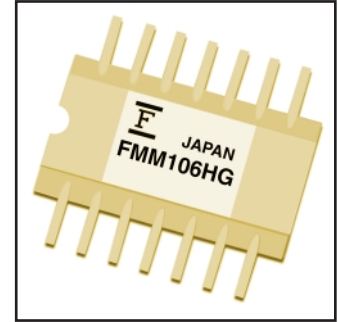


### FEATURES

- 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.

Fujitsu'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	$T_a$	-55	-	+85	°C

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

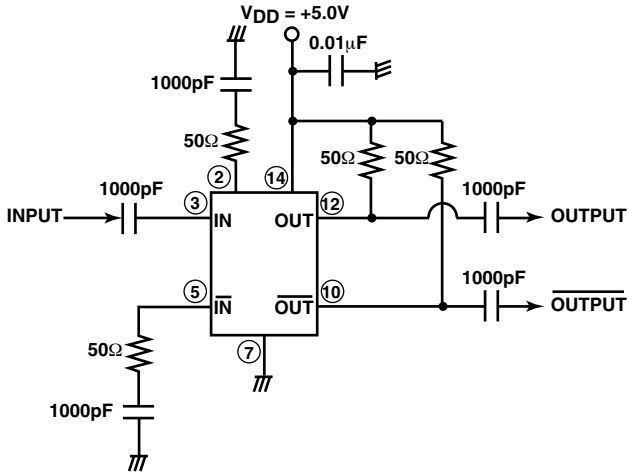
Parameter	Symbol	Ratings	Unit
Supply Voltage	$V_{SS}$	-7.0 to 0	V
Input Voltage	$V_{in}$	$V_{SS}$ to 0	V
Input Power	$P_{in}$	+13.0	dBm
Storage Temperature	$T_{stg}$	-55 to +150	°C

# FMM106HG

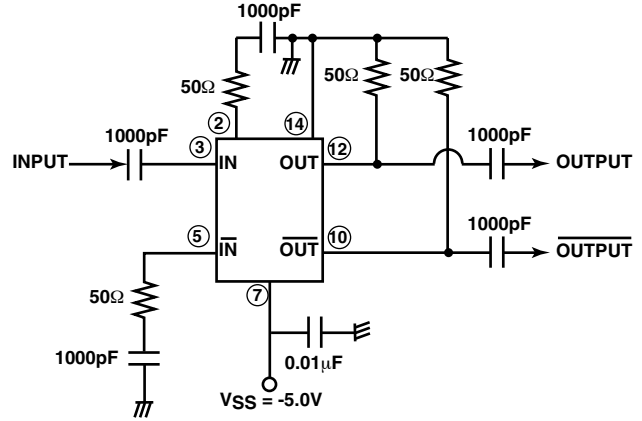
GaAs MMIC

## Test Circuit

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

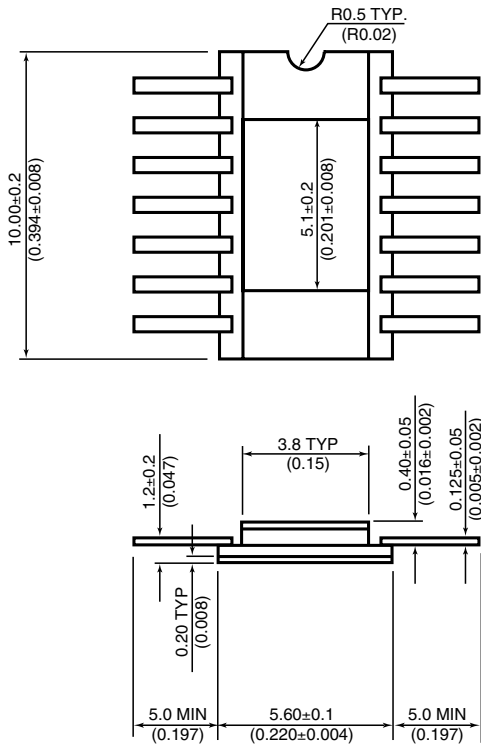


**Negative Supply Voltage  
-5V Operation Circuit**



The backside metal of the package must be grounded.

## Case Style "HG"



### LEAD ASSIGNMENT

Lead	Symbol	Function
1.	NC	No Connection
2.	IN	Input
3.	IN	Input
4.	NC	No Connection
5.	IN	Complementary Input
6.	IN	Complementary Input
7.	VSS	Supply Voltage
8.	NC	No Connection
9.	NC	No Connection
10.	OUT	Complementary Output
11.	NC	No Connection
12.	OUT	Output
13.	NC	No Connection
14.	VDD	Supply Voltage

Unit: mm(inches)

**For further information please contact:**

**FUJITSU COMPOUND SEMICONDUCTOR, INC.**

2355 Zanker Rd.

San Jose, CA 95131-1138, U.S.A.

Phone: (408) 232-9500

FAX: (408) 428-9111

www.fcsi.fujitsu.com

**FUJITSU MICROELECTRONICS, LTD.**

Compound Semiconductor Division

Network House

Norreys Drive

Maidenhead, Berkshire SL6 4FJ

Phone:+44 (0)1628 504800

FAX:+44 (0)1628 504888

**CAUTION**

Fujitsu Compound Semiconductor 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 these products 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.

Fujitsu Limited reserves the right to change products and specifications without notice. The information does not convey any license under rights of Fujitsu Limited or others.

© 1998 FUJITSU COMPOUND SEMICONDUCTOR, INC.

Printed in U.S.A. FCSI0598M200