


**PRODUCT DATA SHEET**
**C7646**

**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:      1 - 500 MHz  
 Power:          30 W CW  
 Coupling:         $20 \pm 1.0$  dB Max.  
 Insertion Loss:   3.0 dB Max.  
 Flatness:         $\pm 1.0$  dB Max.  
 VSWR (ML):     1.30:1 Max.  
 Directivity:      20 dB Min.

**Mechanical Specifications:**

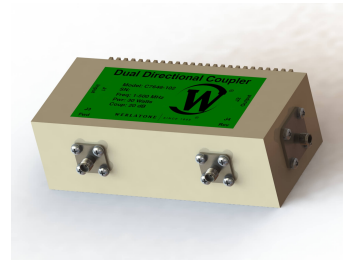
Type:              Connectorized  
 Material:         Aluminum 6061-T6  
 Surface Finish:   Chem. Film Per MIL-DTL-5541F  
                          Type I Class 3 (Yellow Iridite)  
                          RoHS Compliant Available  
 Operating Temperature:   -55°C to +75°C  
 Storage Temperature:    -60°C to +85°C  
 Humidity:         95% Non-Condensing  
 Size:                5.2 x 2.67 x 1.69"

**Connector Configurations:**

Model	Input (J1)	Output (J2)	Fwd (J3)	Rev (J4)
C7646-10	N Female	N Female	N Female	N Female
C7646-12	N Female	N Female	SMA	SMA
C7646-13	N Female	N Female	BNC	BNC
C7646-102	SMA	SMA	SMA	SMA
C7646-200	BNC	BNC	BNC	BNC

\* Insertion Loss includes 0.08 dB Coupling Loss.

**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.

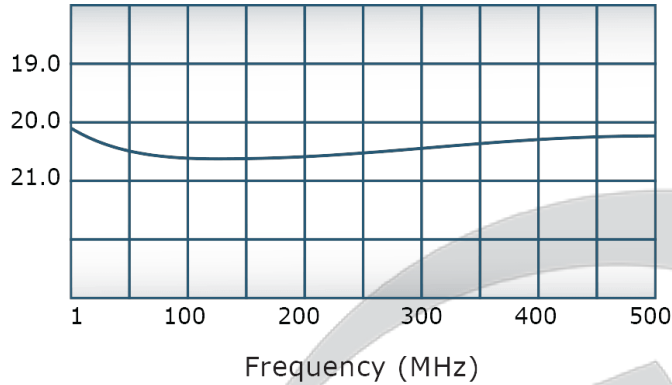


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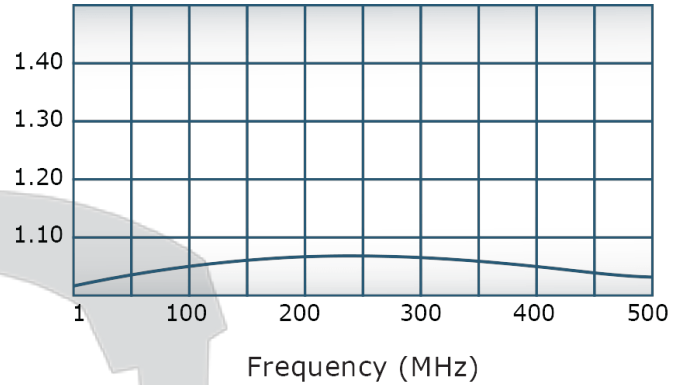
C7646

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

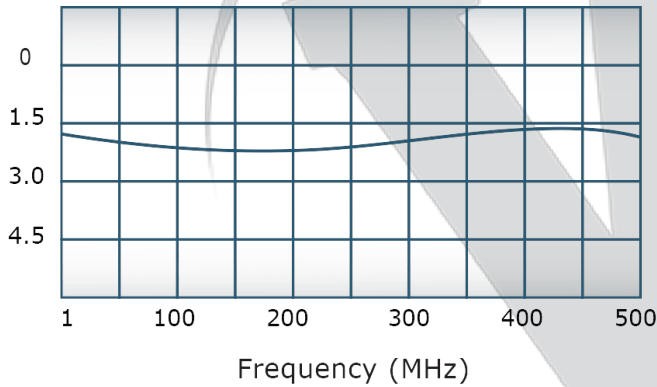
Coupling:



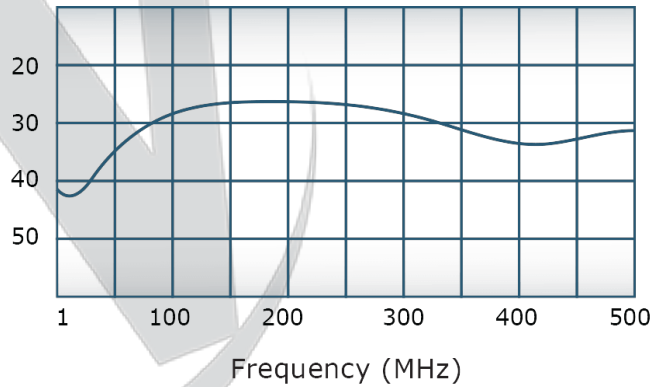
VSWR:



