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
  P_O=26dBm,π/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

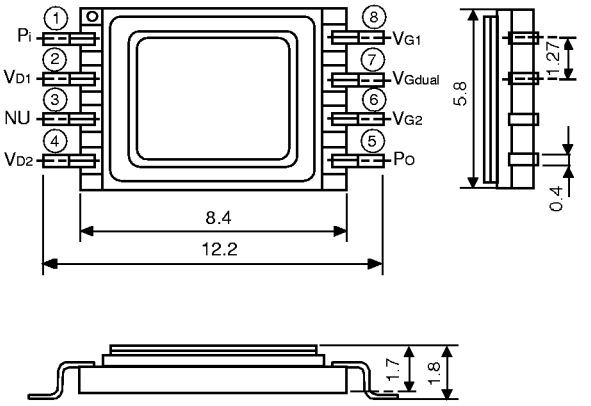
Base-station of Japanese personal handyphone system(PHS)

QUALITY GRADE

- IG

OUTLINE DRAWING

Unit:millimeters



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

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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,π/4DQPSK	21	–	–	dB
I_{Dt}	Total drain current		–	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,π/4DQPSK	–	–	-56	dBc
A.C.P (±900kHz)		P_O=26dBm,f(ACP)=±900kHz, f=1.9GHz,π/4DQPSK	–	–	-62	dBc

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