



PRODUCT DATA SHEET

QH9056

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: 30 - 520 MHz
 Power: 400 W CW
 Insertion Loss: 0.8 dB Max.
 VSWR: 1.30:1 Max.
 Phase Balance: 90° ± 8° dB Max.
 Amplitude Balance: ± 1.2 dB Max. (35-520 MHz)
 ± 1.35 dB at 30 MHz
 Isolation: 18 dB Min.

Mechanical Specifications:

Type: Surface Mount
 Plating Options: QH9056-Pb: Electrodeposited Tin/Lead
 QH9056-Sn: Immersion Tin (RoHS Compliant)
 QH9056-Ag: Immersion Silver (RoHS Compliant)
 QH9056-Au (ENIG)
 Weight: 3.8 oz.
 Size: 4.0 x 1.7 x 0.29"

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 QH9056

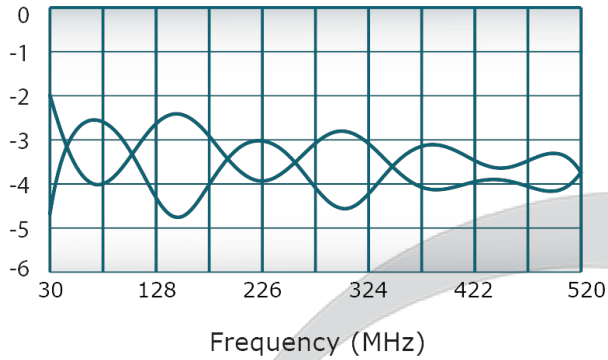


PRODUCT DATA SHEET

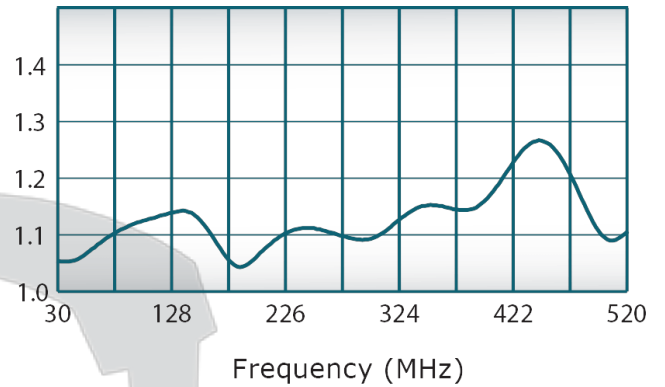
QH9056

Performance Data (Specifications subject to change without notice):

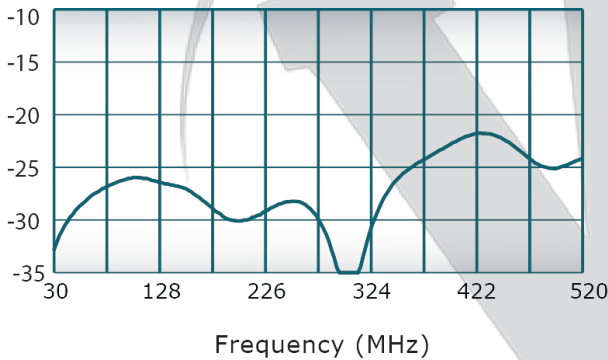
Coupling:



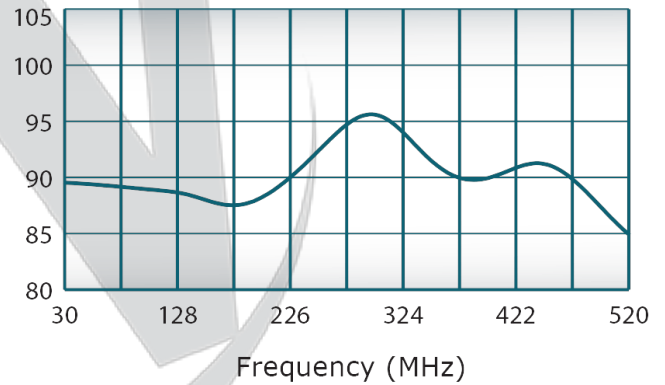
VSWR:



Isolation:



Phase Balance:



