

# Coaxial Frequency Mixer

## ZX05-20H+ ZX05-20H

Level 17 (LO Power +17 dBm) 1500 to 2000 MHz



CASE STYLE: FL905

| Connectors | Model         | Price       | Qty.   |
|------------|---------------|-------------|--------|
| SMA        | ZX05-20H-S(+) | \$41.95 ea. | (1-24) |

### Maximum Ratings

|   |                |
|---|----------------|
| Operating Temperature   | -40°C to 85°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. |                |

### Coaxial Connections

|    |   |
|----|---|
| LO | 1 |
| RF | 2 |
| IF | 3 |

### Features

- rugged construction
- small size
- low conversion loss
- high L-R isolation
- protected by US Patents 6,133,525 & 6,790,049

### Applications

- cellular
- PCS
- instrumentation
- satellite communication

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

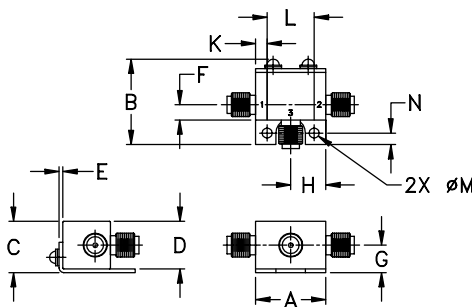
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Electrical Specifications (T<sub>AMB</sub>=25°C)

| FREQUENCY (MHz)                         | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | LO-IF ISOLATION (dB) | IP3 at center band (dBm) |
|---|----------------------|----------------------|----------------------|--------------------------|
| LO/RF<br>f <sub>L</sub> -f <sub>U</sub> | $\bar{X}$ Max.       | Typ. Min.            | Typ. Min.            | Typ.                     |
| 1500-2000 DC-300                        | 5.2 0.2 7.8          | 31 22                | 34 20                | 22                       |

1 dB COMP.: +14 dBm typ.

### Outline Drawing



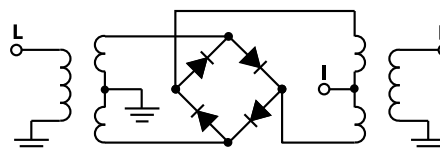
### Outline Dimensions (inch/mm)

|       |       |       |       |      |      |       |
|-------|-------|-------|-------|------|------|-------|
| A     | B     | C     | D     | E    | F    | G     |
| .74   | .90   | .54   | .50   | .04  | .16  | .29   |
| 18.80 | 22.86 | 13.72 | 12.70 | 1.02 | 4.06 | 7.37  |
| H     | J     | K     | L     | M    | N    | wt    |
| .37   | --    | .122  | .496  | .106 | .122 | grams |
| 9.40  | --    | 3.10  | 12.60 | 2.69 | 3.10 | 20.0  |

### 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 +17dBm            | LO +17dBm          | LO +17dBm          | LO +17dBm         | LO +17dBm         |
| 1500.10         | 1530.10 | 5.41                 | 29.73              | 34.08              | 1.20              | 2.52              |
| 1525.74         | 1555.74 | 5.42                 | 29.61              | 35.32              | 1.15              | 2.53              |
| 1551.38         | 1521.38 | 5.45                 | 29.87              | 36.63              | 1.14              | 2.26              |
| 1577.02         | 1547.02 | 5.43                 | 30.16              | 38.26              | 1.10              | 2.36              |
| 1602.66         | 1572.66 | 5.34                 | 30.24              | 39.88              | 1.08              | 2.50              |
| 1628.31         | 1598.31 | 5.33                 | 30.53              | 40.20              | 1.06              | 2.17              |
| 1653.95         | 1623.95 | 5.39                 | 31.16              | 40.57              | 1.05              | 2.07              |
| 1679.59         | 1649.59 | 5.34                 | 31.64              | 40.80              | 1.07              | 2.29              |
| 1705.23         | 1675.23 | 5.34                 | 31.67              | 40.68              | 1.09              | 2.24              |
| 1730.87         | 1700.87 | 5.30                 | 32.00              | 39.89              | 1.11              | 2.02              |
| 1756.51         | 1726.51 | 5.31                 | 32.45              | 39.41              | 1.13              | 2.07              |
| 1794.97         | 1764.97 | 5.27                 | 33.02              | 39.14              | 1.15              | 2.12              |
| 1820.61         | 1790.61 | 5.27                 | 33.08              | 39.21              | 1.15              | 1.86              |
| 1846.25         | 1816.25 | 5.30                 | 32.43              | 38.69              | 1.16              | 1.91              |
| 1871.90         | 1841.90 | 5.30                 | 31.30              | 37.77              | 1.18              | 1.97              |
| 1897.54         | 1867.54 | 5.27                 | 30.34              | 36.83              | 1.20              | 1.87              |
| 1923.18         | 1893.18 | 5.35                 | 29.97              | 36.56              | 1.21              | 1.80              |
| 1948.82         | 1918.82 | 5.39                 | 29.89              | 36.36              | 1.22              | 1.89              |
| 1974.46         | 1944.46 | 5.38                 | 29.89              | 35.83              | 1.23              | 1.84              |
| 2000.10         | 1970.10 | 5.32                 | 30.01              | 35.31              | 1.24              | 1.79              |

### Electrical Schematic



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

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's 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](http://www.minicircuits.com/MCLStore/terms.jsp).

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## Performance Charts

