
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"

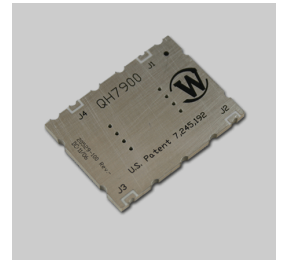
Port Configurations:

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

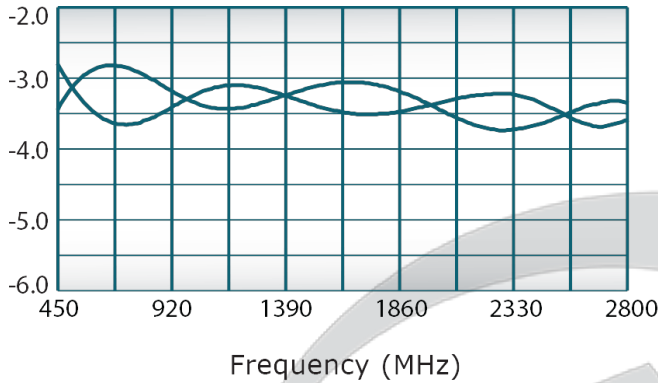


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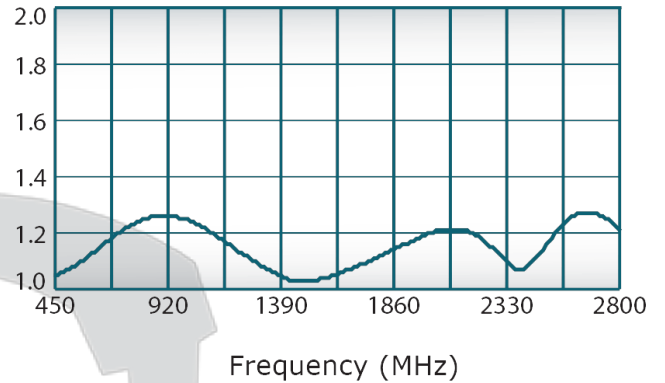
QH7900

Performance Data (Specifications subject to change without notice):

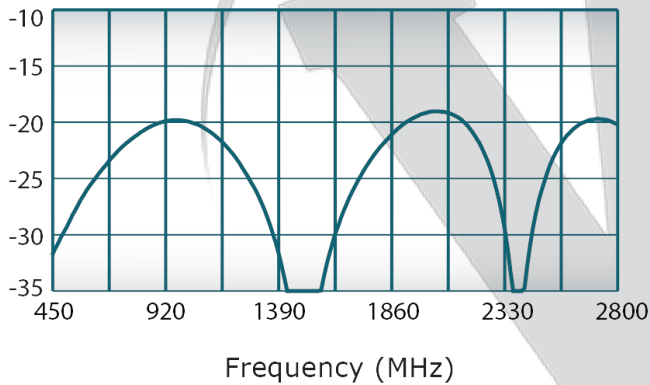
Coupling:



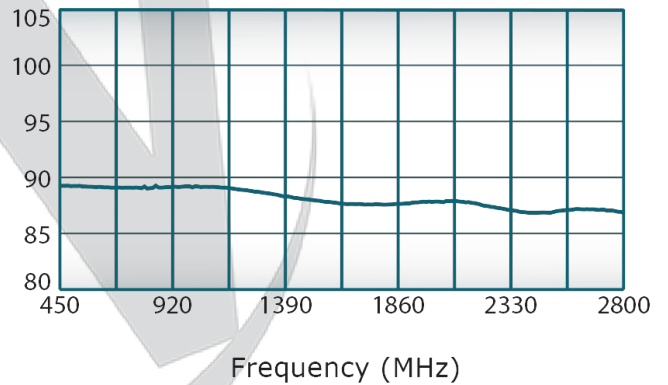
VSWR:



Isolation:



Phase Balance:



