



## PRODUCT DATA SHEET

QH8859

### 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: 80 - 1000 MHz  
Power: 250 W CW  
Insertion Loss: 0.65 dB Max.  
VSWR: 1.40:1 Max.  
Phase Balance:  $90^\circ \pm 6^\circ$  Max.  
Amplitude Balance:  $\pm 1.0$  dB Max.  
Isolation: 16 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: 14.2 oz.  
Size: 3.5 x 3.2 x 1.06"

### Connector Configurations:

Model	Sum Port (J1)	0°, -90° (J2,J3)	ISO Port (J4)
QH8859-10	N Female	N Female	N Female
QH8859-12	N Female	N Female	SMA
QH8859-102	SMA	SMA	SMA
QH8859-113	BNC	BNC	BNC

**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 QH8859

90° Hybrids Connectorized

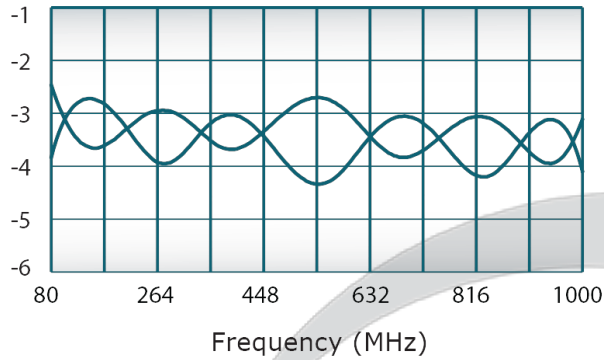


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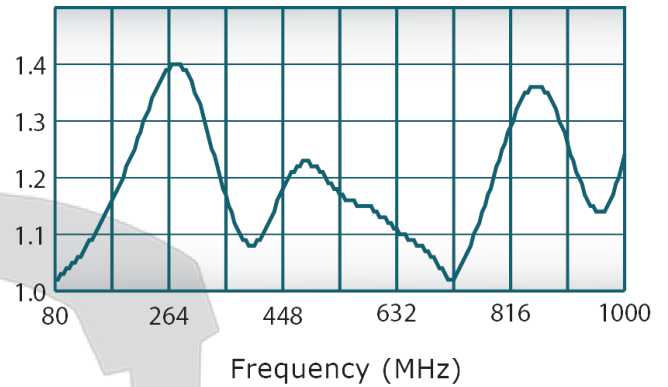
QH8859

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

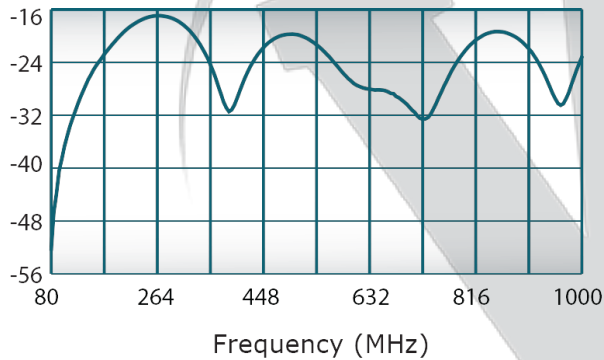
Coupling:



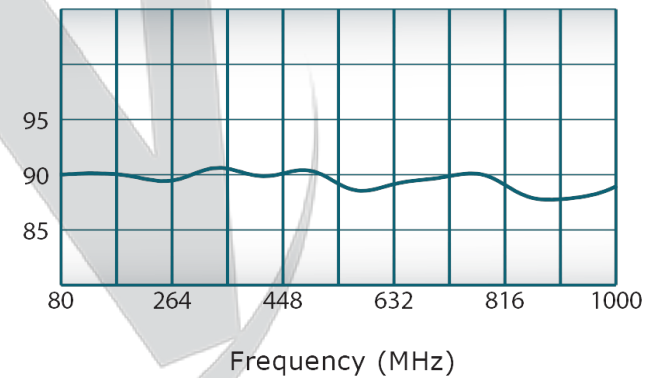
VSWR:



Isolation:



Phase Balance:

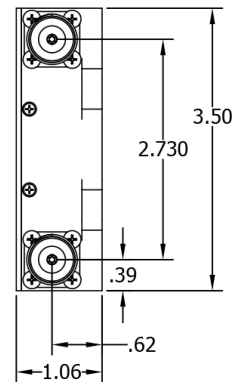
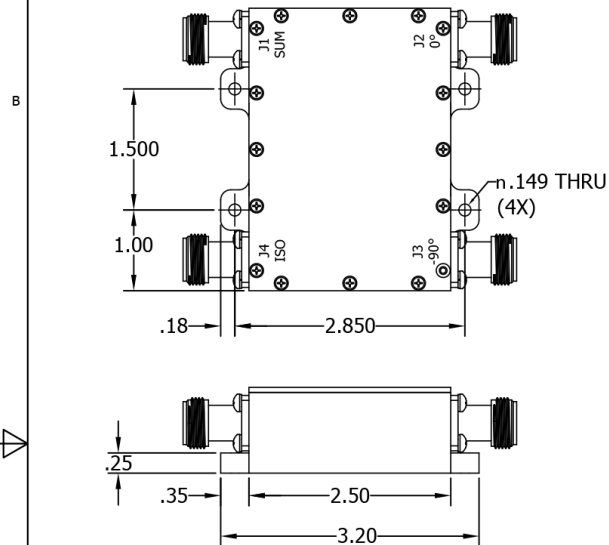


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REVISION HISTORY					
DATE	REV	REVISION RECORD	AUTH	CHK	APPV
2/21/2011	-	INITIAL RELEASE	NH	BW	BW



J1	J2	J3	J4
Sum (S)	-3 dB Q	-3 dB Q-90	Isolated (Δ)
-3 dB Q	Sum (S)	Isolated (Δ)	-3 dB Q-90
-3 dB Q-90	Isolated (Δ)	Sum (S)	-3 dB Q
Isolated (Δ)	-3 dB Q-90	-3 dB Q	Sum (S)

UNLESS OTHERWISE SPECIFIED		DWN	DATE	 WERLATONE   SINCE 1965	17 Jon Barrett Rd Patterson, NY 12563
INTERPRET DRAWING IAW MIL-STD-100 DIMENSIONING PER ASME Y14.5M-2009 PARANTHETICAL INFO FOR REF ONLY DIMENSIONS ARE IN INCHES TOLERANCES: ANGLE ± 2° 3 PL DECIMALS ± .005 2 PL DECIMALS ± .015		NH	02/21/11		
THIRD ANGLE PROJECTION 		CHK	DATE	TITLE	
		BW	02/21/11	OUTLINE	
		ENGR	DATE	USED ON	
		BW	02/21/11		
		QA	DATE		
		RLSE	DATE	SIZE	REV
				A	-
				CAGE CODE	DWG NO
				28812	20725-500
				SCALE	SHEET 1 OF 1

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