

Coaxial Directional Coupler

ZFDC-10-1-75

75Ω

1 to 400 MHz



Maximum Ratings

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

- excellent directivity, 44 dB typ.
- up to 4W input power
- rugged shielded case

Applications

- catv
- VHF/HF
- instrumentation

CASE STYLE: K18

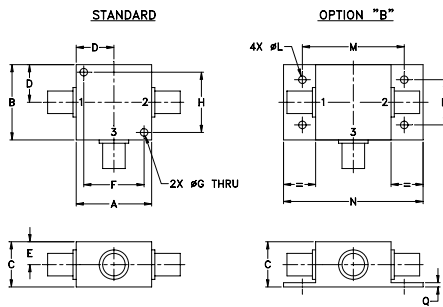
| Connectors | Model | Price | Qty. |
|----------------------|--------------|-------------|-------|
| BNC | ZFDC-10-1-75 | \$45.95 ea. | (1-9) |
| BRACKET (OPTION "B") | | \$5.00 | (1+) |

Directional Coupler Electrical Specifications

| FREQ. RANGE (MHz) | COUPLING (dB) | | MAINLINE LOSS ¹ (dB) | | | | | | DIRECTIVITY (dB) | | | | | | VSWR (:1) | POWER INPUT (W) | | |
|-------------------|---------------|----------|---------------------------------|------|------|------|------|------|------------------|------|------|------|------|------|-----------|-----------------|-----|----|
| | Nom. | Flatness | L | | M | | U | | L | | M | | U | | | Typ. | L | MU |
| | | | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | | | | |
| 1-400 | 10.5±0.5 | ±0.5 | 1.0 | 1.7 | 1.1 | 1.5 | 1.1 | 1.6 | 46 | 30 | 44 | 28 | 34 | 20 | 1.3 | 2.0 | 4.0 | |

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



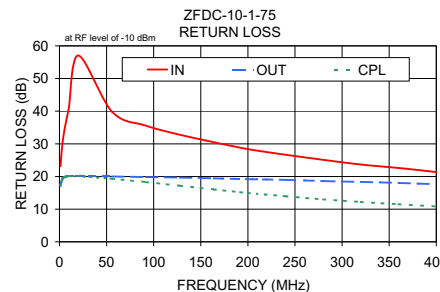
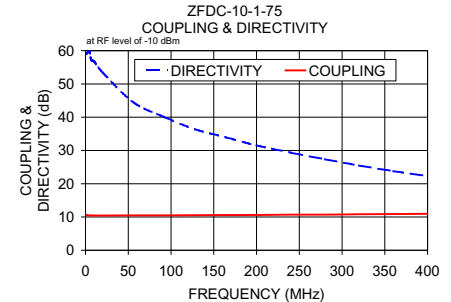
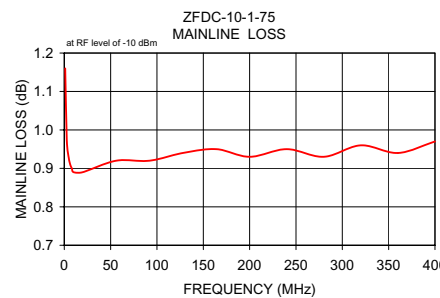
Outline Dimensions (inch/mm)

| 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 |

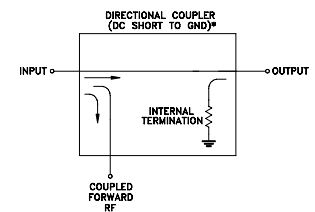
| J | K | L | M | N | P | Q | wt |
|----|----|------|-------|-------|-------|------|-------|
| -- | -- | .125 | 1.688 | 2.18 | .75 | .07 | grams |
| -- | -- | 3.18 | 42.88 | 55.37 | 19.05 | 1.78 | 70.0 |

Typical Performance Data

| Frequency (MHz) | Mainline Loss (dB) In-Out | Coupling (dB) In-Cpl | Directivity (dB) | Return Loss (dB) | | Cpl |
|-----------------|---------------------------|----------------------|------------------|------------------|-------|-------|
| | | | | In | Out | |
| 1.00 | 1.16 | 10.68 | 58.99 | 23.11 | 17.09 | 17.35 |
| 4.60 | 0.93 | 10.48 | 59.93 | 33.06 | 19.71 | 19.75 |
| 8.20 | 0.90 | 10.46 | 57.01 | 38.55 | 20.09 | 20.06 |
| 10.00 | 0.89 | 10.46 | 56.81 | 41.04 | 20.17 | 20.11 |
| 56.00 | 0.92 | 10.48 | 44.49 | 39.77 | 20.01 | 19.33 |
| 128.00 | 0.94 | 10.55 | 36.39 | 32.77 | 19.68 | 17.16 |
| 164.00 | 0.95 | 10.59 | 33.96 | 30.48 | 19.45 | 16.03 |
| 240.00 | 0.95 | 10.70 | 29.35 | 26.66 | 18.97 | 13.94 |
| 320.00 | 0.96 | 10.82 | 25.49 | 23.65 | 18.34 | 12.19 |
| 400.00 | 0.97 | 10.97 | 22.28 | 21.37 | 17.64 | 10.84 |



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS 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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