

PRODUCT DATA SHEET
QH12404
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: 150 W CW
Insertion Loss 0.55 dB Max.
VSWR: 1.35:1 Max.
Phase Balance: $\pm 5^\circ$ dB Max.
Amplitude Balance: ± 0.6 dB Max.
Isolation: 18 dB Min.

Mechanical Specifications:

Type: Surface Mount
Plating Options: QH12404-Ag: Immersion Silver (RoHS)
QH12404-Pb: Electrodeposited Tin/Lead
Size: 1.20 x 0.45 x 0.087"
Weight: 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.

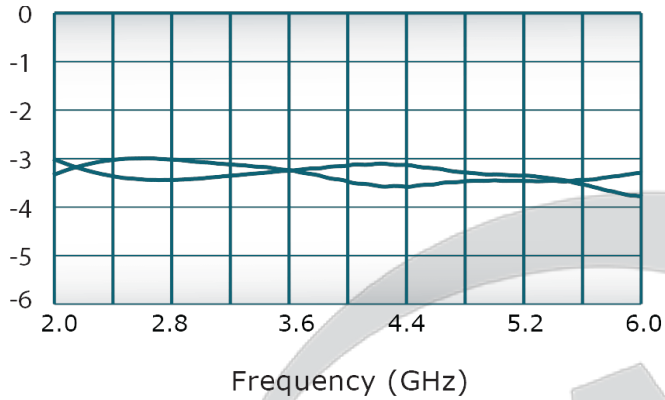


PRODUCT DATA SHEET

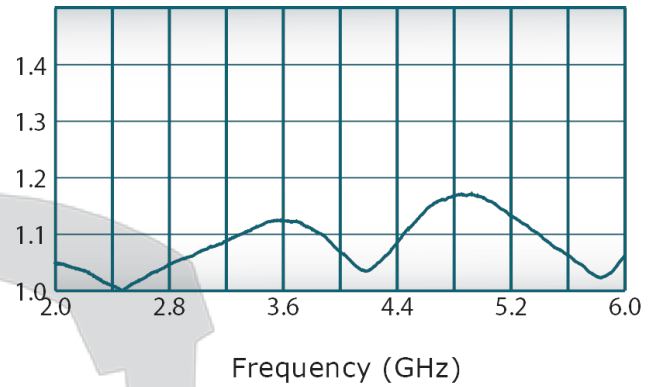
QH12404

Performance Data (Specifications subject to change without notice):

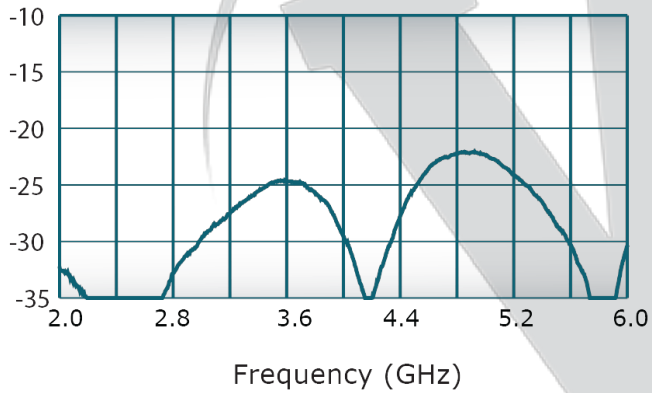
Coupling:



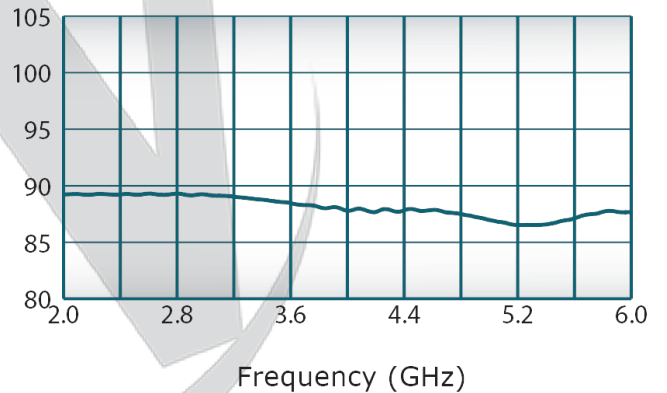
VSWR:



