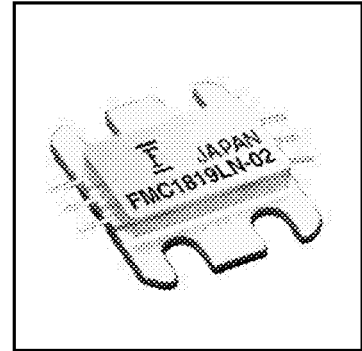


FEATURES

- High Output Power: $P_{1dB} = 12\text{dBm(Typ.)}$
- High Gain: $G_{1dB} = 13.5\text{dB(Typ.)}$
- Low In/Out VSWR
- Low Noise: $NF = 2.5\text{dB (Typ.)}$
- Broad Band: 18.7 ~ 19.7GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package (12 X 15 X 3.5mm)



DESCRIPTION

The FMC1819LN-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, low VSWR and low noise.

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

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature $T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
DC Input Voltage	V_{DD}	10	V
DC Input Voltage	V_{GG}	-7	V
Input Power	P_{in}	-1.5	dBm
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$
Operating Case Temperature	T_{op}	-55 to +85	$^\circ\text{C}$

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.

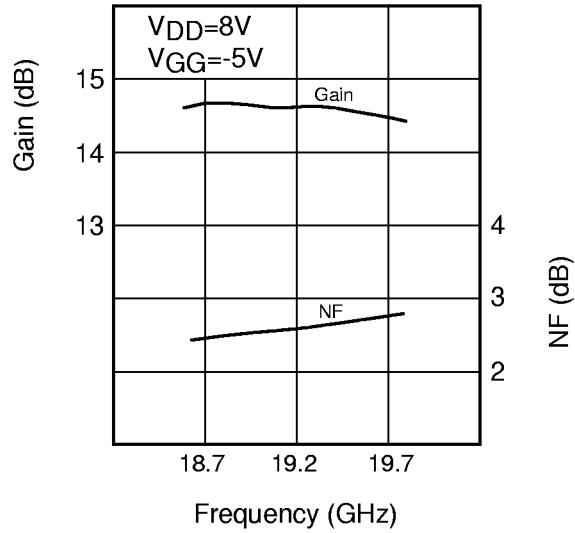
ELECTRICAL CHARACTERISTICS (Case Temperature $T_c = 25^\circ\text{C}$)

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}	$V_{DD} = 8\text{V}$ $V_{GG} = -5\text{V}$ $f = 18.7 \sim 19.7 \text{ GHz}$	11.0	12.0	-	dBm
Power Gain at 1 dB G.C.P.	G_{1dB}		12.5	13.5	-	dB
Noise Figure	NF		-	2.5	3.5	dB
Gain Flatness	ΔG	$V_{DD} = 8\text{V}$ $V_{GG} = -5\text{V}$ $P_{in} = -15\text{dBm}$ $f = 18.7 \sim 19.7\text{GHz}$	-	1.0	-	dB
Input VSWR	VSWR _i		-	3.0:1	-	-
Output VSWR	VSWR _o		-	2.5:1	-	-
DC Input Current	I_D	$V_{DD} = 8\text{V}$ $V_{GG} = -5\text{V}$	-	40	70	mA
DC Input Current	I_G		-	10	15	mA

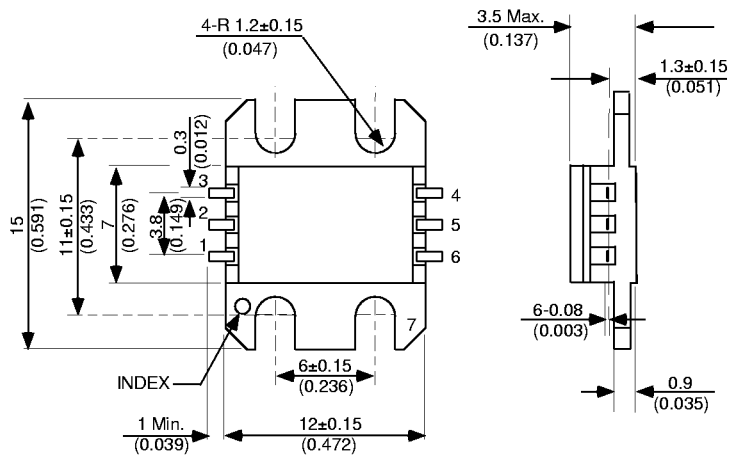
CASE STYLE: GJ

G.C.P.: Gain Compression Point

GAIN & NF vs. FREQUENCY



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)