
**PRODUCT DATA SHEET**
**QH9030**
**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 &amp; Surface Mount

**Electrical Specifications:**

|                    |               |
|--------------------|---------------|
| Frequency:         | 100 - 512 MHz |
| Power:             | 400 W CW      |
| Insertion Loss:    | 0.4 dB Max.   |
| VSWR:              | 1.30:1 Max.   |
| Phase Balance:     | 90° ± 5° Max. |
| Amplitude Balance: | ± 0.6 dB Max. |
| Isolation:         | 20 dB Min.    |

**Mechanical Specifications:**

|                        |                                                                                       |
|------------------------|---------------------------------------------------------------------------------------|
| Type:                  | Connectorized                                                                         |
| Material:              | Aluminum 6061-T6                                                                      |
| Surface Finish:        | Chem. Film Per MIL-DTL-5541F Type I Class 3 (Yellow Iridite) RoHS Compliant Available |
| Operating Temperature: | -55°C to +75°C                                                                        |
| Storage Temperature:   | -60°C to +85°C                                                                        |
| Weight:                | 0.75 lbs.                                                                             |
| Size:                  | 4.0 x 2.42 x 1.1"                                                                     |

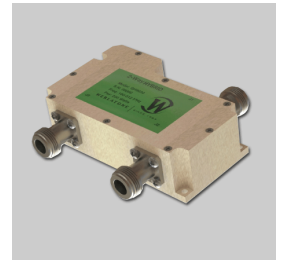
**Connector Configurations:**

| Model      | Sum Port (J1) | Inputs (J2,J3) | Ext. Load Port |
|------------|---------------|----------------|----------------|
| QH9030-10  | N Female      | N Female       | Not Applicable |
| QH9030-12  | N Female      | SMA            | Not Applicable |
| QH9030-300 | TNC           | TNC            | Not Applicable |
| QH9030-302 | TNC           | SMA            | Not Applicable |

**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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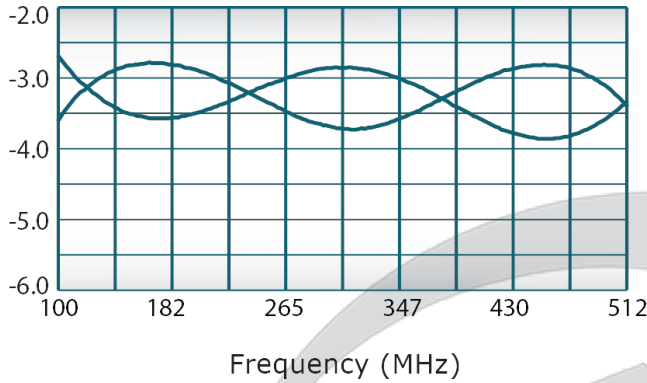


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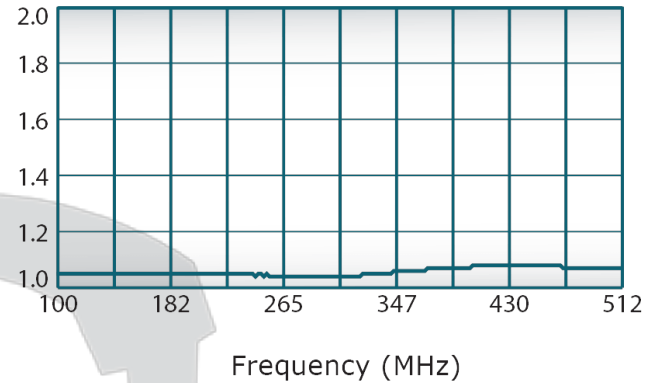
QH9030

**Performance Data (Specifications subject to change without notice):**

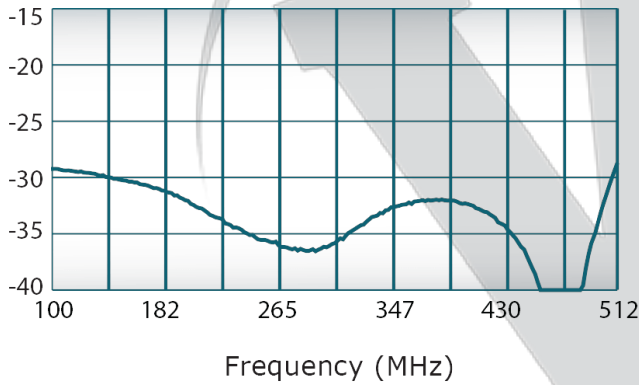
Coupling:



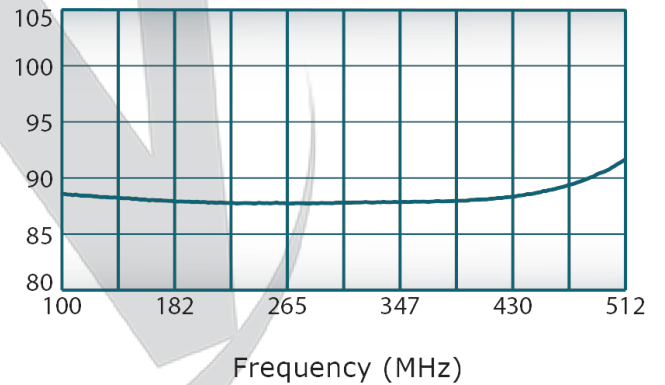
VSWR:



