TOSHIBA

MICROWAVE SEMICONDUCTOR TECHNICAL DATA

FEATURES

HIGH POWERT

P1dB=36.5dBm at 3.3GHz to 3.6GHz

HIGH GAIN

G1dB=10.0dB at 3.3GHz to 3.6GHz

MICROWAVE POWER GaAs FET TIM3742-4SL-341 PRELIMINARY

- BROAD BAND INTERNALLY MATCHED
- HERMETICALLY SEALED PACKAGE

RF PERFORMANCE SPECIFICATIONS $(Ta = 25^{\circ}C)$ **CHARACTERISTICS** SYMBOL CONDITION UNIT MIN. TYP. MAX. Output Power at 1dB P1dB dBm 35.5 36.5 **Compression Point VDS= 10V** Power Gain at 1dB G1dB dB 10.0 f= 3.3 to 3.6GHz **Compression Point Drain Current** IDS1 А 1.1 1.3 ____ Gain Flatness ΔG dB ±0.6 Power Added Efficiency % ____ 37 ____ η_{add} 3rd Order Intermodulation IM3 dBc -42 -45 Distortion NOTE Drain Current IDS2 А 1.3 1.1 °C Channel Temperature Rise ΔTch VDS X IDS X Rth(c-c) 80

NOTE : Two Tone Test, Po=25.5dBm (Single Carrier Level)

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V	mS	_	900	_
		IDS= 1.5A				
Pinch-off Voltage	VGSoff	VDS= 3V	V	-1.0	-2.5	-4.0
		IDS= 15mA				
Saturated Drain Current	IDSS	VDS= 3V	Α	_	2.6	3.5
		VGS= 0V				
Gate-Source Breakdown	VGSO	IGS= -50μΑ	V	-5	_	
Voltage						
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W		4.5	6.5

• The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA for any infringements of patents or other rights of the third parties which may results from its use, No license is granted by implication or otherwise under any patent or patent rights of TOSHIBA or others.

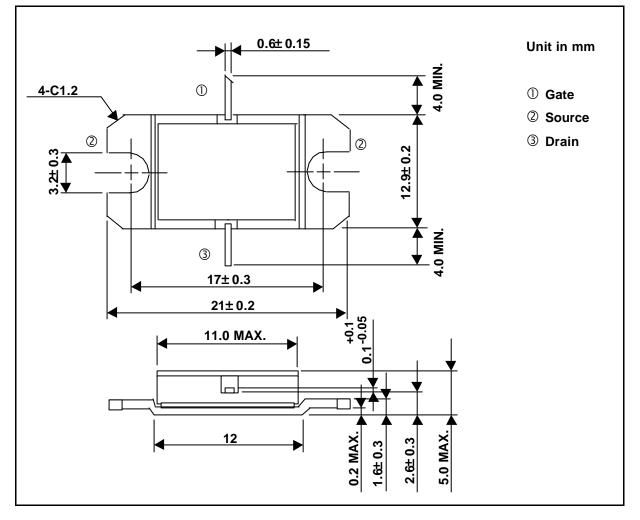
The information contained herein is subject to change without prior notice. It is therefor advisable to contact TOSHIBA before proceeding with design of equipment incorporating this product.

Jun. 2002

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	А	3.5
Total Power Dissipation (Tc= 25 °C)	PT	W	23.0
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.