WERLATONE

Model C8705
Connectorized Directional Couplers

**PRODUCT DATA SHEET** **C8705**

**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: | 100 - 500 MHz |
| Power: | 2000 W CW |
| Coupling: | 60 ± 1.0 dB Max. |
| Insertion Loss: | 0.2 dB Max. |
| Flatness: | ± 0.5 dB Max. |
| VSWR (ML): | 1.15:1 Max. |
| Directivity: | 20 dB Min. |

**Mechanical Specifications:**

| | |
|---|---|
| Type: | Connectorized |
| Material: | Aluminum 6061-T6 |
| Surface Finish: | Chem. Film Per MIL-DTL-5541F<br>Type I Class 3 (Yellow Iridite)<br>RoHS Compliant Available |
| Operating Temperature: | -55°C to +75°C |
| Storage Temperature: | -60°C to +85°C |
| Humidity: | 95% Non-Condensing |
| Size: | 3.0 X 3.0 X 1.09'' |

**Connector Configurations:**

| **Model** | **Input (J1)** | **Output (J2)** | **Fwd (J3)** | **Rev (J4)** |
|---|---|---|---|---|
| C8705-20* | 7/16 Female | 7/16 Female | N Female | N Female |
| C8705-22* | 7/16 Female | 7/16 Female | SMA | SMA |
| C8705-23* | 7/16 Female | 7/16 Female | BNC | BNC |
| C8705-41 | SC Female | SC Female | N Female | N Female |
| C8705-43 | SC Female | SC Female | SMA | SMA |
| C8705-613 | N Female | N Male | BNC | BNC |
| C8705-745 | SC Male | SC Female | SMA | SMA |

*Starred options are 3.0 x 3.0 x 1.59''*

**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.


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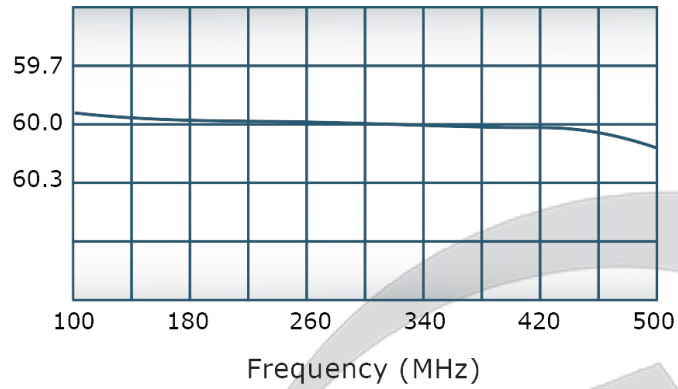
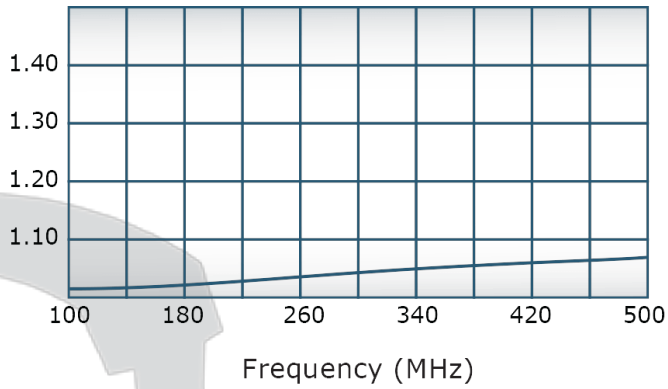
## Performance Data (Specifications subject to change without notice):

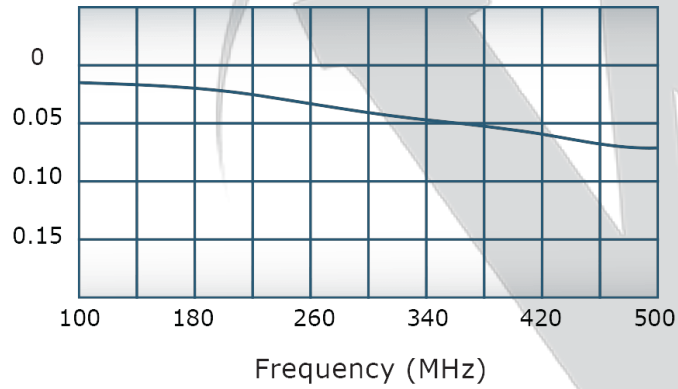
Coupling:



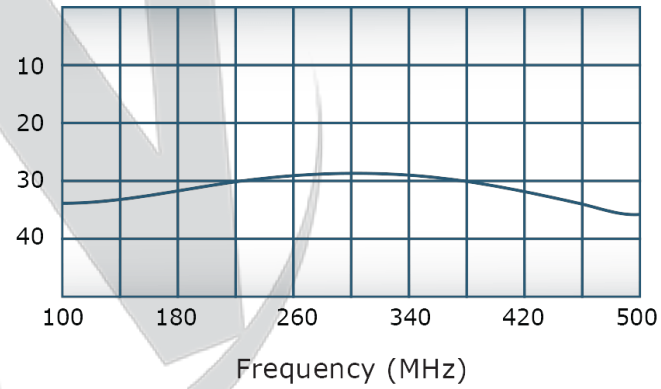

VSWR:




