

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

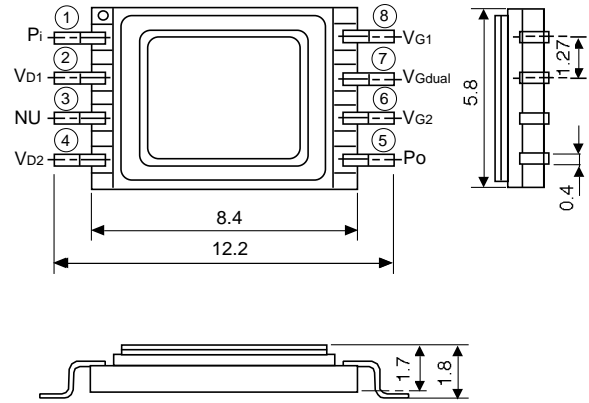
Base-station of Japanese personal handyphone system(PHS)

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		-	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