

Coaxial Directional Coupler

50Ω

1 to 500 MHz

ZFDC-10-1+
ZFDC-10-1



BNC version shown
CASE STYLE: K18

Maximum Ratings

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

Coaxial Connections

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

Features

- excellent directivity, 33 dB typ.
- excellent insertion loss, 0.8 dB typ.
- rugged shielded case

Applications

- VHF/UHF
- instrumentation
- communication receivers & transmitters

| Connectors | Model | Price | Qty. |
|----------------------|----------------|---------|-------|
| BNC | ZFDC-10-1(+) | \$44.95 | (1-9) |
| SMA | ZFDC-10-1-S(+) | \$49.95 | (1-9) |
| N-TYPE | ZFDC-10-1-N(+) | \$49.95 | (1-9) |
| BRACKET (OPTION "B") | | \$2.50 | (1+) |

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

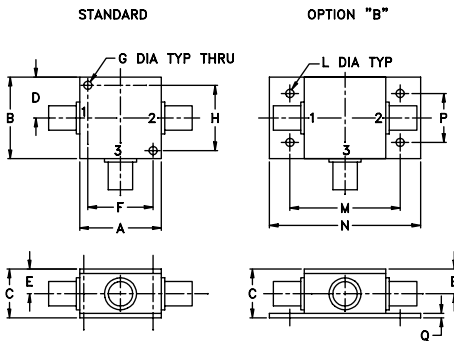
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Directional Coupler Electrical Specifications

| FREQ. RANGE (MHz) | COUPLING (dB) | | MAINLINE LOSS ¹ | | | | | | DIRECTIVITY (dB) | | | | | | VSWR (:1) | POWER INPUT (W) | |
|-------------------|---------------|----------|----------------------------|------|------|------|------|------|------------------|------|------|------|------|------|-----------|-----------------|-----|
| | | | L | | M | | U | | L | | M | | U | | | | |
| | Typ. | Flatness | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | L | MU |
| 1-500 | 10.5±0.25 | ±0.6 | 1.0 | 1.3 | 0.8 | 1.1 | 1.0 | 1.3 | 32 | 25 | 33 | 25 | 22 | 15 | 1.2 | 1.5 | 3.0 |

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

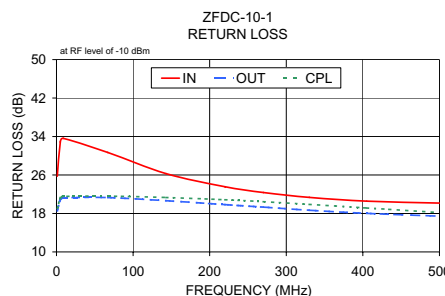
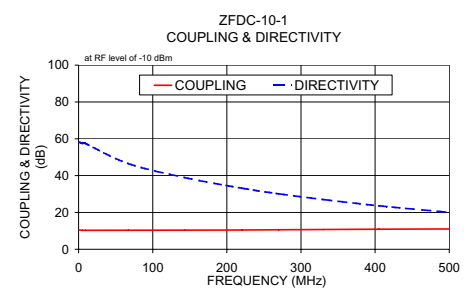
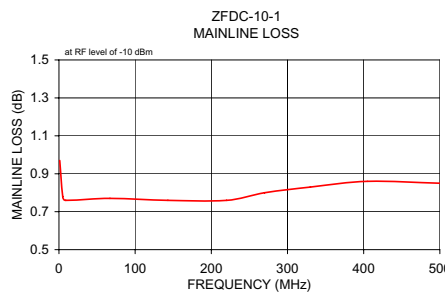


Outline Dimensions (inch/mm)

| 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 | In | Out | |
| 1.00 | 0.97 | 10.47 | 58.25 | 25.76 | 18.55 | 19.10 | |
| 5.00 | 0.78 | 10.32 | 57.52 | 32.88 | 20.94 | 21.28 | |
| 9.00 | 0.76 | 10.31 | 57.51 | 33.62 | 21.25 | 21.54 | |
| 67.00 | 0.77 | 10.34 | 46.55 | 30.69 | 21.30 | 21.61 | |
| 143.00 | 0.76 | 10.40 | 38.96 | 26.28 | 20.66 | 21.32 | |
| 220.00 | 0.76 | 10.49 | 33.22 | 23.55 | 19.85 | 20.86 | |
| 270.00 | 0.80 | 10.62 | 30.12 | 22.35 | 19.32 | 20.45 | |
| 330.00 | 0.83 | 10.74 | 27.02 | 21.34 | 18.68 | 19.89 | |
| 405.00 | 0.86 | 10.90 | 23.63 | 20.56 | 18.03 | 19.15 | |
| 500.00 | 0.85 | 11.04 | 20.05 | 20.16 | 17.44 | 18.20 | |



electrical schematic

