

Coaxial Directional Coupler

50Ω

1 to 1000 MHz

ZFDC-20-4



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 | 3 |
| OUTPUT | 1 |
| COUPLED | 2 |

Features

- wideband, 1 to 1000 MHz
- excellent directivity, 27 dB typ.
- excellent insertion loss, 0.4 dB typ.
- excellent VSWR, 1.1:1 typ.
- rugged shielded case

Applications

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

| Connectors | Model | Price | Qty. |
|----------------------|-------------|---------|-------|
| BNC | ZFDC-20-4 | \$64.95 | (1-9) |
| SMA | ZFDC-20-4-S | \$69.95 | (1-9) |
| N-TYPE | ZFDC-20-4-N | \$69.95 | (1-9) |
| BRACKET (OPTION "B") | | \$2.50 | (1+) |

Directional Coupler Electrical Specifications

| FREQ. RANGE (MHz) | COUPLING (dB) | | MAINLINE LOSS¹ | | | | | | DIRECTIVITY (dB) | | | | | | VSWR (:1) | POWER INPUT (W) | |
|-------------------------|--------------------------------|------|----------------|------|------|------|------|------|---------------------|------|------|------|------|------|--------------|-----------------------|------|
| | | | L | | M | | U | | L | | M | | U | | | | |
| | f _L -f _U | Nom. | Flatness | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Max. |
| 1-1000 | 19.5±0.5 | ±0.5 | 0.4 | 1.2 | 0.4 | 0.8 | 0.8 | 1.5 | 36 | 28 | 27 | 20 | 23 | 28 | 1.1 | 0.5 | 2.0 |

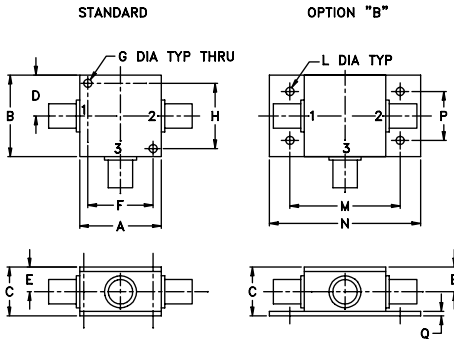
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

| Frequency (MHz) | Mainline Loss (dB) In-Out | Coupling (dB) In-Cpl | Directivity (dB) | Return Loss (dB) In | Return Loss (dB) Out | Cpl |
|-----------------|---------------------------|----------------------|------------------|---------------------|----------------------|-------|
| 1.00 | 0.49 | 19.58 | 43.20 | 23.54 | 24.84 | 24.95 |
| 5.00 | 0.34 | 19.44 | 45.40 | 27.48 | 30.16 | 30.85 |
| 9.00 | 0.33 | 19.42 | 46.16 | 28.13 | 31.18 | 31.81 |
| 96.00 | 0.31 | 19.42 | 41.47 | 28.71 | 31.90 | 31.89 |
| 248.00 | 0.35 | 19.47 | 34.00 | 29.63 | 31.49 | 31.18 |
| 420.00 | 0.41 | 19.55 | 30.27 | 31.67 | 30.80 | 29.73 |
| 520.00 | 0.46 | 19.60 | 29.14 | 33.53 | 30.43 | 28.67 |
| 640.00 | 0.53 | 19.66 | 28.26 | 35.77 | 29.99 | 27.20 |
| 840.00 | 0.68 | 19.77 | 28.03 | 35.04 | 29.07 | 24.87 |
| 1000.00 | 0.84 | 19.87 | 28.35 | 30.50 | 27.81 | 23.33 |

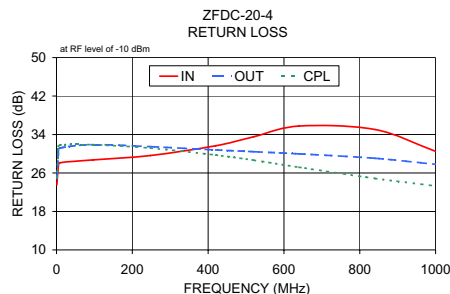
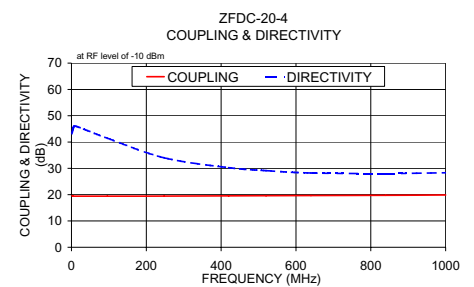
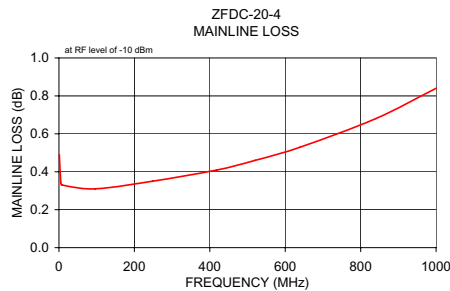
Outline Drawing



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 |



electrical schematic

