TOSHIBA

MICROWAVE POWER GaAs FET TIM1011-5L

MICROWAVE SEMICONDUCTOR TECHNICAL DATA

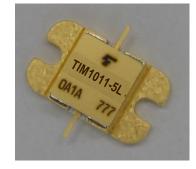
FEATURES

- •BROAD BAND INTERNALLY MATCHED FET •HIGH POWER
- P1dB= 37.5dBm at 10.7GHz to 11.7GHz

·HIGH GAIN

G1dB= 7.0dB at 10.7GHz to 11.7GHz

HERMETICALLY SEALED PACKAGE



CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Gain Compression Point	P1dB	VDS= 9V IDSset= 2.0A f=10.7 to 11.7 GHz	dBm	37.0	37.5	
Power Gain at 1dB Gain Compression Point	G1dB		dB	6.0	7.0	
Drain Current	IDS1		А	_	2.0	2.5
Gain Flatness	ΔG		dB			±0.8
Power Added Efficiency	ηadd		%		25	
3rd Order Intermodulation Distortion	IM3	Two Tone Test Po= 25.0dBm, ∆f= 5MHz (Single Carrier Level)	dBc	-42	-45	
Drain Current	IDS2		А	_	4.5	5.5
Channel Temperature Rise	∆Tch	(VDS X IDS + Pin – P1dB) X Rth(c-c)	°C			80

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

Recommended Gate Resistance(Rg): 150 Ω

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 2.4A	S	_	1.5	_
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 72mA	V	-1.5	-3.0	-4.5
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	А	_	5.0	_
Gate-Source Breakdown Voltage	VGSO	IGS= -72μA	V	-5		_
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	_	3.0	3.7

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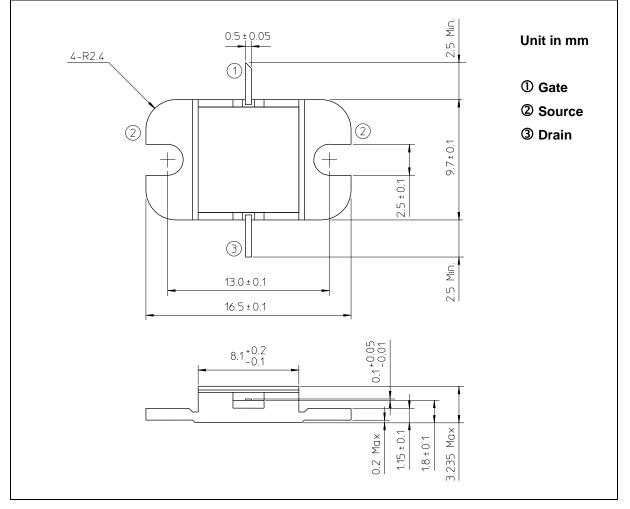
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MICROWAVE SEMICONDUCTOR TECHNICAL DATA

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	5.7
Total Power Dissipation (Tc= 25°C)	PT	W	40.5
Channel Temperature	Tch	°C	175
Storage Temperature	Tstg	°C	-65 to +175

PACKAGE OUTLINE (2-9D1B)



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.