

**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 &amp; Surface Mount

**Electrical Specifications:**

Frequency:	1000 - 2500 MHz
Power:	250 W CW
Insertion Loss	0.2 dB Max.
VSWR:	1.25:1 Max.
Phase Balance:	± 5° dB Max.
Amplitude Balance:	0.65dB Max.
Isolation:	20 dB Min.

**Mechanical Specifications:**

Type:	Surface Mount
Plating Options:	QH9139-Pb: Electrodeposited Tin/Lead QH9139-Sn: Immersion Tin (RoHS Compliant) QH9139-Ag: Immersion Silver (RoHS Compliant)
Size:	0.56 x 0.35 x 0.98"

**Port Configurations:**

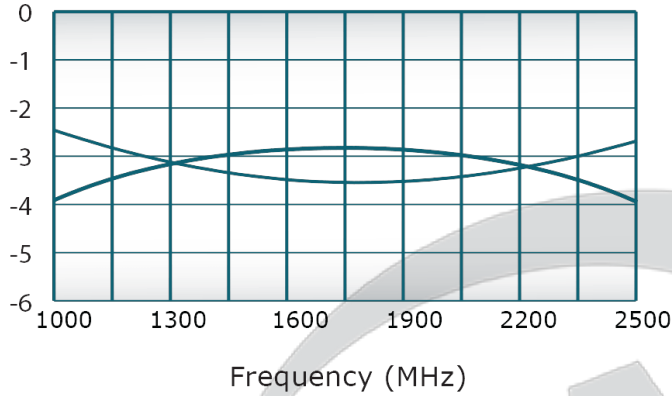
<b>J1</b>	<b>J2</b>	<b>J3</b>	<b>J4</b>
Input	-3 dB, 0°	-3 dB, -90°	Isolated
-3 dB, 0°	-3 dB, 90°	Isolated	-3 dB, -90°
-3 dB, -90°	Isolated	Input	-3 dB, 0°
Isolated	-3 dB, -90°	-3 dB, 0°	Input

**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.

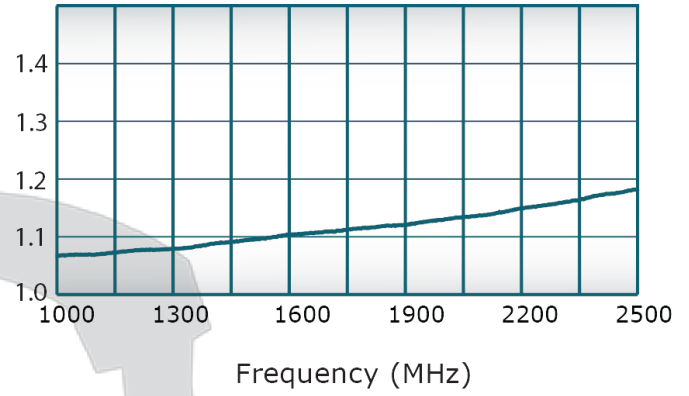


## Performance Data (Specifications subject to change without notice):

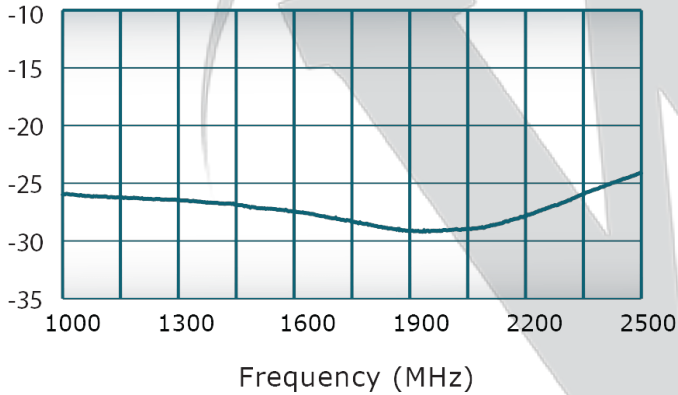
Coupling:



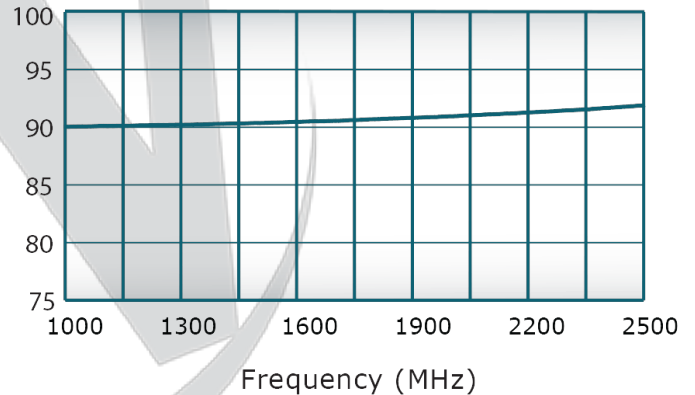
VSWR:



