

FMM1103VJ

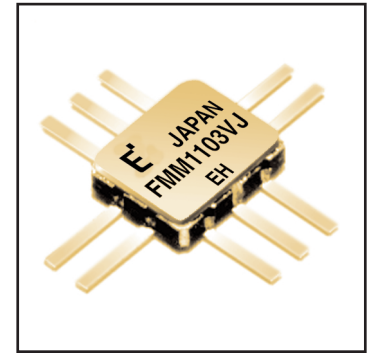
GaAs Microwave Frequency Divider

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 _{SS} | -7.0 to 0 | V |
| Input Voltage | V _{in} | V _{SS} to 0 | V |
| Input Power | P _{in} | +13.0 | dBm |
| Storage Temperature | T _{stg} | -55 to +125 | °C |
| Power Dissipation | P _D | 1.0 | W |

RECOMMENDED OPERATING CONDITIONS

| Parameter | Symbol | Limit | | | Unit |
|----------------------|-----------------|-------|------|------|------|
| | | Min. | Typ. | Max. | |
| Power Supply Voltage | V _{SS} | -5.5 | -5.0 | -4.5 | V |
| Case Temperature | T _c | -40 | - | +85 | °C |

ELECTRICAL CHARACTERISTICS (Case Temperature Tc = -40°C ~ +85°C, V_{SS} = -4.5 ~ -5.5V)

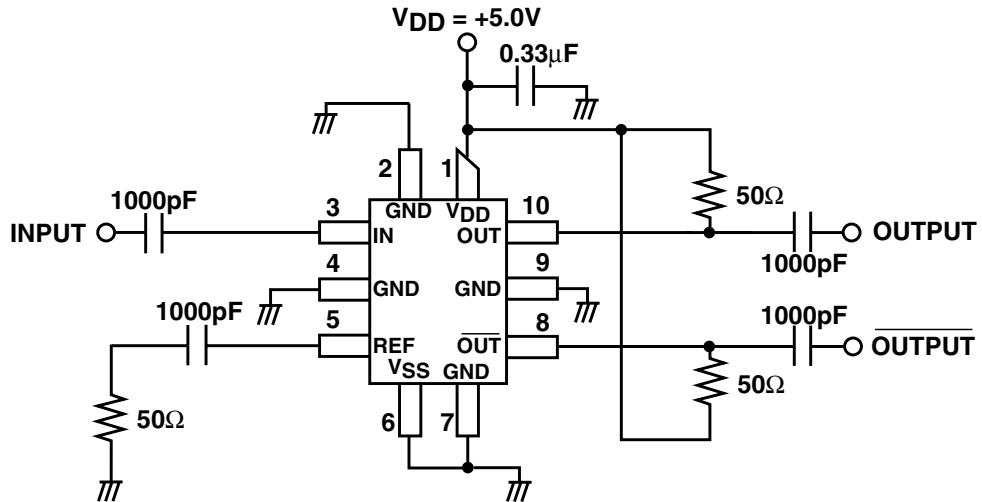
| Parameter | Symbol | Condition | Limit | | | Unit |
|----------------------|-----------------|---------------------------|-------|------|------|------|
| | | | Min. | Typ. | Max. | |
| Power Supply Current | I _{SS} | | - | 90 | - | mA |
| Operating Frequency | f _{in} | P _{in} = 0~10dBm | 2.0 | - | 12.0 | GHz |
| Output Power | P _o | | 0 | 8 | - | dBm |

