

Bi-Directional Coupler

50Ω Up to 10W 1500 to 2400 MHz

ZABDC20-2400+ ZABDC20-2400



CASE STYLE: DD477

| Connectors | Model | Price | Qty. |
|------------|-------------------|-------------|-------|
| SMA | ZABDC20-2400-S(+) | \$89.95 ea. | (1-9) |

+RoHS Compliant

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

Maximum Ratings

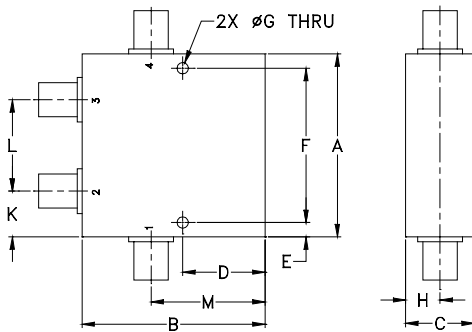
| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| DC Current | 1.0A |

* 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 | 4 |
| COUPLED (forward) | 2 |
| COUPLED (reverse) | 3 |

Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| A | B | C | D | E | F | G |
| 2.00 | 2.00 | .75 | .90 | .156 | 1.688 | .125 |
| 50.80 | 50.80 | 19.05 | 22.86 | 3.96 | 42.88 | 3.18 |
| H | J | K | L | M | | wt |
| .38 | --- | .50 | 1.00 | 1.25 | | grams |
| 9.65 | --- | 12.70 | 25.40 | 31.75 | | 145 |

Features

- excellent directivity, 25 dB typ.
- low mainline loss, 0.3 dB typ.
- high power, up to 10W
- rugged shielded case
- DC current through input to output 1.0A Max. at 1.0 watt RF input power.

Applications

- PCS/DCS/UMTS
- power leveling & monitoring
- VSWR measurement

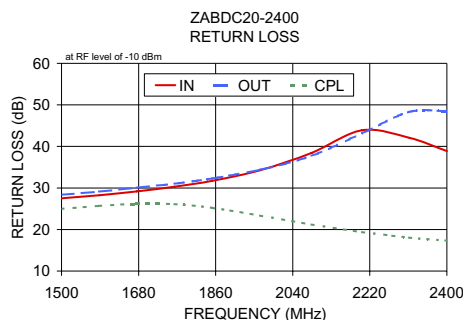
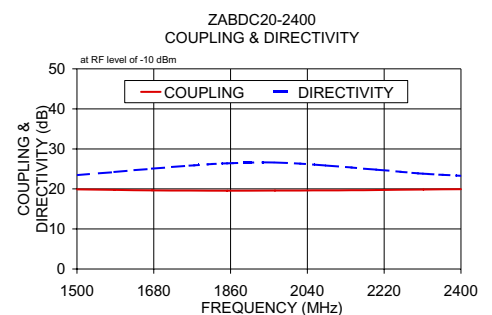
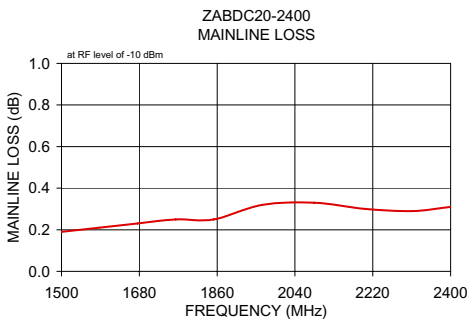
Bi-Directional Coupler Electrical Specifications

| FREQ. RANGE (MHz) | COUPLING (dB) | | MAINLINE LOSS ¹ (dB) | | DIRECTIVITY (dB) | | VSWR (:1) | POWER INPUT (W) |
|-------------------|---------------|----------|---------------------------------|------|------------------|------|-----------|-----------------|
| | Norm. | Flatness | Typ. | Max. | Typ. | Min. | | |
| f_L - f_U | | | | | | | | |
| 1500-2400 | 19.5±1.0 | ±1.0 | 0.3 | 0.5 | 25 | 18 | 1.2 | 10 |

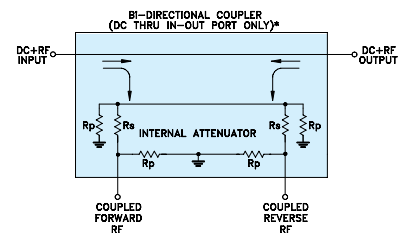
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

| Frequency (MHz) | Mainline Loss (dB) | | Coupling (dB) | Directivity (dB) | Return Loss (dB) | | |
|-----------------|--------------------|--------|---------------|------------------|------------------|-------|-----|
| | In-Out | In-Cpl | | | In | Out | Cpl |
| 1500.00 | 0.19 | 19.90 | 23.45 | 27.51 | 28.35 | 24.98 | |
| 1588.00 | 0.21 | 19.75 | 24.21 | 28.25 | 29.14 | 25.69 | |
| 1676.00 | 0.23 | 19.63 | 25.06 | 29.19 | 30.06 | 26.19 | |
| 1764.00 | 0.25 | 19.59 | 25.82 | 30.29 | 31.05 | 26.11 | |
| 1852.00 | 0.25 | 19.56 | 26.41 | 31.74 | 32.30 | 25.22 | |
| 1964.00 | 0.32 | 19.62 | 26.62 | 34.28 | 34.41 | 23.34 | |
| 2084.00 | 0.33 | 19.65 | 25.86 | 38.45 | 37.76 | 21.21 | |
| 2202.00 | 0.30 | 19.71 | 24.82 | 43.89 | 43.16 | 19.38 | |
| 2312.00 | 0.29 | 19.85 | 23.81 | 42.07 | 48.30 | 18.05 | |
| 2400.00 | 0.31 | 19.93 | 23.26 | 38.87 | 48.51 | 17.31 | |



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR BI-DIRECTIONAL COUPLER WITH INTERNAL ATTENUATORS AT COUPLING PORTS.

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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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