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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(c-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

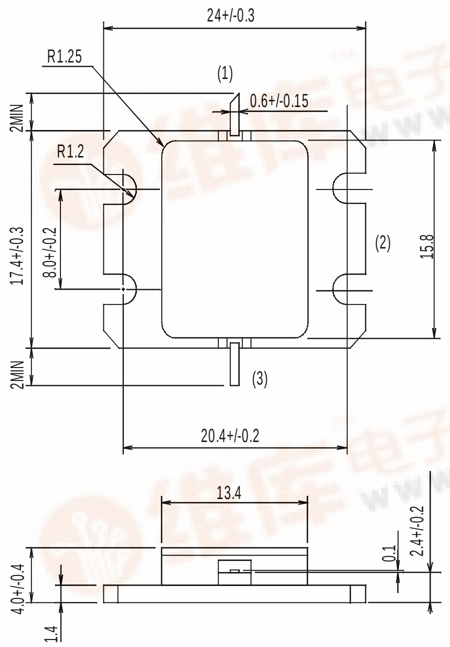
VDS = 10 V

ID = 3.4 A Refer to Bias Procedure

RG= 50 ohm

OUTLINE DRAWING

Unit: millimeters (inches)



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

GF-18

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

< Keep safety first in your circuit designs! >
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ELECTRICAL CHARACTERISTICS

(Ta=25 deg.C)

Symbol	Parameter	Test conditions	Limits Min.	Typ.	Max.	Unit
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

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