

# Coaxial Directional Coupler

75Ω

800 to 1750 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   | S |
| OUTPUT  | 1 |
| COUPLED | 2 |

## Features

- wideband, 800 to 1750 MHz
- excellent mainline loss, 0.4 dB typ.
- excellent VSWR, 1.2:1 typ.
- rugged shielded case

## Applications

- catv
- GPS/cellular
- instrumentation

ZADC-20-18-75+  
ZADC-20-18-75



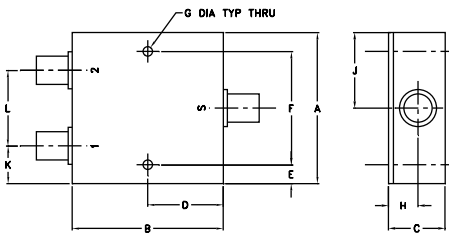
CASE STYLE: F14

| Connectors | Model            | Price       | Qty.  |
|------------|------------------|-------------|-------|
| BNC        | ZADC-20-18-75(+) | \$54.95 ea. | (1-9) |

### +RoHS Compliant

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

## Outline Drawing



## Outline Dimensions (inch)

| A     | B     | C     | D     | E     | F     | G     |
|-------|-------|-------|-------|-------|-------|-------|
| 2.00  | 2.00  | 0.75  | 1.00  | 0.25  | 1.500 | 0.125 |
| 50.80 | 50.80 | 19.05 | 25.40 | 6.35  | 38.10 | 3.18  |
| H     | J     | K     | L     | wt    |       |       |
| 0.39  | 1.00  | 0.50  | 1.00  | grams |       |       |
| 9.91  | 25.40 | 12.70 | 25.40 | 170.0 |       |       |

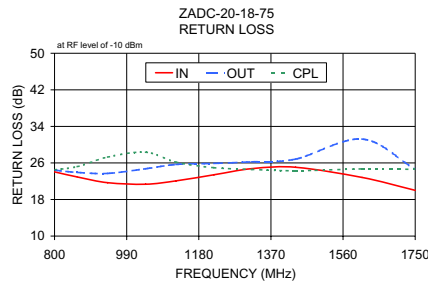
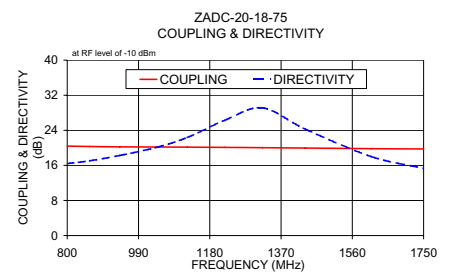
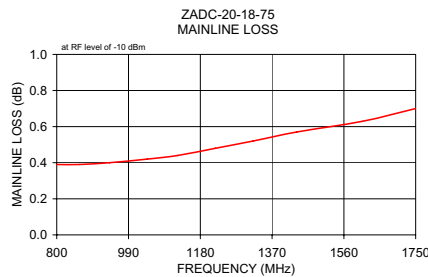
## Directional Coupler Electrical Specifications

| FREQ. RANGE (MHz) | COUPLING (dB) |          | MAINLINE LOSS <sup>1</sup> (dB) |      | DIRECTIVITY (dB) |      | VSWR (:1) | POWER INPUT (W) |
|-------------------|---------------|----------|---------------------------------|------|------------------|------|-----------|-----------------|
|                   | Nom.          | Flatness | Typ.                            | Max. | Typ.             | Min. |           |                 |
| 800-1750          | 19.8±0.6      | ±0.7     | 0.4                             | 0.9  | 22               | 13   | 1.2       | 1.0             |

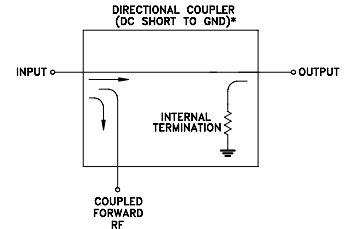
1. Mainline loss includes theoretical power loss at coupled port.

## Typical Performance Data

| Frequency (MHz) | Mainline Loss (dB) In-Out | Coupling (dB) In-Cpl | Directivity (dB) | Return Loss (dB) |       |       |
|-----------------|---------------------------|----------------------|------------------|------------------|-------|-------|
|                 |                           |                      |                  | In               | Out   | Cpl   |
| 800.00          | 0.39                      | 20.40                | 16.42            | 24.06            | 24.43 | 24.51 |
| 860.00          | 0.39                      | 20.32                | 17.06            | 22.94            | 23.93 | 25.20 |
| 940.00          | 0.40                      | 20.23                | 18.28            | 21.68            | 23.71 | 27.29 |
| 1040.00         | 0.42                      | 20.19                | 20.17            | 21.34            | 24.73 | 28.36 |
| 1120.00         | 0.44                      | 20.16                | 22.38            | 22.08            | 25.68 | 26.18 |
| 1220.00         | 0.48                      | 20.11                | 26.29            | 23.42            | 25.91 | 24.97 |
| 1320.00         | 0.52                      | 20.05                | 29.14            | 24.76            | 26.25 | 24.58 |
| 1435.00         | 0.57                      | 19.95                | 24.27            | 25.05            | 26.85 | 24.31 |
| 1610.00         | 0.63                      | 19.82                | 18.04            | 22.84            | 31.24 | 24.71 |
| 1750.00         | 0.70                      | 19.75                | 15.32            | 20.01            | 24.63 | 24.61 |



## Electrical Schematic



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

## Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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