

**PRODUCT DATA SHEET**

**QH7856**

**Our patented 3 dB 90° Hybrid Couplers provide:**

- Superior component performance starting at 3:1 Bandwidth.
- Thicker center boards for high power and increased repeatability.
- Bonded structures which eliminate any air gaps between substrates.
- More sections per bandwidth for better coupling flatness.
- Electrically shorter and physically smaller RF components.

**Features:**

High Power      Wide Bandwidths      Small Size      Connectorized      Drop-In & Surface Mount

**Electrical Specifications:**

Frequency:            500 - 2000 MHz  
 Power:                200 W CW  
 Insertion Loss:      0.55 dB Max.  
 VSWR:                1.35:1 Max.  
 Phase Balance:      90° ± 5° Max.  
 Amplitude Balance: ± 0.5 dB Max.  
 Isolation:            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  
 Weight:                4 oz.  
 Size:                    2.1 x 1.49 x 0.75"

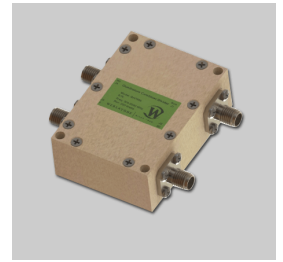
**Port Configurations:**

<b>J1</b>	<b>J2</b>	<b>J3</b>	<b>J4</b>
Input	-3 dB, 0°	-3 dB, -90°	Isolated
-3 dB, 0°	Input	Isolated	-3 dB, -90°
-3 dB, -90°	Isolated	Input	-3 dB, 0°
Isolated	-3 dB, -90°	-3 dB, 0°	Input

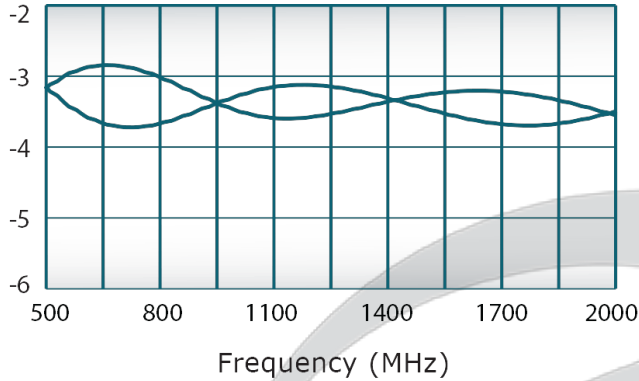
**Werlatone's** breakthrough technology allows us to build our existing line of Broadband 3 dB High Power 90° Hybrid Couplers. Connectorized 3 dB 90° Hybrid Coupler models are available with a choice of connectors. Several of our existing High Power 3 dB 90° RF Couplers are three port designs, wherein the difference port is internally terminated with a high power termination. This eliminates the need for a customer supplied external load for each Hybrid Coupler.

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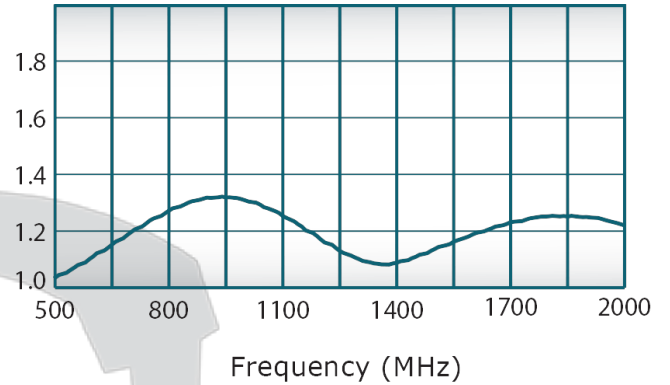
Werlatone, Inc. 17 Jon Barrett Road Patterson, NY 12563 T:(845)278-2220 F:(845)278-3440 sales@werlatone.com www.werlatone.com


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

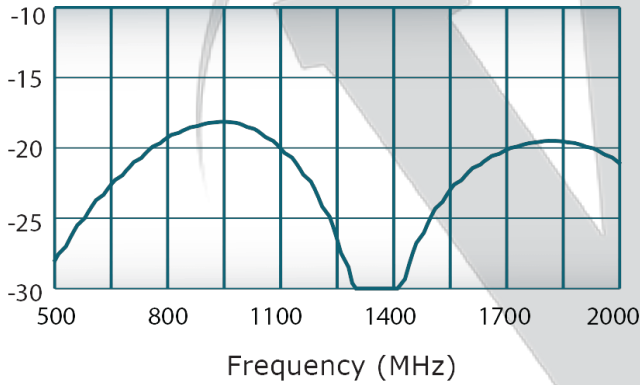
Coupling:



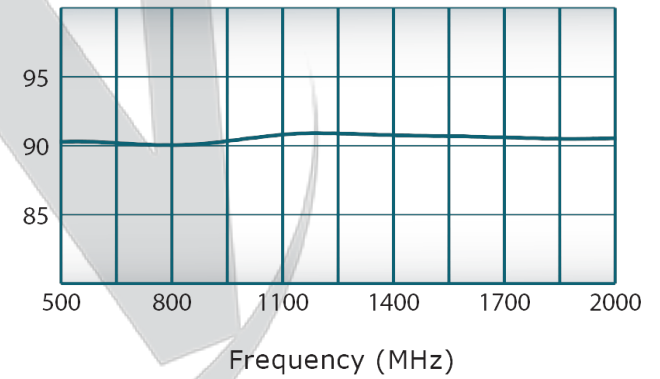
VSWR:



