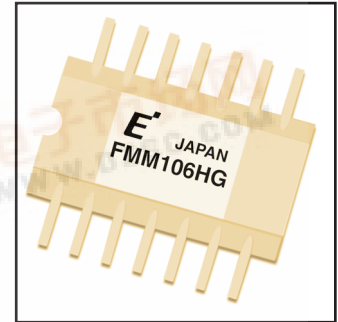


FMM106HG

GaAs MMIC

FEATURES

- Operation to 6.5 GHz
- Divided by 8, OUT and $\overline{\text{OUT}}$ Outputs
- External 50 ohm Load Driving Capability
- -5V DC or +5V DC Single Power Supply
- Metal/Ceramic 14-pin Hermetic Flat Package
- Wide Operation Temperature -55°C to +85°C



DESCRIPTION

The FMM106HG is a GaAs Microwave Frequency Divider that has been designed to divide an input signal by 8 over a frequency range from 2.0 to 6.5 GHz. The FMM106HG 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 +150 | °C |
| Power Dissipation | P _D | 1.0 | W |

RECOMMENDED OPERATING CONDITIONS

| Parameter | Symbol | Limit | | | Unit |
|---------------------|-----------------|-------|------|------|------|
| | | Min. | Typ. | Max. | |
| Supply Voltage | V _{SS} | -5.5 | -5.0 | -4.5 | V |
| Ambient Temperature | Ta | -55 | - | +85 | °C |

ELECTRICAL CHARACTERISTICS (Ambient Temperature Ta = 25°C, V_{SS} = -5.0V)

| Parameter | Symbol | Condition | Limit | | | Unit |
|----------------------|-----------------|-------------|-------|------|------|------|
| | | | Min. | Typ. | Max. | |
| Power Supply Current | I _{DD} | | - | 140 | - | mA |
| Input Frequency | f _{in} | Pin = +5dBm | 2.0 | - | 6.5 | GHz |
| Output Power | P _o | | 2 | 4 | - | dBm |

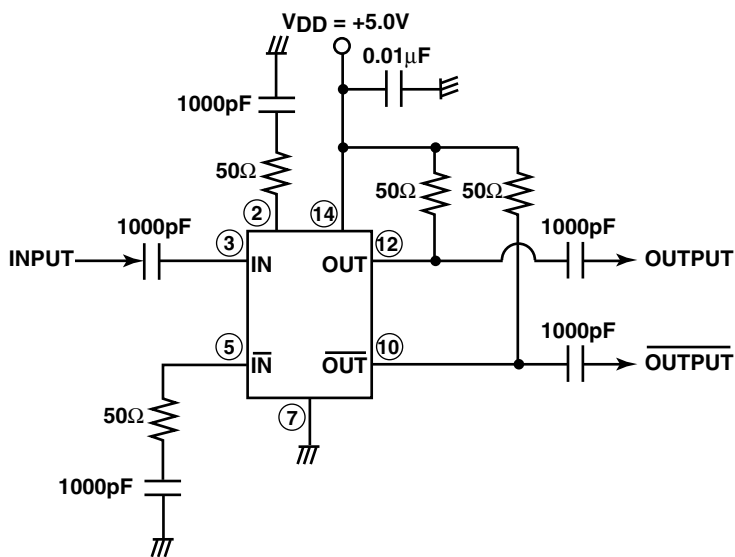
CASE STYLE: HG

FMM106HG

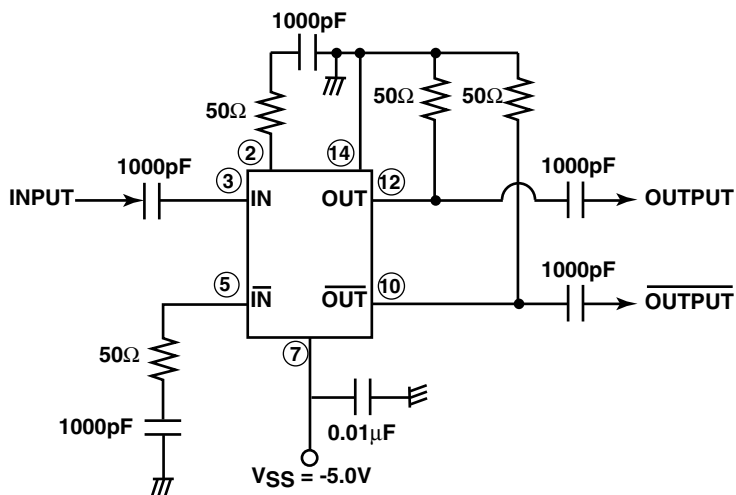
GaAs MMIC

Test Circuit

Positive Supply Voltage +5V Operation Circuit



Negative Supply Voltage -5V Operation Circuit

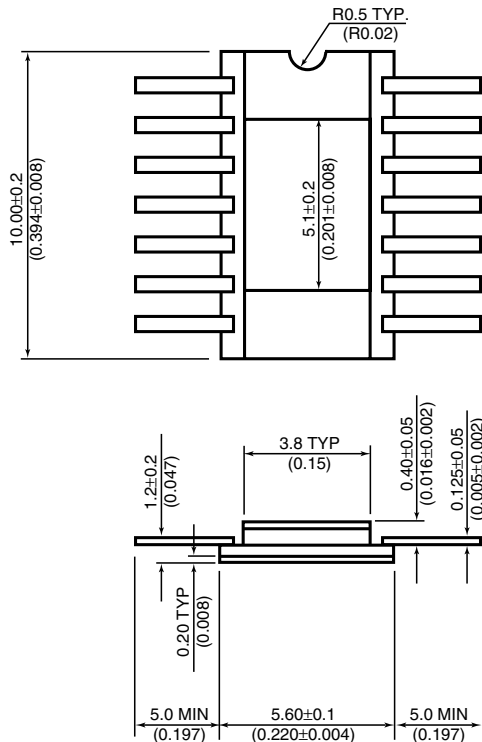


The backside metal of the package must be grounded.

FMM106HG

GaAs MMIC

Case Style "HG"



LEAD ASSIGNMENT

| Lead | Symbol | Function |
|------|-------------------------|----------------------|
| 1. | NC | No Connection |
| 2. | IN | Input |
| 3. | IN | Input |
| 4. | NC | No Connection |
| 5. | $\overline{\text{IN}}$ | Complementary Input |
| 6. | $\overline{\text{IN}}$ | Complementary Input |
| 7. | V_{SS} | Supply Voltage |
| 8. | NC | No Connection |
| 9. | NC | No Connection |
| 10. | $\overline{\text{OUT}}$ | Complementary Output |
| 11. | NC | No Connection |
| 12. | OUT | Output |
| 13. | NC | No Connection |
| 14. | V_{DD} | Supply Voltage |

Unit: mm(inches)

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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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