



## PRODUCT DATA SHEET

QH11687

### 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: 500 - 6000 MHz  
 Power: 150 W CW  
 Insertion Loss: 0.75 dB Max.  
 VSWR: 1.40:1 Max.  
 Phase Balance:  $90^\circ \pm 5^\circ$  dB Max.  
 Amplitude Balance:  $\pm 1.0$  dB (500-6000 MHz) 0.7 dB Max. (600-6000 MHz)  
 Isolation: 17 dB Min.

### Mechanical Specifications:

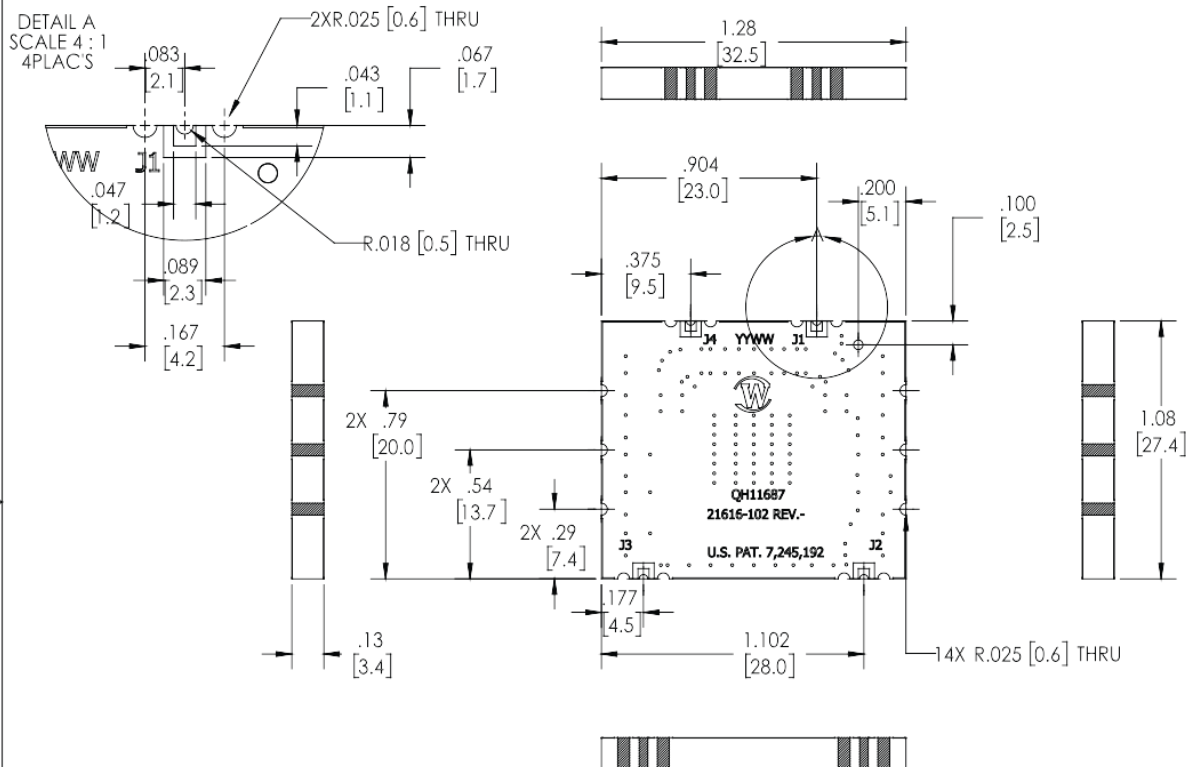
Type: SMT  
 Plating Options: QH11687-Ag: Immersion Silver (RoHS)  
 Size: 1.28 x 1.08 x 0.13"

### Port Configurations:

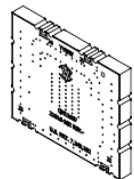
J1	J2	J3	J4
Input	-3 dB, 0°	-3 dB, -90°	Isolated
-3 dB, 0°	Input	Isolated	-3 dB, -90°
-3 dB, -90°	Isolated	Input	-3 dB, 0°
Isolated	-3 dB, -90°	-3 dB, 0°	Input

**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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REVISION HISTORY			
REV.	REVISION RECORD	DATE	APPROVED
-	INITIAL RELEASE	9/14/2018	CS
A	ECN9709	12/7/2018	CS
B	ECN9744	1/29/2019	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

**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			
INTERPRET DRAWING IN ACCORDANCE WITH ISO 1502	DATE	6/13/2018	MB
DIMENSIONS ARE IN INCHES (mm)	DATE	12/7/2018	GP
DIMENSIONAL LIMITS APPLY BEFORE PROCESSES	DATE	6/13/2018	MB
TOLERANCES:	DATE		
ANGLES: ± 2°			
3 PL. ± .005 (1.3)			
2 PL. ± .015 (.4)			
REMOVE ALL BURRS AND SHARP EDGES .01 MAX			
CONCENTRICITY MACHINED DIA. .002 FIM			
MACHINE TOOL WEAR .002 MAX			
APPLICATION	THIRD ANGLE PROJECTION		

W	WERLATONE SINCE 1965	17 Jon Barrett Rd Patterson, NY 12563
TITLE		
OUTLINE		
SIZE	CAGE CODE	DAWG NO
B	28812	21616-500
SCALE		
2:1		
SHEET 1 OF 1		

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