

## 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

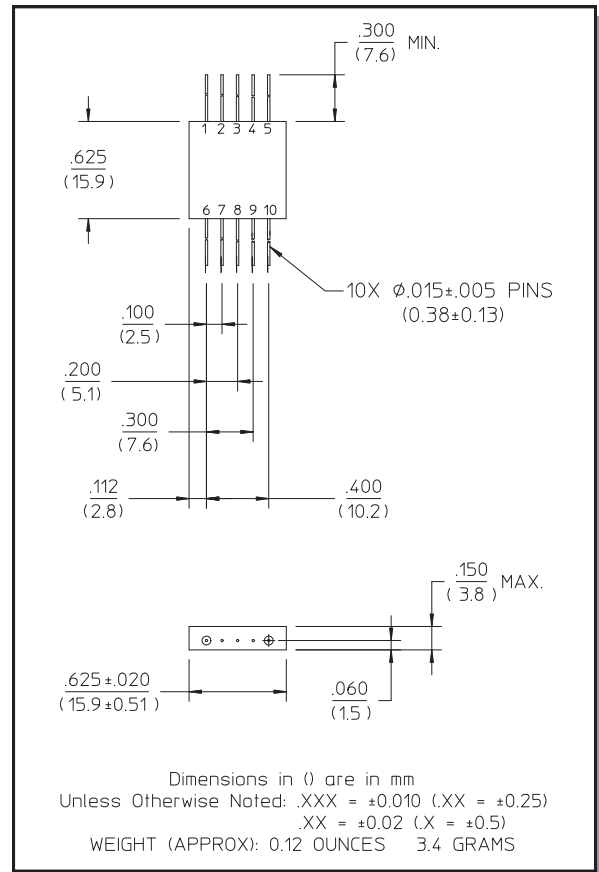
### Description

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



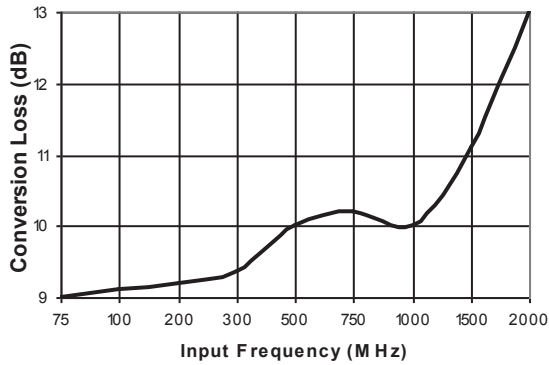
### Electrical Specifications<sup>1</sup>: $T_A = -55^\circ\text{C}$ to $+85^\circ\text{C}$

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Frequency Range	Input	75 - 1500	MHz	—	—	—
	Output	150 - 3000	MHz	—	—	—
Conversion Loss		75 - 1000 MHz	dB	—	—	12
		1000 - 1500 MHz	dB	—	—	14
Spurious (Referred to Output $F_2$ Level)	$F_1$	75 - 1000 MHz	dB	20	—	—
		1000 - 1500 MHz	dB	17	—	—
	$F_3$	225 - 3000 MHz	dB	20	—	—
		3000 - 4500 MHz	dB	17	—	—
VSWR	Input	—	Ratio	—	<2.5:1	—
Conversion Loss as Quadrupler	—	—	dB	—	26	—

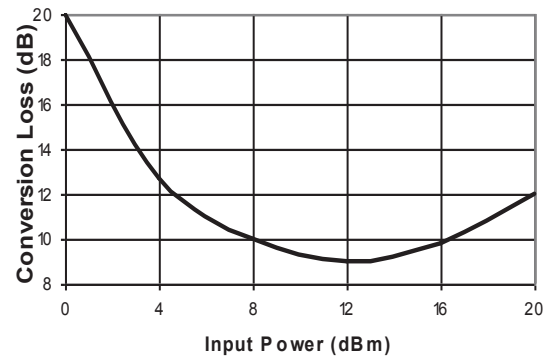
1. All specifications apply when operated at +13 dBm input power with 50 ohm source and load impedance.

## Typical Performance Curves

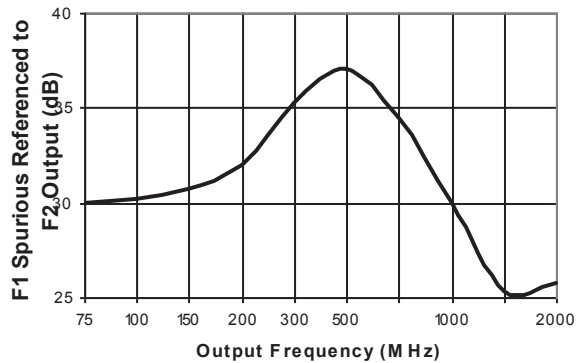
*Conversion Loss*



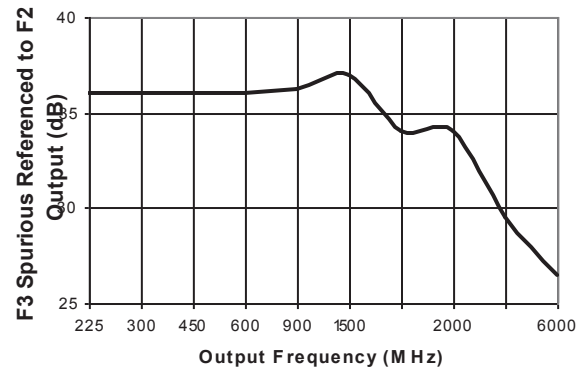
*Conversion Loss vs. Input Power*



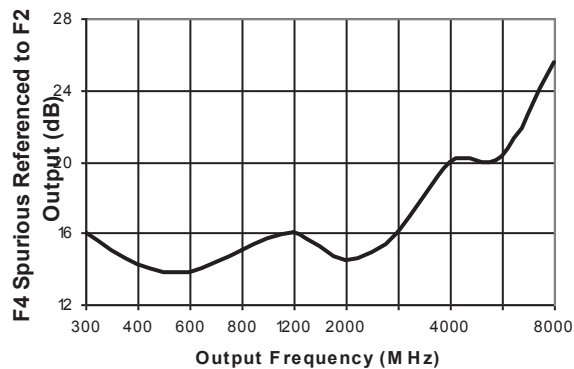
*Spurious Response*



*Spurious Response*



*Spurious Response*



## Ordering Information

Part Number	Package
FM-104 PIN	FP-3

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