

## Plug-In Frequency Doubler, 20 - 1500 MHz Output

Rev. V3

#### **Features**

Relay Header Case

Multioctave Frequency Coverage Conversion Loss: 12 dB Midband

Impedance: 50 Ohms Nominal

Maximum Input Power: 300 mW Max.

MIL-STD-883 Screening Available

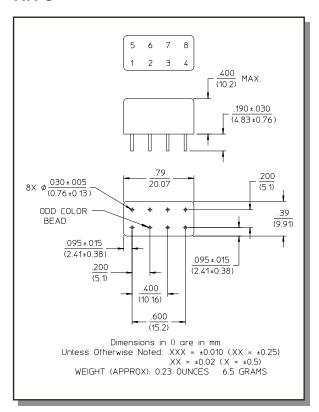
### **Description**

A transmission line balun transformer connects to Schottky diodes arranged in a bridge configuration. This design allows balanced activation of all diodes, and yields excellent conversion loss, and odd-order term suppression.

## **Pin Configuration**

Pin No.	Function	Pin No.	Function	
1	Input	5	GND	
2	GND	6	GND	
3	GND	7	GND	
4	GND	8	Output	

#### RH-3



# Electrical Specifications<sup>1</sup>: $T_A = -55$ °C to +85°C

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Frequency Range	Input Output	10 - 750 20 - 1500	MHz MHz	_	_	_
Conversion Loss		10 - 500 MHz 500 - 750 MHz	dB dB	_	_	14.5 15.5
Spurious (Referred to Output F <sub>2</sub> Level)	F <sub>1</sub>	10 - 100 MHz 100 - 300 MHz 300 - 500 MHz 500 - 750 MHz	dB dB dB dB	25 20 15 10		_ _ _ _
	F <sub>3</sub>	30 - 300 MHz 300 - 900 MHz 900 - 1500 MHz 1500 - 2250 MHz	dB dB dB dB+	35 30 25 20	_ _ _ _	_ _ _ _
VSWR	Input	_	Ratio	_	<2.0:1	_
Conversion Loss as Quadrupler	_	_	dB	_	30	_

1. All specifications apply when operated at +13 dBm input power with 50 ohm source and load impedance.

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.

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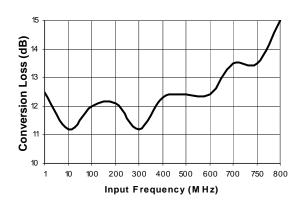


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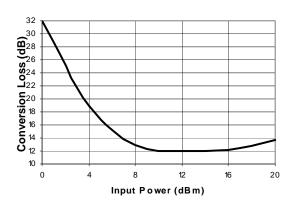
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## **Typical Performance Curves**

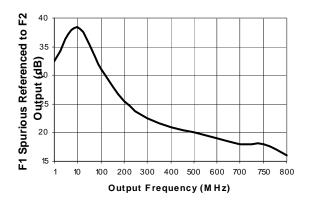
#### **Conversion Loss**



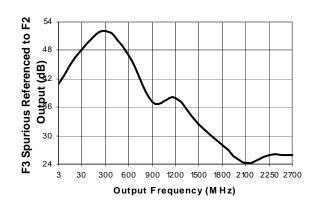
### Conversion Loss vs. Input Power



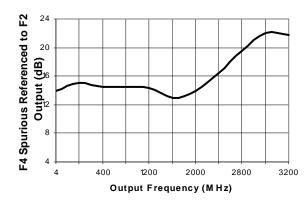
### Spurious Response



### Spurious Response



### Spurious Response



## **Ordering Information**

Part Number	Package		
FM-105 PIN	RH-3		

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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 quaranteed.

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