

Coaxial Directional Coupler

ZX30-9-4+

50Ω 5 to 1200 MHz

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

| | |
|---------|---|
| INPUT | 1 |
| OUTPUT | 2 |
| COUPLED | 3 |

Features

- very flat coupling
- very broad, multi-octave
- all welded construction
- protected by U.S. Patents 6,140,887 & 6,784,521 & 6,790,049

Applications

- VHF/UHF
- communications receivers & transmitters
- cellular
- instrumentation



CASE STYLE: FL905

| Connectors | Model | Price | Qty. |
|------------|-------------|-------------|--------|
| SMA | ZX30-9-4-S+ | \$29.95 ea. | (1-24) |

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

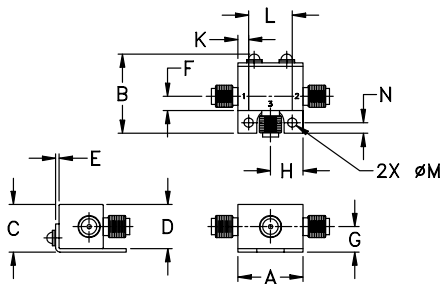
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

| FREQ. (MHz) | COUPLING (dB) | | MAINLINE LOSS ¹ (dB) | | | | | | DIRECTIVITY (dB) | | | | | | VSWR (:1) | POWER INPUT, W | | | |
|--------------------------------|---------------|---------------|---------------------------------|------|------|------|------|------|------------------|------|------|------|------|------|-----------|----------------|------|------|------|
| | Nom. | Typ. Flatness | L | | M | | U | | L | | M | | U | | | Typ. | Max. | Max. | |
| f _L -f _U | | | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Max. | Max. |
| 5-1200 | 8.9±0.5 | ±0.1 | 1.1 | 1.4 | 1.1 | 1.4 | 1.3 | 1.8 | 21 | 19 | 20 | 15 | 16 | 12 | 1.2 | 0.5 | 1.0 | | |

L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]
 1. Mainline loss includes theoretical power loss at coupled port.

Outline Drawing



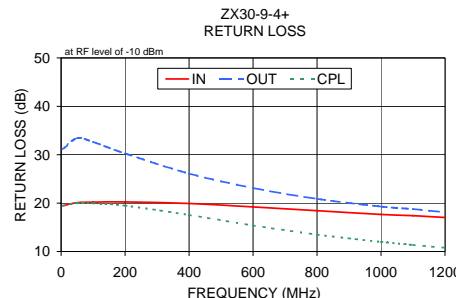
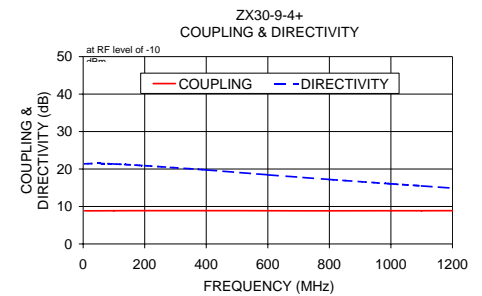
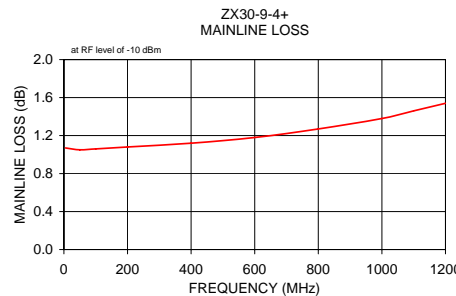
Outline Dimensions (inch/mm)

| 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 |

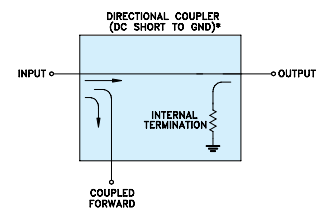
| H | J | K | L | M | N | wt |
|------|----|------|-------|------|------|-------|
| .37 | -- | .122 | .496 | .106 | .122 | grams |
| 9.40 | -- | 3.10 | 12.60 | 2.69 | 3.10 | 20.0 |

Typical Performance Data

| Frequency (MHz) | Mainline Loss (dB) In-Out | Coupling (dB) In-Cpl | Directivity (dB) | Return Loss (dB) | | |
|-----------------|---------------------------|----------------------|------------------|------------------|-------|-------|
| | | | | In | Out | Cpl |
| 5.00 | 1.07 | 8.84 | 21.39 | 19.47 | 31.15 | 19.43 |
| 50.00 | 1.05 | 8.84 | 21.49 | 20.10 | 33.43 | 20.04 |
| 100.00 | 1.06 | 8.86 | 21.35 | 20.20 | 32.64 | 19.97 |
| 200.00 | 1.08 | 8.88 | 20.91 | 20.25 | 30.27 | 19.49 |
| 400.00 | 1.12 | 8.88 | 19.77 | 19.93 | 26.11 | 17.56 |
| 600.00 | 1.18 | 8.86 | 18.46 | 19.22 | 23.13 | 15.39 |
| 800.00 | 1.27 | 8.85 | 17.21 | 18.44 | 20.89 | 13.50 |
| 1000.00 | 1.38 | 8.86 | 16.07 | 17.66 | 19.30 | 11.99 |
| 1100.00 | 1.46 | 8.87 | 15.50 | 17.40 | 18.78 | 11.37 |
| 1200.00 | 1.54 | 8.88 | 14.90 | 17.03 | 18.14 | 10.77 |



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

For detailed performance specs & shopping online see web site



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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.

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