查询TIM1414-18L-252供应商 捷多邦，专业PCB打样工厂，24小时加急出货

TOSHIBA

MICROWAVE SEMICONDUCTOR

TECHNICAL DATA

MICROWAVE POWER GaAs FET

TIM1414-18L-252

FEATURES

- **HIGH POWER**
  P1dB=42.0dBm at 13.75GHz to 14.5GHz
- **HIGH GAIN**
  G1dB=6.0dB at 13.75GHz to 14.5GHz
- **LOW INTERMODULATION DISTORTION**
  IM3(Min.)=–25dBc at Po=36dBm Single Carrier Level
- **BROAD BAND INTERNALLY MATCHED FET**
- **HERMETICALLY SEALED PACKAGE**

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Gain Compression Point	P1dB	VDS= 9V IDSQ≅4.4A f = 13.75 – 14.5GHz	dBm	41.5	42.0	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	5.0	6.0	—
Drain Current	IDS1		A	—	5.5	6.0
Power Added Efficiency	ηadd		%	—	24	—
3rd Order Intermodulation Distortion	IM3	Two Tone Test Po= 36.0dBm (Single Carrier Level)	dBc	-25	—	—
Drain Current	IDS2		A	—	5.5	6.0
Channel Temperature Rise	ΔTch	VDS X IDS X Rth(c-c)	°C	—	—	100

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 4.8A	mS	—	6000	—
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 145mA	V	-0.7	-1.6	-2.3
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	A	—	10.0	—
Gate-Source Breakdown Voltage	VGSO	IGS= -145μA	V	-5	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	1.8	2.3

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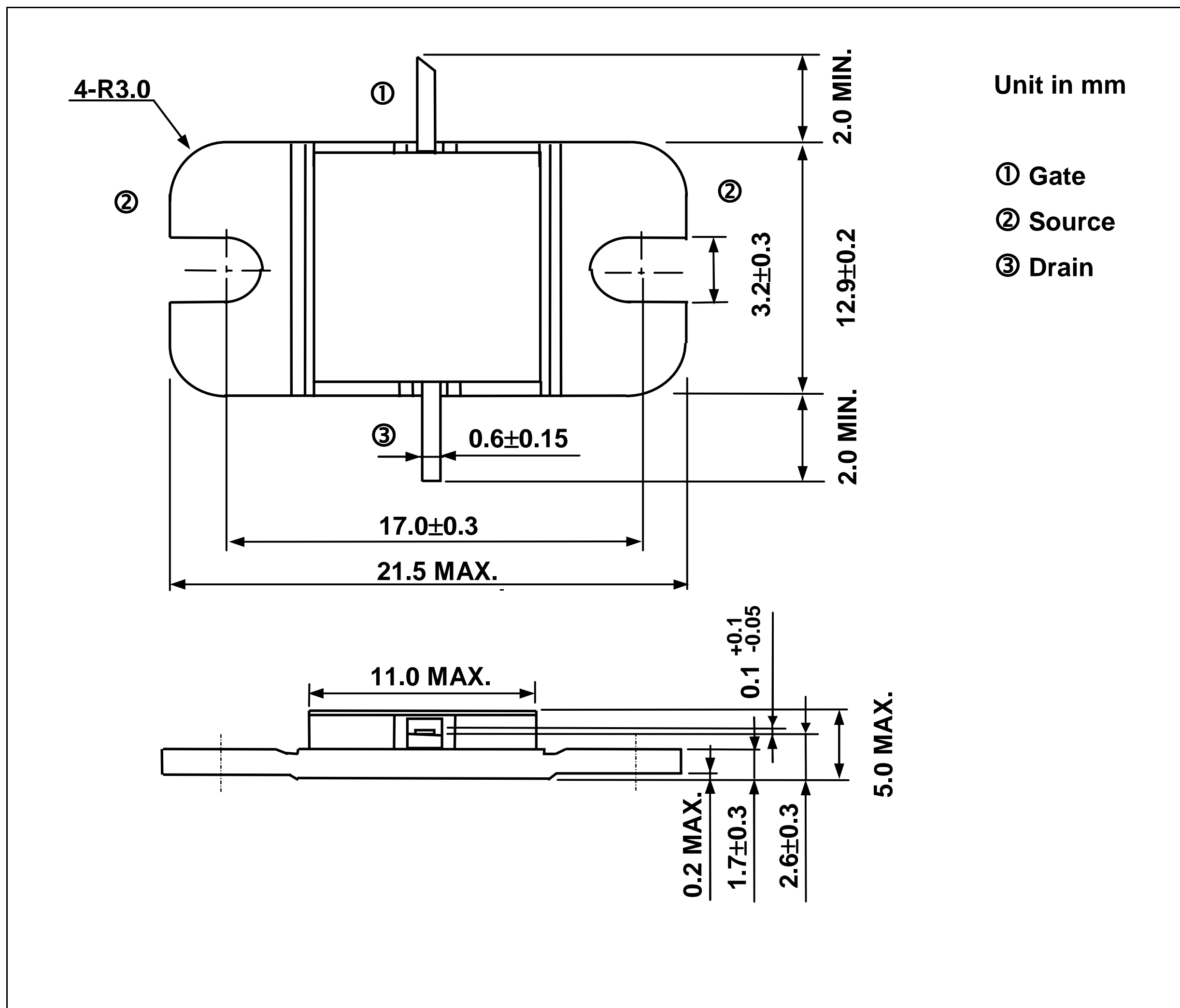
ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	A	11.5
Total Power Dissipation (Tc= 25 °C)	PT	W	60.0
Channel Temperature	Tch	°C	175
Storage	Tstg	°C	-65 to +175

