

DESCRIPTION

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

FEATURES

- High output power
 $P_o=26\text{dBm}, \pi/4\text{DQPSK}$
- Small size
 $5.8 \times 12.2 \times 1.8\text{mm}$
- Light weight
- Surface mount package
- Low supply voltage operation
 $V_D=4.8\text{V}$
- Enable to control gain
 $V_{G\text{dual}}=0/-4\text{V}$

APPLICATION

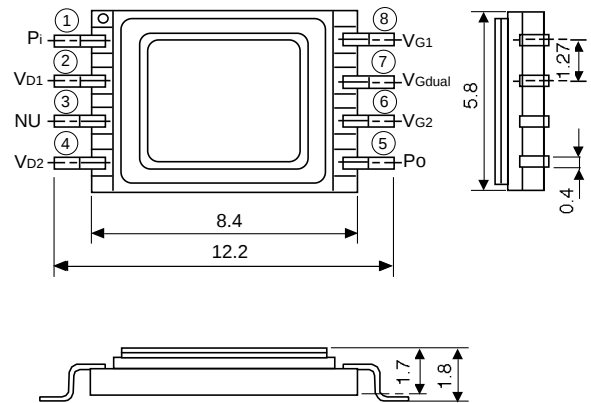
Base-station of Japanese personal handyphone system(PHS)

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	$V_{G\text{dual}}$	: GAIN CONTROL
GND	: GND	P_o	: RF OUTPUT

GC-3**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Ratings	Unit
V_{D1}, V_{D2}	Drain voltage	5.5	V
$V_{G1}, V_{G2}, V_{G\text{dual}}$	Gate voltage	-5.5	V
I_{D1}, I_{D2}, I_{D3}	Drain current	500	mA
P_i	Input power	10	dBm
$T_c(\text{op})$	Operating case temperature	-20 to +90	°C
T_{stg}	Storage temperature	-35 to +120	°C

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

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	$P_o=26\text{dBm}, f=1.9\text{GHz}, \pi/4\text{DQPSK}$	21	—	—	dB
I_{Dt}	Total drain current		—	300	—	mA
G_{con}	Gain control range	$V_{G\text{dual}}=0/-4\text{V}, P_o=26\text{dBm}, f=1.9\text{GHz}$	20	—	—	dB
A.C.P ($\pm 600\text{kHz}$)	Adjacent channel power	$P_o=26\text{dBm}, f(\text{ACP})=\pm 600\text{kHz}, f=1.9\text{GHz}, \pi/4\text{DQPSK}$	—	—	-56	dBc
A.C.P ($\pm 900\text{kHz}$)		$P_o=26\text{dBm}, f(\text{ACP})=\pm 900\text{kHz}, f=1.9\text{GHz}, \pi/4\text{DQPSK}$	—	—	-62	dBc

Note1: $Z_S=Z_L=50\Omega, I_{D1}\text{-bias}=I_{D1}+I_{D2}=280\text{mA}$