

MGF7124A

1.9GHZ BAND AMPLIFIER MMIC

DESCRIPTION

MGF7124A is a monolithic microwave integrated circuit for use in 1.9GHz band power amplifiers.

FEATURES

- High output power
Po=26dBm, /4DQPSK
- Small size
5.8×12.2×1.8mm
- Light weight
- Surface mount package
- Low supply voltage operation
V_D=4.8V
- Enable to control gain
V_{Gdual}=0/-4V

APPLICATION

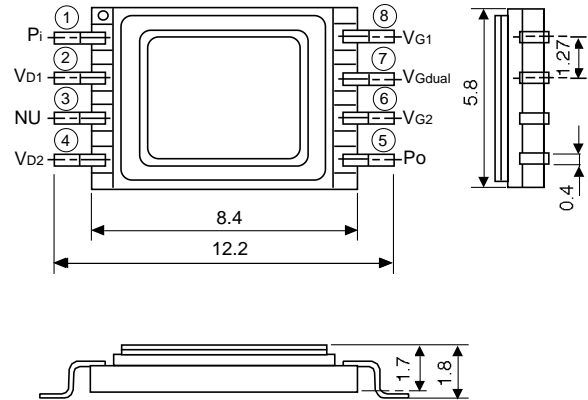
Base-station of Japanese personal handyphone system(PHS)

QUALITY GRADE

- IG

OUTLINE DRAWING

Unit: millimeters



P_i : RF INPUT
 V_{D1} : 1st DRAIN BIAS
 V_{D2} : 2nd DRAIN BIAS
 GND : GND
 V_{G1} : 1st GATE BIAS
 V_{G2} : 2nd GATE BIAS
 V_{Gdual} : GAIN CONTROL
 P_o : RF OUTPUT

GC-3

ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Ratings | Unit |
|--|----------------------------|-------------|------|
| V _{D1} , V _{D2} | Drain voltage | 5.5 | V |
| V _{G1} , V _{G2} , V _{Gdual} | Gate voltage | -5.5 | V |
| I _{D1} , I _{D2} , I _{D3} | Drain current | 500 | mA |
| P _i | Input power | 10 | dBm |
| T _{c(op)} | Operating case temperature | -20 to +90 | °C |
| T _{stg} | Storage temperature | -35 to +120 | °C |

ELECTRICAL CHARACTERISTICS (T_a=25°C)

| Symbol | Parameter | Test conditions (Note1) | Limits | | | Unit |
|------------------|------------------------|--|--------|-----|------|------|
| | | | Min | Typ | Max | |
| f | Frequency | | 1.89 | - | 1.92 | GHz |
| V _D | Drain supply voltage | | 4.8 | 5.0 | 5.2 | V |
| G _P | Power gain | P _O =26dBm, f=1.9GHz, /4DQPSK | 21 | - | - | dB |
| I _{Dt} | Total drain current | P _O =26dBm, f=1.9GHz, /4DQPSK | - | 300 | - | mA |
| G _{con} | Gain control range | V _{Gdual} =0/-4V, P _O =26dBm, f=1.9GHz | 20 | - | - | dB |
| A.C.P (±600kHz) | Adjacent channel power | P _O =26dBm, f(ACP)=±600kHz, f=1.9GHz, /4DQPSK | - | - | -56 | dBc |
| A.C.P (±900kHz) | | P _O =26dBm, f(ACP)=±900kHz, f=1.9GHz, /4DQPSK | - | - | -62 | dBc |

Note1: Z_s=Z_L=50 Ω, I_D-bias=I_{D1}+I_{D2}=280mA