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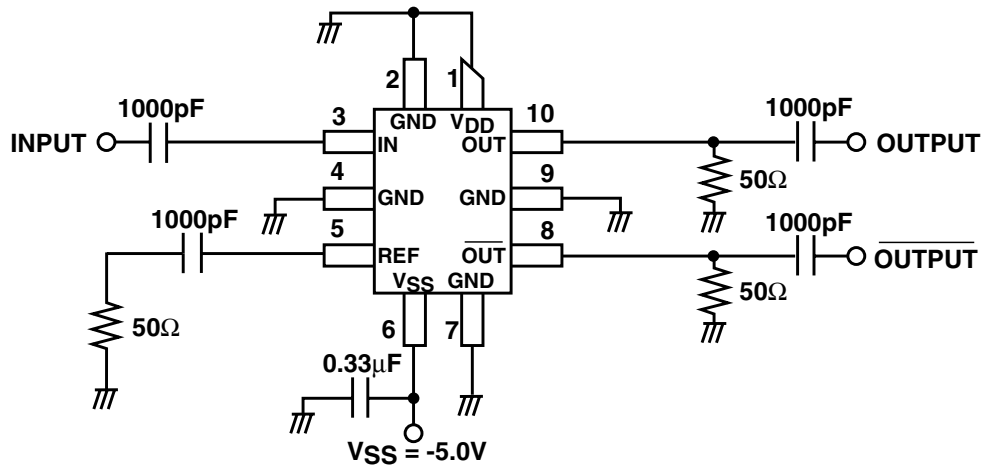
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Test Circuit

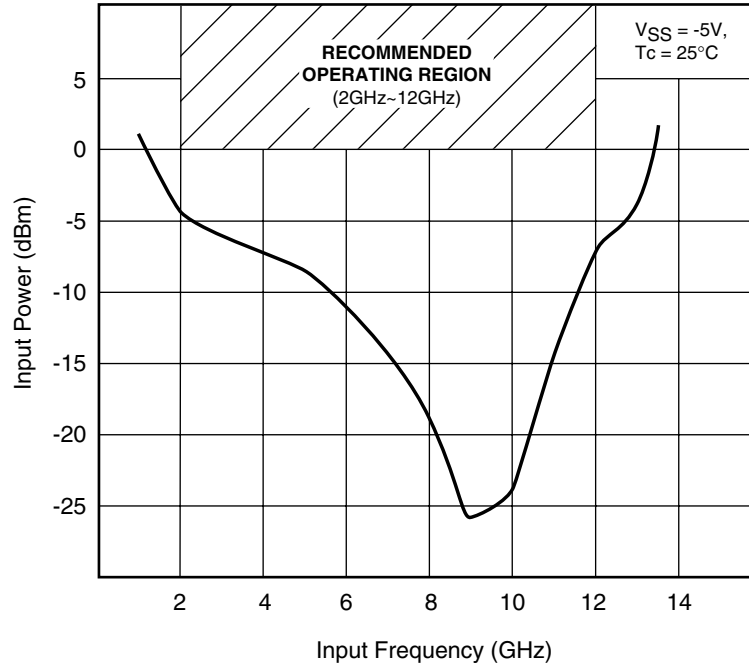
Positive Supply Voltage
VDD = +5V Operation Circuit



Negative Supply Voltage
VSS = -5V Operation Circuit



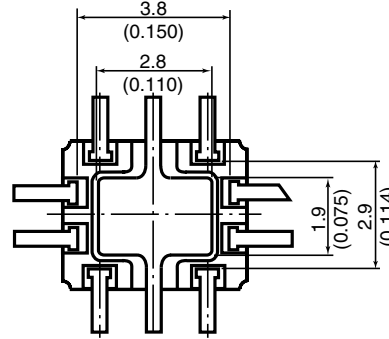
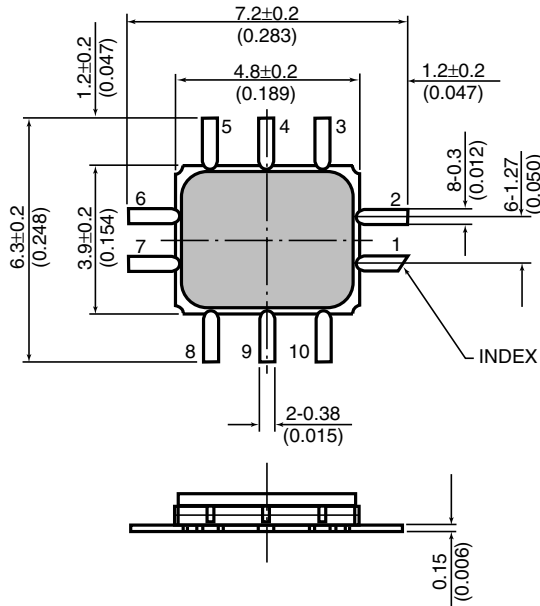
INPUT SENSITIVITY CHARACTERISTICS



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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)

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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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