TOSHIBA

MICROWAVE SEMICONDUCTOR TECHNICAL DATA

MICROWAVE POWER GaAs FET TIM4450-8SL **PRELIMINARY**

FEATURES

- **HIGH POWERT**
 - P1dB=39.5dBm at 4.4GHz to 5.0GHz
- **HIGH GAIN**

G1dB=9.5dB at 4.4GHz to 5.0GHz

■ BROAD BAND INTERNALLY MATCHED

■ HERMETICALLY SEALED PACKAGE

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB	P1dB		dBm	38.5	39.5	_
Compression Point						
Power Gain at 1dB	G1dB	VDS= 10V	dB	8.5	9.5	
Compression Point		f= 4.4 to 5.0GHz				
Drain Current	IDS1		Α		2.2	2.6
Gain Flatness	ΔG		dB			±0.6
Power Added Efficiency	ηadd		%		36	
3 rd Order Intermodulation	IM3		dBc	-42	-45	
Distortion		NOTE				
Drain Current	IDS2		Α		2.2	2.6
Channel Temperature Rise	ΔTch	VDS X IDS X Rth(c-c)	°C			80

NOTE: Two Tone Test, Po=28.5dBm (Single Carrier Level)

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	Gm	VDS= 3V	mS	_	1800	_
		IDS= 3.0A				
Pinch-off Voltage	VGSoff	VDS= 3V	V	-1.0	-2.5	-4.0
		IDS= 30mA				
Saturated Drain Current	IDSS	VDS= 3V	Α		5.2	7.0
		VGS= 0V				
Gate-Source Breakdown	VGSO	IGS= -100μA	V	-5		_
Voltage						
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W		2.5	3.8

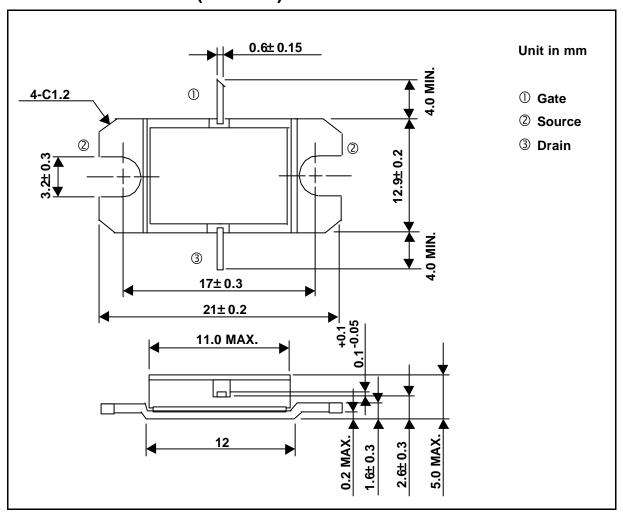
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ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	Α	7.0
Total Power Dissipation (Tc= 25 °C)	РТ	W	37.5
Channel Temperature	Tch	°C	175
Storage Temperature	Tstg	°C	-65 to +175

PACKAGE OUTLINE (2-11D1B)



HANDLING PRECAUTIONS FOR PACKAGED TYPE

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