Isolation:

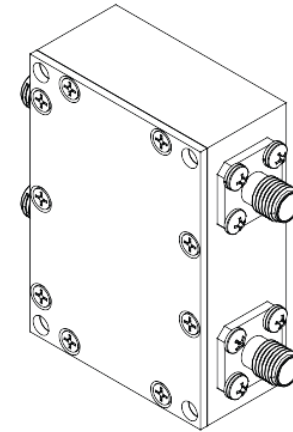
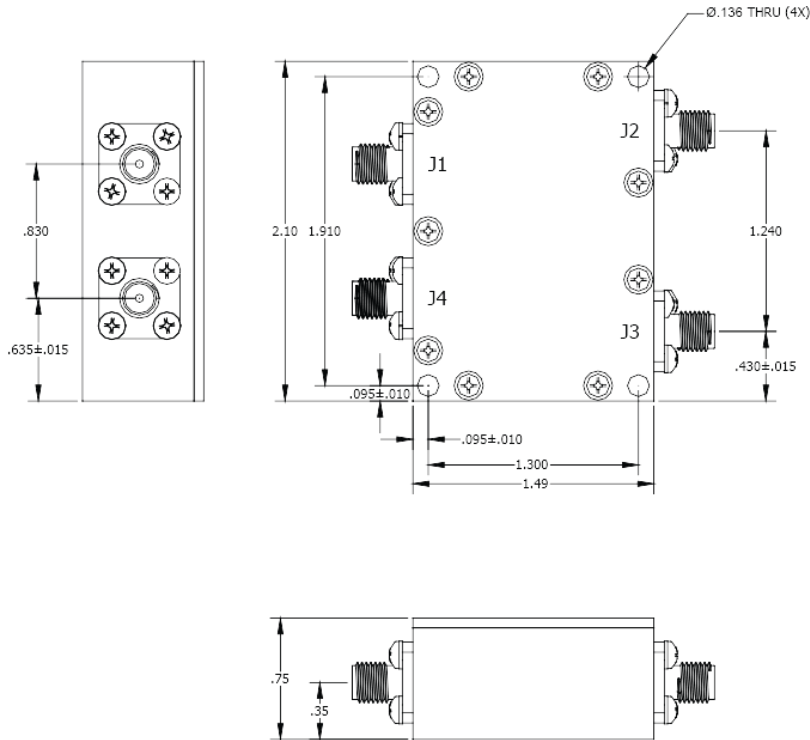


Phase Balance:



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REVISION HISTORY					
DATE	REV	REVISION RECORD	AUTH	CHK	APPV
1/18/07	-	INITIAL RELEASE	GP	NH	BW
1/30/07	-	ECN 4154	GP	NH	BW
1/14/09	A	ECN 5049	GP	NH	BW
8/16/11	B	ECN 5443	GP	NH	BW
10/15/19	D	ECN 9859	GP	NH	BW



**ELECTRICAL SPECIFICATIONS**

Frequency: 0.5 - 2.0 GHz  
 Power: 200 Watts CW  
 Insertion Loss: 0.55 dB Max.  
 Amplitude Balance: ± 0.5 dB Max.  
 Phase Balance: 90° ± 5° Max.  
 VSWR: 1.35:1  
 Isolation: 18 dB Min. J2-J3  
 Temperature: -55°C To +85°C

**Port Configurations**

J1	J2	J3	J4
Input	-3 dB, 0°	-3 dB, -90°	Isolated
-3 dB, 0°	Input	Isolated	-3 dB, -90°
-3 dB, -90°	Isolated	Input	-3 dB, 0°
Isolated	-3 dB, -90°	-3 dB, 0°	Input

**NOTES UNLESS OTHERWISE SPECIFIED:**

- MAT'L: ALUMINUM 6061-T6
- FINISH: CHEM FILM PER MIL-DTL-5541F Type I Class 3 (Yellow Iridite)
- Connectors: All SMA Female

UNLESS OTHERWISE SPECIFIED		DWN	DATE	<b>WERLATONE   SINCE 1965</b>	17 Jon Barrett Rd Patterson, NY 12563
<ul style="list-style-type: none"> <li>INTERPRET DRAWING LAW MIL-STD-100</li> <li>DIMENSIONING PER ASME Y14.5M-2009</li> <li>PARENTHETICAL INFO FOR REF ONLY</li> <li>DIMENSIONS ARE IN INCHES</li> <li>DIMENSIONAL LIMITS APPLY BEFORE PROCESSING</li> </ul>	GP	1/14/10			
<ul style="list-style-type: none"> <li>TOLERANCES: ANGLE ± 2°</li> <li>3 PL ± .005</li> <li>2 PL ± .015</li> </ul>	CHK	DATE	<b>QH7856-102</b>		
	ENGR	DATE			TITLE
	APVD	DATE	SIZE	CAGE CODE	DWG NO
	RLSE	DATE	A	28812	20303-500
THIRD ANGLE PROJECTION	SCALE		1:1	SHEET 1 OF 1	

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