MITSUBISHI ELECTRIC

< High-power GaAs FET (small signal gain stage) >

MGF0909A

L & S BAND / 6W
non - matched

DESCRIPTION

The MGF0909A, GaAs FET with an N-channel schottky gate, is designed for use L & S band Amplifiers

FEATURES

- High output power
  Po=384.0dBm(TYP.) @f=2.3GHz
- High power gain
  GLp=11.0dB(TYP.) @f=2.3
- High power added efficiency
  P.A.E=45%(TYP.) @f=2.3GHz, P1dB

APPLICATION

- For L & S band power amplifiers

QUALITY

- GG

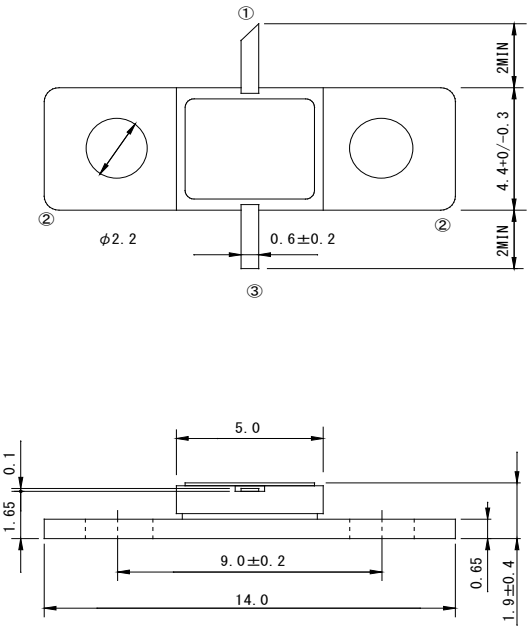
Packaging

- 4 inch Tray (25 pcs)

RECOMMENDED BIAS CONDITIONS

- Vds=8V • Ids=1.3A • Rg=100Ω

OUTLINE DRAWING Unit : millimeters



GF-7

(1) GATE
(2) SOURCE (FLANGE)
(3) DRAIN

Absolute maximum ratings (Ta=25°C)

Symbol	Parameter	Ratings	Unit
VGDO	Gate to Drain Voltage	-15	V
VGSO	Gate to source voltage	-15	V
ID	Drain current	5	A
IGR	Reverse gate current	-15	mA
IGF	Forward gate current	31.5	mA
PT*1	Total power dissipation	30	W
Tch	Cannel temperature	175	°C
Tstg	Storage temperature	-65 to +175	°C

*1:Tc=25°C

Electrical characteristics (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
IDSS	Saturation drain current	VDS=3V. VGS=0V	-	-	5	A
gm	Transconductance	VDS=3V, ID=1.3A	-	1.5	-	S
VGS(off)	Gate to source cut-off voltage	VDS=3V,ID=10mA	-2	-	-5	V
P1dB	Output power 1dB compression P	VDS=10V,ID(RF off)=1.3A	37	38	-	dBm
P.A.E *1	Power added efficiency	f=2.3GHz *1 Po=P1dB	-	45	-	%
GLP *2	Linear power gain	*2 : Pin=22dBm	10.0	11.0	-	dB
Rth(ch-c) *3	Thermal resistance	ΔVf method	-	-	5	°C/W

*3 :Channel-case

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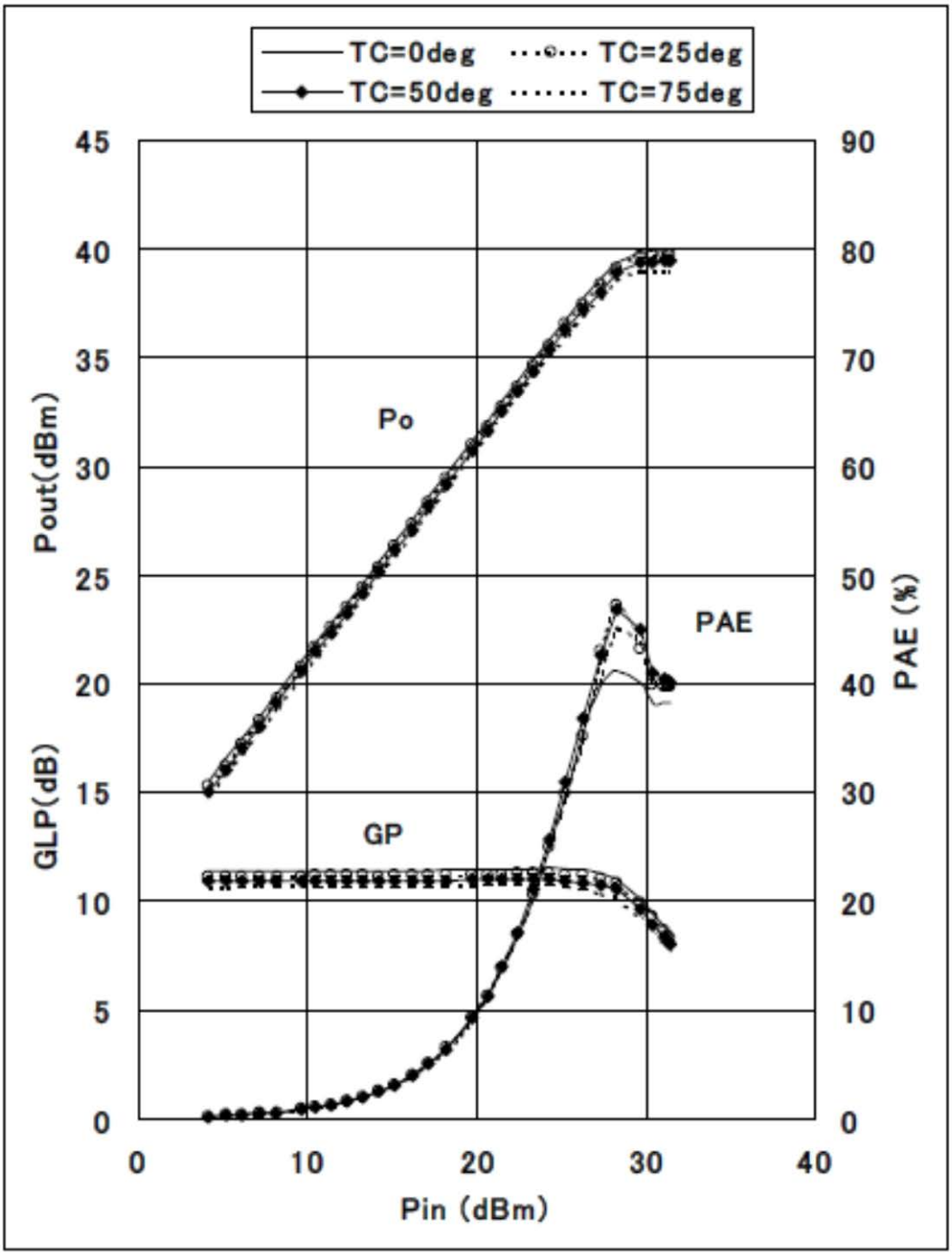
MGF0909A TYPICAL CHARACTERISTICS(Ta=0/25/50/75deg.C)



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