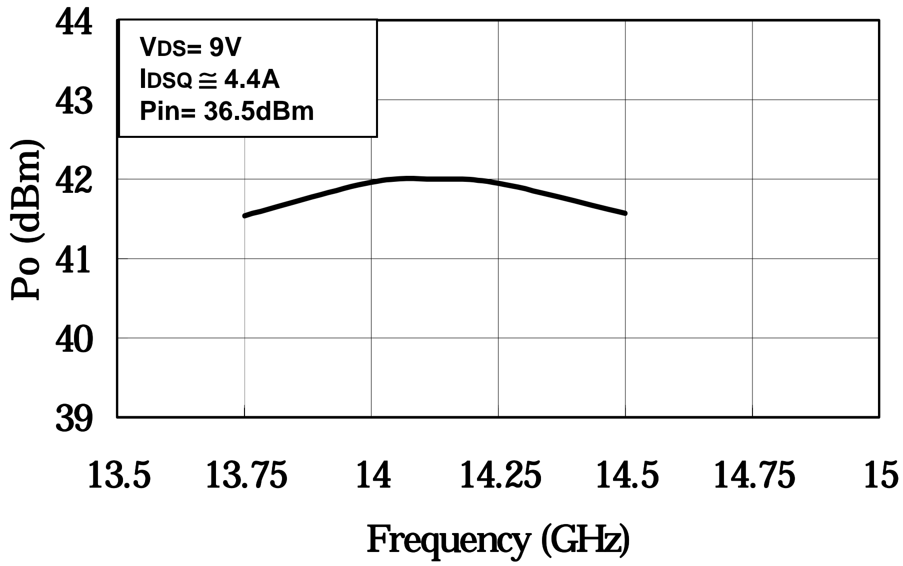
PACKAGE OUTLINE (2-11C1B)

