

## PRODUCT DATA SHEET

C8686

**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: 20-1000 MHz  
Power: 500 W CW  
Coupling: 40 ± 1.0 dB Max.  
Insertion Loss: 0.35 dB Max.  
Flatness: ± 0.5 dB Max.  
VSWR (ML): 1.25:1 Max.  
Directivity: 20 dB Min.

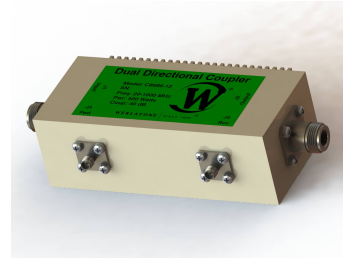
### Mechanical Specifications:

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 2.68 x 1.69"

### Connector Configurations:

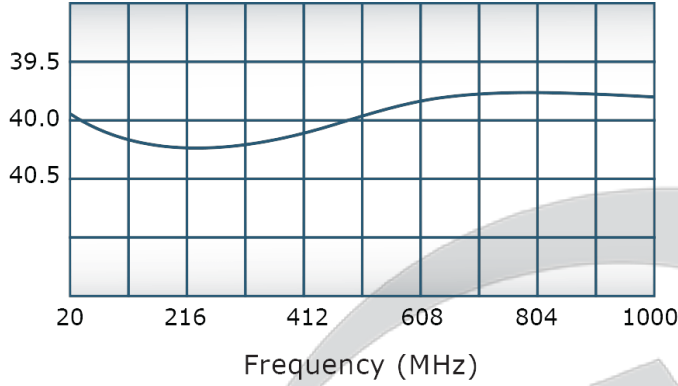
Model	Input (J1)	Output (J2)	Fwd (J3)	Rev (J4)
C8686-10	N Female	N Female	N Female	N Female
C8686-12	N Female	N Female	SMA	SMA
C8686-13	N Female	N Female	BNC	BNC
C8686-712	N Male	N Female	SMA	SMA
C8686-714	N Male	N Female	N Female	N Female

**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.

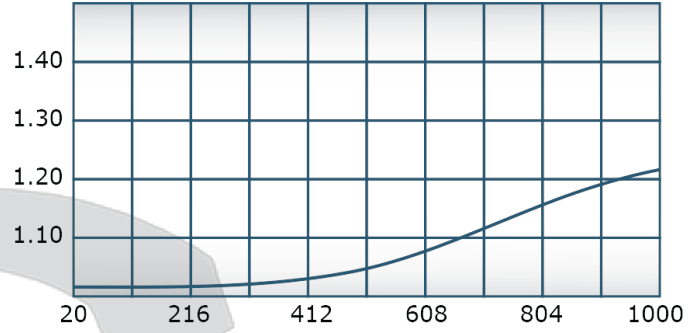


## Performance Data (Specifications subject to change without notice):

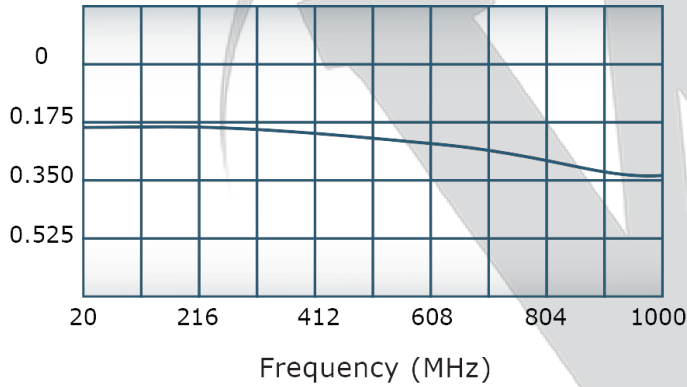
Coupling:



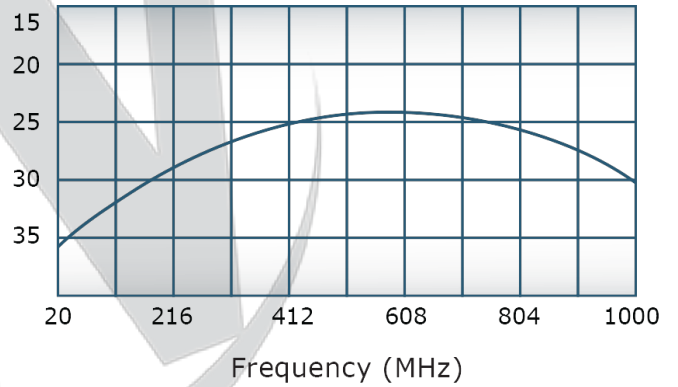
VSWR:



