

High Frequency Quadrature Hybrid, 500 - 1000 MHz

Rev. V3

Features

- Octave Bandwidth
- Low VSWR: 1.2:1 Typical
- Miniature Size: 1/2" x 3/8" Flatpack
- Impedance: 50 Ohms Nominal
- Input Power: 25 Watts Max @ +25°C, Derated to 1 Watt @ +85°C
- MIL-STD-202 Screening Available

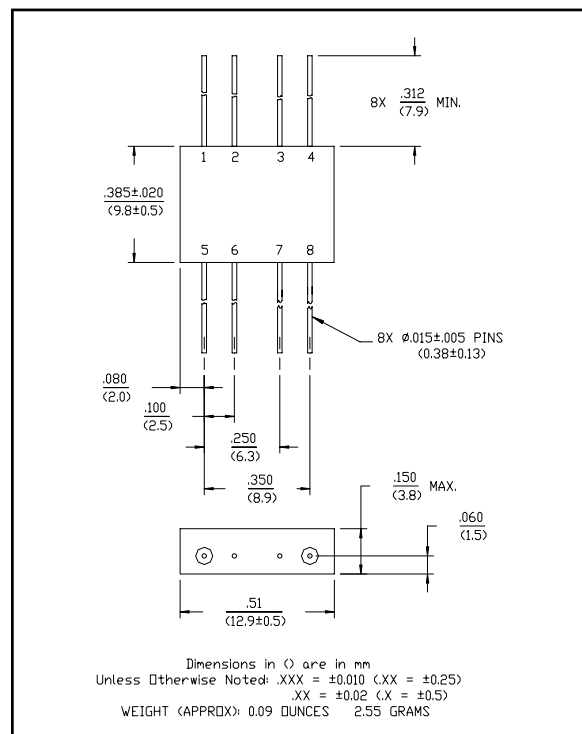
Description

3 dB Hybrids are ideal for dividing a signal into two signals of equal amplitude and a constant 90° or 180° phase differential and for Quadrature combining or performing summation/differential combining.

Phasing Diagram

IN	OUT	A	B	C	D
A		ISO	-90°	0°	
B		ISO	0°	-90°	
C		-90°	0°	ISO	
D		0°	-90°	ISO	

FP-2



Pin Configuration

Pin No.	Function	Pin No.	Function
1	A	5	D
2	GND	6	GND
3	GND	7	GND
4	B	8	C

Electrical Specifications¹: T_A = -55°C to +85°C

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss ²	Less Coupling	500 - 1000 MHz	dB	—	—	0.3
Isolation	—	500 - 1000 MHz	dB	18	—	—
Amplitude Balance	—	500 - 1000 MHz	dB	—	—	1.0
VSWR	—	500 - 1000 MHz	Ratio	—	—	1.3:1
Deviation from Quadrature	—	500 - 1000 MHz	°	—	—	3

1. All specifications apply with 50 ohm source and load impedance.

2. Average of coupled output less 3 dB.

This product contains elements protected by United States Patent Number 3,484,724.

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

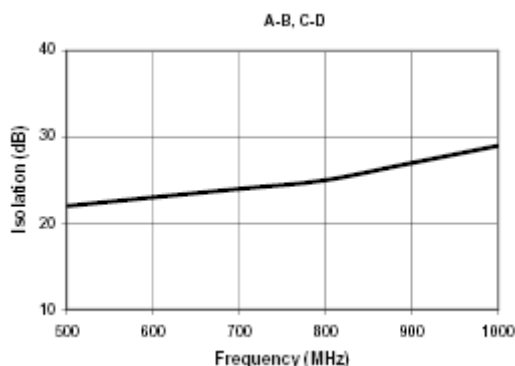
PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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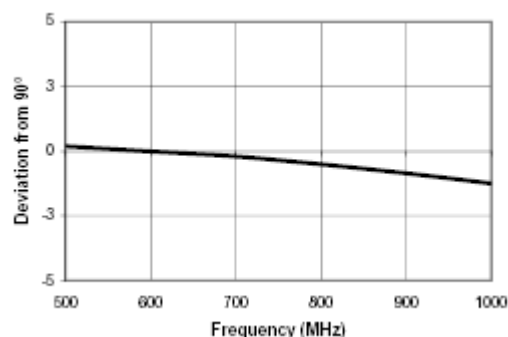
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Typical Performance Curves

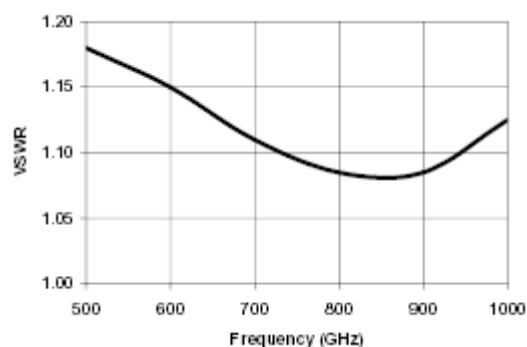
Isolation



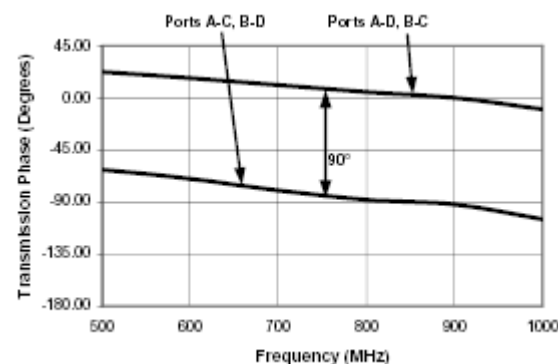
Deviation from Quadrature



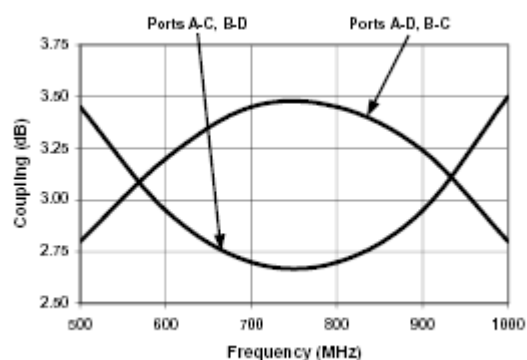
VSWR



Transmission Phase



Coupling



Ordering Information

Part Number	Package
JH-140 PIN	FP-2