

LEAD-FREE / RoHS-COMPLIANT

3 dB QUADRATURE HYBRID

QH-0867

The QH-0867 is a 8-67 GHz, multi-purpose broadband 3dB quadrature hybrid. The multisection tri-plate stripline design exhibits excellent amplitude balance with broadband quadrature phasing (90°) between the output ports. Applications include single sideband upconverters, image rejection downconverters, IQ modulators, balanced amplifiers, microwave correlators and microwave Butler matrices. Custom designs are also available; contact the factory for details.



Features

- Broadband performance
- Excellent amplitude and phase balance
- High isolation
- Low VSWR
- [Microwave Power Dividers & Couplers App Note](#)

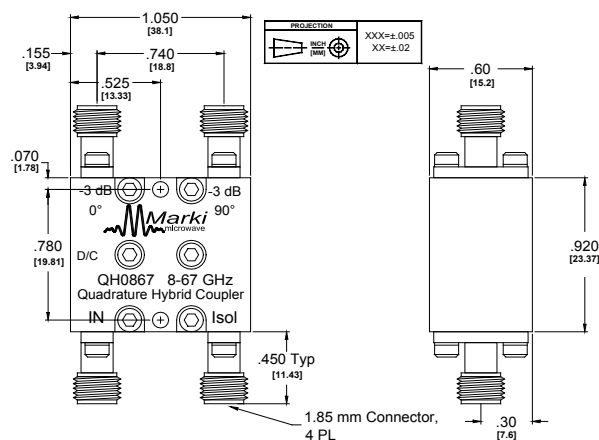
Electrical Specifications

Parameter ¹	Frequency Range (GHz)	Min	Typ	Max
Coupling (dB)	8 to 67		3	
Phase Shift (Degrees)			90	
Amplitude Balance (dB) ²			±0.6	±1.2
Phase Balance (Degrees)			±6	±18
Excess Through Line Insertion Loss (dB) ³			1.2	
VSWR	8 to 40		1.3	1.65
	40 to 67		1.6	
Isolation (dB)	8 to 50	13	18	
	50 to 67	9	13	
Weight (g)			36	

¹Specifications guaranteed when operated in a 50Ω system.

²Maximum amplitude *differential* is twice the magnitude of the amplitude *balance* (see Fig. 3).

³Excess Insertion Loss = (Input to Output Insertion Loss) – 3 dB.



3 dB QUADRATURE HYBRID

QH-0867

Page 2

Typical Performance

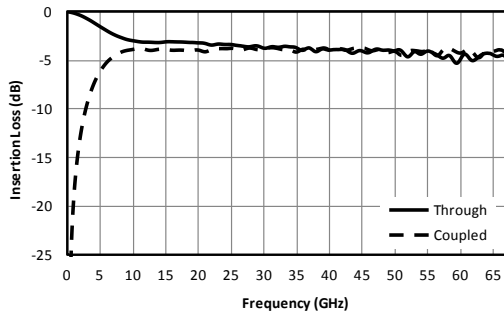


Fig. 1. Through and coupled line insertion loss.

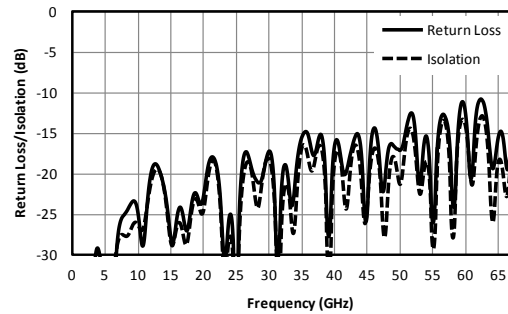


Fig. 2. Typical port return loss and isolation (all ports 50 Ω terminated).

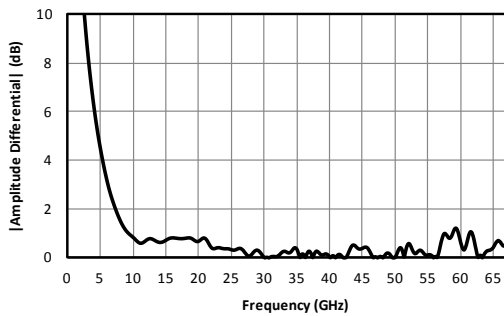


Fig. 3. Amplitude difference between the 0° and 90° output ports.

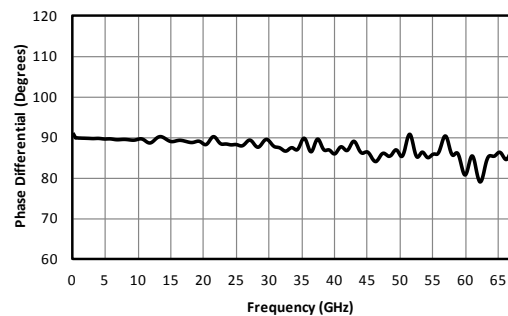


Fig. 4. Phase difference between the 0° and 90° output ports.

Model Number	Description
QH-0867	8-67 GHz 3 dB Quadrature Hybrid with 1.85 mm connectors ¹ , LEAD-FREE/RoHS COMPLIANT

¹Default is 1.85 mm female connectors. Consult factory for other connector options.

Marki Microwave reserves the right to make changes to the product(s) or information contained herein without notice. Marki Microwave makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Marki Microwave assume any liability whatsoever arising out of the use of or application of any product.

© Marki Microwave, Inc.

