

< C band internally matched power GaAs FET >

MGFC36V6472A

6.4 - 7.2 GHz BAND / 4W

DESCRIPTION

The MGFC36V6472A is an internally impedance-matched GaAs power FET especially designed for use in 6.4 - 7.2 GHz band amplifiers. The hermetically sealed metal-ceramic package guarantees high reliability.

FEATURES

Class A operation

Internally matched to 50(ohm) system • High output power

- P1dB=4W (TYP.) @f=6.4 7.2GHz • High power gain
- GLP=9.5dB (TYP.) @f=6.4 7.2GHz • High power added efficiency
- P.A.E.=30% (TYP.) @f=6.4 7.2GHz • Low distortion [item -51]
- IM3=-45dBc (TYP.) @Po=25dBm S.C.L

APPLICATION

- item 01 : 6.4 7.2 GHz band power amplifier
- item 51 : 6.4 7.2 GHz band digital radio communication

QUALITY

• IG

RECOMMENDED BIAS CONDITIONS

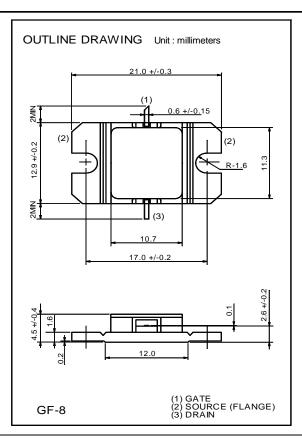
• VDS=10V • ID=1.2A Refer to Bias Procedure • RG=100ohm

Absolute maximum ratings (Ta=25°C)

Symbol	Parameter	Ratings	Unit					
VGDO	Gate to drain breakdown voltage	-15	V					
VGSO	Gate to source breakdown voltage	-15	V					
ID	Drain current	3.75	А					
IGR	Reverse gate current	-10	mA					
IGF	Forward gate current	21	mA					
PT *1	Total power dissipation	25	W					
Tch	Cannel temperature	175	°C					
Tstg	Storage temperature	-65 to +175	°C					

*1 : Tc=25°C

Electrical characteristics (Ta=25°C)



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Symbol	Parameter	Test conditions	Limits		Unit	
			Min.	Тур.	Max.	
IDSS	Saturated drain current	VDS=3V,VGS=0V	-	-	3.75	А
gm	Transconductance	VDS=3V,ID=1.1A	-	1	-	S
VGS(off)	Gate to source cut-off voltage	VDS=3V,ID=10mA	-	-	-4.5	V
P1dB	Output power at 1dB gain compression	VDS=10V,ID(RF off)=1.2A	35	37	-	dBm
GLP	Linear Power Gain	f=6.4 – 7.2GHz	8	9.5	-	dB
ID	Drain current		-	-	1.8	А
P.A.E.	Power added efficiency		-	30	-	%
IM3 *2	3rd order IM distortion		-42	-45	-	dBc
Rth(ch-c) *3	Thermal resistance	delta Vf method	-	5	6	°C/W

*2 :item -51 ,2 tone test,Po=25dBm Single Carrier Level ,f=7.2GHz,delta f=10MHz

*3 :Channel-case

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