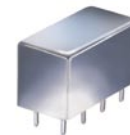


# Plug-In Frequency Mixer

**SRA-1+**

Level 7 (LO Power +7 dBm) 0.5 to 500 MHz



## Maximum Ratings

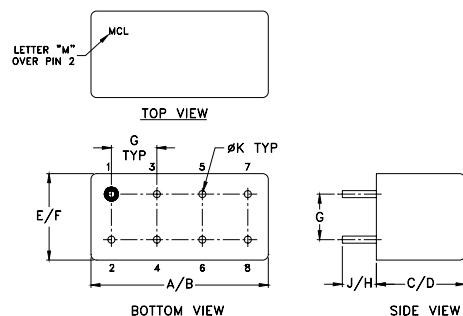
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature   | -55°C to 100°C |
| RF Power              | 50mW           |
| IF Current            | 40mA           |

## Pin Connections

|             |                  |
|-------------|------------------|
| LO          | 8                |
| RF          | 1                |
| IF          | 3,4 <sup>^</sup> |
| GROUND      | 2,5,6,7          |
| CASE GROUND | 2                |

<sup>^</sup> pins must be connected together externally

## Outline Drawing



## Outline Dimensions (inch)

| 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, 5.11 dB typ.
- high L-R isolation, 45 dB typ. L-I isolation, 40 dB typ.
- rugged welded construction

## Applications

- VHF/UHF
- defense & federal communications
- instrumentation

CASE STYLE: A01  
PRICE: \$16.70 ea. QTY (1-9)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix has been added in order to identify 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 | 5.11                 | .09      | 7.0                    | 8.5  | 50                   | 45   | 45   | 30   | 35   | 25   | 45                   | 35   | 40   | 25   | 30   | 20   |

1 dB COMP.: +1 dBm typ.

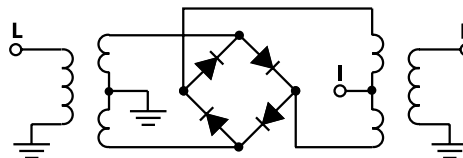
L = low range [ $f_L$  to  $10 f_L$ ]  
m = mid band [ $2 f_L$  to  $f_U/2$ ]

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 +7dBm             | LO +7dBm           | LO +7dBm           | LO +7dBm          | LO +7dBm          |
| 0.50            | 30.50  | 7.29                 | >67.00             | >67.00             | 1.21              | 1.98              |
| 1.00            | 31.00  | 6.89                 | >67.00             | 62.73              | 1.03              | 1.93              |
| 2.00            | 32.00  | 6.49                 | >67.00             | 61.28              | 1.02              | 1.96              |
| 5.00            | 35.00  | 6.01                 | >67.00             | 60.55              | 1.06              | 1.86              |
| 10.00           | 40.00  | 5.99                 | >67.00             | 59.37              | 1.10              | 1.83              |
| 20.00           | 50.00  | 6.02                 | >67.00             | 59.08              | 1.13              | 1.87              |
| 32.73           | 62.73  | 5.96                 | 59.27              | 57.92              | 1.15              | 1.88              |
| 50.00           | 80.00  | 5.91                 | 56.01              | 56.08              | 1.19              | 1.91              |
| 64.95           | 94.95  | 5.87                 | 53.83              | 54.11              | 1.23              | 1.91              |
| 100.00          | 70.00  | 5.81                 | 49.90              | 49.45              | 1.29              | 1.92              |
| 161.63          | 131.63 | 5.84                 | 44.60              | 43.60              | 1.35              | 1.91              |
| 200.00          | 170.00 | 5.99                 | 41.47              | 40.82              | 1.42              | 1.99              |
| 226.08          | 196.08 | 5.95                 | 40.62              | 39.96              | 1.49              | 1.99              |
| 258.31          | 228.31 | 5.89                 | 39.44              | 37.84              | 1.56              | 1.99              |
| 306.65          | 276.65 | 5.99                 | 37.26              | 36.42              | 1.65              | 2.03              |
| 354.99          | 324.99 | 6.23                 | 34.94              | 34.34              | 1.74              | 2.16              |
| 403.33          | 373.33 | 6.32                 | 33.70              | 33.77              | 1.81              | 2.20              |
| 451.66          | 421.66 | 6.68                 | 33.66              | 33.23              | 1.93              | 2.27              |
| 483.89          | 453.89 | 7.17                 | 34.17              | 34.46              | 2.00              | 2.25              |
| 500.00          | 470.00 | 7.25                 | 34.51              | 34.41              | 2.03              | 2.26              |

## Electrical Schematic



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