

### 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. | $P_{1dB}$  | $V_{DD} = 8\text{V}$<br>$V_{GG} = -5\text{V}$<br>$f = 18.7 \sim 19.7 \text{ GHz}$                           | 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              | $\Delta G$ | $V_{DD} = 8\text{V}$<br>$V_{GG} = -5\text{V}$<br>$P_{in} = -15\text{dBm}$<br>$f = 18.7 \sim 19.7\text{GHz}$ | -           | 1.0   | -    | dB   |
| Input VSWR                 | $VSWR_i$   |                                                                                                             | -           | 3.0:1 | -    | -    |
| Output VSWR                | $VSWR_o$   |                                                                                                             | -           | 2.5:1 | -    | -    |
| DC Input Current           | $I_D$      | $V_{DD} = 8\text{V}$<br>$V_{GG} = -5\text{V}$                                                               | -           | 40    | 70   | mA   |
| DC Input Current           | $I_G$      |                                                                                                             | -           | 10    | 15   | mA   |

CASE STYLE: GJ

G.C.P.: Gain Compression Point

### GAIN & NF vs. FREQUENCY

