FM-107 / -108 / FMS-109



Broadband Frequency Doubler, 10—4800 MHz Output

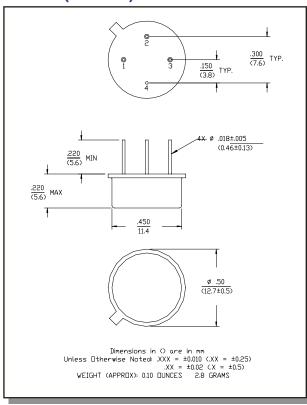
Rev. V5

Features

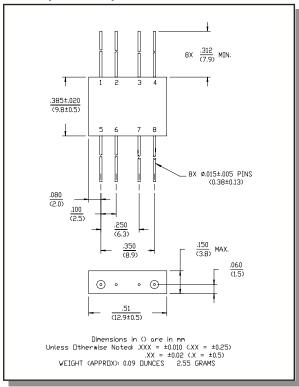
- Operates Over Full AMPS/PCN PCS/PHS Bands
- Low Conversion Loss
- Two Hermetic Package Options
- Typical Midband VSWR 1.5:1
- High Fundamental and Third Order Suppression

Description

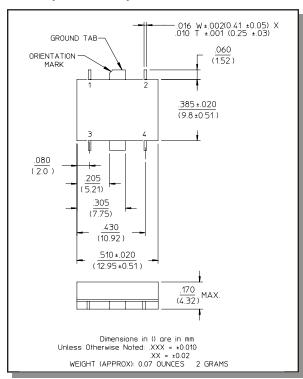
TO-8-1 (FM-108)



FP-2 (FM-107)



SF-1 (FMS-109)



ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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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• India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.

FM-107 / -108 / FMS-109



Broadband Frequency Doubler, 10—4800 MHz Output

Rev. V5

Electrical Specifications: T_A = 25°C, Input Frequency: 5-2400 MHz, Output Frequency: 10-4800 MHz, Input Power: +10 dBm

Parameter	Test Conditions	Frequency	Units	Min.	Тур.	Max.
Conversion Loss	Input: +10 dBm		dB	_	11	13
F1 Suppression	Input: +10 dBm	5-750 MHz 750-1000 MHz 1000-2400 MHz	dB dB dB	30 25 20	40 30 25	
F3 Suppression	Input: +10 dBm	15-1500 MHz 1500-3000 MHz 3000-7200 MHz	dB dB dB	35 25 20	40 35 25	
VSWR	Input: +10 dBm		Ratio	_	1.5:1	2.0:1
Loss as Quadrupler	Input: +10 dBm		dB	_	27	_

Pin Configuration (FM-107)

Pin No.	Function	Pin No.	Function
1	GND	5	GND
2	GND	6	GND
3	GND	7	GND
4	RF IN	8	RF OUT

Pin Configuration (FM-108)

Pin No.	Function	Pin No.	Function
1	RF IN	3	RF OUT
2	N/C	4	GND

Pin Configuration (FMS-109)

Pin No.	Function	Pin No.	Function
1	GND	3	GND
2	RF OUT	4	RF IN

Absolute Maximum Ratings 1

Parameter	Absolute Maximum		
Max Input Power ²			
Total Power	300 mW Max. Derated to 85°C @ 3.2 mW/°C		

- 1. Operation of this device above any one of these parameters may cause permanent damage.
- 2. Ambient Temperature $(T_A) = +25^{\circ}C$

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Broadband Frequency Doubler, 10—4800 MHz Output

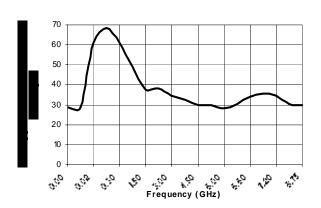
Rev. V5

Typical Performance Curves

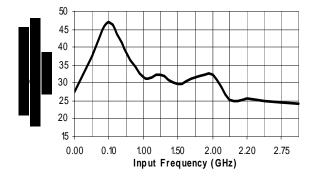
Conversion Loss vs. Input Freq.

18 16 14 12 10 8 6 0.00 0.05 0.25 0.75 1.25 1.75 2.10 2.40 3.00 Input Frequency (GHz)

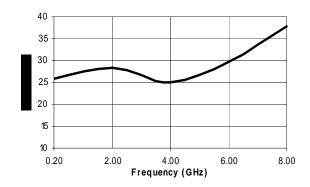
Spurious Response: F3 Suppression



Spurious Response: F1 Suppression



Loss as a Quadrupler



Ordering Information

Part Number	Package
FM-107-PIN	Hermetic Flatpack Package (FP-2)
FM-108-PIN	Hermetic Package (TO-8-1)
FMS-109-PIN	Hermetic Surface Mount package (SF-1)

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