

DC Pass Directional Coupler

50Ω Up to 4W 2500 to 6000 MHz

ZADC-10-63+



CASE STYLE: CC1266

| Connectors | Model |
|------------|---------------|
| SMA | ZADC-10-63-S+ |

+RoHS Compliant

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

Maximum Ratings

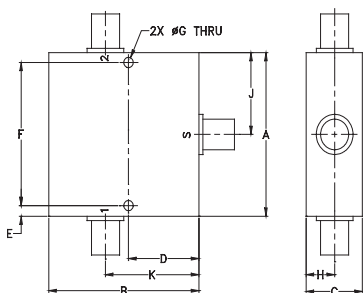
| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| DC Current | 1.0A |

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

| | |
|---------|---|
| INPUT | 1 |
| OUTPUT | 2 |
| COUPLED | S |

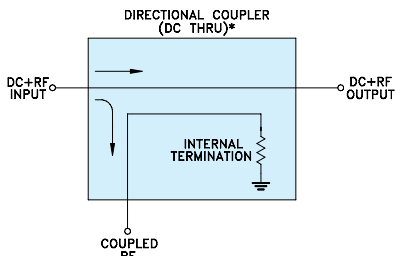
Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| A | B | C | D | E | F |
| 2.00 | 2.00 | .75 | .938 | .13 | 1.750 |
| 50.80 | 50.80 | 19.05 | 23.83 | 3.30 | 44.45 |
| G | H | J | K | wt | |
| .125 | .38 | 1.00 | 1.25 | grams | |
| 3.18 | 9.65 | 25.40 | 31.75 | 200.0 | |

Electrical Schematic



* ELECTRICAL SCHEMATIC FOR DIRECTIONAL COUPLER THAT IS DESIGNED WITHOUT INTERNAL TRANSFORMERS.

Features

- excellent directivity, 20 dB typ.
- good VSWR, 1.40 typ.
- power input up to 4W
- low cost
- DC current through input to output 1.0A Max.

Applications

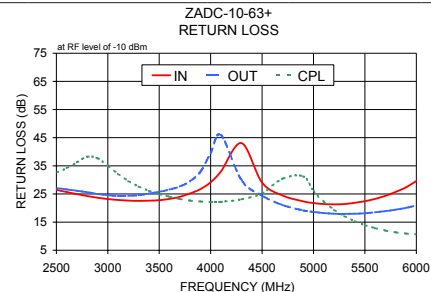
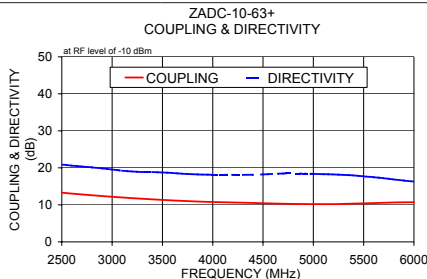
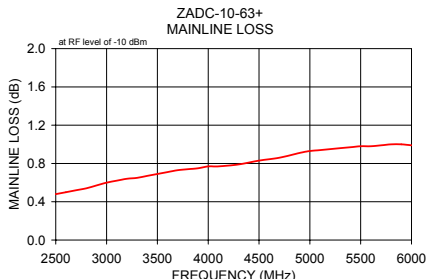
- instrumentation
- ISM
- defense communications
- federal communications
- fixed satellite

Electrical Specifications at 25°C

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Unit |
|-------------------------------------------------|-----------------|------|------|------|------|
| Frequency Range | | 2500 | — | 6000 | MHz |
| Mainline Loss (above theoretical 0.3 dB) | 2500 | — | 0.2 | 0.7 | dB |
| | 3500 | — | 0.4 | 0.9 | |
| | 5000 | — | 0.6 | 1.1 | |
| | 6000 | — | 0.7 | 1.2 | |
| | 2500 - 6000 | — | 11.7 | — | |
| Coupling | 2500 - 3500 | 10.5 | — | 14.5 | dB |
| | 3500 - 5000 | 9.5 | — | 12.5 | |
| | 5000 - 6000 | 9.3 | — | 11.3 | |
| | 2500 - 6000 | — | 11.7 | — | |
| Coupling Flatness(±) | 2500 - 3500 | — | 1.0 | 1.5 | dB |
| | 3500 - 5000 | — | 0.6 | 1.0 | |
| | 5000 - 6000 | — | 0.2 | 0.5 | |
| Directivity | 2500 | 17 | 23.0 | — | dB |
| | 3500 | 13 | 21.8 | — | |
| | 5000 | 12 | 20.6 | — | |
| | 6000 | 10 | 16.6 | — | |
| Return Loss (Input) | 2500 | 20 | 30 | — | dB |
| | 3500 | 18 | 25 | — | |
| | 5000 | 15 | 22 | — | |
| | 6000 | 15 | 22 | — | |
| Return Loss (Output) | 2500 | 19 | 31 | — | dB |
| | 3500 | 18 | 29 | — | |
| | 5000 | 14 | 19 | — | |
| | 6000 | 14 | 19 | — | |
| Return Loss (Coupling) | 2500 | 19 | 32 | — | dB |
| | 3500 | 18 | 27 | — | |
| | 5000 | 14 | 25 | — | |
| | 6000 | 8 | 11 | — | |
| Input Power | 2500 - 6000 | — | — | 4.0 | W |

Typical Performance Data

| Frequency (MHz) | Mainline Loss (dB) In-Out | Coupling (dB) In-Cpl | Directivity (dB) | Return Loss (dB) | | |
|-----------------|---------------------------|----------------------|------------------|------------------|-------|-------|
| | | | | In | Out | Cpl |
| 2500.00 | 0.48 | 13.28 | 20.90 | 26.47 | 27.12 | 32.61 |
| 2800.00 | 0.54 | 12.59 | 20.13 | 24.27 | 25.60 | 38.24 |
| 3000.00 | 0.60 | 12.19 | 19.55 | 23.20 | 24.58 | 35.00 |
| 3500.00 | 0.69 | 11.34 | 18.75 | 22.79 | 25.76 | 24.94 |
| 4000.00 | 0.77 | 10.78 | 18.15 | 29.15 | 39.56 | 22.16 |
| 4500.00 | 0.83 | 10.44 | 18.22 | 29.05 | 24.41 | 25.25 |
| 5000.00 | 0.93 | 10.19 | 18.37 | 21.78 | 18.62 | 26.09 |
| 5500.00 | 0.98 | 10.41 | 17.71 | 22.43 | 18.14 | 13.93 |
| 5800.00 | 1.00 | 10.64 | 16.88 | 25.73 | 19.41 | 11.34 |
| 6000.00 | 0.99 | 10.71 | 16.27 | 29.59 | 20.91 | 10.70 |



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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