

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

FM-105

## 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

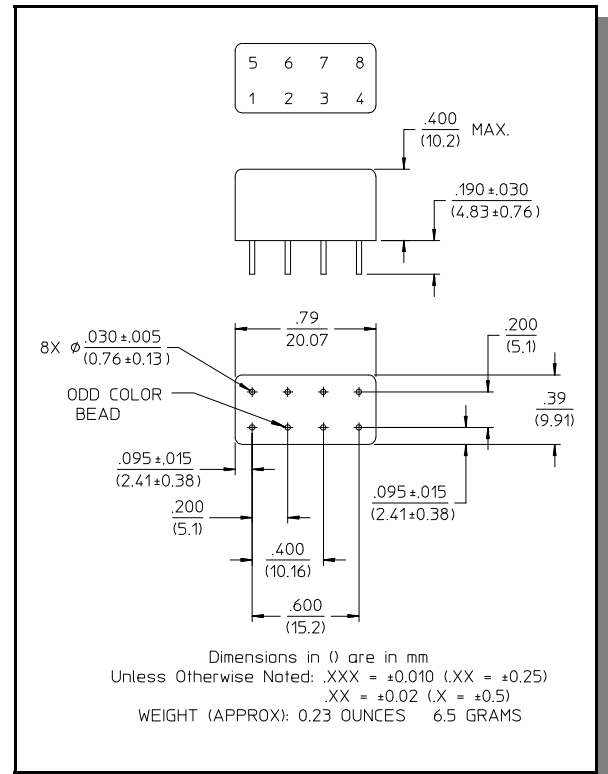
## Description

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



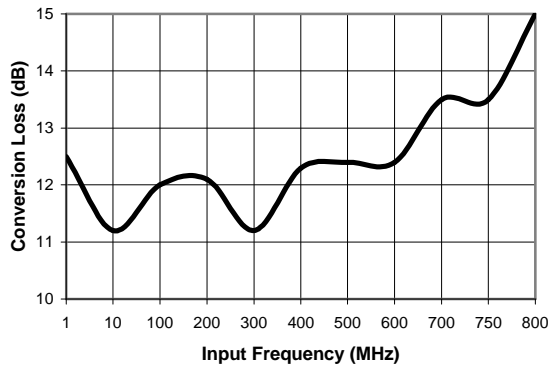
## Electrical Specifications<sup>1</sup>: T<sub>A</sub> = -55°C to +85°C

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

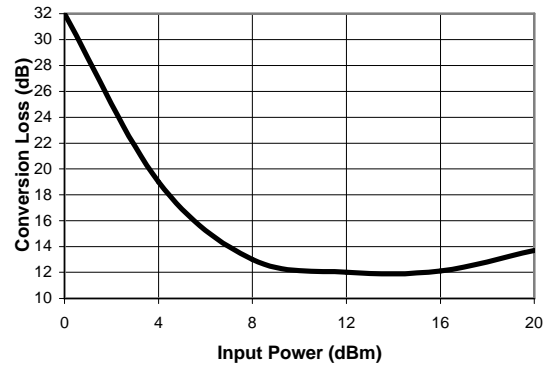
1. All specifications apply when operated at +13 dBm input power with 50 ohm source and load impedance.

### Typical Performance Curves

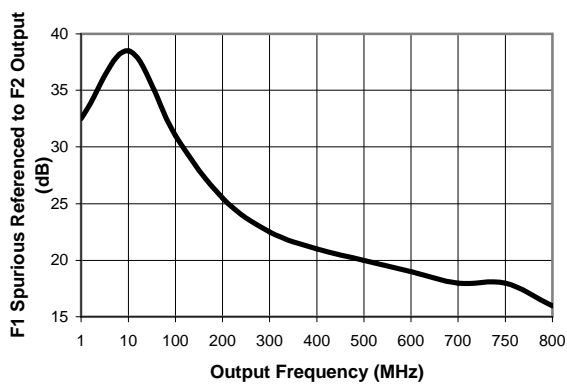
Conversion Loss



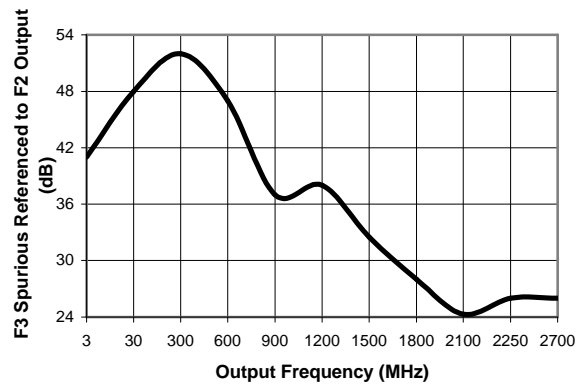
Conversion Loss vs. Input Power



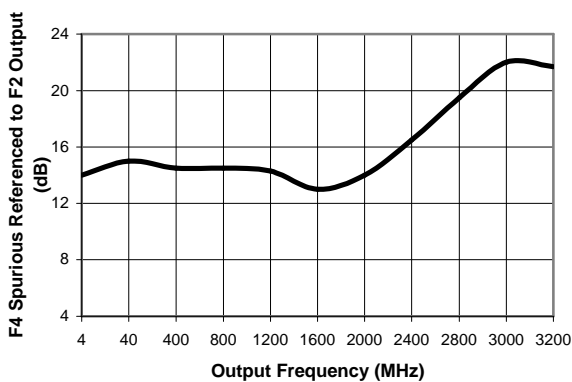
Spurious Response



Spurious Response



Spurious Response



### Ordering Information

Part Number	Package
FM-105 PIN	RH-3

Specifications subject to change without notice.

- North America: Tel. (800) 366-2266
- Asia/Pacific: Tel. +81-44-844-8296, Fax +81-44-844-8298
- Europe: Tel. +44 (1344) 869 595, Fax +44 (1344) 300 020

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