

MGFC41V6472

6.4 ~ 7.2GHz BAND 12W INTERNALLY MATCHED GaAs FET

DESCRIPTION

The MGFC41V6472 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 = 12W (TYP.) @ f=6.4~7.2GHz
- High power gain
 - GLP = 9 dB (TYP.) @ f=6.4~7.2GHz
- High power added efficiency
 - P.A.E. = 32 % (TYP.) @ f=6.4~7.2GHz
- Low distortion [item -51]
 - IM3= -45 dBc(TYP.) @Po=30dBm S.C.L.
- Thermal Resistance
 - Rth(ch-c)= - deg.C/W(TYP.)

APPLICATION

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

QUALITY GRADE

IG

RECOMMENDED BIAS CONDITIONS

- VDS = 10 V
- ID = 3.4 A Refer to Bias Procedure
- RG= 50 ohm

ABSOLUTE MAXIMUM RATINGS

(Ta=25 deg.C)

Symbol	Parameter	Ratings	Unit
VGDO	Gate to drain voltage	-15	V
VGSO	Gate to source voltage	-15	V
ID	Drain current	12	A
IGR	Reverse gate current	-30	mA
IGF	Forward gate current	63	mA
PT	Total power dissipation *1	53.6	W
Tch	Channel temperature	175	deg.C
Tstg	Storage temperature	-65 ~ +175	deg.C

*1 : Tc=25 deg.C

ELECTRICAL CHARACTERISTICS

(Ta=25 deg.C)

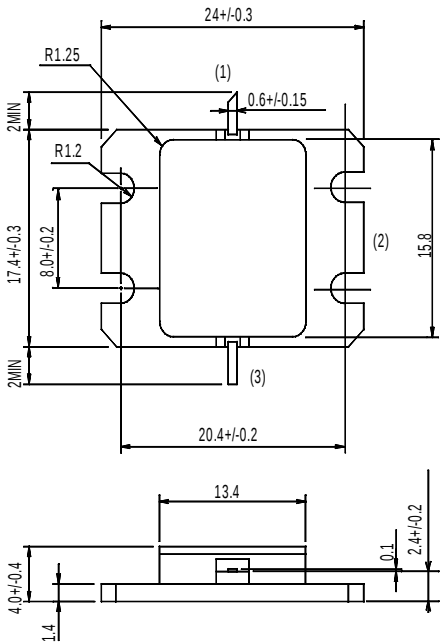
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
IDSS	Saturated drain current	VDS=3V, VGS=0V	-	-	12	A
gm	Transconductance	VDS=3V, ID=3A	-	3	-	S
VGS(off)	Gate to source cut-off voltage	VDS=3V, ID=30mA	-	-	-5	V
P1dB	Output power at 1dB gain compression	VDS=10V, ID(RF off)=3.4A, f=6.4~7.2GHz	40	41	-	dBm
GLP	Linear power gain		8	9	-	dB
ID	Drain current		-	-	-	A
P.A.E.	Power added efficiency		-	32	-	%
IM3	3rd order IM distortion *1		-42	-45	-	dBc
Rth(ch-c)	Thermal resistance *2	Delta Vf method	-	2.2	2.8	deg.C/W

*1 : item -51, 2 tone test, Po=30dBm Single Carrier Level, f=7.2GHz, Delta f=10MHz

*2 : Channel to case

OUTLINE DRAWING

Unit: millimeters (inches)



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

GF-18

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