

# FMM1103VJ

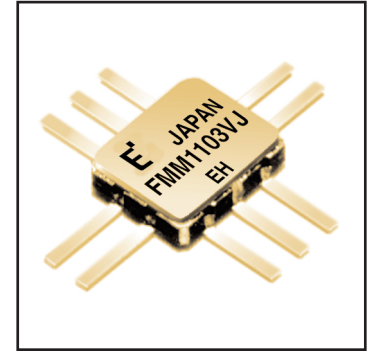
## GaAs Microwave Frequency Divider

### FEATURES

- Operation to 12.0 GHz
- Input Frequency divide by 8, OUT and  $\overline{\text{OUT}}$
- -5V (or+5V) DC Single Power Supply
- External 50 ohm Load Driving Capability
- Small 10 pin Hermetic SMT-10 Package (VJ)
- Tape and Reel available

### DESCRIPTION

The FMM1103VJ is a GaAs Microwave Static Frequency Divider designed for dividing an input signal by 8 over a frequency range from 2.0 to 12.0 GHz. This part is designed for Microwave Frequency Synthesizer and Phase-Locked Oscillator applications.



Eudyna's stringent Quality Assurance Program assures the highest reliability and consistent performance.

### ABSOLUTE MAXIMUM RATINGS (Ambient Temperature Ta=25°C)

Parameter	Symbol	Ratings	Unit
Supply Voltage	V <sub>SS</sub>	-7.0 to 0	V
Input Voltage	V <sub>in</sub>	V <sub>SS</sub> to 0	V
Input Power	P <sub>in</sub>	+13.0	dBm
Storage Temperature	T <sub>stg</sub>	-55 to +125	°C
Power Dissipation	P <sub>D</sub>	1.0	W

### RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Limit			Unit
		Min.	Typ.	Max.	
Power Supply Voltage	V <sub>SS</sub>	-5.5	-5.0	-4.5	V
Case Temperature	T <sub>c</sub>	-40	-	+85	°C

### ELECTRICAL CHARACTERISTICS (Case Temperature T<sub>c</sub> = -40°C ~ +85°C, V<sub>SS</sub> = -4.5 ~ -5.5V)

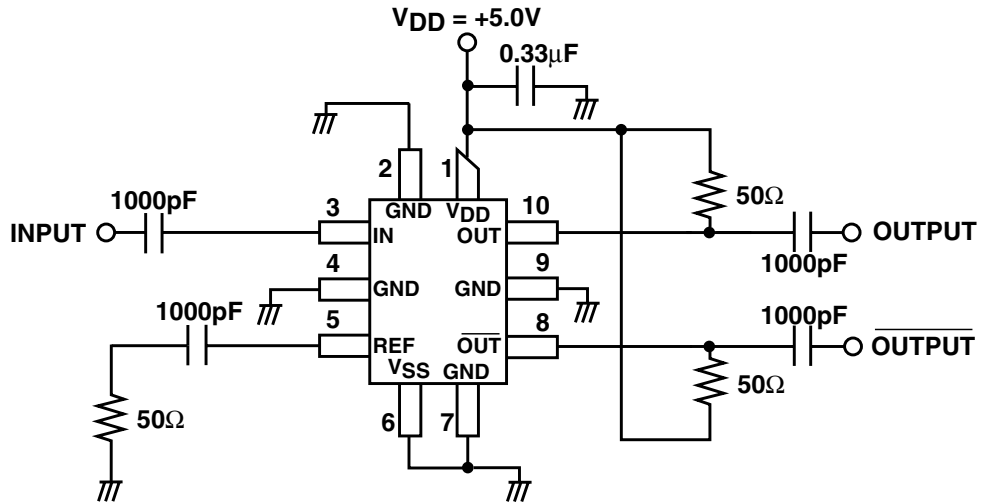
Parameter	Symbol	Condition	Limit			Unit
			Min.	Typ.	Max.	
Power Supply Current	I <sub>SS</sub>		-	90	-	mA
Operating Frequency	f <sub>in</sub>	P <sub>in</sub> = 0~10dBm	2.0	-	12.0	GHz
Output Power	P <sub>o</sub>		0	8	-	dBm

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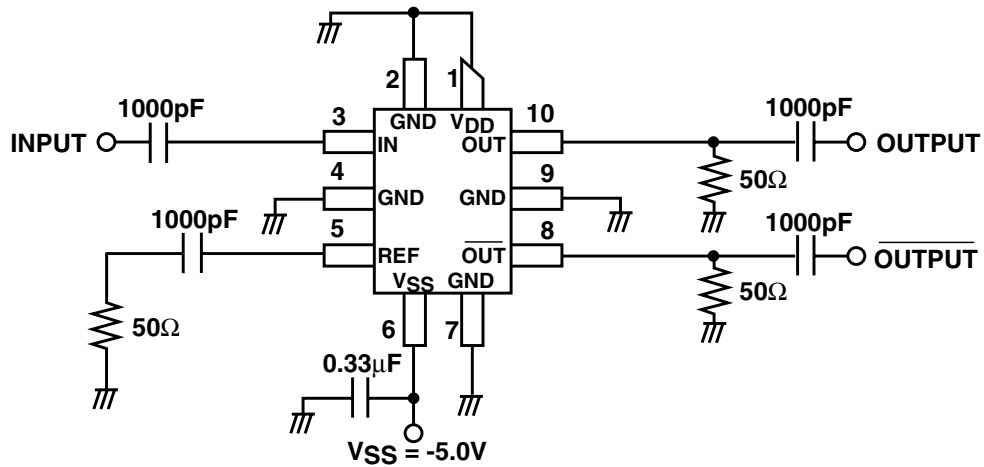
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## Test Circuit

