



## PRODUCT DATA SHEET

C9639

**4-Port Bi-Directional Coupler:** Similar to the 3-Port Uni-Directional Coupler, except that both ends of the coupled line serve as coupled ports. Convenient for simultaneously monitoring both forward and reverse power. The directivity of this coupler design is, however, dependent upon well matched 50 Ohm loads on the coupled ports.

### Features:

High Power      Wide Bandwidths      Small Size      Flat Coupling      Custom Designs Available

### Electrical Specifications:

Frequency: 2500 - 6000 MHz  
Power: 100 W CW  
Coupling:  $20 \pm 1.0$  dB Max.  
Insertion Loss: 0.4 dB Max.  
Flatness:  $\pm 1.0$  dB Max.  
VSWR (ML): 1.25:1 Max.  
Directivity: 18 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: 1.1 x 0.75 x 0.48"  
Weight: 0.9 ounces / 26 grams

### Connector Configurations:

| Model     | Input (J1) | Output (J2) | Fwd (J3) | Rev (J4) |
|-----------|------------|-------------|----------|----------|
| C9639-102 | 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 C9639

Connectorized Directional Couplers

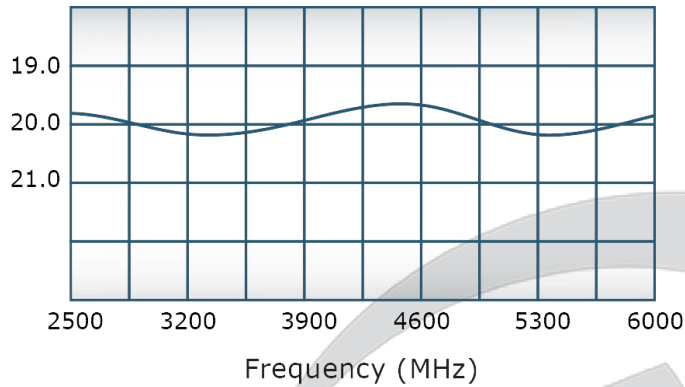


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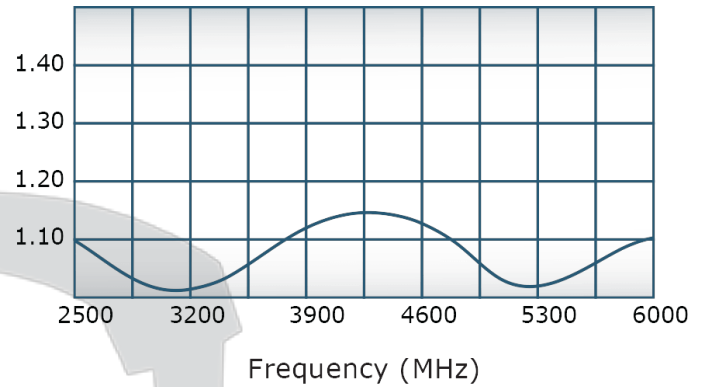
C9639

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

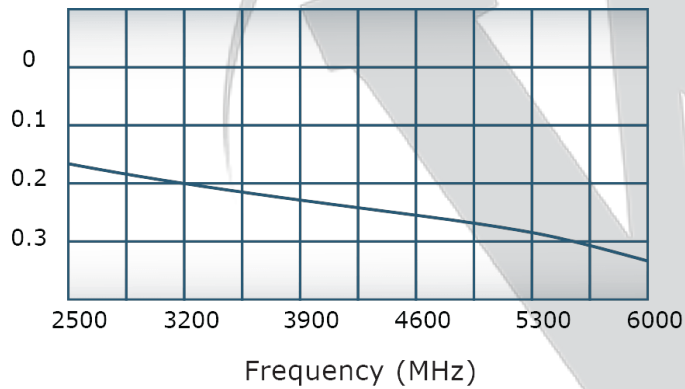
Coupling:



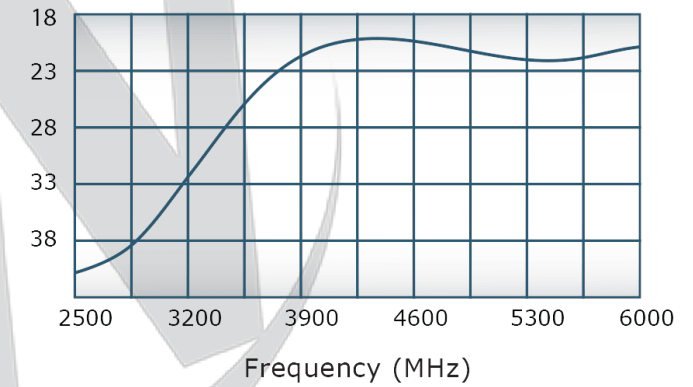
VSWR:



Insertion Loss:



Directivity:



