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



Rev. V1

## **Features**

- n Relay Header Case
- n Multioctave Frequency Coverage
- n Conversion Loss: 12 dB Midband
- n Impedance: 50 Ohms Nominal
- n Maximum Input Power: 300 mW Max.
- n 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>: $T_A = -55^{\circ}C$ to +85°C

Parameter	Test Conditions	Frequency	Units	Min	Тур	Мах
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)	F1	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	

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- 1. All specifications apply when operated at +13 dBm input power with 50 ohm source and load impedance.
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# **Typical Performance Curves**

## **Conversion Loss**



#### **Spurious Response**



#### **Spurious Response**



### Conversion Loss vs. Input Power



### Spurious Response



# **Ordering Information**

Part Number	Package		
FM-105 PIN	RH-3		

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