Isolation:



Phase Balance:



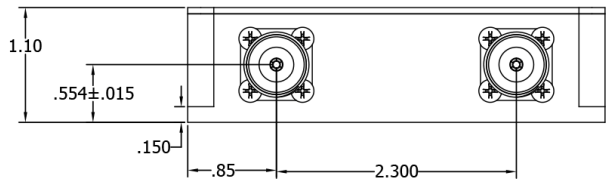
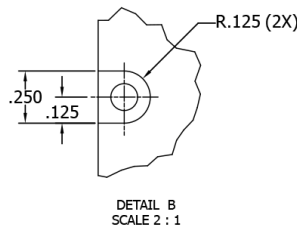
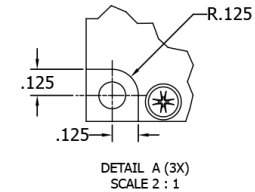
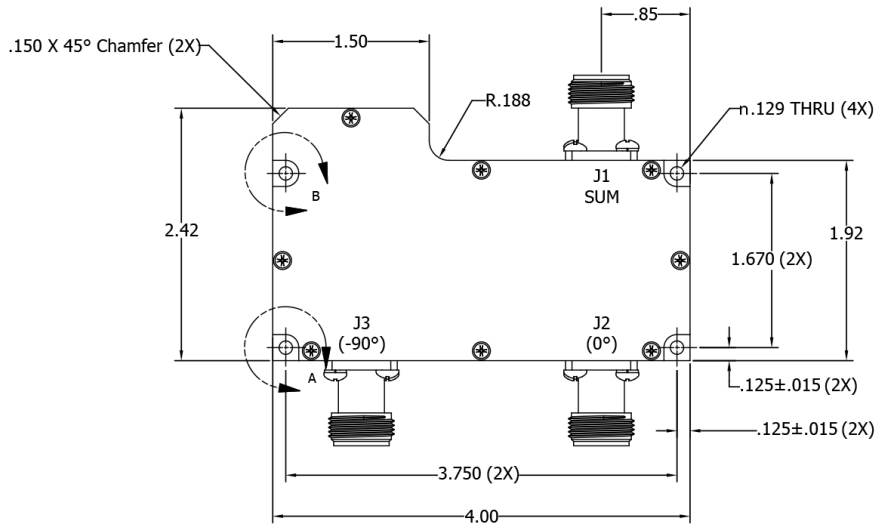
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| REVISION HISTORY |                 |           |          |
|------------------|-----------------|-----------|----------|
| REV              | REVISION RECORD | DATE      | APPROVED |
| -                | INITIAL RELEASE | 6/17/2011 | BW       |
|                  |                 |           |          |
|                  |                 |           |          |



|                                              |                                              |       |           |                                                                  |
|----------------------------------------------|----------------------------------------------|-------|-----------|------------------------------------------------------------------|
| UNLESS OTHERWISE SPECIFIED                   |                                              | DWGR  | DATE      | WERLATONE SINCE 1965<br>17 Jon Barrett Rd<br>Patterson, NY 12563 |
| • INTERPRET DRAWING LAW MIL-STD-100          | • DIMENSIONING PER ASME Y14.5M-2009          | CP    | 6/17/2011 |                                                                  |
| • DIMENSIONAL LIMITS APPLY BEFORE PROCESSING | • DIMENSIONAL LIMITS APPLY BEFORE PROCESSING | CHK   | DATE      | TITLE                                                            |
| • DIMENSIONS ARE IN INCHES                   | • DIMENSIONS ARE IN INCHES                   | NH    | 6/17/2011 |                                                                  |
| • TOLERANCES: ANGLES ±.2°                    | • TOLERANCES: ANGLES ±.2°                    | ENGR  | DATE      | SIZE                                                             |
| • TOLERANCES: 2 PL. ± .005                   | • TOLERANCES: 2 PL. ± .015                   | MPGR  | DATE      |                                                                  |
| • REMOVE ALL BURRS AND SHARP EDGES           | • REMOVE ALL BURRS AND SHARP EDGES           | QA    | DATE      | CAGE CODE                                                        |
| • CONCENTRICITY MACHINED DIA: .002 FIM       | • CONCENTRICITY MACHINED DIA: .002 FIM       | RELSE | DATE      |                                                                  |
| • MACHINE TOOL MISMATCH .003 MAX             | • MACHINE TOOL MISMATCH .003 MAX             |       |           | DWG NO                                                           |
| • THIRD ANGLE PROJECTION                     | • THIRD ANGLE PROJECTION                     |       |           |                                                                  |
|                                              |                                              |       |           | B 28812                                                          |
|                                              |                                              |       |           | 20775-500                                                        |
|                                              |                                              |       |           | SCALE 1:1                                                        |
|                                              |                                              |       |           | SHEET 1 OF 1                                                     |

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