


**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.

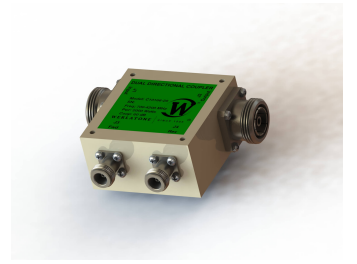
**Mechanical Specifications:**

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.

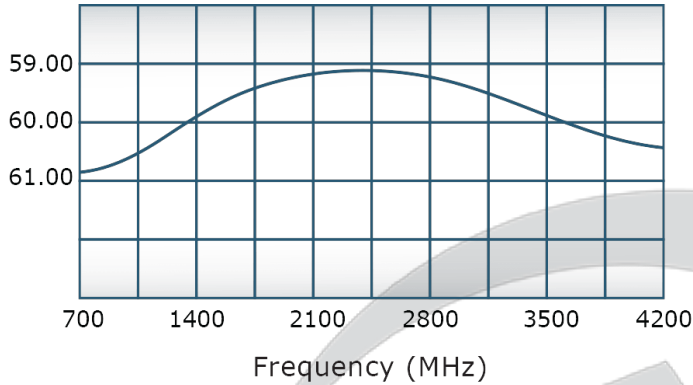


## PRODUCT DATA SHEET

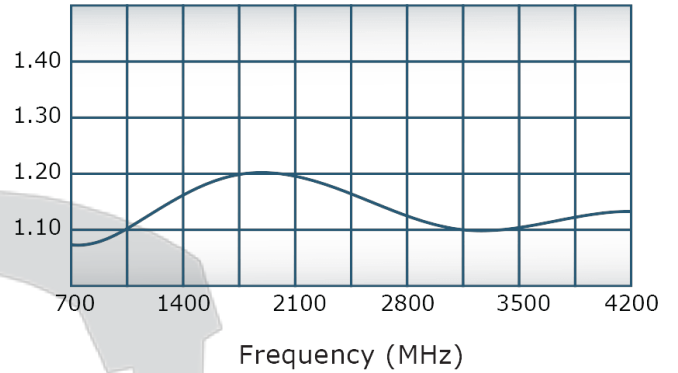
C10166

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

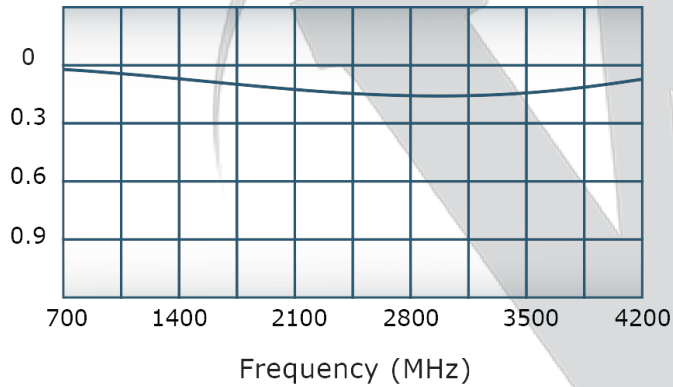
Coupling:



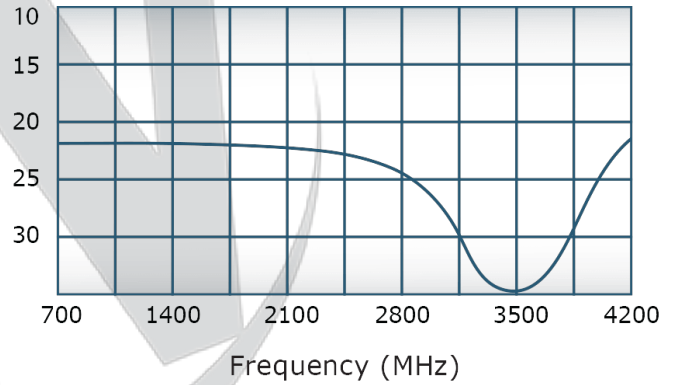
VSWR:



Insertion Loss:



Directivity:



Restriction on use, duplication, or disclosure of proprietary information. This document contains proprietary information which is the sole property of

Werlatone, Inc.

