

**TOSHIBA**  
**MICROWAVE SEMICONDUCTOR**  
**TECHNICAL DATA**

**MICROWAVE POWER GaAs FET**  
**TIM6472-12UL**

**FEATURES**

- **HIGH POWER**  
 P1dB=41.5dBm at 6.4GHz to 7.2GHz
- **HIGH GAIN**  
 G1dB=9.5dB at 6.4GHz to 7.2GHz
- **BROAD BAND INTERNALLY MATCHED**
- **HERMETICALLY SEALED PACKAGE**

**RF PERFORMANCE SPECIFICATIONS ( Ta= 25°C )**

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Compression Point	P1dB	VDS= 10V f = 6.4 - 7.2GHz	dBm	40.5	41.5	—
Power Gain at 1dB Compression Point	G1dB		dB	8.5	9.5	—
Drain Current	IDS1		A	—	3.2	3.8
Gain Flatness	ΔG		dB	—	—	±0.6
Power Added Efficiency	ηadd		%	—	39	—
3rd Order Intermodulation Distortion	IM3	Two Tone Test Po=30.5dBm	dBc	-44	-47	—
Drain Current	IDS2	(Single Carrier Level)	A	—	3.2	3.8
Channel Temperature Rise	ΔTch	VDS X IDS X Rth(c-c)	°C	—	—	80

**ELECTRICAL CHARACTERISTICS ( Ta= 25°C )**

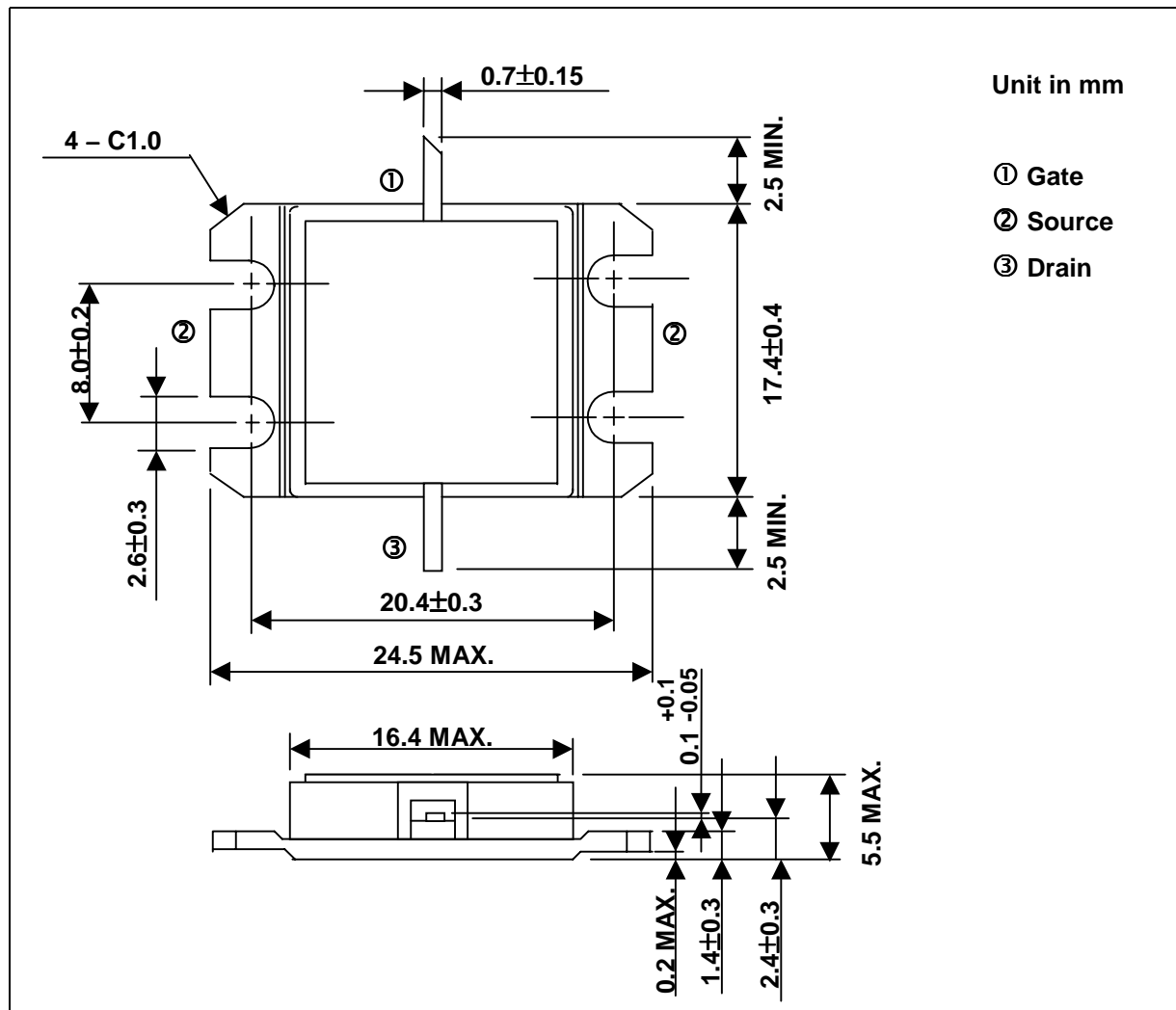
CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 4.0A	mS	—	2500	—
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 40mA	V	-1.0	-2.5	-4.0
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	A	—	7.2	10.0
Gate-Source Breakdown Voltage	VGSO	IGS= -140μA	V	-5	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	2.0	2.4

