

PRODUCT DATA SHEET

QH10828

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 Connectorized Drop-In & Surface Mount

Electrical Specifications:

Frequency: 1000 - 8000 MHz
 Power: 100 W CW
 Insertion Loss: 0.9 dB Max.
 VSWR: 1.40:1 Max.
 Phase Balance: $\pm 5^\circ$ dB Max.
 Amplitude Balance: ± 0.7 dB Max. (1200-8000 MHz) ± 1.5 dB Max. (1000-1200 MHz)
 Isolation: 17 dB Min.

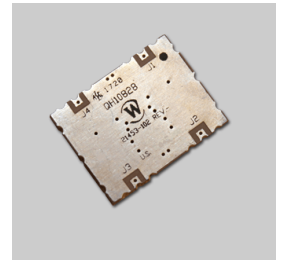
Mechanical Specifications:

Type: Surface Mount
 Plating Options: QH10828-Pb: Electrodeposited Tin/Lead
 QH10828-Sn: Immersion Tin (RoHS Compliant)
 QH10828-Ag: Immersion Silver (RoHS Compliant)
 Size: 0.65 x 0.5 x 0.07"

Port Configurations:

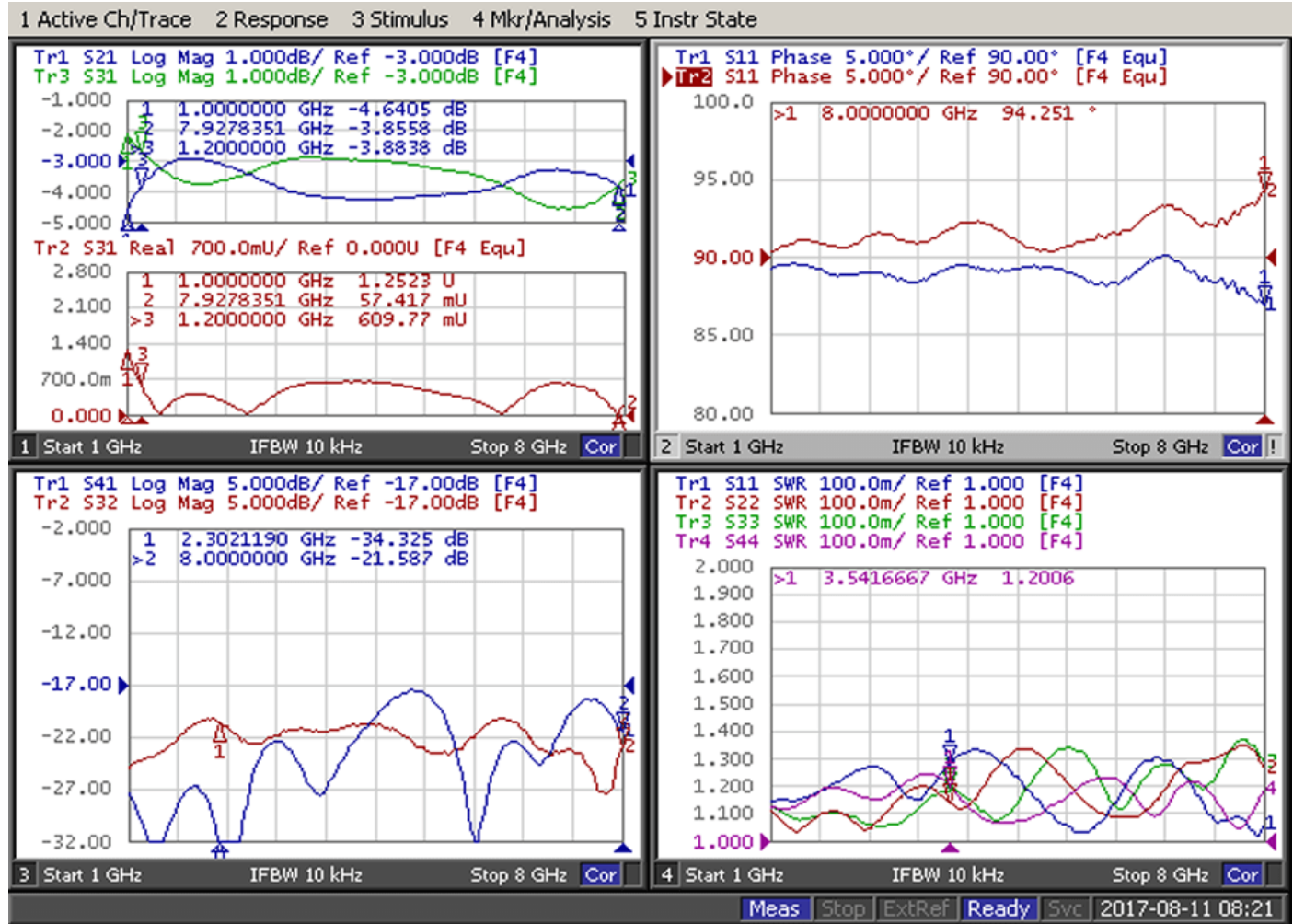
J1	J2	J3	J4
Input	3 dB, 0°	-3 dB, -90°	Isolated
-3 dB, 0°	Input	Isolated	-3 dB, -90°
-3 dB, -90°	Isolated	Input	-3 dB, 0°
Isolated	-3 dB, -90°	-3 dB, 0°	Input

