

# Double Balanced Mixers With Removable Connectors

## 290X Series

V2.00

### Features

- Double-Balanced 2-18 GHz
- Removable Connectors
- Ideal for Drop-in Applications
- High Reliability
- Hermetic Seal

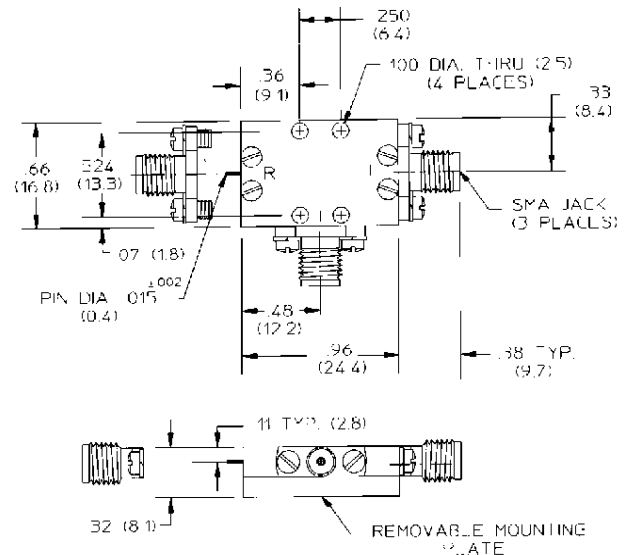
### Description

Broadband, high reliability, hermetically sealed double-balanced mixers feature SMA jack removable connectors and mounting plate for applications requiring drop-in modules. Units are also available with SMA plug connectors.

### Environmental

These devices are designed to meet the following conditions:

| Test                  | MIL-STD | Method | Cond         |
|-----------------------|---------|--------|--------------|
| Mechanical Shock      | 202     | 213B   | C            |
| Constant Acceleration | 883     | 2001   | A            |
| Thermal Cycle         | 883     | 1010   | B            |
| Vibration, HF         | 202     | 204D   | D            |
| Moisture Resistance   | 202     | 106E   | -            |
| Salt Spray            | 202     | 101D   | A            |
| Solvent Resistance    | 883     | 2015   | -            |
| Hermeticity           | 883     | 1014   | Fine & Gross |



### Maximum Ratings

| Parameter            | LO Drive Level              |                    |
|----------------------|-----------------------------|--------------------|
|                      | Low Medium<br>(L, M Suffix) | High<br>(H Suffix) |
| Operating Temp. Max. | -55°C to + 100°C            | -55°C to + 100°C   |
| Storage Temp. Max    | -65°C to + 125°C            | -65°C to + 125°C   |
| RF Input Power Max.  | 100 mW                      | 200mW              |

Specifications Subject to Change Without Notice.

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## Specifications\* 25°C

| RF/LO<br>Frequency<br>Range (GHz) | L-R<br>Isolation<br>(dB min.) | L-I<br>Isolation<br>(dB min.) | 3 dB IF<br>Bandwidth<br>(GHz min.) | LO Range<br>(dBm)<br>Min./Max. | Conversion<br>Loss (dB)<br>Max./Typ. | Input I dB<br>Compression<br>(dBm Min.) | Input 3rd Order<br>Pt. Intercept Pt.<br>(dBm Min.) | Part Number  |
|-----------------------------------|-------------------------------|-------------------------------|------------------------------------|--------------------------------|--------------------------------------|-----------------------------------------|----------------------------------------------------|--------------|
| 2.0-18.0                          | 20                            | 12                            | dc-1.0                             | +7/+11                         | 10.0/7.0                             | +2                                      | +12                                                | 2901-04-DBL  |
|                                   |                               |                               |                                    | +11/+15                        | 10.0/7.0                             | +5                                      | +15                                                | 2901-04-DBM  |
|                                   |                               |                               |                                    | +15/+18                        | 0.5/7.5                              | +8                                      | +18                                                | 2901-04-DBH  |
|                                   | 20                            | 15                            | .01-6.0                            | +7/+11                         | 9.5/6.5                              | +2                                      | +12                                                | 2902-04-DBL† |
|                                   |                               |                               |                                    | +11/+15                        | 9.5/6.5                              | +5                                      | +15                                                | 2902-04-DBM  |
|                                   |                               |                               |                                    | +15/+18                        | 10.0/7.0                             | +8                                      | +18                                                | 2902-04-DBH  |
|                                   | 20                            | 15                            | .5-8.0                             | +7/+11                         | 10.0/7.0                             | +3                                      | +12                                                | 2903-04-DBL  |
|                                   |                               |                               |                                    | +11/+15                        | 10.0/7.0                             | +6                                      | +15                                                | 2903-04-DBM  |
|                                   |                               |                               |                                    | +15/+18                        | 10.5/7.0                             | +8                                      | +18                                                | 2903-04-DBH  |

**Notes:**

1. All measurements performed in a 50 ohm system.

2. Available in phase and amplitude matched sets; consult factory for details.

\*Consult the factory for typical performance over frequency.

†Available from stock at local authorized distributors.

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