

# COUPLER 90° HYBRID 10 WATT

HybriX®



EMC  
Technology

DATA SHEET

PART SERIES: HD064M3F

SHEET 1 OF 3  
Dwg 1014085

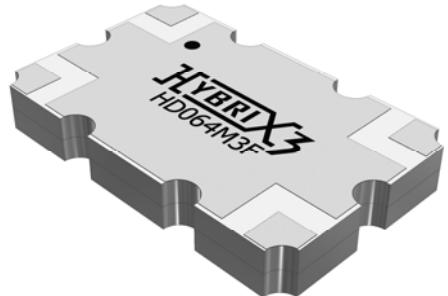
EN 15-1278  
Revision A

## FEATURES

Low Profile Surface Mount Package  
High Power  
Low Insertion Loss  
High Isolation  
High Reliability

## APPLICATIONS

Power Amplifiers  
Modulator  
Demodulator  
Signal Distribution Network  
Antenna Feeds  
Switch Networks  
MRI Applications



## GENERAL DESCRIPTION

EMC Technology offers high performance hybrid couplers in a low profile, surface mount package. These couplers are designed for demanding application where high power, low loss and excellent isolation are required.

## ORDERING INFORMATION

Part Identifier: HD064M3F

## SPECIFICATIONS

### 1.0 ELECTRICAL

Frequency	Isolation	Insertion Loss	VSWR	Amplitude Balance	Phase Balance	Power Handling
63 to 65 MHz	18 dB Min	1.0 dB Max	1.3 Max	0.1 dB Max	90° ± 3	10 Watts CW
59 to 69 MHz	13 dB Min	1.2 dB Max	1.6 Max	0.5 dB Max	90° ± 3	10 Watts CW

### 2.0 ENVIRONMENTAL

Operating Temperature: -55 °C to + 125 °C

### 3.0 MARKING

Hybrix, Part Number and Pin 1 Identification

### 4.0 QUALITY ASSURANCE

Sample Inspect Per MIL-STD-105, Level II, 1.0% AQL.

Visual and Mechanical Examination for Conformance To Outline Drawing Requirements.

Measure Amplitude Balance and VSWR

#### Test Data Requirements

No Test Data Required

Data Retention – 12 months

### 5.0 PACKAGING

Standard: Tape And Reel

*Note: Specifications are subject to change.*

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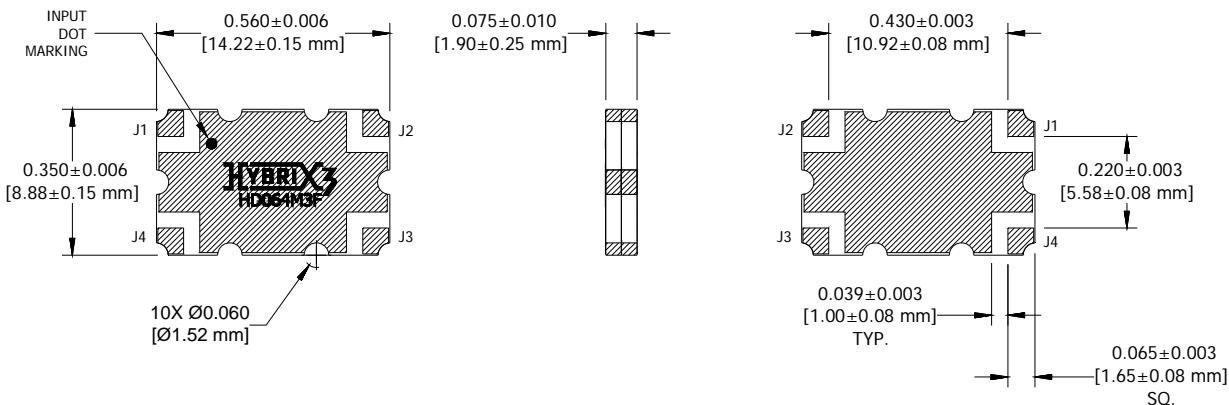
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## 6.0 MECHANICAL

Substrate: LTCC  
Conductor: Silver  
Plating: Copper, Silver Plated  
Application Note: AN0030 (General Hybrid and Directional Couplers)

## PIN CONFIGURATION

Port	J1	J2	J3	J4
J1	-	lso	-90°	0°
J2	lso	-	0°	-90°
J3	-90°	0°	-	lso
J4	0°	-90°	lso	-



Unless Otherwise Specified: TOLERANCE: X.XX = ± 0.01 X.XXX = ± 0.005

Metric dimensions are provided for reference only.

