

Coaxial Frequency Mixer

ZX05-10H+

Level 17 (LO Power +17 dBm) 10 to 1000 MHz



CASE STYLE: FL905

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 & 6,947,717

Applications

- cellular
- PCS
- instrumentation
- satellite communication

| Connectors | Model | Price | Qty. |
|------------|-------------|-------------|--------|
| SMA | ZX05-10H-S+ | \$41.95 ea. | (1-24) |

+ 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.

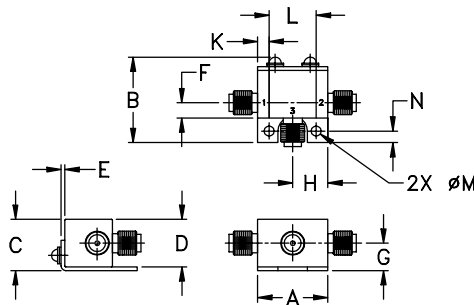
Electrical Specifications (T_{AMB}=25°C)

| FREQUENCY (MHz) | CONVERSION LOSS (dB) | | | | LO-RF ISOLATION (dB) | | | | | | LO-IF ISOLATION (dB) | | | | | | IP3 at center band (dBm) |
|-----------------|----------------------|-----------|------------|------------------|----------------------|------|------|------|------|------|----------------------|------|------|------|------|----|--------------------------|
| | LO/RF | IF | Mid-Band m | Total Range Max. | L | M | U | L | M | U | L | M | U | | | | |
| 10-1000 | DC-800 | f_L-f_U | \bar{X} | σ Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | | |
| | | | | | 68 | 52 | 55 | 38 | 47 | 25 | 46 | 30 | 32 | 20 | 26 | 13 | 22 |

1 dB COMP: +14 dBm typ.
Conversion Loss increases when IF is above 150 MHz.

L = low range [f_L to $10 f_L$]
M = mid band [$2 f_U$ to $f_U/2$]
U = upper range [$f_U/2$ to f_U]

Outline Drawing



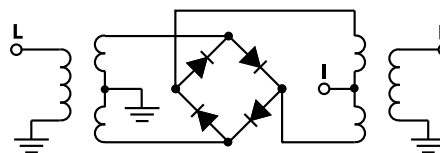
Outline Dimensions (inch/mm)

| 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 |
| 10.10 | 40.10 | 7.55 | 81.69 | 62.06 | 1.43 | 1.13 |
| 50.10 | 80.10 | 7.39 | 69.91 | 47.32 | 1.39 | 1.09 |
| 100.10 | 70.10 | 7.47 | 64.18 | 40.85 | 1.40 | 1.13 |
| 143.85 | 113.85 | 7.39 | 61.39 | 37.09 | 1.39 | 1.18 |
| 215.10 | 185.10 | 7.24 | 56.02 | 32.50 | 1.38 | 1.20 |
| 262.60 | 232.60 | 7.10 | 54.66 | 30.65 | 1.38 | 1.19 |
| 310.10 | 280.10 | 7.07 | 53.72 | 29.51 | 1.40 | 1.20 |
| 357.60 | 327.60 | 7.02 | 53.34 | 28.60 | 1.39 | 1.17 |
| 405.10 | 375.10 | 7.15 | 51.82 | 28.24 | 1.40 | 1.20 |
| 452.60 | 422.60 | 7.04 | 50.25 | 27.84 | 1.39 | 1.18 |
| 500.10 | 470.10 | 7.24 | 48.94 | 27.66 | 1.41 | 1.24 |
| 552.10 | 522.10 | 7.17 | 46.94 | 27.44 | 1.39 | 1.23 |
| 616.10 | 586.10 | 7.30 | 45.19 | 27.21 | 1.38 | 1.30 |
| 648.10 | 618.10 | 7.31 | 44.07 | 27.04 | 1.38 | 1.32 |
| 712.10 | 682.10 | 7.39 | 42.17 | 25.98 | 1.35 | 1.34 |
| 776.10 | 746.10 | 7.14 | 39.71 | 24.50 | 1.32 | 1.45 |
| 840.10 | 810.10 | 7.25 | 36.65 | 23.70 | 1.28 | 1.53 |
| 904.10 | 874.10 | 7.47 | 34.81 | 23.29 | 1.26 | 1.56 |
| 968.10 | 938.10 | 7.65 | 33.06 | 22.47 | 1.23 | 1.69 |
| 1000.10 | 970.10 | 7.67 | 32.44 | 21.87 | 1.23 | 1.70 |

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

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-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.

REV. D
M108294
ZX05-10H+
RVN/TD/AM
091007
Page 1 of 2