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.



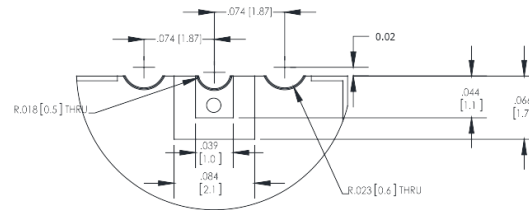
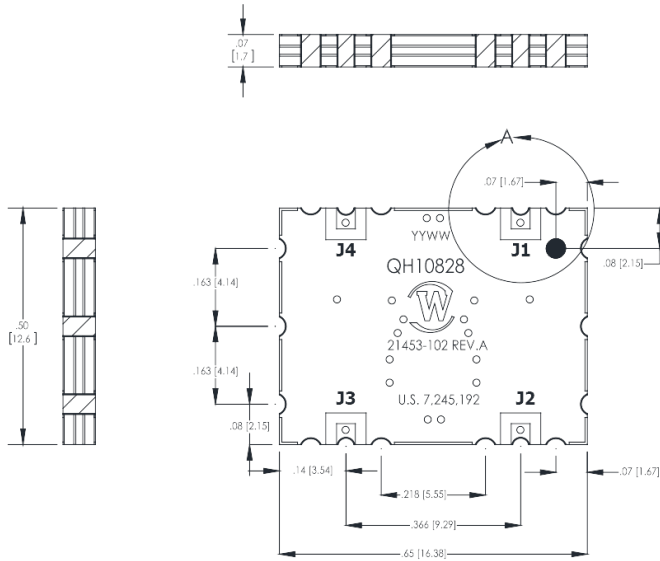
Performance Data (Specifications subject to change without notice):

Plot 1: Coupling & Insertion Loss, Plot 2: Phase Balance, Plot 3: Isolation, Plot 4: VSWR



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REVISION HISTORY			
REV.	REVISION RECORD	DATE	APPROVED
-	PRE-RELEASE	2/1/2017	CS
A	ECN9328	6/1/2017	CS
B	ECN10098	9/16/21	CS



DETAIL A
SCALE 8 : 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

ELECTRICAL SPECIFICATIONS

Frequency: 1000 - 8000 MHz
 Power: 60 Watts CW
 Insertion Loss: 0.9 dB Max.
 Amplitude Balance: ±0.7 dB Max. 1200-8000 MHz
 ±1.5 dB Max. 1000 - 1200 MHz
 Phase Balance: ± 5° Max.
 VSWR: 1.4 :1
 Isolation: 17 dB Min.

NOTES: UNLESS OTHERWISE SPECIFIED

- SURFACE MOUNT UNIT**
- SURFACE FINISH: IMMERSION SILVER (RoHS Compliant). OTHER SURFACE FINISHES AVAILABLE UPON REQUEST.**
- SEE SURFACE MOUNT TECH NOTE FOR INSTALLATION GUIDELINES.**

UNLESS OTHERWISE SPECIFIED		DWN	DATE	WERLATONE SINCE 1965 17 Jon Barrett Rd Patterson, NY 12563
• INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100 • DIMENSIONING PER ASME Y14.5M-2009 • DIMENSIONS ARE IN INCHES (mm) • DIMENSIONAL LIMITS APPLY TO ALL PROCESSES • TOLERANCES: ANGLES = ± 3 PL = .005 [1.3] 2 PL = .015 [4]		MB	2/1/2017	
QH10828		CHK	DATE	OUTLINE SIZE CAGE CODE DWG NO B 28812 21453-500
NEXT ASSY USED ON		BW	2/1/2017	
APPLICATION		ENGR	DATE	REV
		MB	2/1/2017	B
		MFR	DATE	
		QA	DATE	
		RLSE	DATE	
		SCALE		SHEET 1 OF 1
		4:1		

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