION (dB) |      |      |      |      |      |
|------------------------|--------|----------------------|----------|------------------------|------|----------------------|------|------|------|------|------|----------------------|------|------|------|------|------|
| LO/RF<br>$f_L$ - $f_U$ | IF     | Mid-Band<br>m        |          | Total<br>Range<br>Max. |      | L                    |      | M    |      | U    |      | L                    |      | M    |      | U    |      |
|                        |        | $\bar{X}$            | $\sigma$ | Max.                   | Max. | Typ.                 | Min. | Typ. | Min. | Typ. | Min. | Typ.                 | Min. | Typ. | Min. | Typ. | Min. |
| 0.5-500                | DC-500 | 5.65                 | .04      | 7.0                    | 8.5  | 50                   | 45   | 45   | 30   | 35   | 25   | 45                   | 35   | 40   | 25   | 30   | 20   |

1 dB COMP.: +9 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ]

m = mid band [ $2 f_L$  to  $f_U/2$ ]

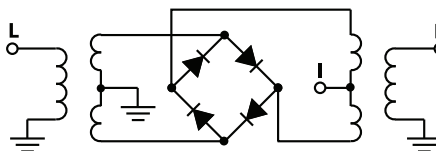
M = mid range [ $10 f_L$  to  $f_U/2$ ]

U = upper range [ $f_U/2$  to  $f_U$ ]

## 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 +13dBm            | LO +13dBm          | LO +13dBm          | LO +13dBm         | LO +13dBm         |
| 1.00            | 31.00  | 7.26                 | 66.63              | 59.30              | 1.29              | 1.95              |
| 2.00            | 32.00  | 6.48                 | 65.04              | 58.69              | 1.13              | 1.91              |
| 5.00            | 35.00  | 5.80                 | 64.44              | 58.27              | 1.07              | 1.85              |
| 10.00           | 40.00  | 5.74                 | 61.13              | 53.40              | 1.07              | 1.98              |
| 20.00           | 50.00  | 5.69                 | 58.51              | 50.54              | 1.07              | 1.94              |
| 50.00           | 80.00  | 5.58                 | 56.72              | 48.94              | 1.08              | 1.82              |
| 78.97           | 48.97  | 5.62                 | 55.44              | 47.33              | 1.08              | 1.80              |
| 100.00          | 70.00  | 5.44                 | 53.92              | 46.33              | 1.09              | 1.79              |
| 125.75          | 95.75  | 5.44                 | 53.09              | 46.06              | 1.09              | 1.83              |
| 141.35          | 111.35 | 5.41                 | 52.16              | 45.59              | 1.10              | 1.85              |
| 172.53          | 142.53 | 5.46                 | 48.96              | 44.44              | 1.11              | 1.88              |
| 200.00          | 170.00 | 5.64                 | 47.22              | 43.17              | 1.11              | 1.87              |
| 250.50          | 220.50 | 5.55                 | 44.34              | 41.70              | 1.15              | 1.96              |
| 297.29          | 267.29 | 5.63                 | 44.71              | 40.68              | 1.18              | 2.04              |
| 344.07          | 314.07 | 5.80                 | 41.06              | 38.65              | 1.23              | 2.06              |
| 390.85          | 360.85 | 5.89                 | 41.01              | 37.04              | 1.32              | 2.08              |
| 422.04          | 392.04 | 6.29                 | 39.17              | 36.14              | 1.37              | 2.11              |
| 453.23          | 423.23 | 6.32                 | 38.02              | 34.90              | 1.42              | 2.22              |
| 484.41          | 454.41 | 6.27                 | 37.70              | 34.14              | 1.45              | 2.34              |
| 500.00          | 470.00 | 6.32                 | 38.19              | 35.22              | 1.49              | 2.45              |

## Electrical Schematic



**Mini-Circuits®**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

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