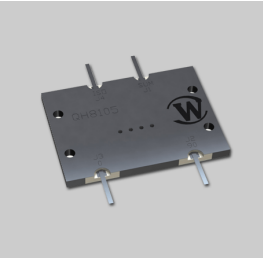
WERLATONE

Model QH8105



PRODUCT DATA SHEET **QH8105**

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:	800 - 4200 MHz
Power:	150 W CW
Insertion Loss	0.55 dB Max.
VSWR:	1.35:1 Max.
Phase Balance:	± 5° dB Max.
Amplitude Balance:	± 0.5 dB Max.
Isolation:	18 dB Min.

Mechanical Specifications:

Type:	Surface Mount
Plating Options:	QH8105-Sn: Immersion Tin (RoHS) QH8105-Ag: Immersion Silver (RoHS) QH8105-Au: ENIG (RoHS) QH8105-Pb: ED Tin/Lead
Size:	1.5 x 1.08 x 0.09"
Weight:	5 grams

Port Configurations:

J1	**J2**	**J3**	**J4**
Sum Port	90° Port	0° Port	Isolated Port

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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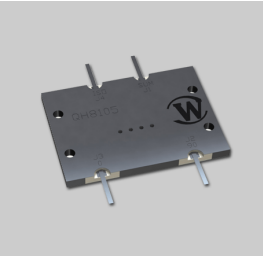
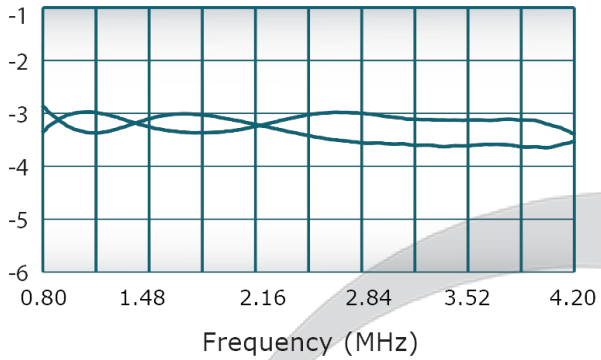
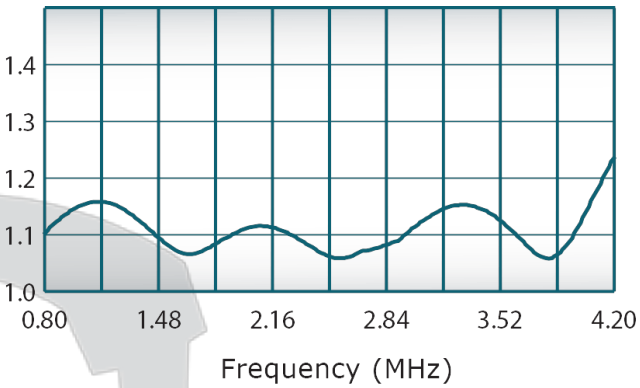


Performance Data (Specifications subject to change without notice):

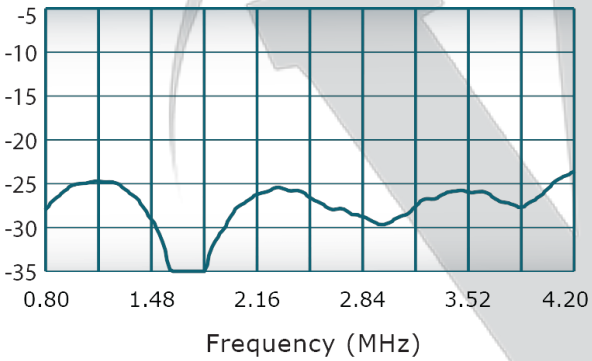
Coupling:



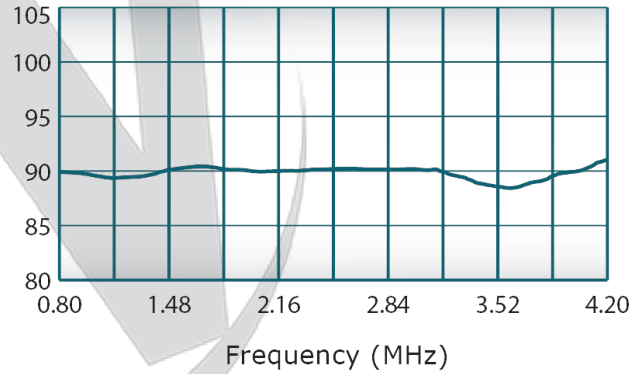
VSWR:



Isolation:



Phase Balance:



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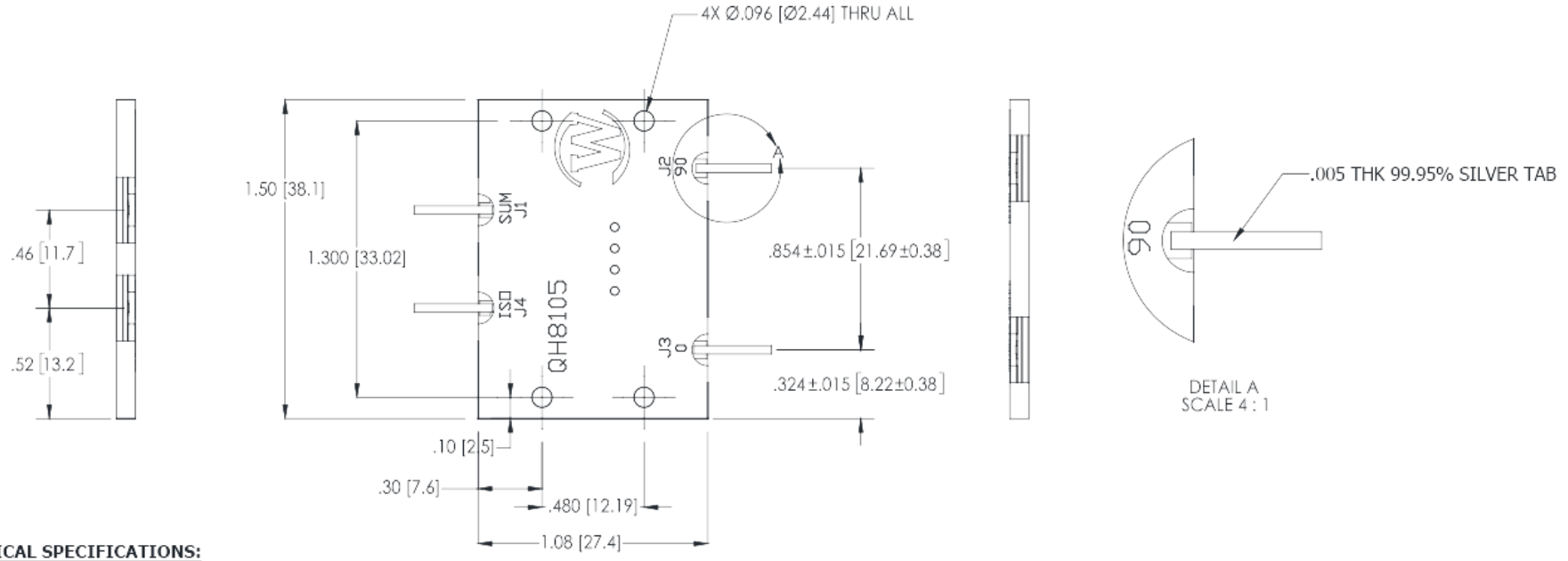
REVISIONS			
REV.	REVISION RECORD	DATE	APPROVED
-	INITIAL RELEASE	10/19/2012	GP
A	ECN 7577	10/19/2012	GP
B	ECN 8213	6/6/2013	BW
C	ECN 10009	3/5/2021	BW



ELECTRICAL SPECIFICATIONS:

Frequency:	0.8 - 4.2 GHz
Power:	150 Watts CW
Insertion Loss:	0.55 db Max.
Amplitude Balance:	±0.5 db Max.
Phase Balance:	90° ± 5° Max. (J2-J3)
VSWR:	1.35:1
Isolation:	18 dB Min.
Operating Temperature:	-55°C To +85°C

CREATE CAVITY IN PCB AND MOUNT THIS SURFACE TO HEATSINK. LEADS SHOULD BE ON SAME PLANE AS MICROSTRIP TRACE.
ALTERNATIVELY, THIS SURFACE COULD BE SOLDERED TO A GND PLANE ON PCB WITH THERMAL VIA ARRAY.

NOTES: UNLESS OTHERWISE SPECIFIED

1. **4X LEADS/TABS SHOULD BE SOLDERED TO 50 Ω TRANSMISSION LINES.**
2. **BODY OF PART IS GND AND IS A SOLDERABLE SURFACE.**
3. **ORDERING INFORMATION:**

QH8105-PB-T

- INTERFACE
  - -T: RF TABS / LEADS
  - BLANK: NO TABS. SOLDER PAD.
- Surface Finish
  - Pb: ED Tin/Lead
  - Ag: Immersion Silver
  - Sn: Immersion Tin
  - Au: ENIG

UNLESS OTHERWISE SPECIFIED
- INTERPRET DRAWING PER MIL-STD-100
- DIMENSIONING PER ASME Y14.5M-2009
- PARENTHETICAL INFO FOR REF ONLY
- DIMENSIONS ARE IN INCHES
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- TOLERANCES: ANGLES ±2° / 3 PL ± .005 / 2 PL ± .015
- REMOVE ALL BURRS AND SHARP EDGES 0.01 MAX
- CONCENTRICITY MACHINED DIA: .002 TIR
- MACHINE TOOL MISMATCH .000 MAX

DWN GP 10/19/2012 | CHK | ENGR | MFGR | QA | RLSE

THIRD ANGLE PROJECTION

NEXT ASSY | USED ON

APPLICATION

WERLATONE SINCE 1965 | 17 Jon Barrett Rd Patterson, NY 12563

TITLE: QH8105 -3dB Hybrid Coupler

SIZE	CAGE CODE	DWG NO	REV
B	28812	20406-500	C

SCALE 2:1 | SHEET 1 OF 1