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**ABSOLUTE MAXIMUM RATINGS ( Ta= 25°C )**

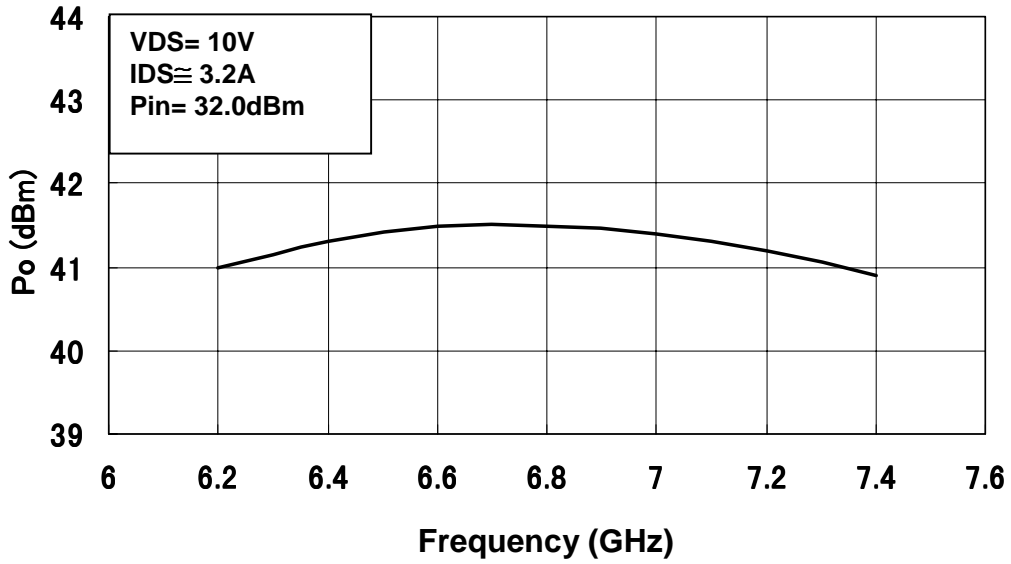
CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	A	10.0
Total Power Dissipation (Tc= 25 °C )	PT	W	62.5
Channel Temperature	Tch	°C	175
Storage	Tstg	°C	-65 ~ +175

