
**PRODUCT DATA SHEET**
**C10166**

**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: 700 - 4200 MHz  
Power: 2000 W CW  
Coupling: 60 ± 1.0 dB Max.  
Insertion Loss: 0.2 dB Max.  
Flatness: ± 1.0 dB Max.  
VSWR (ML): 1.35:1 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: 3.0 x 3.0 x 1.59"

**Connector Configurations:**

Model	Input (J1)	Output (J2)	Fwd (J3)	Rev (J4)
C10166-20	7/16 Female	7/16 Female	N Female	N Female
C10166-22	7/16 Female	7/16 Female	SMA	SMA
C10166-23	7/16 Female	7/16 Female	BNC	BNC
C10166-627	7/16 Female	7/16 Male	N Female	N Female
C10166-727	7/16 Male	7/16 Female	N Female	N Female
C10166-728	7/16 Male	7/16 Female	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.

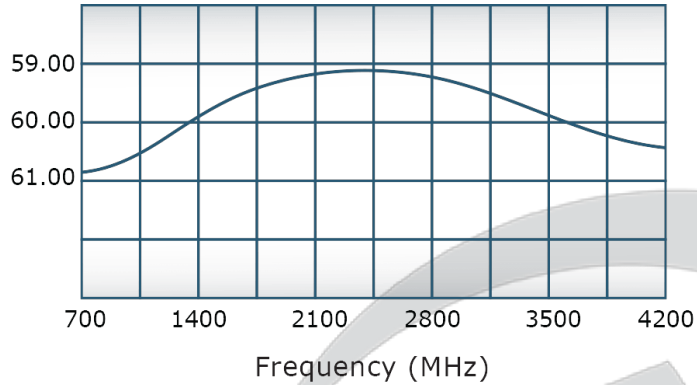


## PRODUCT DATA SHEET

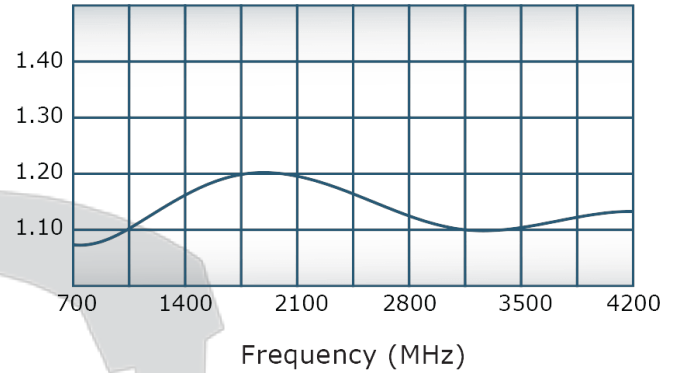
C10166

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

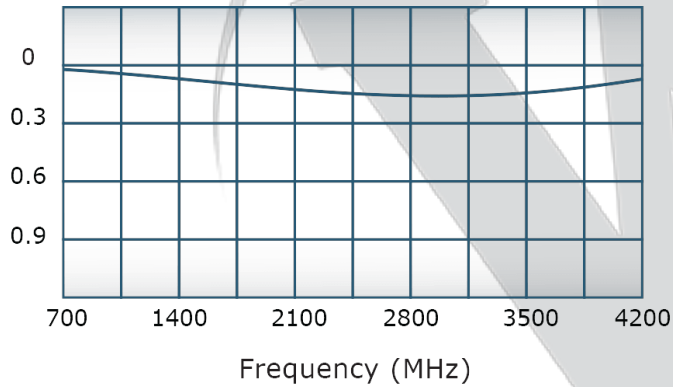
Coupling:



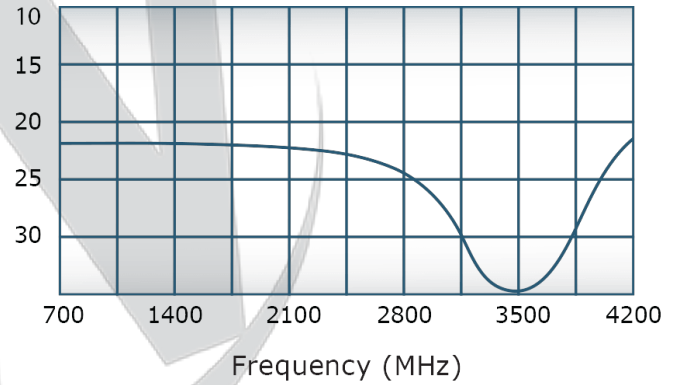
VSWR:



Insertion Loss:



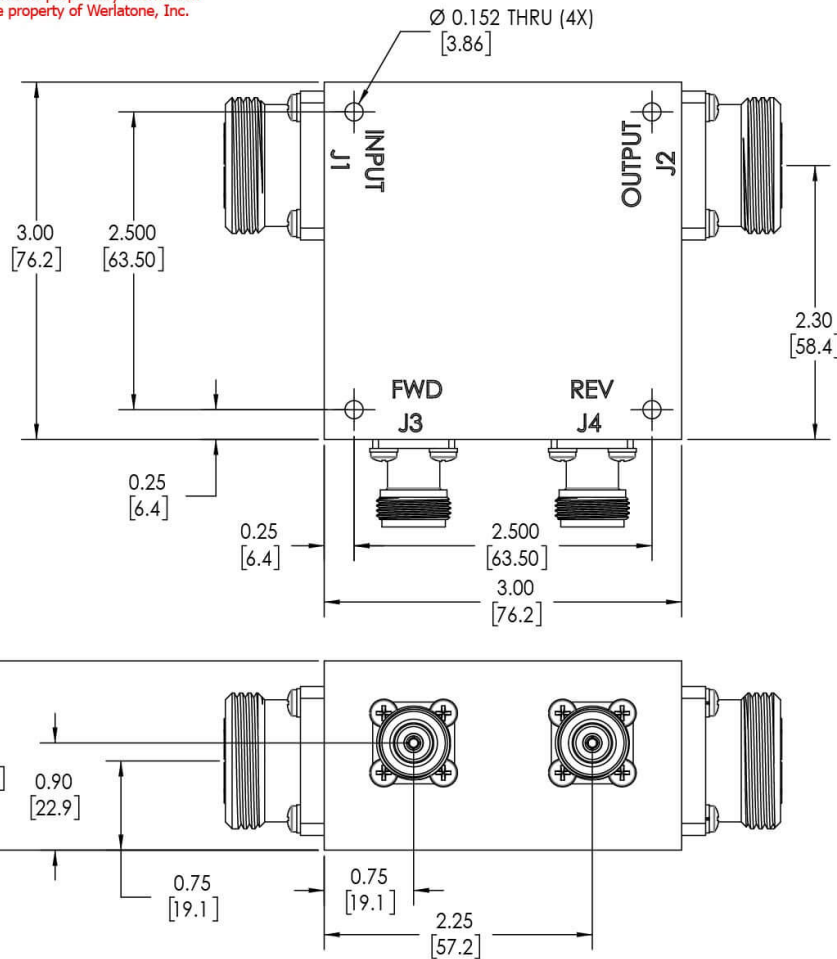
Directivity:



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REVISION HISTORY			
REV.	REVISION RECORD	DATE	APPROVED
A	ECN 9696	5/13/2019	RB

**NOTES: UNLESS OTHERWISE SPECIFIED**

- MATERIAL: ALUMINUM 6061-T6**
- FINISH: CHEM FILM PER MIL-DTL-5541F CLASS I TYPE 3 (YELLOW IRIDITE)**
- CONNECTORS:**  
J1, J2: 7/16 FEMALE  
J3, J4: N FEMALE

<div>UNLESS OTHERWISE SPECIFIED</div> <div>INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100</div> <div>DIMENSIONS FOR ASSEMBLY 14.504-2009</div> <div>PARENTHESES ARE FOR REF ONLY</div> <div>DIMENSIONS ARE IN INCHES</div> <div>DIMENSIONAL LIMITS APPLY BEFORE PROCESSES</div> <div>TOLERANCES:</div> <div>    ANGLES ± 2°</div> <div>    3 PL ± .005 [13]</div> <div>    2 PL ± .015 [38]</div> <div>REMOVE ALL BURRS AND SHARP EDGES R.01 MAX</div> <div>CONCENTRICITY MACHINED DIA. .002 FIM</div> <div>MACHINE TOOL MISMATCH .003 MAX</div>		OWN	DATE	<div><div> WERLATONE</div><div>SINCE 1965</div></div>	<div>17 Jon Barrett Rd</div> <div>Patterson, NY 12563</div>		
		SD	5/13/2019				
		CHK	DATE				
		CS	5/13/2019				
		ENGR	DATE				
		INFR	DATE				
<div>NEXT ASSY</div> <div>USED ON</div>		QA	DATE	SIZE	CAGE CODE	DWG NO	REV
		B		10443-501	A		
		SCALE				1:1	SHEET 1 OF 1
		APPLICATION				THIRD ANGLE PROJECTION	

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