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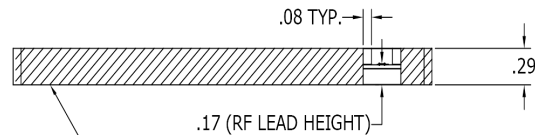
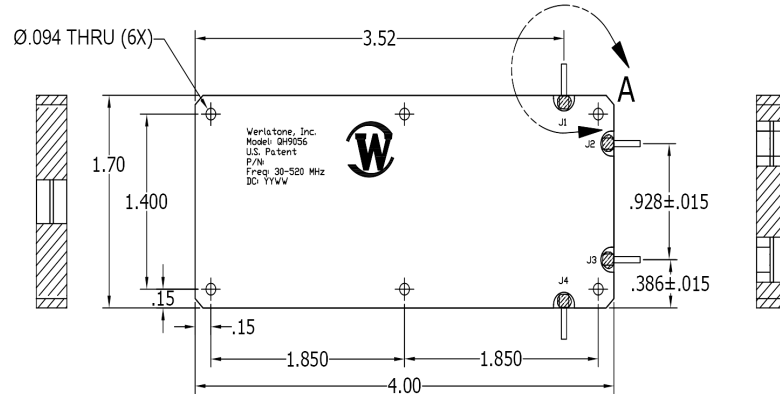
Werlatone, Inc. 17 Jon Barrett Road Patterson, NY 12563 T:(845)278-2220 F:(845)278-3440 sales@werlatone.com www.werlatone.com

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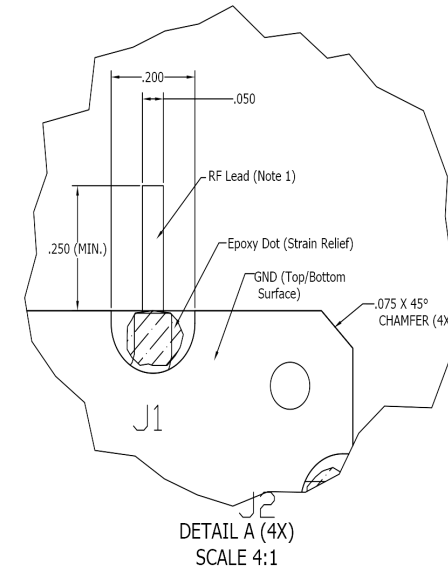
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REVISION HISTORY

REV	REVISION RECORD	DATE	APPROVED
-	INITIAL RELEASE	5/24/2012	BW
A	ECN 8375	11/5/2013	BW
B	ECN 10549	1/26/2024	BW



Edge Plate Entire Perimeter Except for .080 on Either Side of Pockets (4X)



NOTES: UNLESS OTHERWISE SPECIFIED

1. RF LEAD MATERIAL: 99.95% PURE SILVER. .005 THICK. LEAD IS RESISTANCE WELDED TO EXPOSED COPPER STRIPLINE TRACE. THERMALLY CONDUCTIVE EPOXY DOT IS FOR STRAIN-RELIEF PURPOSES ONLY AND IS NOT AN ELECTRICALLY CONDUCTIVE MATERIAL.

2. SEE 90° DROP-IN APPLICATION NOTE FOR MORE INFORMATION

3. ORDERING INFORMATION:

QH9056-AG-

Surface Finish
Pb: ED Tin/Lead
Ag: Immersion Silver
Sn: Immersion Tin
Au: ENIG

INTERFACE
-T: RF TABS / LEADS
BLANK: NO TABS. SOLDER PAD.

ELECTRICAL SPECIFICATIONS

Frequency: 30 - 520 MHz
Power: 400 Watts CW
Insertion Loss: 0.8 db Max.
Amplitude Balance: ± 1.2 db Max. (35-520 MHz.)
 ± 1.35 db at 30 MHz
Phase Balance: $90^\circ \pm 8^\circ$ Max.
VSWR: 1.3:1 Max.
Isolation: 18 dB Min.
Operating Temperature: -55°C to +85°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

UNLESS OTHERWISE SPECIFIED

- INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-883C
- DIMENSIONING PER ASME Y14.5M-2009
- PARENTHESES ARE FOR REF ONLY
- DIMENSIONS ARE IN INCHES
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- TOLERANCES: ANGLES $\pm 2^\circ$
3 PL $\pm .005$
2 PL $\pm .015$

THIRD ANGLE PROJECTION

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5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012	5/24/2012
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WERLATONE | SINCE 1965

17 Jon Barrett Rd
Patterson, NY 12563

TITLE

QH9056 3dB 90° Hybrid Coupler

SIZE

B

28812

SCALE

1:1

SHEET 1 OF 1

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