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

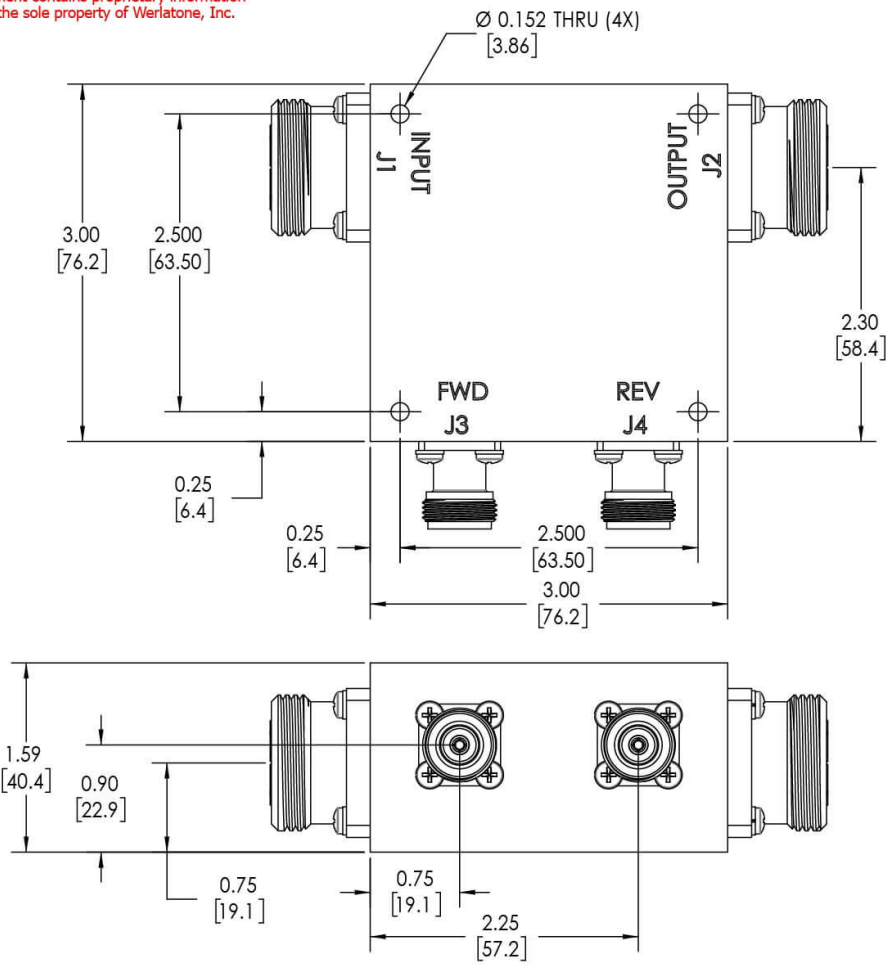
**RESTRICTION ON USE, DUPLICATION OR DISCLOSURE OF PROPRIETARY INFORMATION**

This document contains proprietary information which is the sole property of Werlatone, Inc.

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**



UNLESS OTHERWISE SPECIFIED		DATE	17 Jon Barrett Rd
INTERPRET DRAWING IAW MIL-STD-100	SD	5/13/2019	Patterson, NY 12563
DIMENSIONS PER ASME Y14.5M-2009	CHK	DATE	
PARENTHESES FOR REF ONLY	CS	5/13/2019	
DIMENSIONS ARE IN INCHES	ENGR	DATE	
DIMENSIONAL LIMITS APPLY BEFORE PROCESSES	INFR	DATE	
TOLERANCES:	QA	DATE	
ANGLES ± 2°	RLSE	DATE	
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	SCALE	REV
APPLICATION	THIRD ANGLE PROJECTION	B	A
		1:1	10443-501
			SHEET 1 OF 1

Restriction on use, duplication, or disclosure of proprietary information. This document contains proprietary information which is the sole property of Werlatone, Inc.  
 Werlatone, Inc. 17 Jon Barrett Road Patterson, NY 12563 T:(845)278-2220 F:(845)278-3440 sales@werlatone.com www.werlatone.com