Insertion Loss:




Directivity:





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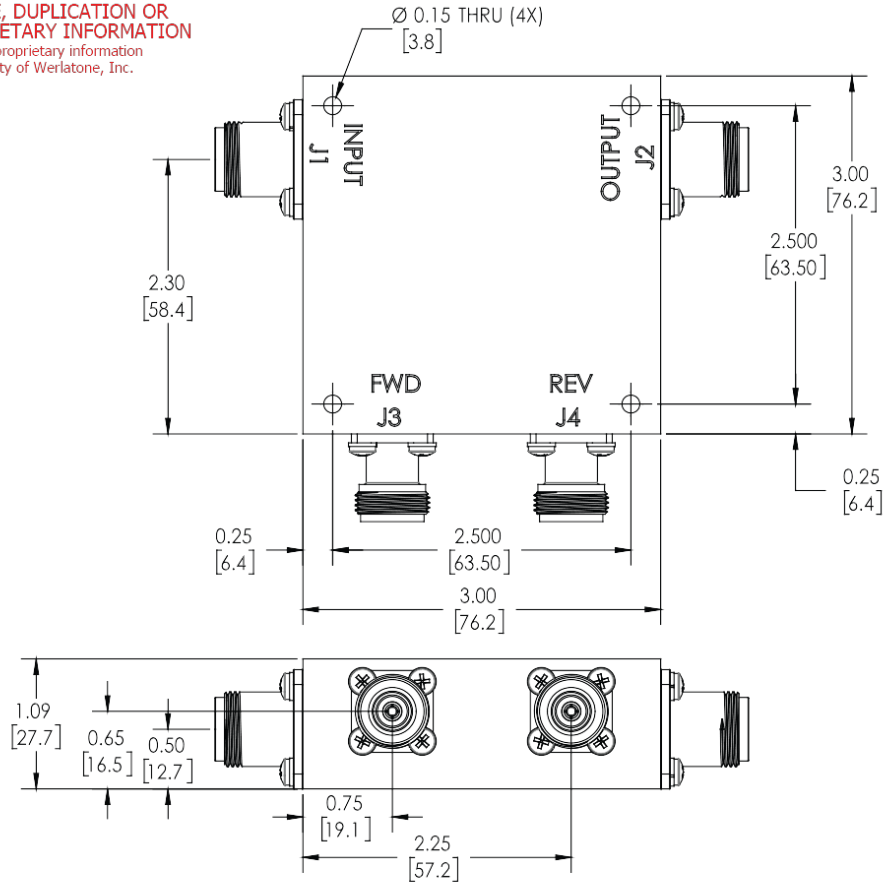


| REVISION HISTORY | | | |
|---|---|---|---|
| REV. | REVISION RECORD | DATE | APPROVED |
| A | ECN 9696 | 11/27/18 | RB |

**NOTES: UNLESS OTHERWISE SPECIFIED**
1. **MATERIAL: ALUMINUM 6061-T6**
2. **FINISH: CHEM FILM PER MIL-DTL_5541F TYPE I CLASS 3 (YELLOW IRIDITE)**

| | | UNLESS OTHERWISE SPECIFIED | DWN | DATE |
|---|---|---|---|---|
| | | • INTERPRET DRAWING IAW MIL-STD-100<br>• DIMENSIONING PER ASME Y14.5M-2009<br>• PARENTHETICAL INFO FOR REF ONLY<br>• DIMENSIONS ARE IN INCHES<br>• DIMENSIONAL LIMITS APPLY BEFORE PROCESSES<br>• TOLERANCES:<br>ANGLES ± 2°<br>3 PL ± .005 [.13]<br>2 PL ± .015 [.38]<br>• REMOVE ALL BURRS AND SHARP EDGES R.01 MAX<br>• CONCENTRICITY MACHINED DIA: .002 FIM<br>• MACHINE TOOL MISMATCH .003 MAX | RH | 7/5/2001 |
| | | | CHK | DATE |
| | | | ENGR | DATE |
| | | | MJ | 7/5/2001 |
| | | | MFGR | DATE |
| | | | QA | DATE |
| NEXT ASSY | USED ON | | RLSE | DATE |
| APPLICATION | | THIRD ANGLE PROJECTION | | |

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TITLE: OUTLINE

| SIZE | CAGE CODE | DWG NO | REV |
|---|---|---|---|
| B | | 10379-505 | A |

SCALE 1:1 — SHEET 1 OF 1


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