
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"

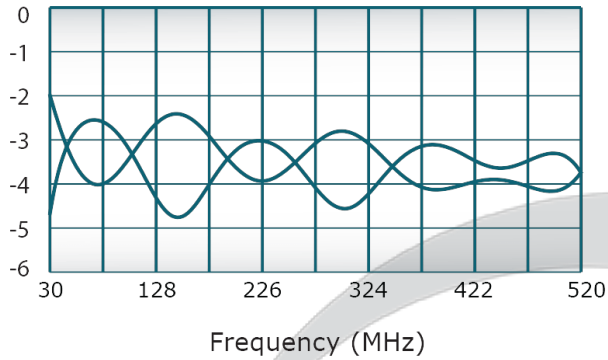
Port Configurations:

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

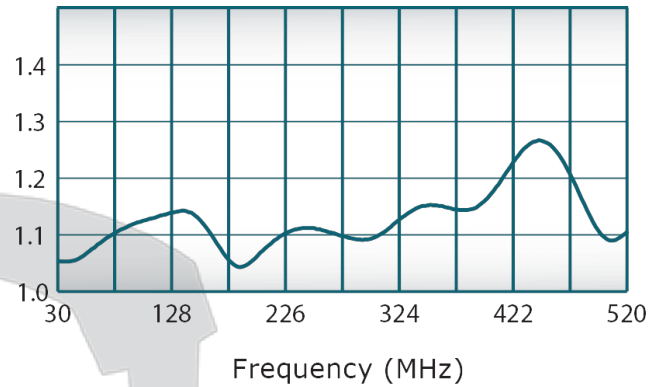
Werlatone's breakthrough technology allows us to build our existing line of Broadband 3 dB High Power 90° Hybrid Couplers. Connectorized 3 dB 90° Hybrid Coupler models are available with a choice of connectors. Several of our existing High Power 3 dB 90° RF Couplers are three port designs, wherein the difference port is internally terminated with a high power termination. This eliminates the need for a customer supplied external load for each Hybrid Coupler.


Performance Data (Specifications subject to change without notice):

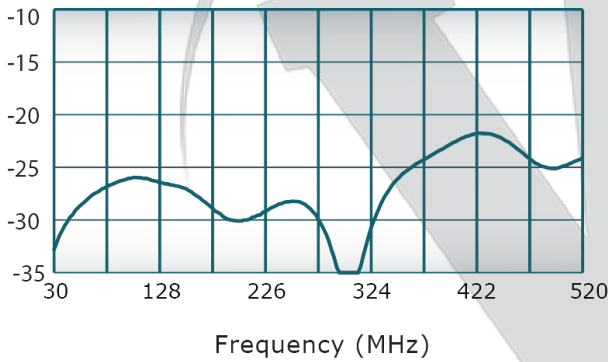
Coupling:



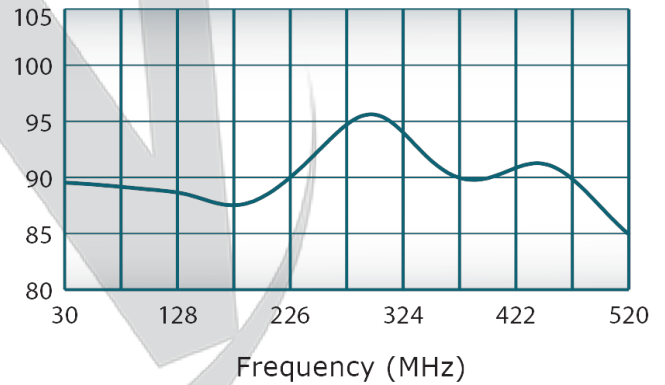
VSWR:



Isolation:



Phase Balance:



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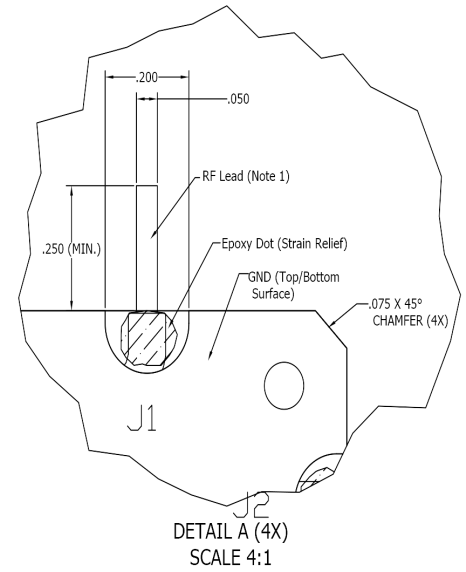
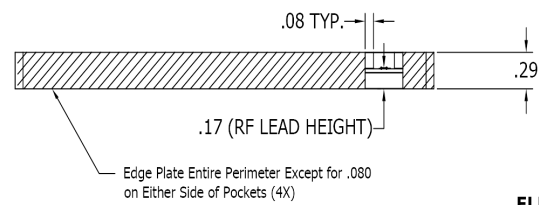
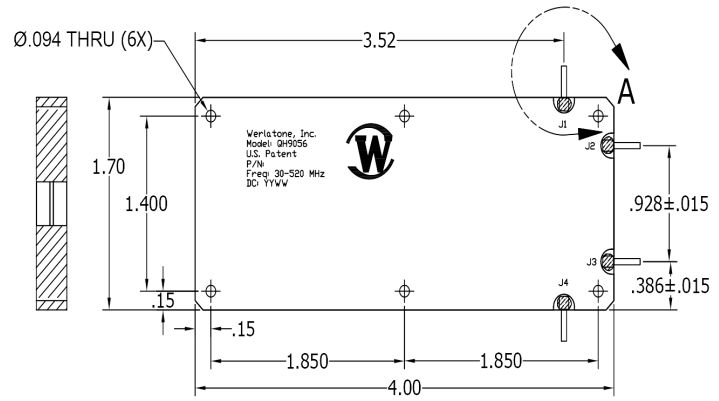
Werlatone, Inc.

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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



NOTES: UNLESS OTHERWISE SPECIFIED

- 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.
- SEE 90° DROP-IN APPLICATION NOTE FOR MORE INFORMATION
- ORDERING INFORMATION:
QH9056-AG-T

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° ± 8° 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 <ul style="list-style-type: none"> INTERPRET DRAWING IN ACCORDANCE WITH ASME Y14.5-2009 DIMENSIONING PER ASME Y14.5M-2009 PARENTHESES ARE FOR REF ONLY DIMENSIONS ARE IN INCHES DIMENSIONAL LIMITS APPLY BEFORE PROCESSES 	OWN	DATE	WERLATONE SINCE 1965	17 Jon Barrett Rd Patterson, NY 12563	
	GRK	DATE			
	ENGR	DATE	TITLE QH9056 3dB 90° Hybrid Coupler		
	QA	DATE	SIZE	CAGE CODE	DWG NO
RELSE	DATE	B	28812	20785-500	
THIRD ANGLE PROJECTION		SCALE	1:1		
			SHEET 1 OF 1		

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