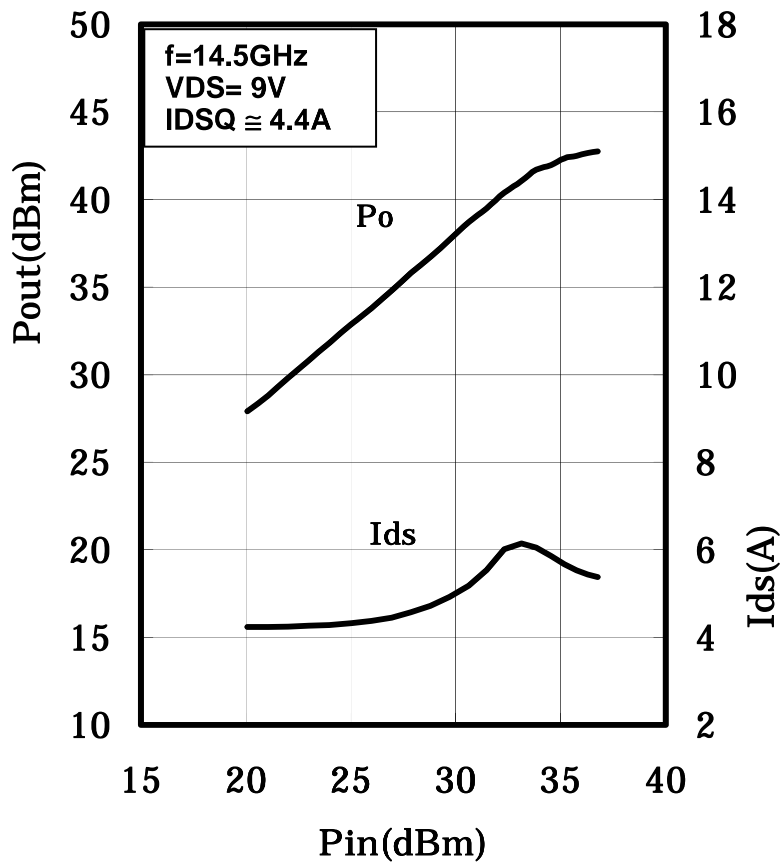


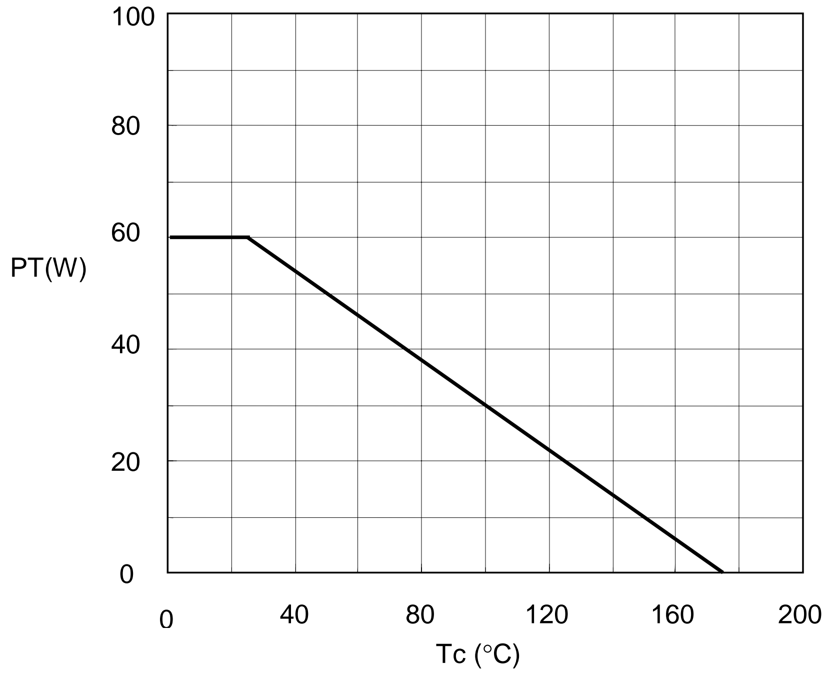
HANDLING PRECAUTIONS FOR PACKAGE MODEL

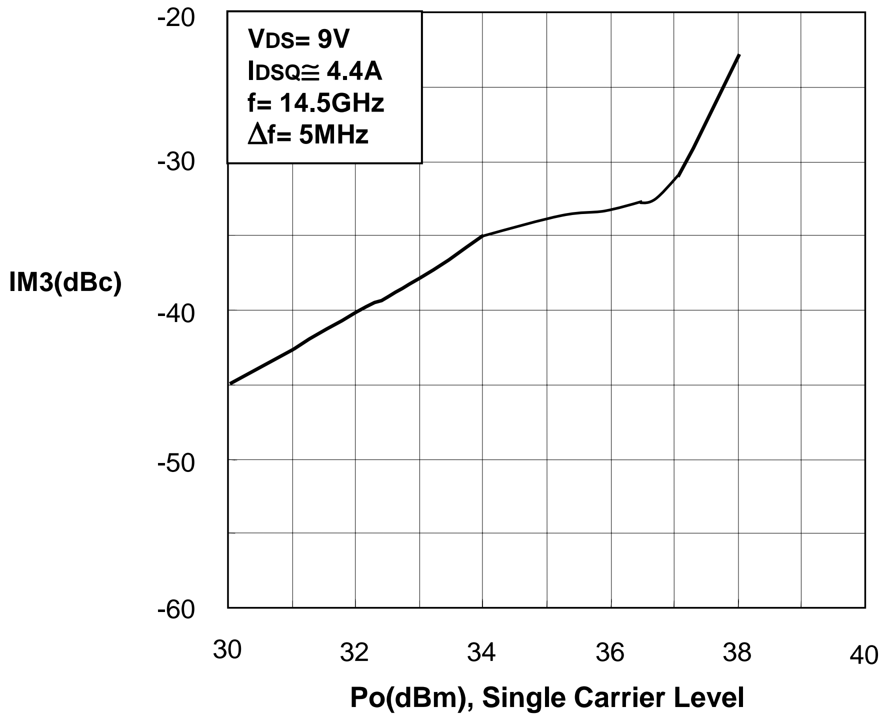
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCE






Power Dissipation vs. Case Temperature
100
80
60
40
20
0
PT(W)
0
40
80
120
160
200
Tc (°C)


IM3 vs. Output Power Characteristics
VDS= 9V
IDSQ≅ 4.4A
f= 14.5GHz
Δf= 5MHz
-20
-30
-40
-50
-60
IM3(dBc)
30
32
34
36
38
40
Po(dBm), Single Carrier Level