



## PRODUCT DATA SHEET

C7881

**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: 20 - 500 MHz  
Power: 25 W CW  
Coupling:  $30 \pm 1.0$  dB Max.  
Insertion Loss: 0.75 dB Max.  
Flatness:  $\pm 1.0$  dB Max.  
VSWR (ML): 1.20:1 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: 2.7 x 1.5 x 1.1"

### Connector Configurations:

| Model     | Input (J1) | Output (J2) | Fwd (J3) | Rev (J4) |
|-----------|------------|-------------|----------|----------|
| C7881-10  | N Female   | N Female    | N Female | N Female |
| C7881-12  | N Female   | N Female    | SMA      | SMA      |
| C7881-102 | SMA        | SMA         | SMA      | SMA      |

**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 C7881

Connectorized Directional Couplers

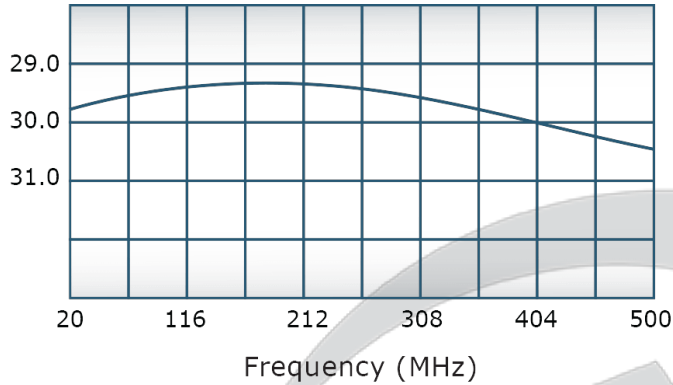


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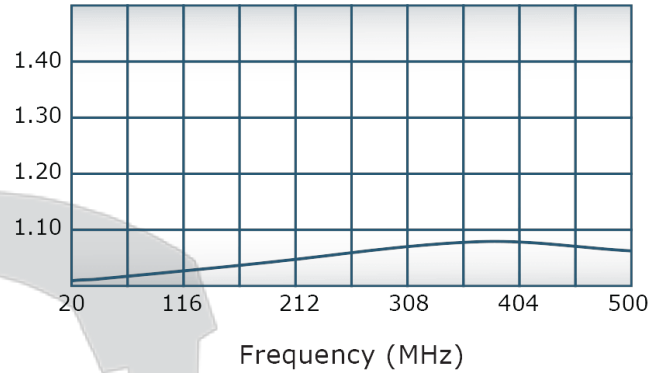
C7881

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

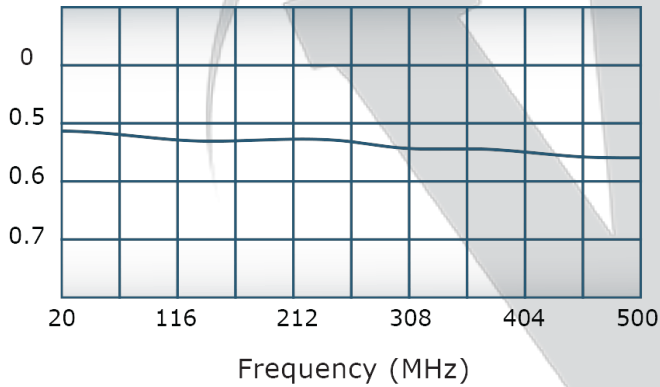
Coupling:



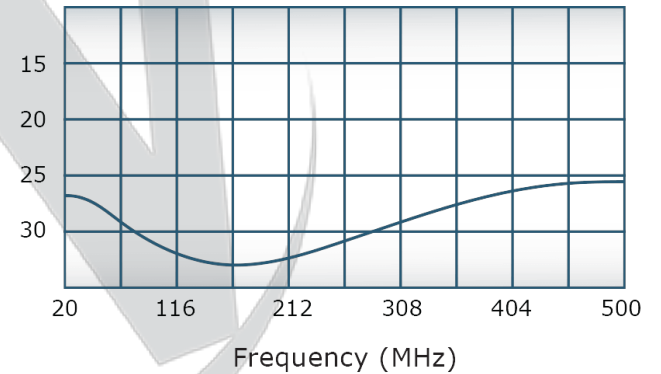
VSWR:



Insertion Loss:



Directivity:



