TOSHIBA

MICROWAVE POWER GaAs FET TIM5867-30UL

MICROWAVE SEMICONDUCTOR TECHNICAL DATA

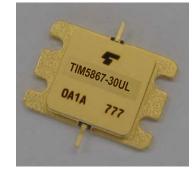
FEATURES

- **·BROAD BAND INTERNALLY MATCHED FET**
- ·HIGH POWER
 - P1dB= 45.0dBm at 5.85GHz to 6.75GHz

·HIGH GAIN

G1dB= 10.0dB at 5.85GHz to 6.75GHz

·HERMETICALLY SEALED PACKAGE



CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.	
Output Power at 1dB Gain Compression Point	P1dB	VDS= 10V IDSset= 6.4A f = 5.85 to 6.75GHz	dBm	44.0	45.0	_	
Power Gain at 1dB Gain Compression Point	G1dB		dB	9.0	10.0		
Drain Current	IDS1		А	_	7.0	8.0	
Gain Flatness	∆G		dB	_		±0.8	
Power Added Efficiency	ηadd		%	_	41		
3rd Order Intermodulation Distortion	IM3	Two Tone Test Po= 34.0dBm, ∆f= 5MHz (Single Carrier Level)	dBc	-44	-47		
Drain Current	IDS2		А		7.0	8.0	
Channel Temperature Rise	∆Tch	(VDS X IDS + Pin – P1dB) X Rth(c-c)	°C			100	

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

Recommended Gate Resistance(Rg): 28 Ω

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 10.0A	S	_	8.0	_
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 80mA	V	-0.5	-2.0	-3.0
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	А	_	16.0	
Gate-Source Breakdown Voltage	VGSO	IGS= -240µA	V	-5		
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	_	1.0	1.5

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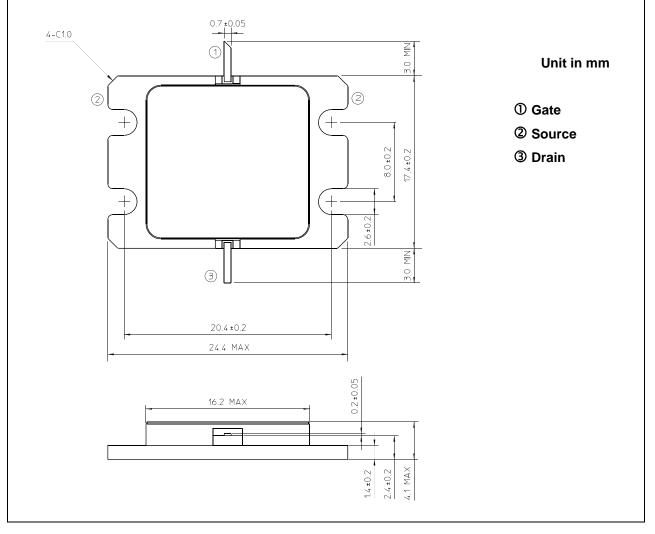
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ABSOLUTE MAXIMUM RATINGS ($Ta=25^{\circ}C$)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	A	18.0
Total Power Dissipation (Tc= 25°C)	PT	W	100
Channel Temperature	Tch	°C	175
Storage	Tstg	°C	-65 to +175

PACKAGE OUTLINE (7-AA05A)



HANDLING PRECAUTIONS FOR PACKAGE MODEL

Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.