



PRODUCT DATA SHEET

C8991

4-Port Dual Directional Coupler employs two, 3-Port Uni-Directional Couplers, internally connected, in tandem, providing measurement of both forward and reverse power. Ideal for simultaneously monitoring a system's forward and reverse power and for reflectometer measurements. Unlike the Bi-Directional Coupler, the directivity of the Dual Directional Coupler is unaffected by the loads on the coupled ports.

Features:

High Power

Wide Bandwidths

Small Size

Flat Coupling

Custom Designs Available

Electrical Specifications:

| | |
|-----------------|------------------|
| Frequency: | 0.01 - 1000 MHz |
| Power: | 50 W CW |
| Coupling: | 30 ± 1.0 dB Max. |
| Insertion Loss: | 1.2 dB Max. |
| Flatness: | ± 0.5 dB Max. |
| VSWR (ML): | 1.10:1 Max. |
| Directivity: | 20 dB Min. |

Mechanical Specifications:

| | |
|------------------------|---------------------------------|
| Type: | Connectorized |
| Material: | Aluminum 6061-T6 |
| Surface Finish: | Chem. Film Per MIL-DTL-5541F |
| | Type I Class 3 (Yellow Iridite) |
| | RoHS Compliant Available |
| Operating Temperature: | -55°C to +75°C |
| Storage Temperature: | -60°C to +85°C |
| Humidity: | 95% Non-Condensing |
| Size: | 5.2 x 2.28 x 1.69" |

Connector Configurations:

| Model | Input (J1) | Output (J2) | Fwd (J3) | Rev (J4) |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|
| C8991-10 | N Female | N Female | N Female | N Female |
| C8991-12 | N Female | N Female | SMA | SMA |
| C8991-13 | N Female | N Female | BNC | BNC |
| C8991-102 | SMA | SMA | SMA | SMA |
| C8991-10STS | Stainless Steel N Female |

Werlatone® Broadband Dual, Uni, and Bi Directional RF Couplers are designed to tolerate the most stringent operating conditions associated with military and EMC testing environments. Many of our RF Directional Couplers, designated Mismatch Tolerant®, will operate continuously, at rated power, into a severe load mismatch condition. Our multi-octave Directional Couplers maintain exceptional coupling flatness, directivity, VSWR, and insertion loss.



WERLATONE

Model C8991

Connectorized Directional Couplers

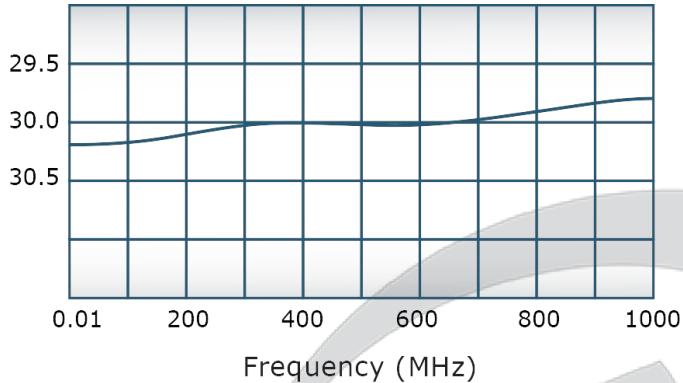


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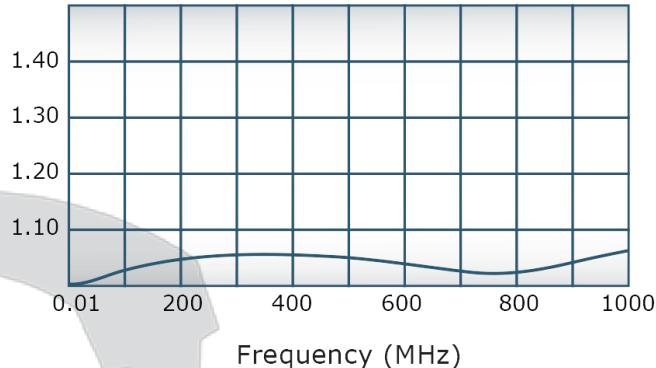
C8991

Performance Data (Specifications subject to change without notice):

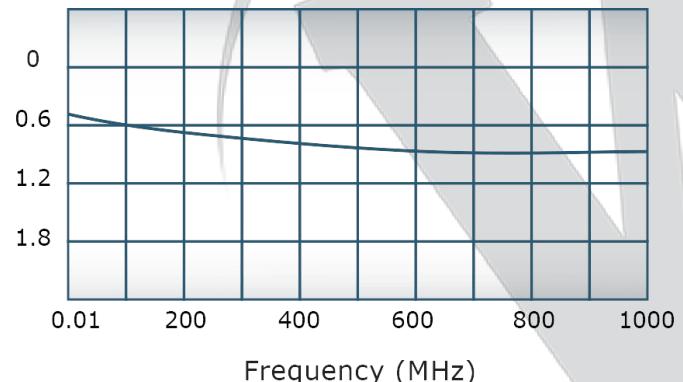
Coupling:



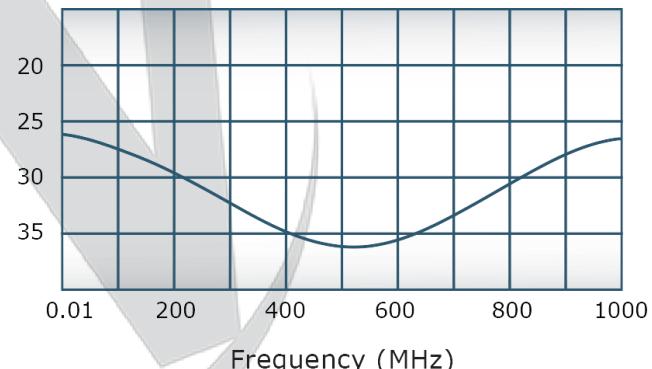
VSWR:



Insertion Loss:



Directivity:



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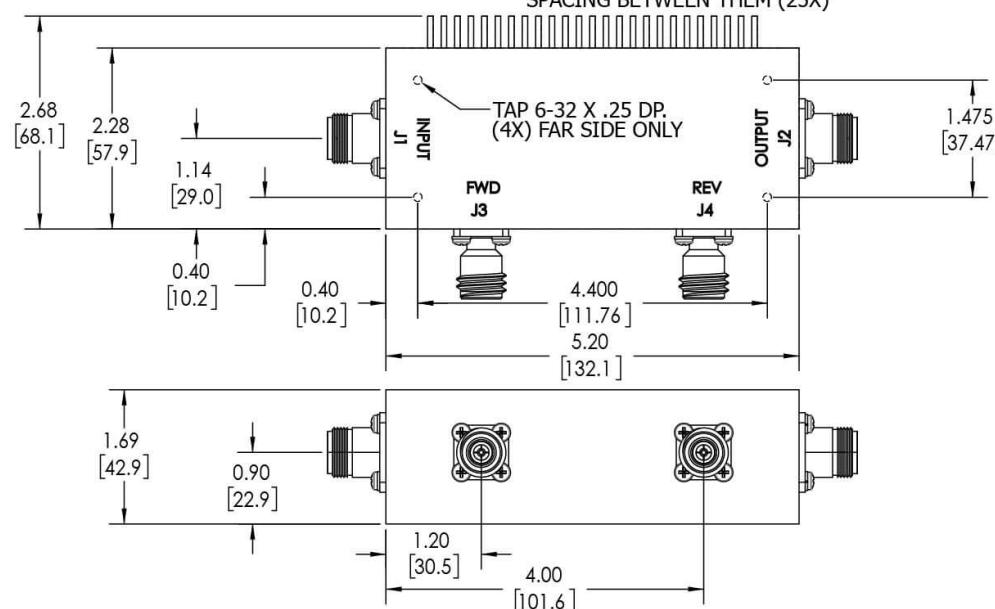
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REVISION HISTORY

| REV. | REVISION RECORD | DATE | APPROVED |
|------|-----------------|----------|----------|
| A | ECN 9696 | 11/28/18 | RB |

NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: ALUMINUM 6061-T6
2. FINISH: CHEM FILM PER MIL-DTL-5541F TYPE I CLASS 3 (YELLOW IRIDITE)
3. CONNECTORS:
J1, J2: N FEMALE
J3, J4: N FEMALE

B

B

→

→

A

A

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| | | | | | |
|-----------|---------|--|---------|-------------|----------------------|
| | | UNLESS OTHERWISE SPECIFIED | OWN | DATE | 17 Jon Barrett Rd |
| | | INTERPRET DRAWING JAW MIL-STD-100 | SD | 2/11/2019 | WERLATONE SINCE 1965 |
| | | UNIFORM DRAWING AS 14-5M-2009 | CHK | DATE | Patterson, NY 12563 |
| | | PARENTHETICAL THIS FOR REFERENCE ONLY | CS | 2/11/2019 | |
| | | DIMENSIONAL LIMITS APPLY BEFORE PROCESSES | ENGR | DATE | |
| | | TOLERANCES | CS | 2/27/2002 | |
| | | ANGLES $\pm 2^\circ$ | MFGR | DATE | |
| | | 3 RL $\pm .005$ [1.27] | QA | DATE | |
| | | 2 RL $\pm .012$ [3.05] | RELEASE | DATE | |
| | | REMOVE ALL BURRS AND SHARP EDGES R0.01 MAX | | | REV A |
| | | CONCENTRICITY MACHINED DIA. .002 FIM | | | |
| | | MACHINE TOOL MISMATCH .003 MAX | | | |
| NEXT ASSY | USED ON | APPLICATION | | | |
| | | THIRD ANGLE PROJECTION | | | |
| | | | | SCALE 1:1.5 | |
| | | | | | SHEET 1 OF 1 |

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