

## PRODUCT DATA SHEET

QH7900

### 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      Excellent Amplitude Balance

### Electrical Specifications:

Frequency: 450 - 2800 MHz  
 Power: 125 W CW  
 Insertion Loss: 0.55 dB Max.  
 VSWR: 1.35:1 Max.  
 Phase Balance: 90° ± 5° dB Max.  
 Amplitude Balance: ± 0.45 dB Max.  
 Isolation: 18 dB Min.

### Mechanical Specifications:

Type: Surface Mount  
 Plating Options: QH7900-Pb: Electrodeposited Tin/Lead  
 QH7900-Sn: Immersion Tin (RoHS Compliant)  
 QH7900-Ag: Immersion Silver (RoHS Compliant)  
 QH7900-Au (ENIG)  
 Weight: 6 grams  
 Size: 1.5 x 1.1 x 0.095"

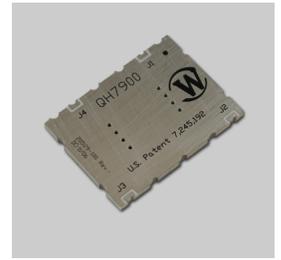
### Port Configurations:

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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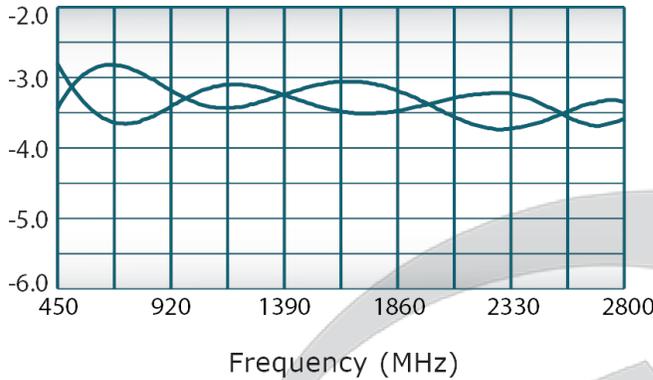


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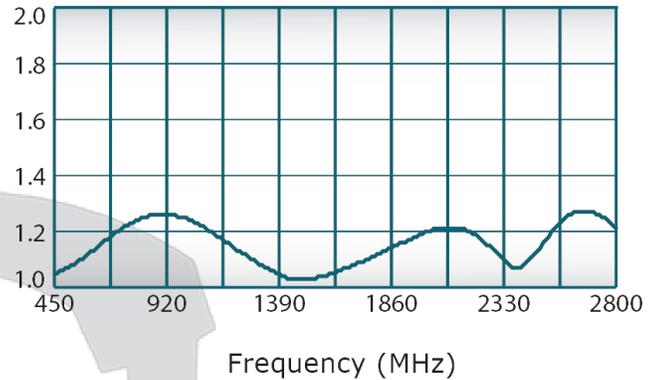
QH7900

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

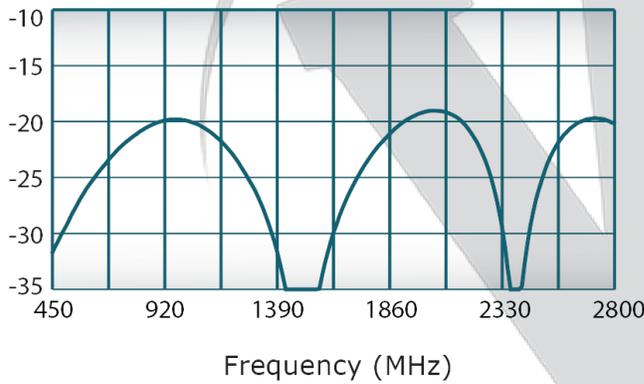
Coupling:



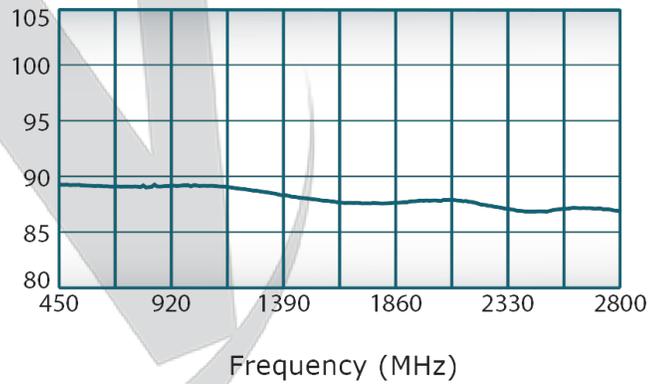
VSWR:



Isolation:



Phase Balance:



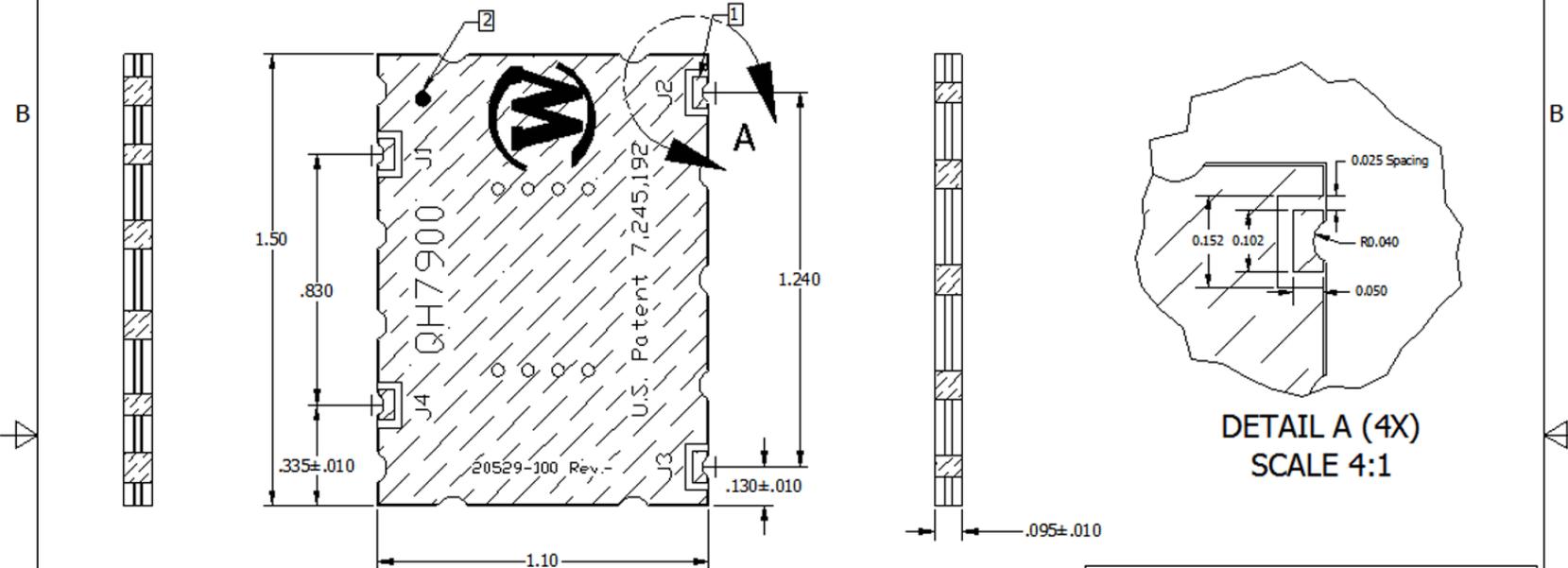
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REVISION HISTORY				
DATE	REV	REVISION RECORD	AUTH	APPRV
6/22/2009	-	INITIAL RELEASE	GP	BW
9/8/2010	A	ECN 5223	GP	BW
3/13/2014	B	ECN 8586	GP	BW
11/18/2019	C	ECN 9885	BW	BW



**NOTES: UNLESS OTHERWISE SPECIFIED**

- Ports (4X) are Ø.080 Plated Castellations (4X)
- Ø.050 Printed Fiducial for Orientation
- Hatched Areas Denote Metallization
- SMT Component. Reference Tech Note for Mounting Recommendations.
- Plating Options:  
 QH7900-Pb : Electrodeposited Tin/Lead  
 QH7900-Sn : Immersion Tin  
 QH7900-Ag : Immersion Silver  
 QH7900-Au : ENIG  
 QH7900-Ha : HASL Tin/Lead

**ELECTRICAL SPECIFICATIONS**

Frequency: 450 - 2800 MHz  
 Power: 125 Watts CW  
 Insertion Loss: 0.55 db Max.  
 Amplitude Balance: ± 0.45 db Max.  
 Phase Balance: 90° ± 5° Max.  
 VSWR: 1.35:1  
 Isolation: 18 dB Min.  
 Temperature: -55°C To +85°C

**Port Configurations**

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

UNLESS OTHERWISE SPECIFIED		DATE	DATE	<b>WERLATONE   SINCE 1965</b> 17 Jon Barrett Rd Patterson, NY 12563
• INTERPRET DRAWING (AWI) MS-D-370-100 • DIMENSIONS DIVIDED PER ASME Y14.5M-2009 • PARAMETRICAL DIMS FOR REF ONLY • DIMENSIONS ARE IN INCHES • TOLERANCES: ANGLE ± 2° 3 PL 0 DECIMALS ± .005 2 PL 0 DECIMALS ± .015 THIRD ANGLE PROJECTION	GP NH DATE DATE DATE DATE DATE DATE	6/22/2009 6/22/2009	TITLE <b>QH7900 -3 dB Hybrid Coupler</b> USED ON <b>QH7900</b> SIZE <b>A</b> SCALE <b>2:1</b>	
SHEET 1 OF 1				

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