
**PRODUCT DATA SHEET**
**QH8193**
**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:	2000 - 6000 MHz
Power:	100 W CW
Insertion Loss	0.25 dB Max.
VSWR:	1.30:1 Max.
Phase Balance:	± 5° dB Max.
Amplitude Balance:	2.0 GHz: ± 0.9 dB Max. 4.0 GHz: ± 0.75 dB Max. 6.0 GHz: ± 0.75 dB Max.
Isolation:	20 dB Min.

**Mechanical Specifications:**

Type:	Surface Mount
Plating Options:	QH8193-Sn: Immersion Tin (RoHS) QH8193-Ag: Immersion Silver (RoHS) QH8193-Au: ENIG (RoHS) QH8193-Pb: Electrodeposited Tin/Lead
Size:	0.85 x 0.33 x 0.14"
Weight:	1.5 grams

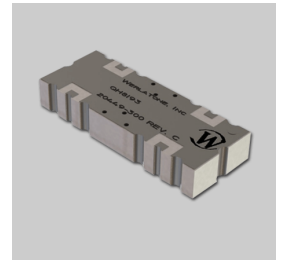
**Port Configurations:**

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.

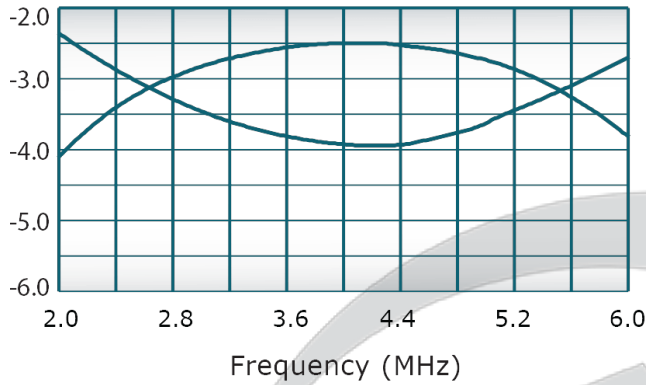
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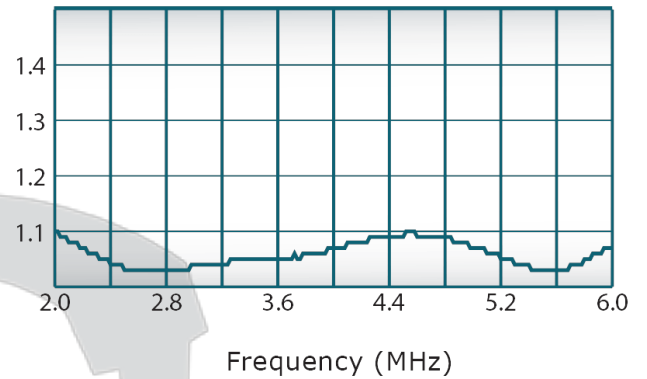


## Performance Data (Specifications subject to change without notice):

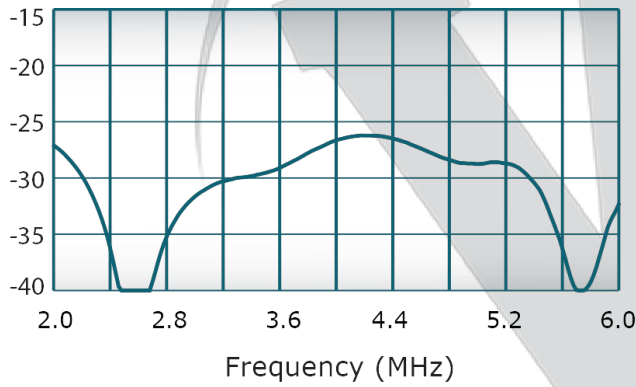
Coupling:



