MGFC40V6472

6.4 - 7.2GHz BAND 10W INTERNALLY MATCHED GaAs FET

DESCRIPTION

The MGFC40V6472A 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

Internally matched to 50 ohm system
High output power
P1dB = 10W (TYP.) @ f=6.4 - 7.2 GHz
High power gain
GLP =9 dB (TYP.) @ f=6.4 - 7.2 GHz
High power added efficiency
P.A.E. = 32 % (TYP.) @ f=6.4 - 7.2 GHz
Low Distortion[Item-51]
IM3=-45 dBc(TYP.)@Po=29 dBm 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 GRADE

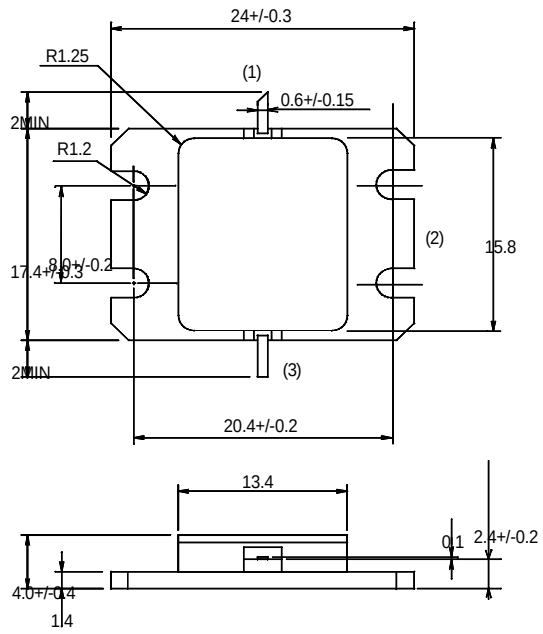
IG

RECOMMENDED BIAS CONDITIONS

V_{DS} = 10 (V)
ID = 2.4 (A)
Rg=50 (ohm) Refer to Bias Procedure GF-18

OUTLINE DRAWING

Unit: millimeters (inches)



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

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Ratings	Unit
VGDO	Gate to drain voltage	-15	V
VGSO	Gate to source voltage	-15	V
ID	Drain current	7.5	A
IGR	Reverse gate current	-20	mA
IGF	Forward gate current	42	mA
PT	Total power dissipation	42.8	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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ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
IDSS	Saturated drain current	VDS = 3V , VGS = 0V	-	4.5	6	A
Gm	Transconductance	VDS = 3V , ID = 2.2A	-	2	-	S
VGS(off)	Gate to source cut-off voltage	VDS = 3V , ID = 40mA	-2	-3	-4	V
P1dB	Output power at 1dB gain compression	VDS=10V, ID(RF off)=2.4A, f=6.4-7.2GHz	39.5	40.5	-	dBm
GLP	Linear power gain		7	9	-	dB
ID	Drain current		-	2.4	-	A
PAE	Power added efficiency		-	32	-	%
IM3	3rd order IM distortion *1		-42	-45	-	dBc
Rth(ch-c)	Thermal resistance *2	Delta Vf method	-	-	3.5	Deg.C/W

*1 : item -51,2 tone test,Po=29.0dBm Single Carrier Level,f=7.2GHz,Delta f=10MHz *2 : Channel-case

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