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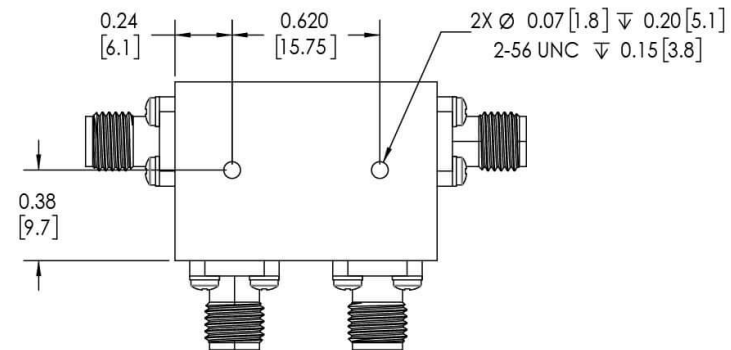
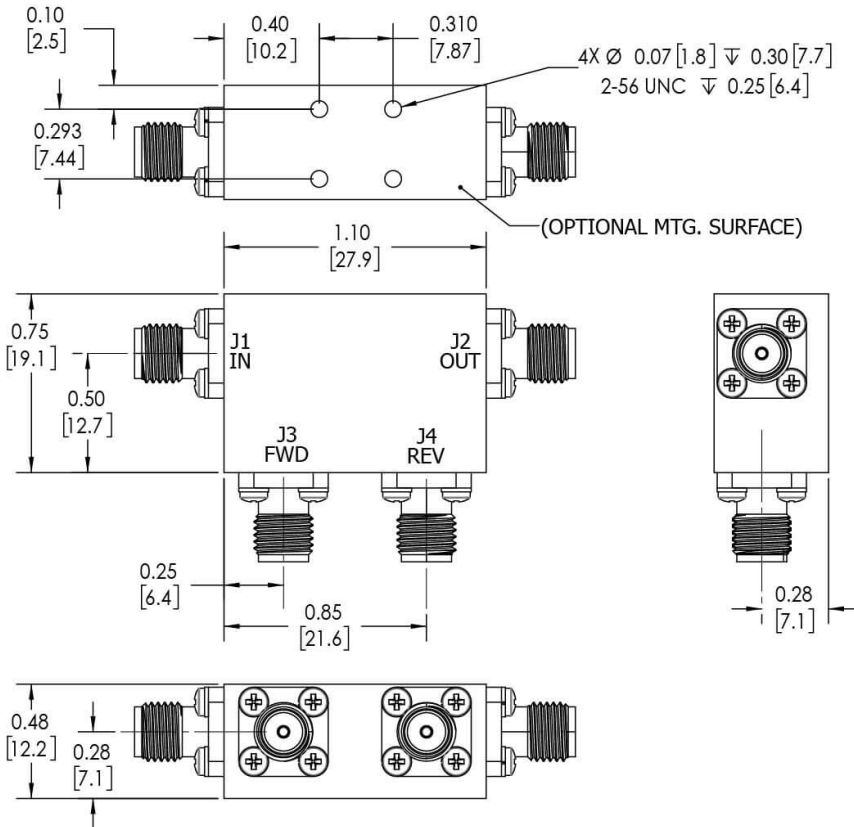
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| REVISION HISTORY |                 |           |          |
|------------------|-----------------|-----------|----------|
| REV.             | REVISION RECORD | DATE      | APPROVED |
| A                | ECN 9696        | 8/21/2019 | RB       |

**NOTES: UNLESS OTHERWISE SPECIFIED**

- MATERIAL: ALUMINUM 6061-T6**
- FINISH: CHEM FILM PER MIL-DTL-5541F TYPE I CLASS 3 (YELLOW IRIDITE)**
- CONNECTORS: J1-J4: SMA FEMALE**



|             |  |                                                                                                              |  |      |           |                                                                                                             |  |                                          |           |           |     |
|-------------|--|--------------------------------------------------------------------------------------------------------------|--|------|-----------|-------------------------------------------------------------------------------------------------------------|--|------------------------------------------|-----------|-----------|-----|
|             |  | UNLESS OTHERWISE SPECIFIED                                                                                   |  | OWN  | DATE      |  WERLATONE  SINCE 1965 |  | 17 Jon Barrett Rd<br>Patterson, NY 12563 |           |           |     |
|             |  | INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100                                                             |  | SD   | 8/21/2019 |                                                                                                             |  |                                          |           |           |     |
|             |  | DIMENSIONS FOR ASSEMBLY 14.59-2009                                                                           |  | CHK  | DATE      |                                                                                                             |  |                                          |           |           |     |
|             |  | PARENTHESES FOR REF ONLY                                                                                     |  | CS   | 8/21/2019 |                                                                                                             |  |                                          |           |           |     |
|             |  | DIMENSIONS ARE IN INCHES                                                                                     |  | ENGR | DATE      | TITLE                                                                                                       |  |                                          |           |           |     |
|             |  | DIMENSIONAL LIMITS APPLY BEFORE PROCESSES                                                                    |  | INFR | DATE      | OUTLINE                                                                                                     |  |                                          |           |           |     |
|             |  | TOLERANCES:                                                                                                  |  | QA   | DATE      |                                                                                                             |  | SIZE                                     | CAGE CODE | DWG NO    | REV |
|             |  | ANGLES ± 2°                                                                                                  |  |      |           |                                                                                                             |  | B                                        |           | 20643-500 | A   |
|             |  | 3 PL ± .005 [13]                                                                                             |  |      |           |                                                                                                             |  |                                          |           |           |     |
|             |  | 2 PL ± .015 [38]                                                                                             |  |      |           |                                                                                                             |  |                                          |           |           |     |
|             |  | REMOVE ALL BURRS AND SHARP EDGES R.01 MAX                                                                    |  |      |           |                                                                                                             |  |                                          |           |           |     |
|             |  | CONCENTRICITY MACHINED DIA. .002 FIM                                                                         |  |      |           |                                                                                                             |  |                                          |           |           |     |
|             |  | MACHINE TOOL MISMATCH .003 MAX                                                                               |  |      |           |                                                                                                             |  |                                          |           |           |     |
| NEXT ASSY   |  | USED ON                                                                                                      |  | RLSE | DATE      | SCALE                                                                                                       |  | SHEET 1 OF 1                             |           |           |     |
| APPLICATION |  | THIRD ANGLE PROJECTION  |  |      |           |                                                                                                             |  |                                          |           |           |     |

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