Note: Specifications are subject to change.

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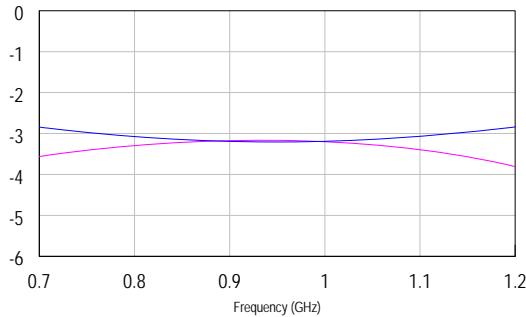
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SHEET 3 OF 3  
Dwg 1014085

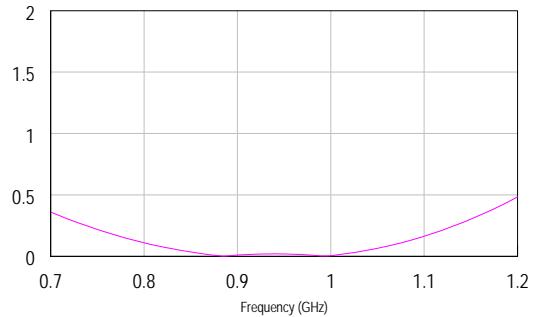
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## 7.0 TYPICAL PERFORMANCE AT 25°C

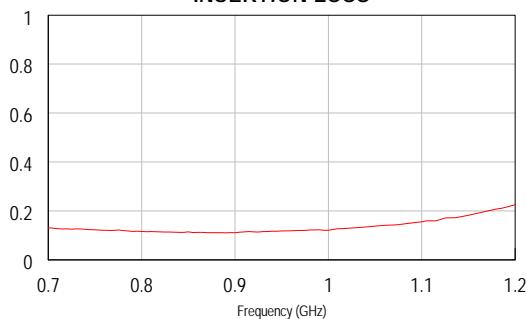
COUPLING



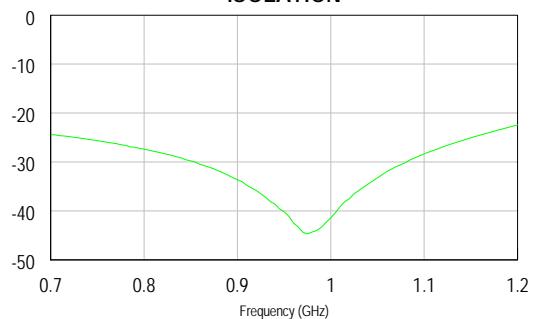
AMPLITUDE BALANCE



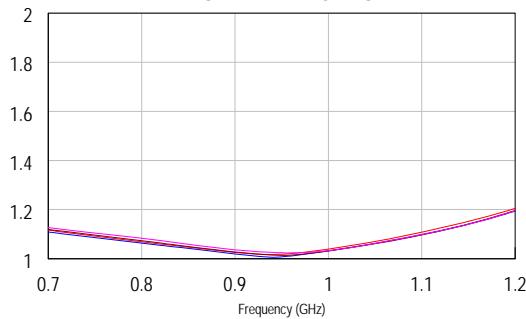
INSERTION LOSS



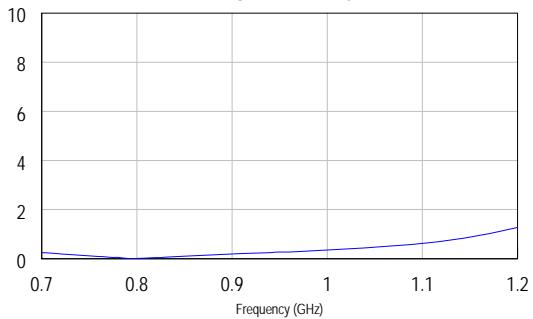
ISOLATION



VSWR ALL PORTS



PHASE BALANCE



Note: Specifications are subject to change.