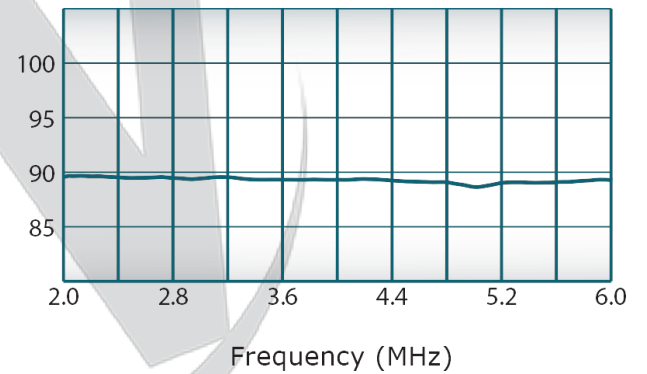
VSWR:



Isolation:



Phase Balance:



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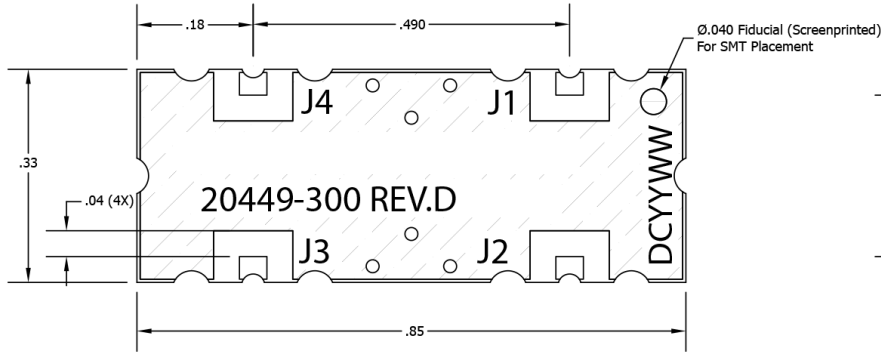
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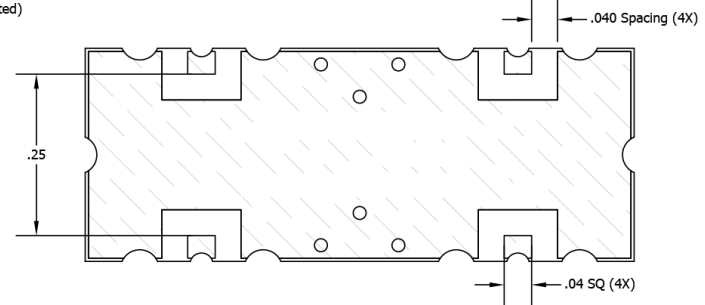
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DATE	SYM	REVISION RECORD	AUTH	DR	CK
7/23/2008	A	ECN 4567	GP	GP	NH
8/26/2008	B	ECN 4595	GP	GP	NH
5/7/2009	C	ECN 4882	GP	GP	NH
11/3/2009	D	ECN 5000	CS	CS	TC
6/23/2015	E	ECN 8845	GP	GP	BW

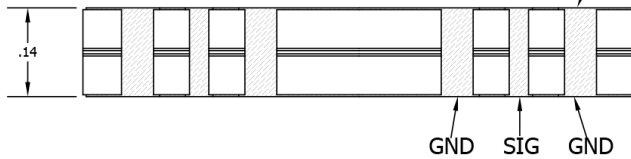
**Top View**



**Bottom View**



Hatched Areas Denotes Metallization



UNLESS OTHERWISE SPECIFIED		DWN	GP	DATE	6/12/08	<b>WERLATONE   SINCE 1965</b>	2095 Route 22 Brewster, NY 10509						
<ul style="list-style-type: none"> <li>● INTERPRET DRAWING IAW MIL-STD-100</li> <li>● DIMENSIONING PER ASME Y14.5M-2009</li> <li>● PARANTHETICAL INFO FOR REF ONLY</li> <li>● DIMENSIONS ARE IN INCHES</li> <li>● TOLERANCES: ANGLE ± 2°</li> <li>3 PL DECIMALS ± .005</li> <li>2 PL DECIMALS ± .015</li> </ul>	CHK	NH	DATE	5/7/09	TITLE								
		ENGR	BW	DATE	5/7/09	USED ON							
		QA		DATE		SIZE	A	CAGE CODE	28812	DWG NO	20449-500	REV	E
		RLSE		DATE		SCALE	4:1			SHEET 1 OF 1			

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