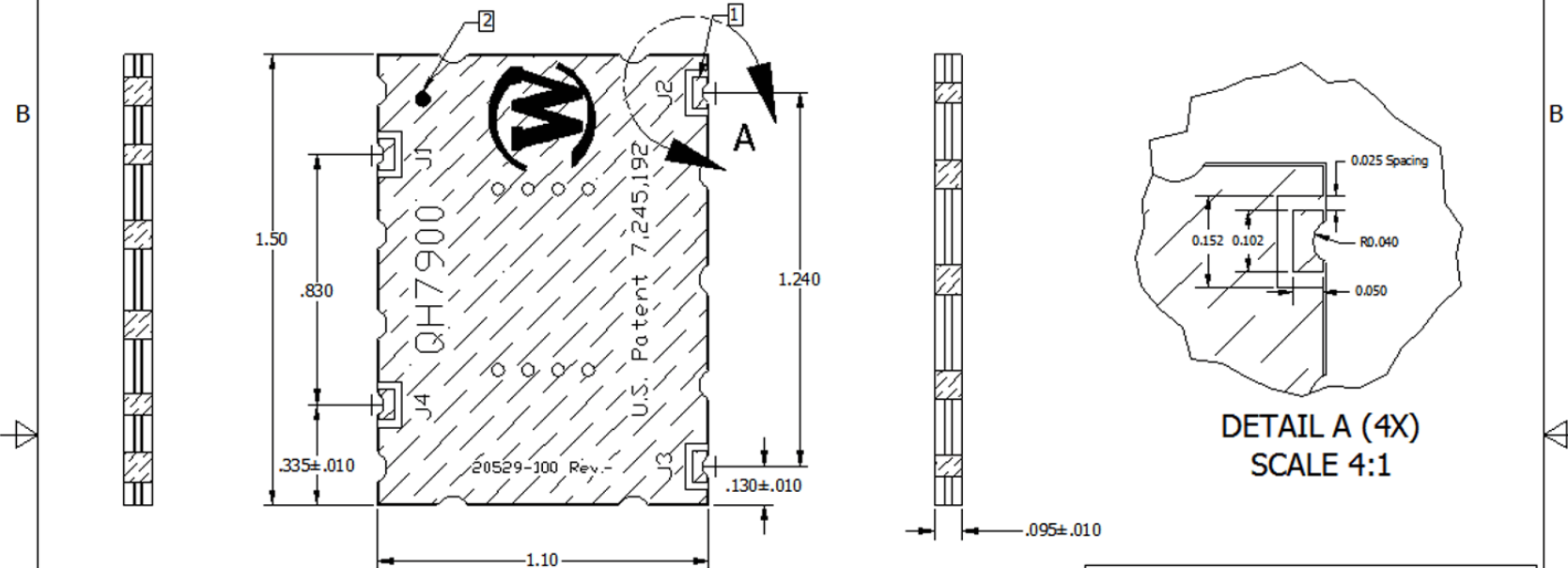
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REVISION HISTORY				
DATE	REV	REVISION RECORD	AUTH	APPRV
6/22/2009	-	INITIAL RELEASE	GP	BW
9/8/2010	A	ECN 5223	GP	BW
3/13/2014	B	ECN 8586	GP	BW
11/18/2019	C	ECN 9885	BW	BW



NOTES: UNLESS OTHERWISE SPECIFIED

- Ports (4X) are \varnothing .080 Plated Castellations (4X)
- \varnothing .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: $90^\circ \pm 5^\circ$ Max.
 VSWR: 1.35:1
 Isolation: 18 dB Min.
 Temperature: -55°C To $+85^\circ\text{C}$

	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

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UNLESS OTHERWISE SPECIFIED		DATE	DATE	DATE	DATE
GP	6/22/2009	NH	6/22/2009		
* INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100 * DIMENSIONS UNLESS OTHERWISE SPECIFIED * DIMENSIONS ARE IN INCHES * TOLERANCES: ANGLE $\pm 2^\circ$ 3 PL. DECIMALS $\pm .005$ 2 PL. DECIMALS $\pm .015$		WERLATONE SINCE 1965 17 Jon Barrett Rd Patterson, NY 12563		TITLE: QH7900 -3 dB Hybrid Coupler USED ON: QH7900	
SIZE	A	CAGE CODE	28812	DWG/NO	20529-500
SCALE	2:1			REV	
				SHEET 1 OF 1	

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