

Coaxial Directional Coupler

75Ω 5 to 1500 MHz

Z30-13-5-75+ Z30-13-5-75



Maximum Ratings

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

* Case temperature is defined as temperature on ground leads. 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

Applications

- VHF/UHF
- instrumentation
- communications receivers & transmitters
- cable tv

CASE STYLE: K18

| Connectors | Model | Price | Qty. |
|------------|----------------|-------------|--------|
| BNC | Z30-13-5-75(+) | \$29.95 ea. | (1-24) |

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

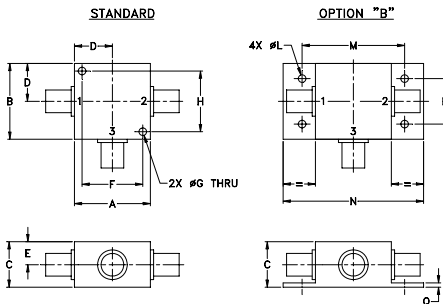
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications (T_{AMB} = -55°C to 100°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. | L | MU |
| f _L -f _U | | | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Max. | Max. | |
| 5-1000 | 13.4±0.5 | ±0.4 | 0.85 | 1.4 | 0.9 | 1.6 | 1.0 | 1.7 | 22 | 17 | 20 | 14 | 19 | — | 1.30 | 0.5 | 1.0 | |
| 1000-1500 | 14.0±0.5 | ±0.5 | | | 1.2 | 2.2 | | | | | 18 | — | | | 1.40 | | 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



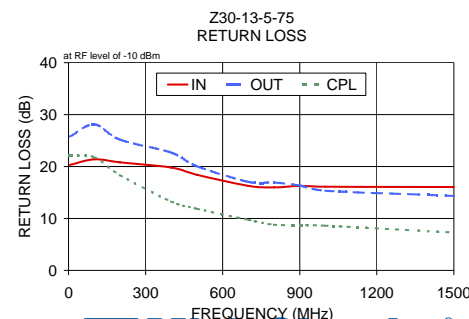
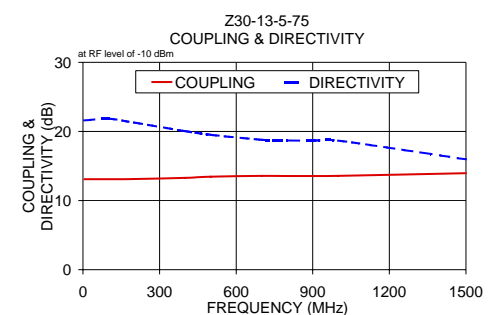
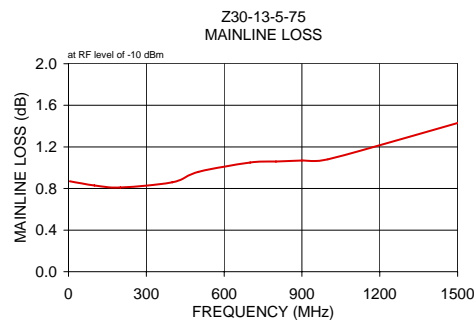
Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H |
|-------|-------|-------|-------|------|-------|------|-------|
| 1.25 | 1.25 | .75 | .63 | .38 | 1.00 | .125 | 1.000 |
| 31.75 | 31.75 | 19.05 | 16.00 | 9.65 | 25.40 | 3.18 | 25.40 |

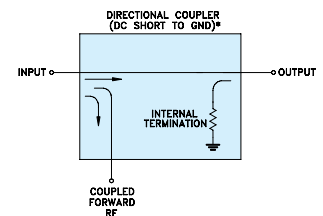
| J | K | L | M | N | P | Q | wt |
|----|----|------|-------|-------|-------|------|-------|
| -- | -- | .125 | 1.688 | 2.18 | .75 | .07 | grams |
| -- | -- | 3.18 | 42.88 | 55.37 | 19.05 | 1.78 | 70.0 |

Typical Performance Data

| Frequency (MHz) | Mainline Loss (dB) In-Out | Coupling (dB) In-Cpl | Directivity (dB) | Return Loss (dB) | | |
|-----------------|---------------------------|----------------------|------------------|------------------|-------|-------|
| | | | | In | Out | Cpl |
| 5.00 | 0.87 | 13.08 | 21.59 | 20.33 | 25.77 | 22.04 |
| 100.00 | 0.83 | 13.09 | 21.83 | 21.40 | 28.11 | 21.82 |
| 200.00 | 0.81 | 13.12 | 21.28 | 20.81 | 25.17 | 18.35 |
| 400.00 | 0.86 | 13.28 | 20.04 | 19.81 | 22.67 | 13.27 |
| 500.00 | 0.96 | 13.45 | 19.52 | 18.43 | 20.05 | 11.87 |
| 700.00 | 1.05 | 13.58 | 18.80 | 16.28 | 17.07 | 9.73 |
| 800.00 | 1.06 | 13.54 | 18.70 | 15.99 | 16.93 | 8.80 |
| 900.00 | 1.07 | 13.56 | 18.67 | 16.28 | 16.35 | 8.73 |
| 1000.00 | 1.08 | 13.57 | 18.68 | 16.13 | 15.35 | 8.61 |
| 1500.00 | 1.43 | 13.97 | 15.97 | 16.05 | 14.33 | 7.28 |



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



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

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. C
M119986
EDR-5760
Z30-13-5-75
RVN/TD/CP/AM
090915