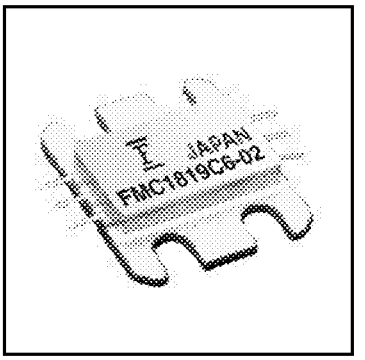
FMC1819C6-02
Ku, K-Band Power GaAs Modules

FUJITSU

FEATURES

- High Output Power: P_{1dB} = 18dBm(Typ.)
- High Gain: G_{1dB} = 14.5dB(Typ.)
- Low In/Out VSWR
- Broad Band: 18.7 ~ 19.7GHz
- Impedance Matched Zin/Zout = 50Ω
- Hermetically Sealed Package (12 X 15 X 3.5mm)



DESCRIPTION

The FMC1819C6-02 is a module that contains a two-stage amplifier, internally matched, for standard communications in the 18.7 to 19.7GHz 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 Ta = 25°C)

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

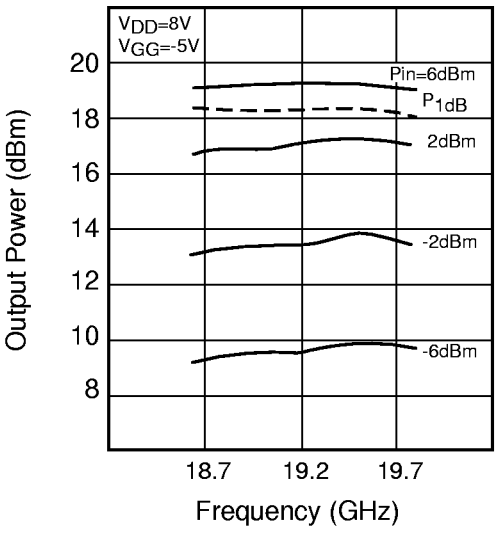
ELECTRICAL CHARACTERISTICS (Case Temperature Tc = 25°C)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Frequency Range	f		18.7 ~ 19.7			GHz
Output Power at 1dB G.C.P.	P_{1dB}	V_{DD} =8V V_{GG} = -5V f = 18.7 ~ 19.7 GHz	16.5	18.0	-	dBm
Power Gain at 1 dB G.C.P.	G_{1dB}		12.5	14.5	17.5	dB
Gain Flatness	ΔG	V_{DD} =8V V_{GG} = -5V P_{in} = -15dBm f = 18.7 ~ 19.7GHz	-	1.0	2.0	dB
Input VSWR	VSWRi		-	2.5:1	3.0:1	-
Output VSWR	VSWRo		-	3.0:1	4.0:1	-
DC Input Current	I_D	V_{DD} =8V V_{GG} =-5V	-	70	100	mA
DC Input Current	I_G		-	10	15	mA

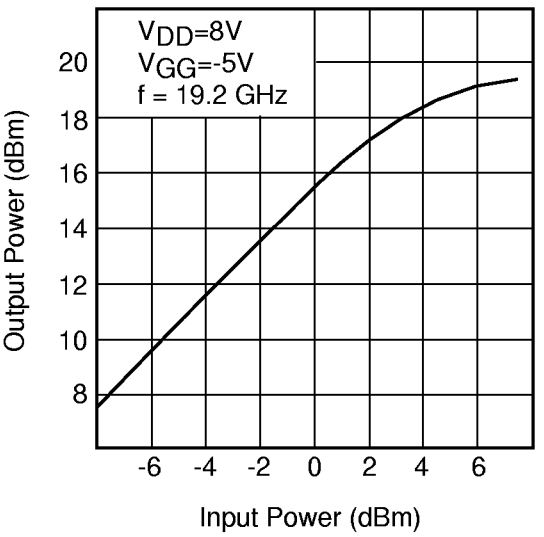
CASE STYLE: GJ

G.C.P.: Gain Compression Point

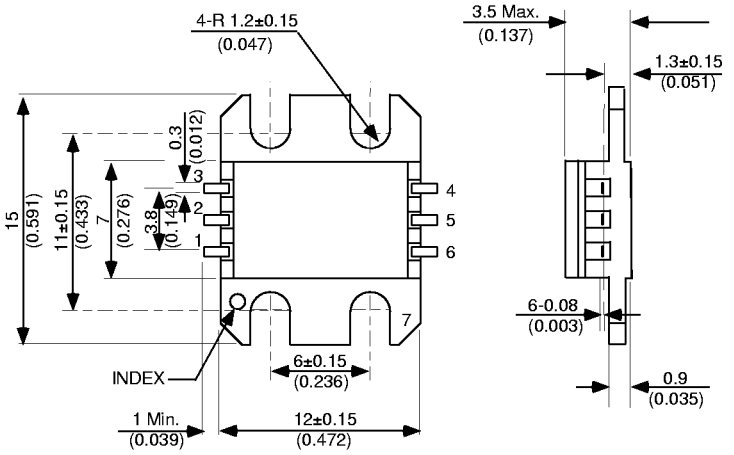
OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER



Case Style "GJ"
Metal-Ceramic Hermetic Package



1. V_{DD}
2. RF_{in}
3. V_{GG}
4. V_{GG}
5. RF_{out}
6. V_{DD}
7. GND (Body)

Unit: mm (inches)