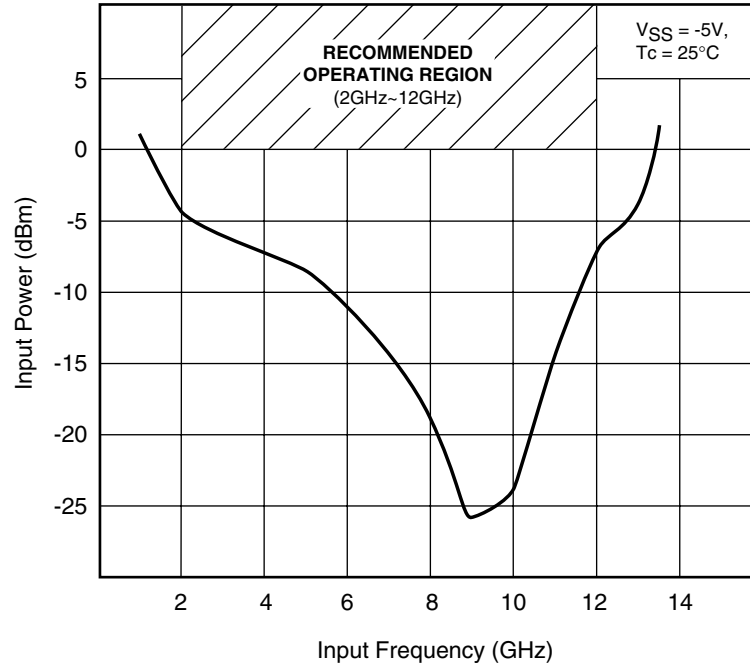
### Positive Supply Voltage VDD = +5V Operation Circuit



### Negative Supply Voltage VSS = -5V Operation Circuit



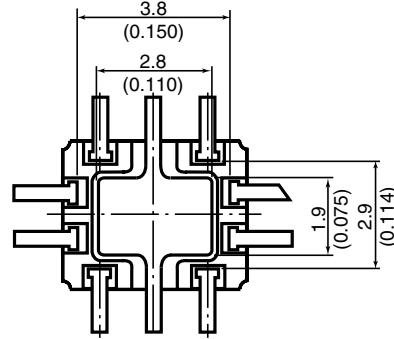
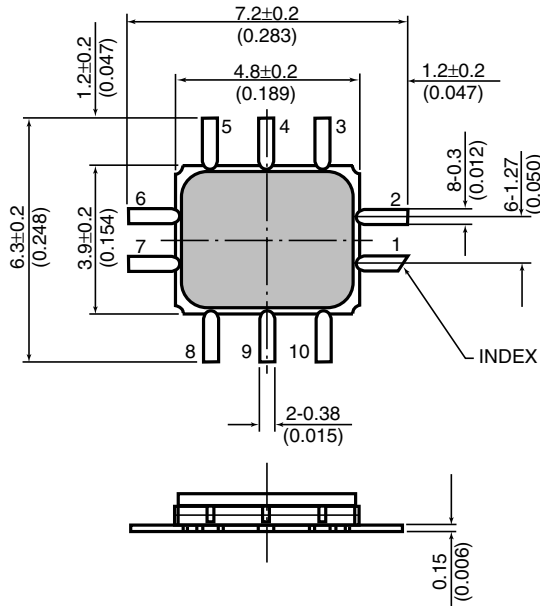
### INPUT SENSITIVITY CHARACTERISTICS



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### Case Style "VJ"



#### LEAD ASSIGNMENT

Lead	Symbol	Lead	Symbol
1.	VDD	6.	Vss
2.	GND	7.	GND
3.	IN	8.	OUT
4.	GND	9.	GND
5.	REF	10.	OUT

Unit: mm(inches)

For further information please contact:

#### Eudyna Devices USA Inc.

2355 Zanker Rd.  
San Jose, CA 95131-1138, U.S.A.  
TEL: (408) 232-9500  
FAX: (408) 428-9111  
[www.us.eudyna.com](http://www.us.eudyna.com)

#### Eudyna Devices Europe Ltd.

Network House  
Norreys Drive  
Maidenhead, Berkshire SL6 4FJ  
United Kingdom  
TEL: +44 (0) 1628 504800  
FAX: +44 (0) 1628 504888

#### Eudyna Devices Asia Pte Ltd.

Hong Kong Branch  
Rm. 1101, Ocean Centre, 5 Canton Rd.  
Tsim Sha Tsui, Kowloon, Hong Kong  
TEL: +852-2377-0227  
FAX: +852-2377-3921

#### Eudyna Devices Inc.

Sales Division  
1, Kanai-cho, Sakae-ku  
Yokohama, 244-0845, Japan  
TEL: +81-45-853-8156  
FAX: +81-45-853-8170

#### CAUTION

Eudyna Devices Inc. products contain **gallium arsenide (GaAs)** which can be hazardous to the human body and the environment. For safety, observe the following procedures:

- Do not put this product into the mouth.
- Do not alter the form of this product into a gas, powder, or liquid through burning, crushing, or chemical processing as these by-products are dangerous to the human body if inhaled, ingested, or swallowed.
- Observe government laws and company regulations when discarding this product. This product must be discarded in accordance with methods specified by applicable hazardous waste procedures.

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