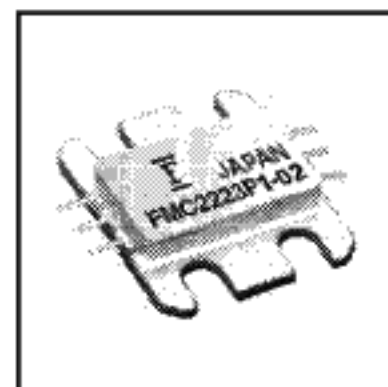


### FEATURES

- High Output Power:  $P_{1dB} = 21dBm$ (Typ.)
- High Gain:  $G_{1dB} = 12dB$ (Typ.)
- Low In/Out VSWR
- Broad Band: 22.4 ~ 23.6GHz
- Impedance Matched  $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package (12 X 15 X 3.5mm)



### DESCRIPTION

The FMC2223P1-02 is a module that contains a two-stage amplifier, internally matched, for standard communications in the 22.4 to 23.6GHz frequency range. This product is well suited for point-to-point radio applications as it offers high power, high gain, and low VSWR.

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

### ABSOLUTE MAXIMUM RATINGS (Ambient Temperature $T_a = 25^\circ C$ )

Parameter	Symbol	Rating	Unit
DC Input Voltage	$V_{DD}$	10	V
DC Input Voltage	$V_{GG}$	-7	V
Input Power	$P_{in}$	13	dBm
Storage Temperature	$T_{stg}$	-55 to +125	$^\circ C$
Operating Case Temperature	$T_{op}$	-55 to +85	$^\circ C$

Fujitsu recommends the following conditions for the reliable operation of GaAs modules:

1. The drain operating voltage ( $V_{DD}$ ) should not exceed 8 volts.
2. The gate operating voltage ( $V_{GG}$ ) should not exceed -5 volts.

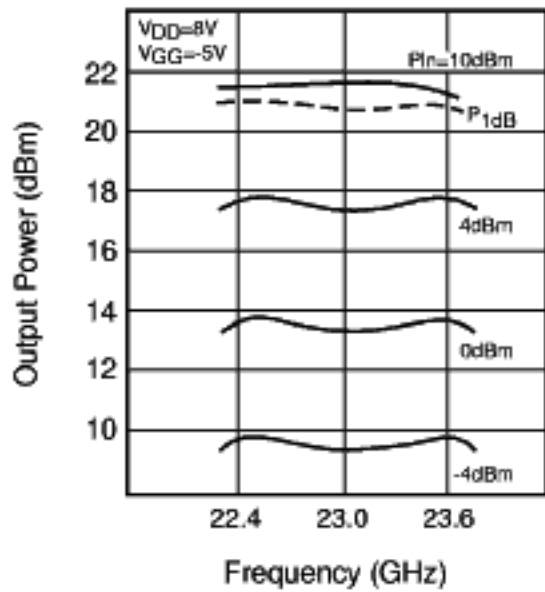
### ELECTRICAL CHARACTERISTICS (Case Temperature $T_c = 25^\circ C$ )

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Frequency Range	f		22.4 ~ 23.6			GHz
Output Power at 1dB G.C.P.	$P_{1dB}$	$V_{DD} = 8V$ $V_{GG} = -5V$	20.0	21.0	-	dBm
Power Gain at 1 dB G.C.P.	$G_{1dB}$	f = 22.4 ~ 23.6 GHz	10.0	12.0	15.0	dB
Gain Flatness	$\Delta G$	$V_{DD} = 8V$ $V_{GG} = -5V$	-	1.0	2.0	dB
Input VSWR	VSWR <sub>i</sub>	$P_{in} = 0dBm$	-	2.5:1	3.0:1	-
Output VSWR	VSWR <sub>o</sub>	f = 22.4 ~ 23.6GHz	-	3.0:1	4.0:1	-
DC Input Current	$I_D$	$V_{DD} = 8V$ $V_{GG} = -5V$	-	120	150	mA
DC Input Current	$I_G$		-	10	15	mA

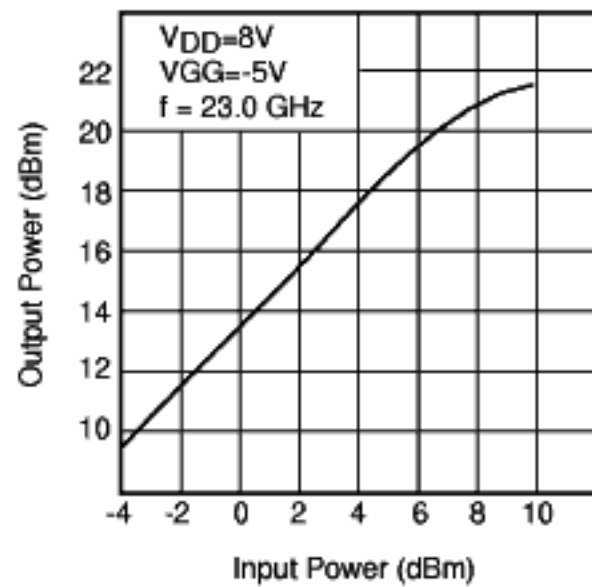
CASE STYLE: GJ

G.C.P.: Gain Compression Point

OUTPUT POWER vs. FREQUENCY

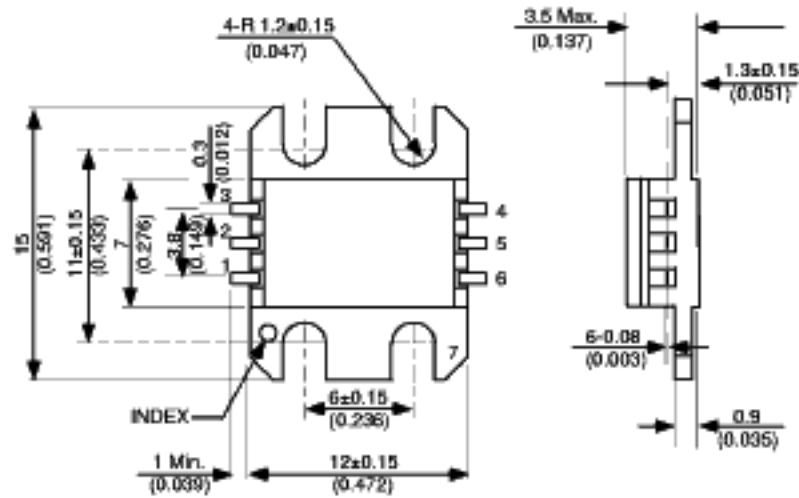


OUTPUT POWER vs. INPUT POWER



2

Case Style "GJ"  
Metal-Ceramic Hermetic Package



- 1. V<sub>DD</sub>
  - 2. RF<sub>in</sub>
  - 3. V<sub>GG</sub>
  - 4. V<sub>GG</sub>
  - 5. RF<sub>out</sub>
  - 6. V<sub>DD</sub>
  - 7. GND (Body)
- Unit: mm (inches)