

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

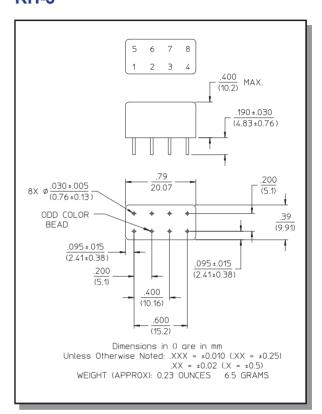
Description

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 Specifications¹: $T_A = -55$ °C to +85°C

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Frequency Range	Input Output	10 - 750 20 - 1500	MHz MHz	_	_	_
Conversion Loss	2.540.	10 - 500 MHz 500 - 750 MHz	dB dB	_	_	14.5 15.5
Spurious (Referred to Output F ₂ Level)	F ₁	10 - 100 MHz 100 - 300 MHz 300 - 500 MHz 500 - 750 MHz	dB dB dB dB	25 20 15 10	_ _ _	_ _ _ _
	F ₃	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.

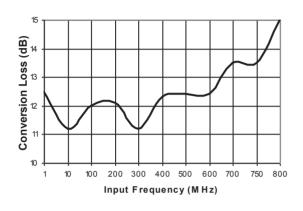


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Typical Performance Curves

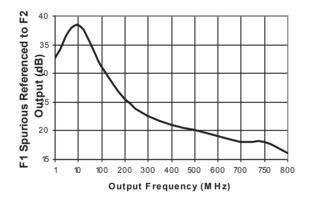
Conversion Loss



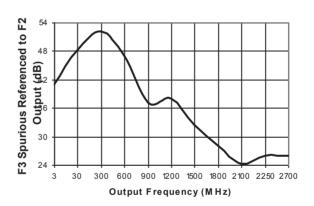
Conversion Loss vs. Input Power



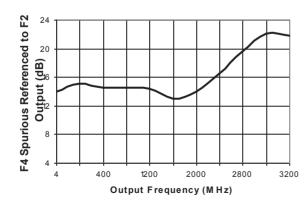
Spurious Response



Spurious Response



Spurious Response



Ordering Information

Part Number	Package		
FM-105 PIN	RH-3		

FM-105



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