Isolation:



Phase Balance:



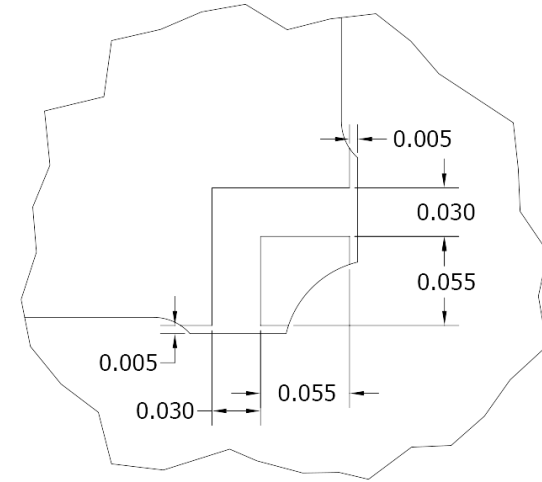
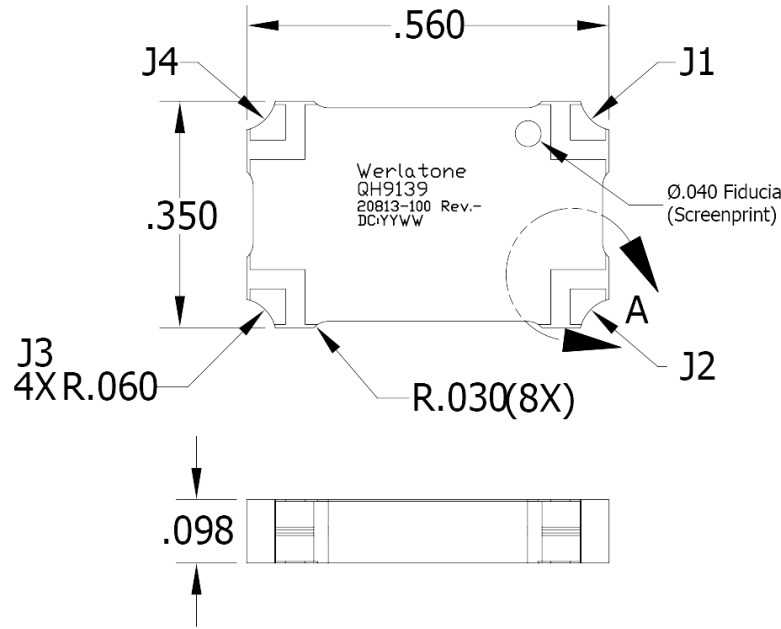
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Werlatone, Inc.

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REVISION HISTORY			
REV	REVISION RECORD	DATE	APPROVED
-	PRE-RELEASE	10/13/2011	BW



**DETAIL A**  
**SCALE 10:1**

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**

- SMT Component. Reference Tech Note for Mounting Recommendations.
- Plating Options:  
 QH9139-Pb : Electrodeposited Tin/Lead  
 QH9139-Sn : Immersion Tin (ROHS COMPLIANT)  
 QH9139-Ag : Immersion Silver (ROHS COMPLIANT)  
 QH9139-Au : ENIG (ROHS COMPLIANT)

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 IN ACCORDANCE WITH MIL-STD-100</li> <li>● DIMENSIONING PER ASME Y14.5M-2009</li> <li>● PARENTHESES ARE FOR REF ONLY</li> <li>● DIMENSIONS ARE IN INCHES</li> <li>● DIMENSIONAL LIMITS APPLY BEFORE PROCESSES</li> </ul>	GP	10/13/2011				
<ul style="list-style-type: none"> <li>● TOLERANCES: ANGLES ± 2</li> <li>3 PL # .005</li> <li>2 PL # .015</li> </ul>	CHK	DATE	TITLE			
	NH	10/13/2011	QH9139 3dB 90° Hybrid Coupler			
	ENGR	DATE	SIZE	CAGE CODE	DWG NO	REV
	BW	10/13/2011	A	28812	20813-500	-
THIRD ANGLE PROJECTION		MFGR	DATE	SCALE	SHEET 1 OF 1	
		QA	DATE	4:1		
		RLSE	DATE			

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