

DC Pass Bi-Directional Coupler

ZABDC20-25H75F+

75Ω Up to 100W 700 to 2500 MHz

Maximum Ratings

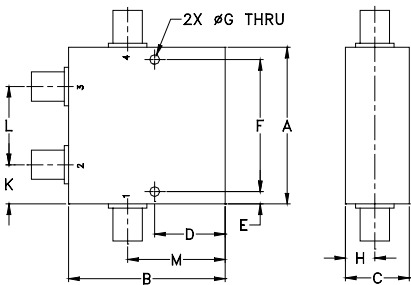
| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| DC Current | 2.0 A |

* 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 |

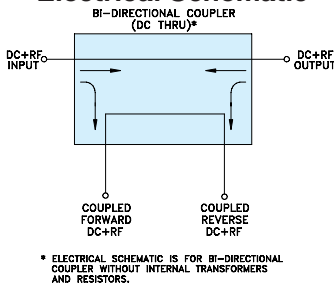
Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | | | | | | | |
|-------|-------|-------|-------|------|-------|------|------|-----|-------|-------|-------|-------|
| A | B | C | D | E | F | G | H | J | K | L | M | wt |
| 2.00 | 2.00 | .88 | .90 | .156 | 1.688 | .125 | .38 | --- | .50 | 1.00 | 1.25 | grams |
| 50.80 | 50.80 | 22.35 | 22.86 | 3.96 | 42.88 | 3.18 | 9.65 | --- | 12.70 | 25.40 | 31.75 | 225 |

Electrical Schematic



Features

- excellent mainline loss, 0.3 dB typ.
- excellent directivity, 25 dB typ.
- high power, up to 100W
- rugged shielded case
- DC current through input to output 2.0A Max. at 50 watt RF input power

Applications

- cable tv
- power leveling & monitoring
- VSWR measurement



Generic photo used for illustration purposes only

CASE STYLE: DD477-1

Connectors Model
F-TYPE ZABDC20-25H75F+

+RoHS Compliant

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

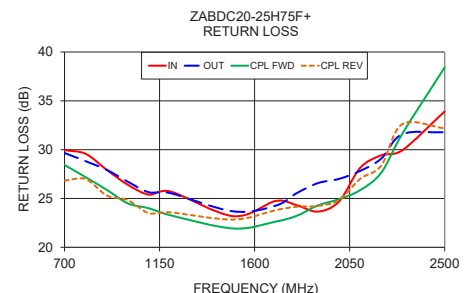
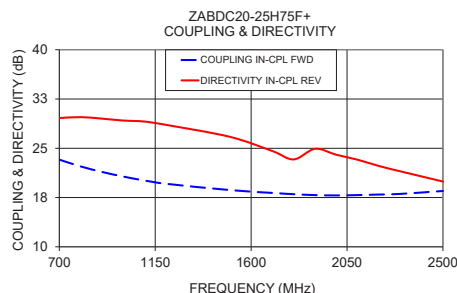
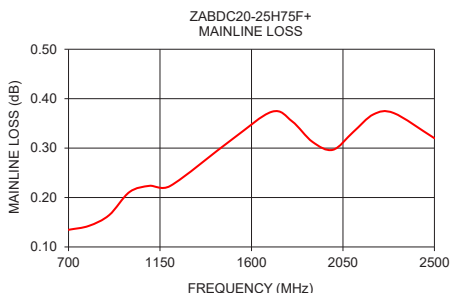
Electrical Specifications

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Unit |
|-------------------------------|-----------------|------|----------|------|------|
| Frequency Range | | 700 | — | 2500 | MHz |
| Mainline Loss | 700 - 1000 | — | 0.2 | 0.4 | dB |
| | 1000 - 1300 | — | 0.3 | 0.5 | |
| | 1300 - 2200 | — | 0.3 | 0.5 | |
| | 2200 - 2500 | — | 0.3 | 0.5 | |
| Coupling | 700 - 800 | — | 22.7±1.0 | — | dB |
| | 800 - 1000 | — | 21.5±1.0 | — | |
| | 1000 - 1300 | — | 20±0.8 | — | |
| | 1300 - 2200 | — | 18.5±1.0 | — | |
| Coupling Flatness(±) | 700 - 800 | — | ±0.7 | — | dB |
| | 800 - 1000 | — | ±0.95 | — | |
| | 1000 - 1300 | — | ±0.95 | — | |
| | 1300 - 2200 | — | ±0.9 | — | |
| Directivity | 700 - 1000 | 22 | 27 | — | dB |
| | 1000 - 1300 | 20 | 27 | — | |
| | 1300 - 2200 | 17 | 25 | — | |
| | 2200 - 2500 | 15 | 18 | — | |
| Return Loss (Input) | 700 - 2500 | — | 23.0 | — | dB |
| Return Loss (Output) | 700 - 2500 | — | 23.0 | — | dB |
| Return Loss (Coupling) | 700 - 2500 | — | 23.0 | — | dB |
| Input Power | 700 - 1000 | — | — | 100 | W |
| | 1000 - 1300 | — | — | 50 | |
| | 1300 - 2200 | — | — | 50 | |
| | 2200 - 2500 | — | — | 25 | |

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 Fwd | In-Cpl Rev | Out-Cpl Rev | Out-Cpl Fwd | In-Cpl Rev | In | Out | Cpl Fwd |
| 700.0 | 0.13 | 23.27 | 23.28 | 28.60 | 29.60 | 29.95 | 29.66 | 28.43 | 26.83 |
| 800.0 | 0.14 | 22.24 | 22.26 | 28.66 | 29.74 | 29.57 | 28.82 | 27.18 | 26.99 |
| 1000.0 | 0.21 | 20.69 | 20.71 | 27.91 | 29.22 | 26.40 | 26.71 | 24.50 | 24.83 |
| 1100.0 | 0.22 | 20.09 | 20.10 | 27.59 | 29.06 | 25.39 | 25.63 | 24.00 | 23.48 |
| 1200.0 | 0.22 | 19.60 | 19.57 | 26.95 | 28.56 | 25.72 | 25.55 | 23.29 | 23.58 |
| 1700.0 | 0.37 | 18.21 | 18.27 | 24.40 | 24.57 | 24.75 | 24.27 | 22.64 | 23.81 |
| 1900.0 | 0.31 | 17.87 | 17.96 | 23.13 | 24.92 | 23.66 | 26.58 | 24.29 | 24.24 |
| 2000.0 | 0.30 | 17.82 | 17.95 | 22.36 | 24.01 | 24.70 | 27.01 | 24.93 | 24.84 |
| 2200.0 | 0.37 | 17.96 | 18.16 | 21.16 | 22.30 | 29.43 | 29.09 | 27.65 | 28.37 |
| 2300.0 | 0.37 | 18.06 | 18.30 | 20.55 | 21.49 | 29.94 | 31.59 | 31.64 | 32.62 |
| 2500.0 | 0.32 | 18.50 | 18.82 | 19.55 | 19.94 | 33.91 | 31.78 | 38.42 | 32.19 |



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.
- The parts covered by this specification document 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/WCLStore/terms.jsp



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. A
M151107
ED-13230A
ZABDC20-25H75F+
WP/CP/AM
200505
Page 1 of 1