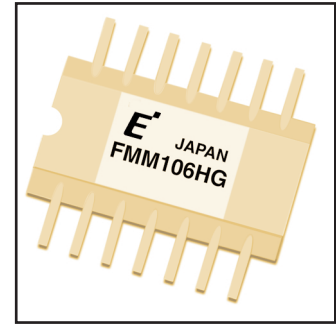


### FEATURES

- Operation to 6.5 GHz
- Divided by 8,  $\overline{\text{OUT}}$  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 <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 +150          | °C   |
| Power Dissipation   | P <sub>D</sub>   | 1.0                  | W    |

### RECOMMENDED OPERATING CONDITIONS

| Parameter           | Symbol          | Limit |      |      | Unit |
|---------------------|-----------------|-------|------|------|------|
|                     |                 | Min.  | Typ. | Max. |      |
| Supply Voltage      | V <sub>SS</sub> | -5.5  | -5.0 | -4.5 | V    |
| Ambient Temperature | T <sub>a</sub>  | -55   | -    | +85  | °C   |

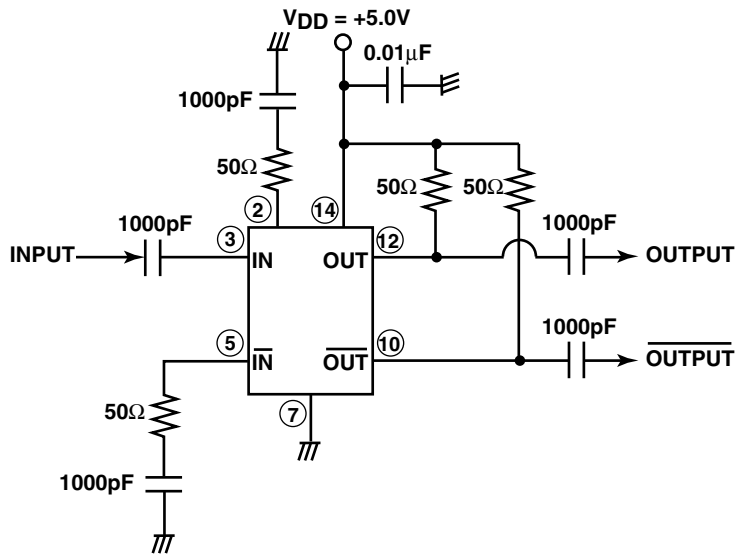
### ELECTRICAL CHARACTERISTICS (Ambient Temperature Ta = 25°C, V<sub>SS</sub> = -5.0V)

| Parameter            | Symbol          | Condition               | Limit |      |      | Unit |
|----------------------|-----------------|-------------------------|-------|------|------|------|
|                      |                 |                         | Min.  | Typ. | Max. |      |
| Power Supply Current | I <sub>DD</sub> |                         | -     | 140  | -    | mA   |
| Input Frequency      | f <sub>in</sub> | P <sub>in</sub> = +5dBm | 2.0   | -    | 6.5  | GHz  |
| Output Power         | P <sub>o</sub>  |                         | 2     | 4    | -    | dBm  |

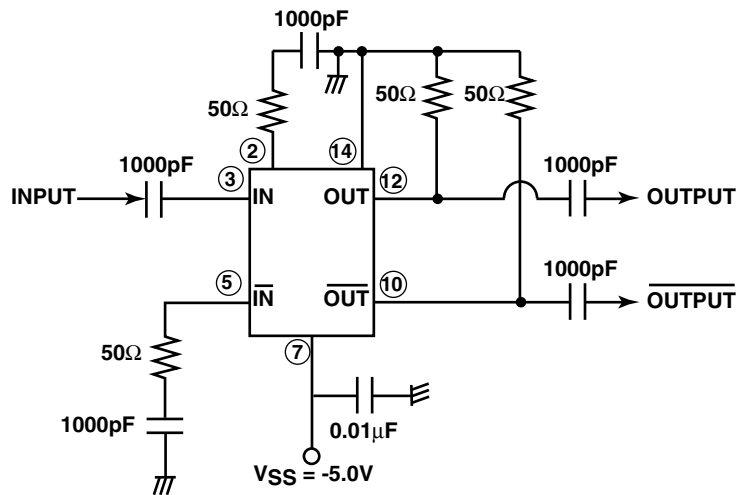
CASE STYLE: HG

### Test Circuit

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

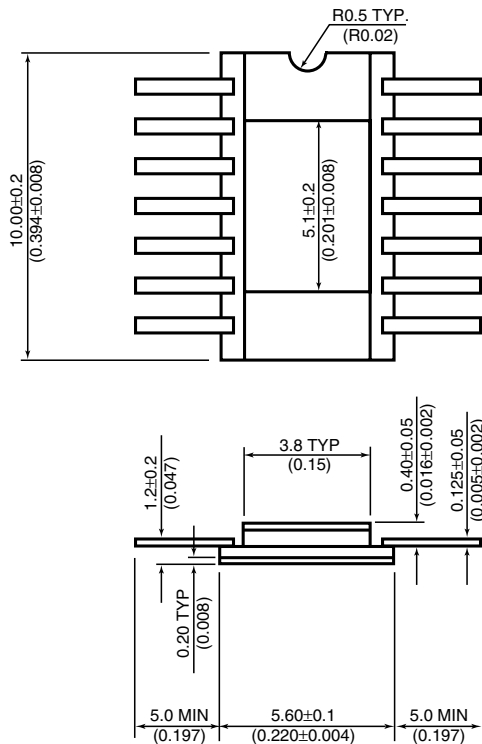


#### Negative Supply Voltage -5V Operation Circuit



The backside metal of the package must be grounded.

### 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:

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- 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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