

## Broadband Frequency Doubler, 150 - 3000 MHz Output

Rev. V3

#### **Features**

- n Hermetic Flatpack
- n Multioctave Frequency Coverage
- n Conversion Loss: 10 dB Midband
- n Impedance: 50 Ohms Nominal
- n Maximum Input Power: 300 mW Max.
- n MIL-STD-202 Screening Available

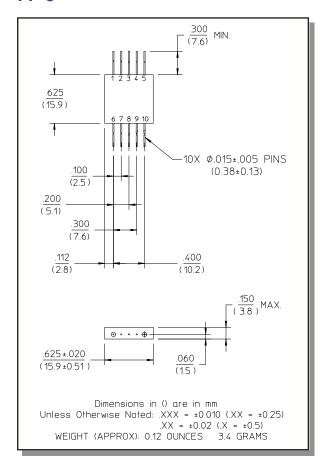
### **Description**

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	GND	6	GND
2	GND	7	GND
3	Input	8	Output
4	GND	9	GND
5	GND	10	GND

### FP-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	75 - 1500 150 - 3000	MHz MHz	_	_	_
Conversion Loss		75 - 1000 MHz 1000 - 1500 MHz	dB dB	_	_	12 14
Spurious (Referred to Output F <sub>2</sub> Level)	F <sub>1</sub>	75 - 1000 MHz 1000 - 1500 MHz 225 - 3000 MHz	dB dB dB	20 17 20	_ _ _	_ _ _
	-	3000 - 4500 MHz	dB	17	_	_
VSWR	Input	_	Ratio	_	<2.5:1	_
Conversion Loss as Quadrupler		_	dB	_	26	_

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.

- North America Tel: 800.366.2266 Europe Tel: +353.21.244.6400
- India Tel: +91.80.43537383
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  Visit www.macomtech.com for additional data sheets and product information.

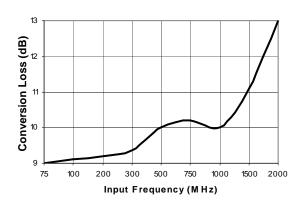


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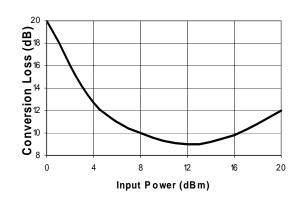
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## **Typical Performance Curves**

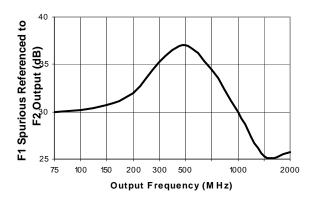
#### **Conversion Loss**



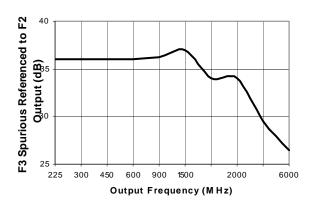
### Conversion Loss vs. Input Power



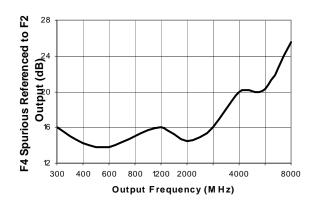
### Spurious Response



### Spurious Response



### Spurious Response



## **Ordering Information**

Part Number	Package		
FM-104 PIN	FP-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. For in the produce in the product of the pr

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