



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:

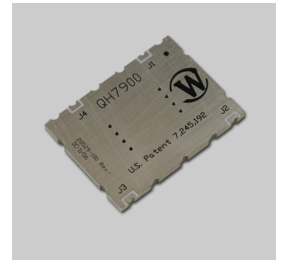
J1	J2	J3	J4
Input	-3 dB, 0°	-3 dB, -90°	Isolated
-3 dB, 0°	Input	Isolated	-3 dB, -90°
-3 dB, -90°	Isolated	Input	-3 dB, 0°
Isolated	-3 dB, -90°	-3 dB, 0°	Input

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.



WERLATONE

Model QH7900

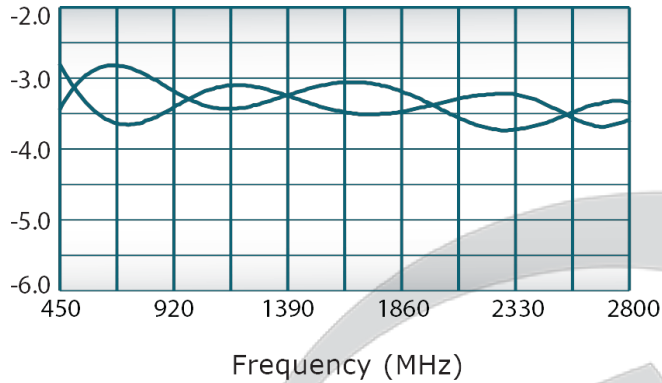


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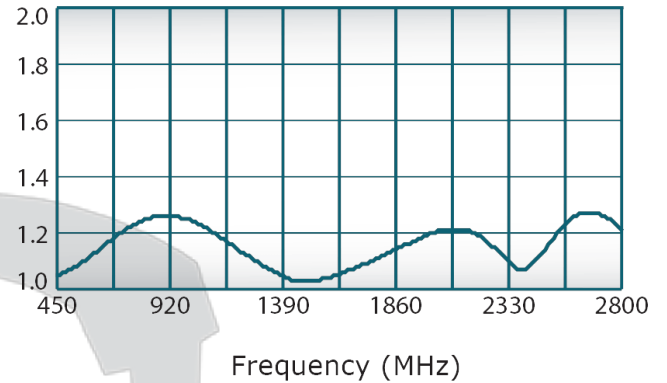
QH7900

Performance Data (Specifications subject to change without notice):

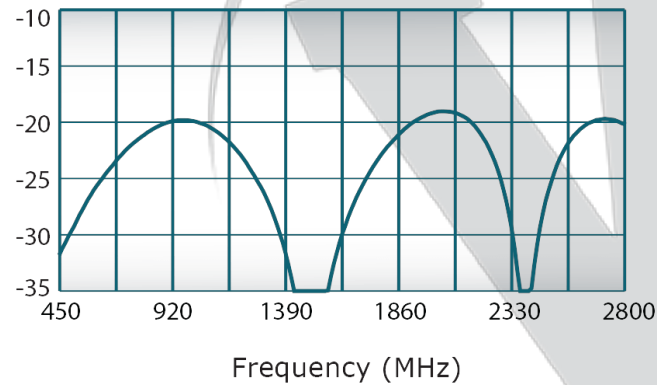
Coupling:



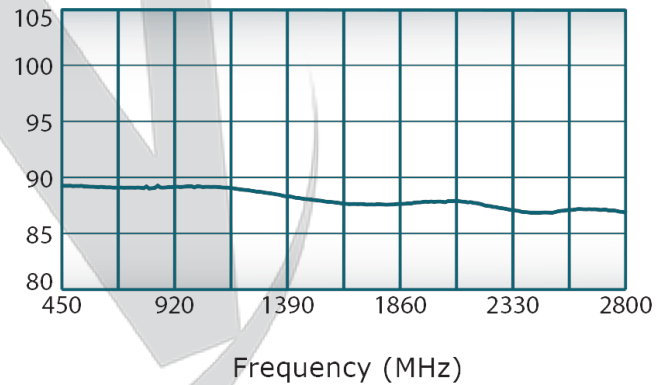
VSWR:



Isolation:



Phase Balance:

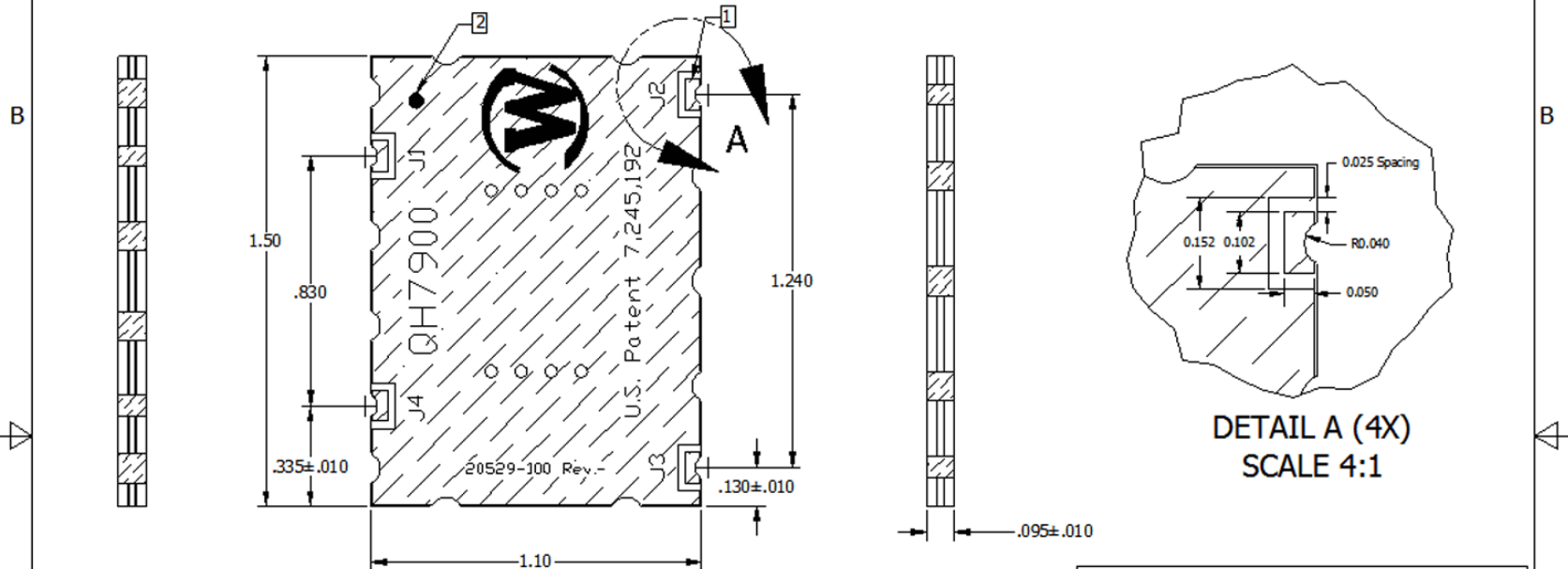


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REVISION HISTORY				
DATE	REV	REVISION RECORD	AUTH	APPV
6/22/2009	-	INITIAL RELEASE	GP	BW
9/8/2010	A	ECN 5223	GP	BW
3/13/2014	B	ECN 8586	GP	BW
11/18/2019	C	ECN 9885	BW	BW



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 $+85^\circ\text{C}$

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

- Ports (4X) are $\phi 0.080$ Plated Castellations (4X)
- $\phi 0.050$ 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

UNLESS OTHERWISE SPECIFIED		DATE	DATE	 WERLATONE SINCE 1965	17 Jon Barrett Rd Patterson, NY 12563			
GP	GP	6/22/2009	6/22/2009					
* DIMENSIONS DRAWING (AW 102-370-100)		DATE	DATE	TITLE QH7900 -3 dB Hybrid Coupler	USED ON QH7900			
OK	NH	6/22/2009	6/22/2009					
* DIMENSIONS PER ASME Y14.5M-2009		DATE	DATE					
* PARALLELISM PER ASME Y14.5M-2009		DATE	DATE					
* DIMENSIONS ARE IN INCHES		DATE	DATE					
* TOLERANCES: ANGLE ± .1°		DATE	DATE	SIZE A	CAGE CODE 28812	DWG NO 20529-500	REV 0	
3 PLO DECIMALS ± .005		DATE	DATE					
2 PLO DECIMALS ± .015		DATE	DATE					
THIRD ANGLE PROJECTION 		DATE	DATE	SCALE 2:1				SHEET 1 OF 1

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