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

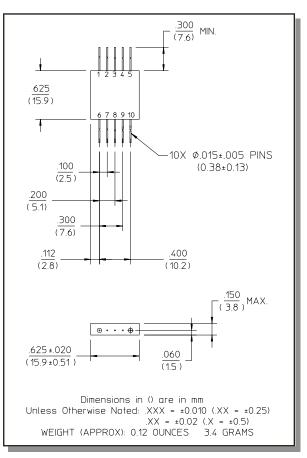
Description

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 Specifications¹: $T_A = -55^{\circ}C$ to $+85^{\circ}C$

Parameter	Test Conditions	Frequency	Units	Min	Тур	Мах
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 ₂ Level)	F ₁	75 - 1000 MHz 1000 - 1500 MHz	dB dB	20 17	_	
	F_3	225 - 3000 MHz 3000 - 4500 MHz	dB dB	20 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.

1

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 Europe Tel: +353.21.244.6400
 India Tel: +91.80.43537383
 China Tel: +86.21.2407.1588
- Visit www.macomtech.com for additional data sheets and product information.

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. Commitment to produce in volume is not guaranteed.

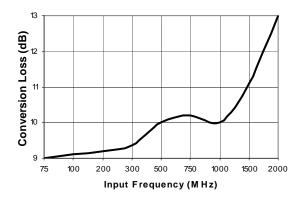
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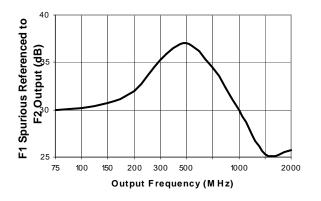


Typical Performance Curves

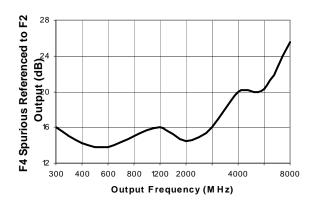
Conversion Loss



Spurious Response



Spurious Response

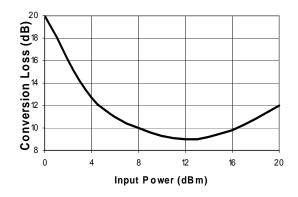


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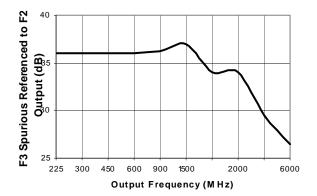
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Conversion Loss vs. Input Power



Spurious Response



Ordering Information

Part Number	Package		
FM-104 PIN	FP-3		

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