
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: | ± 5° 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" |

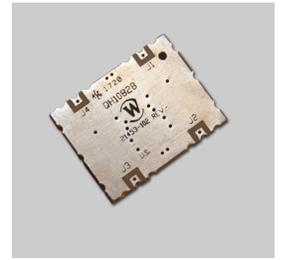
Port Configurations:

| 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.

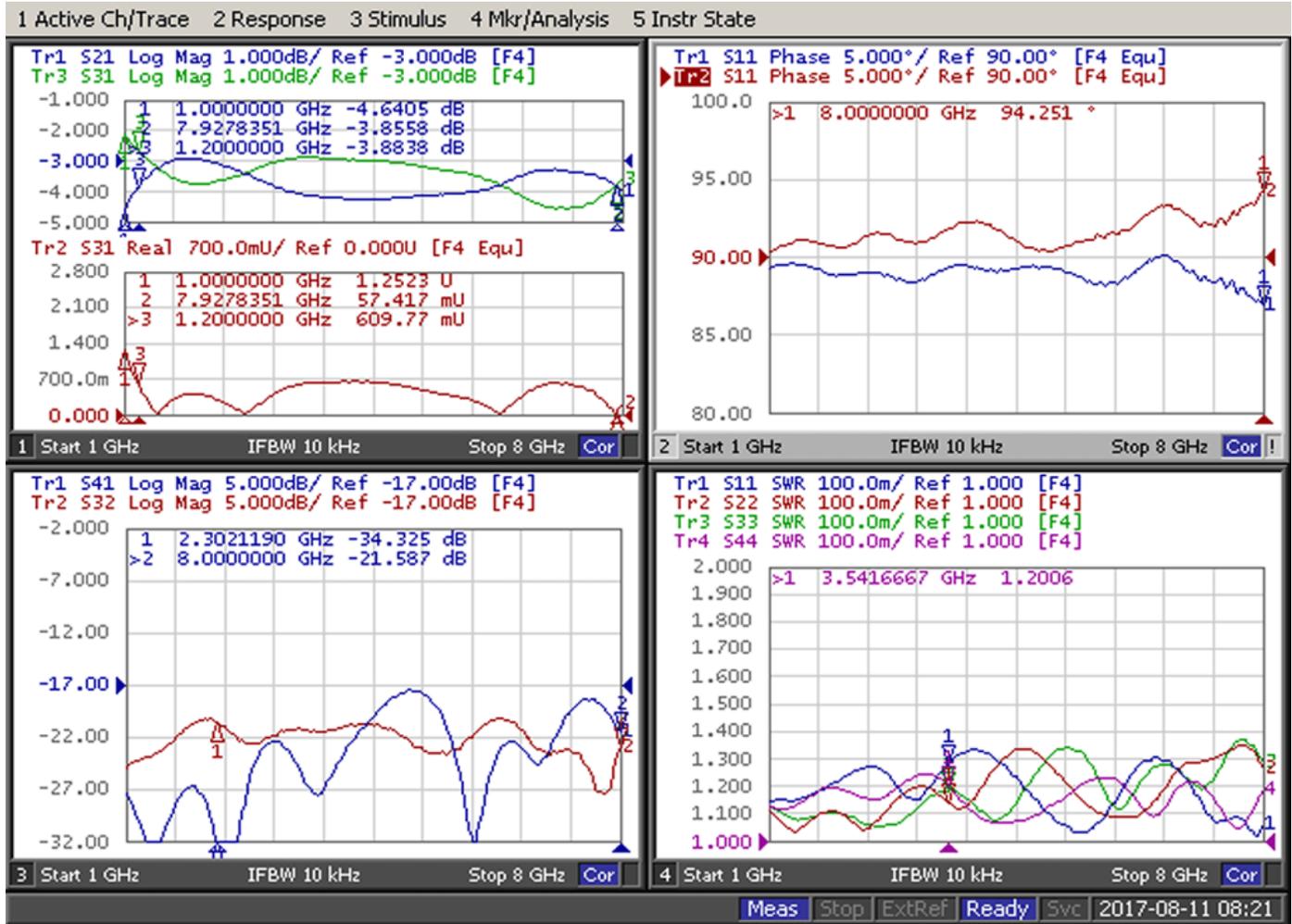
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Werlatone, Inc. 17 Jon Barrett Road Patterson, NY 12563 T:(845)278-2220 F:(845)278-3440 sales@werlatone.com www.werlatone.com



Performance Data (Specifications subject to change without notice):

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

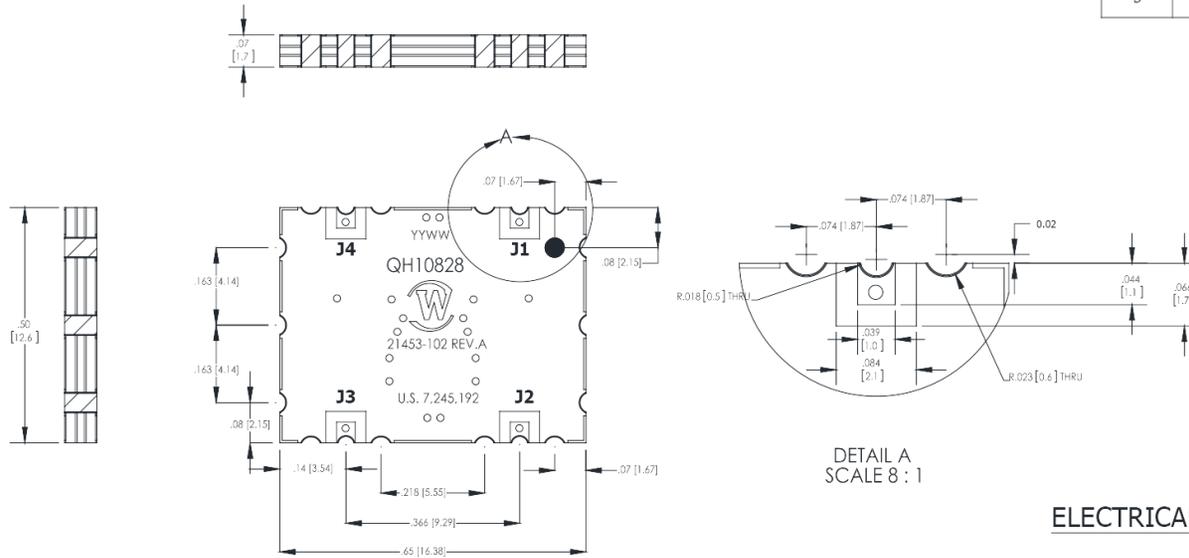


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| REVISION HISTORY | | | |
|------------------|-----------------|----------|----------|
| REV. | REVISION RECORD | DATE | APPROVED |
| - | PRE-RELEASE | 2/1/2017 | CS |
| A | ECN9328 | 6/1/2017 | CS |
| B | ECN10098 | 9/16/21 | CS |



| 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 • DIMENSIONAL UNITS PER PART ONLY • 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 4:1 | | SHEET 1 OF 1 |

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