**PACKAGE OUTLINE (2-16G1B)****HANDLING PRECAUTIONS FOR PACKAGED TYPE**

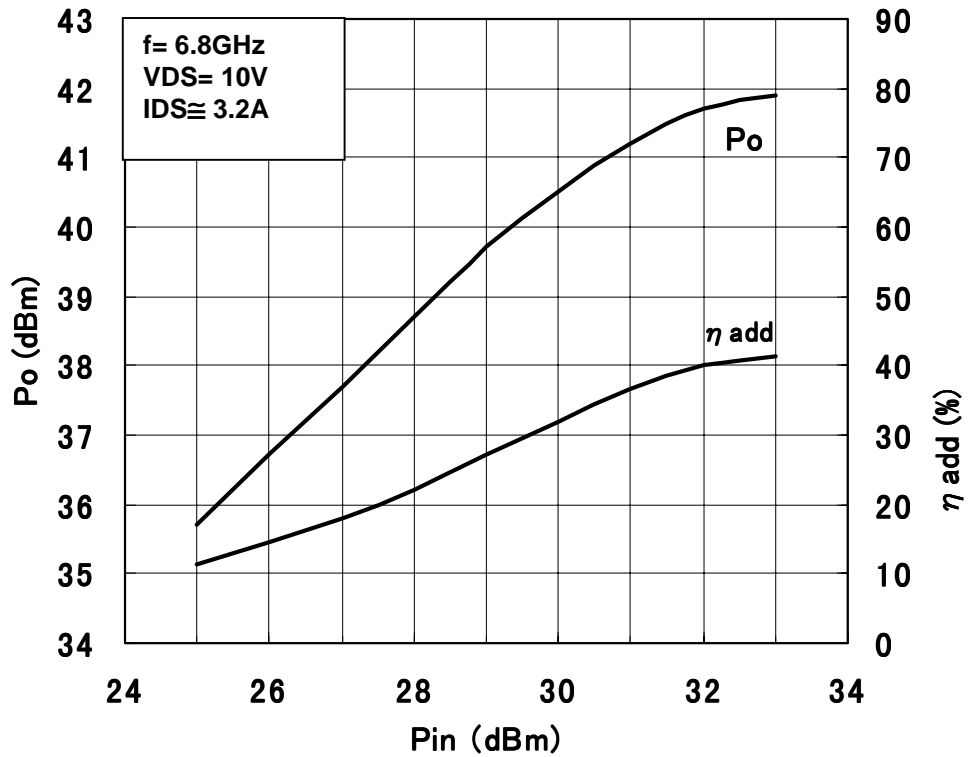
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCES

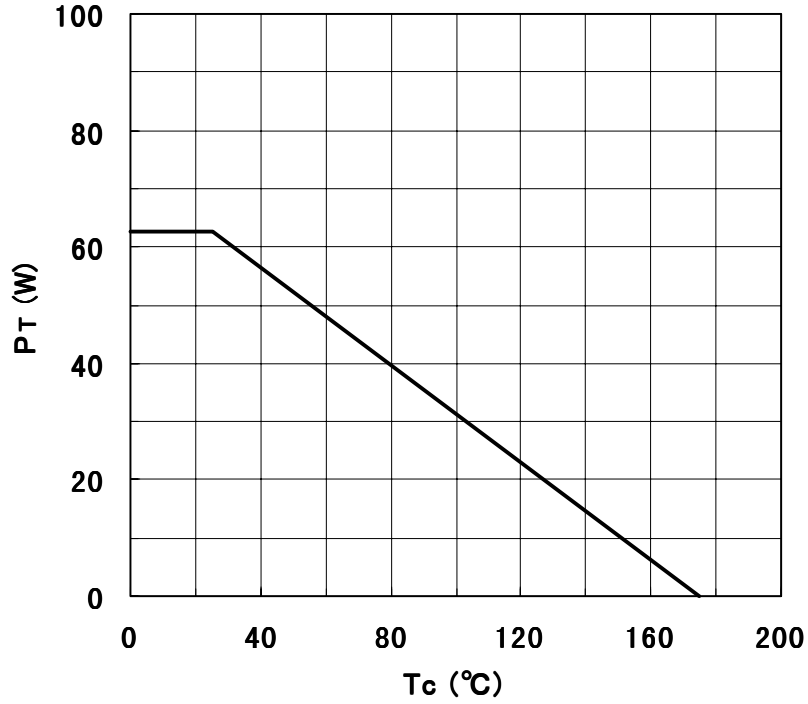
Output Power vs. Frequency



Output Power vs. Input Power



**POWER DISSIPATION vs. CASE TEMPERATURE**



**IM3 vs. OUTPUT POWER CHARACTERISTICS**