Insertion Loss:



Directivity:



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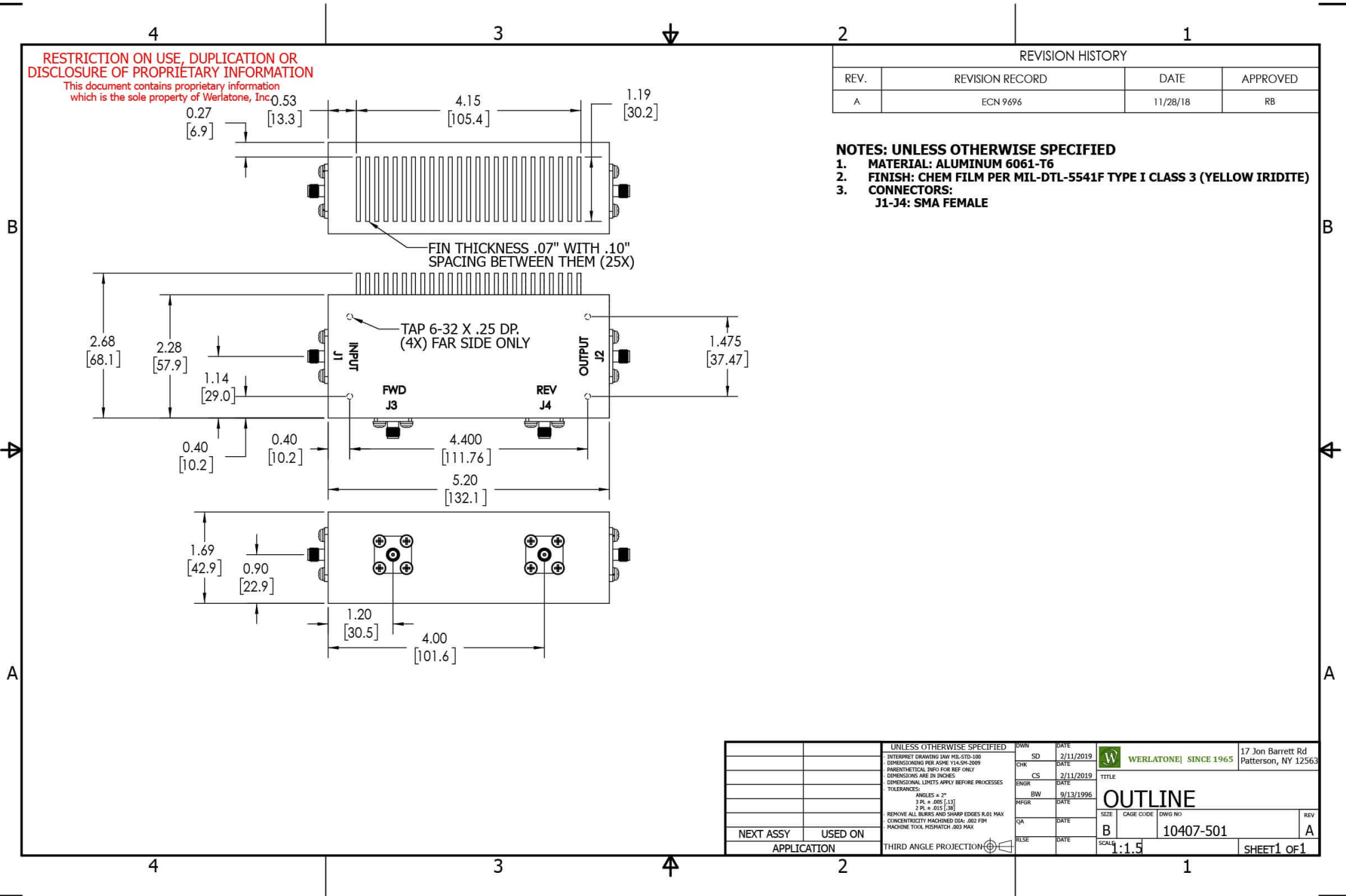
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REVISION HISTORY			
REV.	REVISION RECORD	DATE	APPROVED
A	ECN 9696	11/28/18	RB

**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		DATE	17 Jon Barrett Rd Patterson, NY 12563
INTERRUPT DRAWING IAW MIL-STD-100	SD	2/11/2019	W WERLATONE SINCE 1965
DIMENSIONS PER ASME Y14.5M-2009	CHK	DATE	
PARENTHESES INFO FOR REF ONLY	CS	2/11/2019	TITLE
DIMENSIONS ARE IN INCHES	ENGR	DATE	OUTLINE
DIMENSIONAL LINES APPLY BEFORE PROCESSES	BW	9/13/1996	SIZE CAGE CODE DWG NO
TOLERANCES:	QA	DATE	B 10407-501
ANGLES ± 2°	RLSE	DATE	SCALE 1:1.5
3 PL ± .005 [13]			REV A
2 PL ± .015 [38]			SHEET 1 OF 1
REMOVE ALL BURRS AND SHARP EDGES R.01 MAX			
CONCENTRICITY MACHINED DIA: .002 FIM			
MACHINE TOOL MISMATCH .003 MAX			

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