

## 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:  $90^\circ \pm 5^\circ$  Max.  
 Amplitude Balance:  $\pm 0.5$  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:

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

**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.

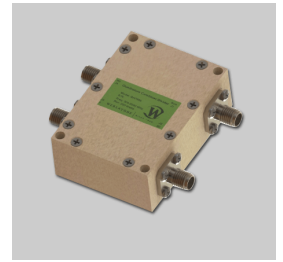
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# WERLATONE

Model QH7856

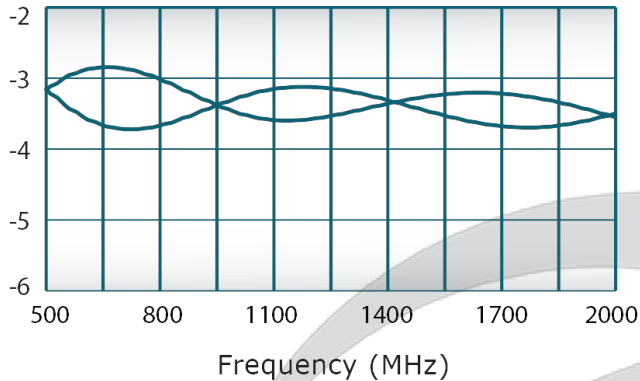


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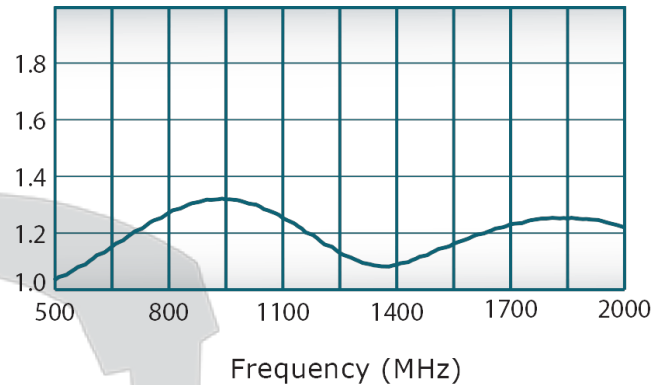
QH7856

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

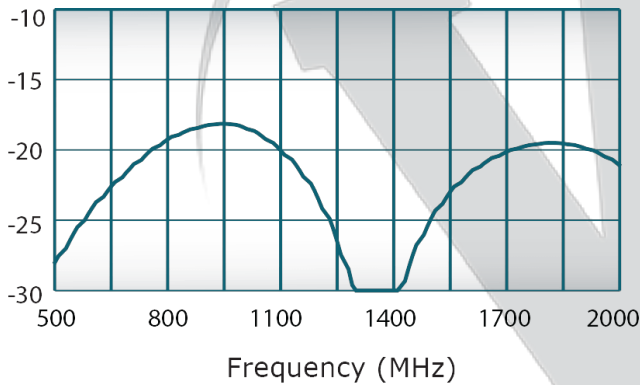
Coupling:



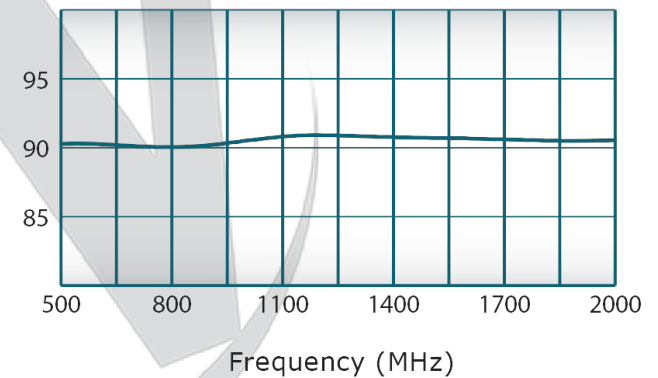
VSWR:



Isolation:



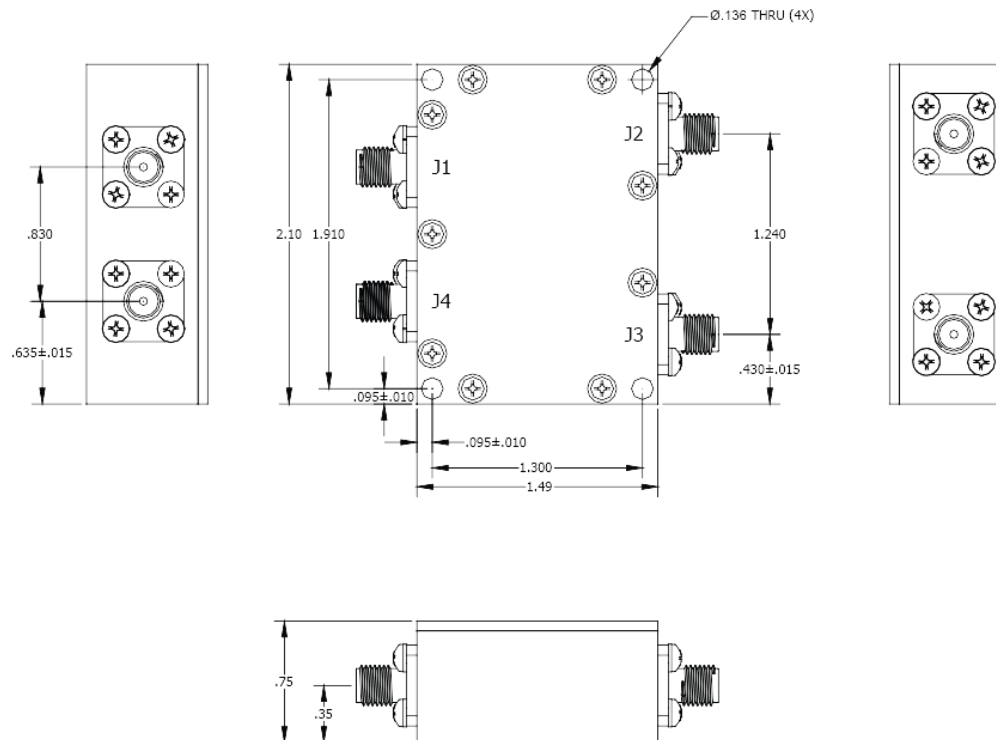
Phase Balance:



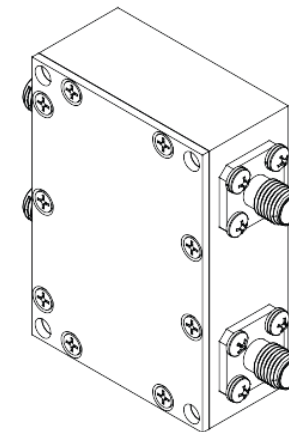
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REVISION HISTORY					
DATE	REV	REVISION RECORD	AUTH	CHK	APPV
1/18/07	-	INITIAL RELEASE	GP	NH	BW
1/30/07	A	ECN 4154	GP	NH	BW
1/14/09	B	ECN 5049	GP	NH	BW
8/16/11	C	ECN 5443	GP	NH	BW
10/15/19	D	ECN 9859	GP	NH	BW



#### 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	
• INTERPRET DRAWING (AW MIL-STD-100) • DIMENSIONING PER ASME Y14.5M-2009 • PARENTHETICAL INFO FOR REF ONLY • DIMENSIONS ARE IN INCHES • DIMENSIONAL LIMITS APPLY BEFORE PROCESSING • TOLERANCES: ANGLE ± 2° 3 PL ± .005 2 PL ± .015		GP	1/14/10				
		CHK	DATE	TITLE		<b>QH7856-102</b>	
		ENGR	DATE				
		APVD	DATE	SIZE A CAGE CODE 28812 DWG NO 20303-500		REV 00	
		RLSE	DATE				
THIRD ANGLE PROJECTION		SCALE 1:1		SHEET 1 OF 1			

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