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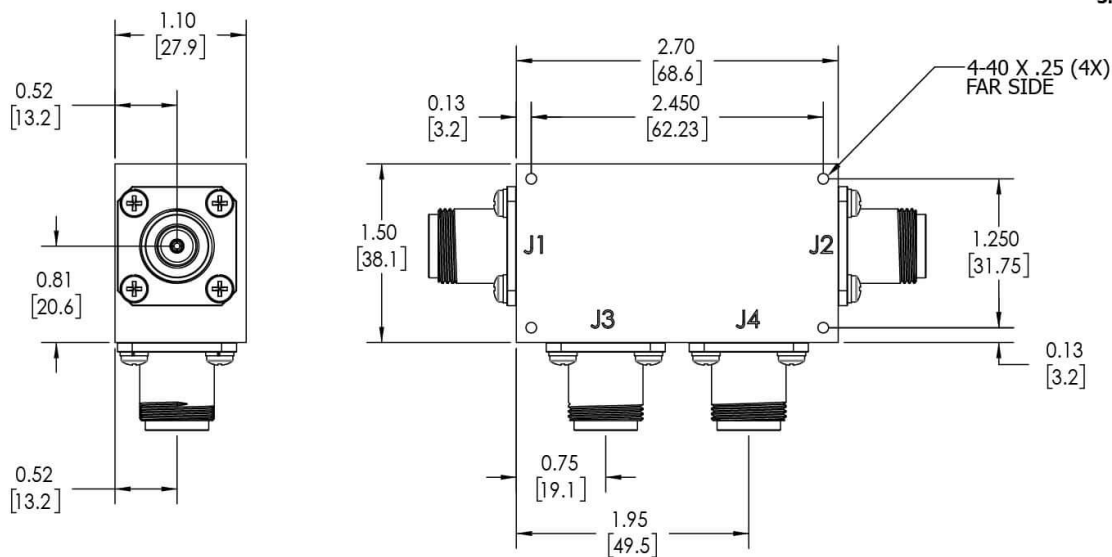
Werlatone, Inc. 17 Jon Barrett Road Patterson, NY 12563 T:(845)278-2220 F:(845)278-3440 sales@werlatone.com www.werlatone.com

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| REVISION HISTORY |                 |           |          |
|------------------|-----------------|-----------|----------|
| REV.             | REVISION RECORD | DATE      | APPROVED |
| A                | ECN 9696        | 5/14/2019 | RB       |

**NOTES: UNLESS OTHERWISE SPECIFIED**

- MATERIAL: ALUMINUM 6061-T6**
- FINISH: CHEM FILM PER MIL-DTL-5541F TYPE I CLASS 3 (YELLOW IRIDITE)**
- CONNECTORS:**  
**J1-J4: N FEMALE**  
**J1-INPUT; J2-OUTPUT**  
**J3-FWD; J4-REV**



|                                                  |  |      |           |                                                                                                                   |  |
|--------------------------------------------------|--|------|-----------|-------------------------------------------------------------------------------------------------------------------|--|
| UNLESS OTHERWISE SPECIFIED                       |  | OWN  | DATE      | 17 Jon Barrett Rd<br>Patterson, NY 12563                                                                          |  |
| INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100 |  | SD   | 5/14/2019 |  <b>WERLATONE</b> SINCE 1965 |  |
| DIMENSIONS FOR ASSEMBLY TO BE USED FOR REF ONLY  |  | CHK  | DATE      |                                                                                                                   |  |
| PARENTHESES ARE IN INCHES                        |  | CS   | 5/14/2019 | <b>OUTLINE</b>                                                                                                    |  |
| DIMENSIONAL LIMITS APPLY BEFORE PROCESSES        |  | ENGR | DATE      |                                                                                                                   |  |
| TOLERANCES:                                      |  | INFR | DATE      | SIZE CAGE CODE DWG NO<br><b>B 10685-500</b>                                                                       |  |
| ANGLES ± 2°                                      |  | QA   | DATE      |                                                                                                                   |  |
| 3 PL ± .005 [13]                                 |  | RLSE | DATE      | SCALE <b>1:1</b>                                                                                                  |  |
| 2 PL ± .015 [38]                                 |  |      |           |                                                                                                                   |  |
| REMOVE ALL BURRS AND SHARP EDGES R.01 MAX        |  |      |           | SHEET <b>1</b> OF <b>1</b>                                                                                        |  |
| CONCENTRICITY MACHINED DIA. .002 FIM             |  |      |           |                                                                                                                   |  |
| MACHINE TOOL MISMATCH .003 MAX                   |  |      |           |                                                                                                                   |  |
| THIRD ANGLE PROJECTION                           |  |      |           |                                                                                                                   |  |
| NEXT ASSY USED ON                                |  |      |           |                                                                                                                   |  |
| APPLICATION                                      |  |      |           |                                                                                                                   |  |

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