Isolation:



Phase Balance:

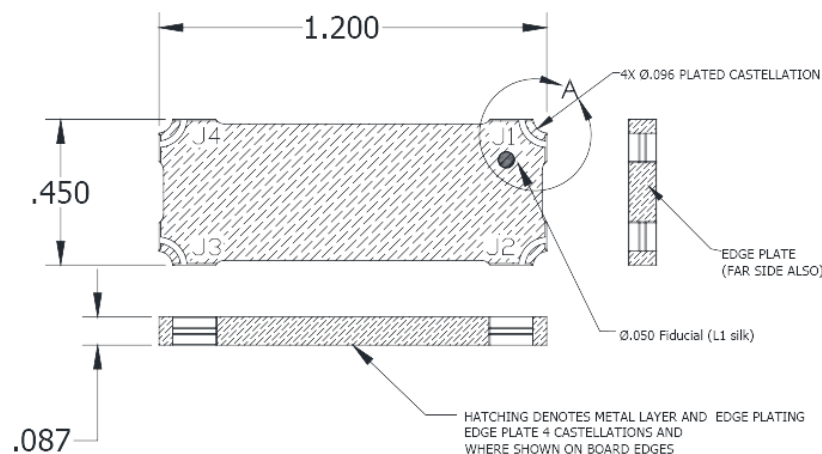


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ELECTRICAL SPECIFICATIONS

Frequency: 2.0 - 6.0 GHz
Power: 150 Watts CW
Insertion Loss: 0.55 dB Max.
Amplitude Balance: ± 0.6 dB Max.
Phase Balance: $90^\circ \pm 5^\circ$ Max.
VSWR: 1.35:1
Isolation: 18 dB Min.
Temperature
(Operating): -55 to +85 °C

NOTES: UNLESS OTHERWISE SPECIFIED

1. SURFACE MOUNT UNIT
2. SURFACE FINISH: IMMERSION SILVER (RoHS Compliant).
3. OTHER SURFACE FINISHES AVAILABLE UPON REQUEST.
4. UNIT INTENDED TO BE SOLDERED TO A MICROSTRIP SUBSTRATE.
FOR MORE INFO, REQUEST APPLICATION NOTE

PART MARKING (BLACK EPOXY ON TOP SURFACE)



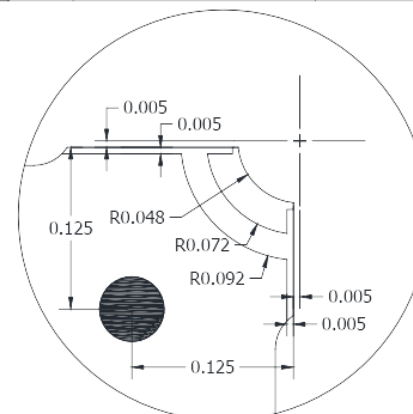
SCALE 1:1

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		DWN	DATE	6/29/2022		WERLATONE SINCE 1965		17 Jon Barrett Rd Patterson, NY 12563	
• INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100	• DIMENSIONING PER ASME Y14.5M-2009	• PARENTHESES ARE FOR REF ONLY	• DIMENSIONS ARE IN INCHES	• DIMENSIONAL LIMITS APPLY BEFORE PROCESSING	• TOLERANCES: ANGLES $\pm 2^\circ$ 3 PL $\pm .010$ 2 PL $\pm .015$	GP	DATE	7/1/2022	
CHK	MS	ENGR	GP	DATE	7/1/2022	TITLE			
MFGR	QA	DATE	RLSE	DATE	SCALE	SIZE	CAGE CODE	DWG NO	REV
					2:1	A	28812	21874-500	-
THIRD ANGLE PROJECTION								SHEET 1 OF 1	

DETAIL A
SCALE 8:1



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A

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