Insertion Loss:

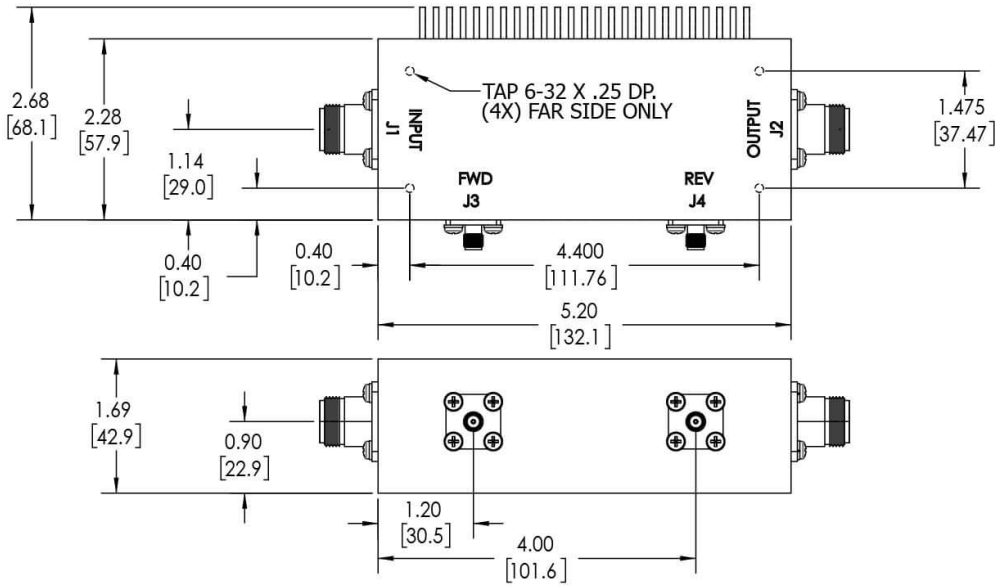
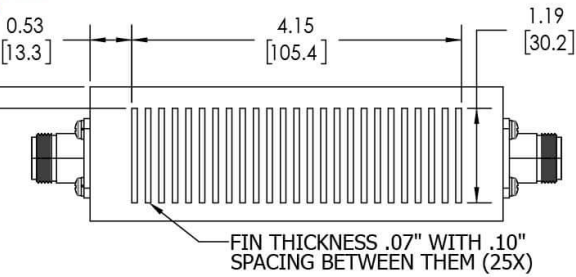


Directivity:



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REVISION HISTORY			
REV.	REVISION RECORD	DATE	APPROVED
A	ECN 9696	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, J2: N FEMALE**  
**J3, J4: SMA FEMALE**

UNLESS OTHERWISE SPECIFIED		DWN	DATE	17 Jon Barrett Rd Patterson, NY 12563
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100	SD	2/11/2019	W	WERLATONE SINCE 1965
DIMENSIONS FOR ASSEMBLY PER MIL-STD-100	CHK	DATE		
PARENTHESES FOR REFERENCE ONLY	CS	2/11/2019		
DIMENSIONS ARE IN INCHES	ENGR	DATE		TITLE
DIMENSIONAL LIMITS APPLY BEFORE PROCESSES	BW	5/28/2008		OUTLINE
TOLERANCES:	INFR	DATE		SIZE
ANGLES ± 2°	QA	DATE		CAGE CODE
3 PL ± .005 [1.3]	RLSE	DATE		DWG NO
2 PL ± .015 [3.8]				REV
REMOVE ALL BURRS AND SHARP EDGES R.01 MAX				A
CONCENTRICITY MACHINED DIA: .002 FIM				
MACHINE TOOL MISMATCH .003 MAX				
NEXT ASSY	USED ON			SCALE
APPLICATION	THIRD ANGLE PROJECTION			1:1.5
				10407-502
				SHEET 1 OF 1

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