

FMC1718P1-01

Ku, K-Band Power GaAs Modules



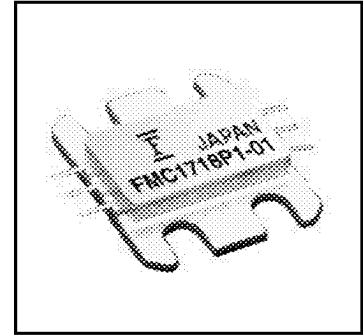
FEATURES

- High Output Power: $P_{1dB} = 21dBm(Typ.)$
- High Gain: $G_{1dB} = 13.5dB(Typ.)$
- Low In/Out VSWR
- Broad Band: 17.7 ~ 18.7GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package (12 X 15 X 3.5mm)

DESCRIPTION

The FMC1718P1-01 is a module that contains a two-stage amplifier, internally matched, for standard communications in the 17.7 to 18.7GHz 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 $T_a = 25^\circ C$)

Parameter	Symbol	Rating	Unit
DC Input Voltage	V_{DD}	10	V
DC Input Voltage	V_{GG}	-7	V
Input Power	P_{in}	11.5	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.

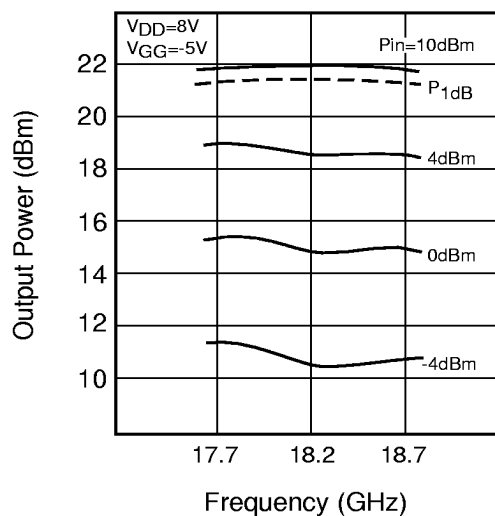
ELECTRICAL CHARACTERISTICS (Case Temperature $T_c = 25^\circ C$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Frequency Range	f		17.7 ~ 18.7			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 = 17.7 ~ 18.7 GHz	11.5	13.5	16.5	dB
Gain Flatness	ΔG	$V_{DD} = 8V$ $V_{GG} = -5V$	-	1.0	2.0	dB
Input VSWR	$VSWR_i$	$P_{in} = -15dBm$	-	2.5:1	3.0:1	-
Output VSWR	$VSWR_o$	f = 17.7 ~ 18.7GHz	-	3.0:1	4.0:1	-
DC Input Current	I_D	$V_{DD} = 8V$	-	120	150	mA
DC Input Current	I_G	$V_{GG} = -5V$	-	10	15	mA

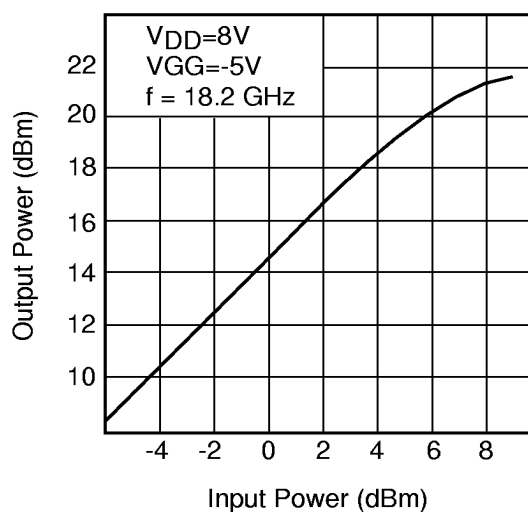
CASE STYLE: GJ

G.C.P.: Gain Compression Point

OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER



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Case Style "GJ"

Metal-Ceramic Hermetic Package

