

## TIM5964-30L-251

### 1. RF PERFORMANCE SPECIFICATIONS (Ta= 25 °C)

CHARACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power at 1dB Compression Point	P <sub>1dB</sub>	V <sub>DS</sub> = 10V f= 5.9- 6.75GHz	44.0	44.5	—	dBm
Power Gain at 1dB Compression Point	G <sub>1dB</sub>		7.0	8.0	—	dB
Drain Current	I <sub>DS1</sub>		—	8.0	9.0	A
Gain Flatness	ΔG		—	—	±0.8	dB
Power Added Efficiency	η <sub>add</sub>		—	33	—	%
3rd Order Intermodulation Distortion	IM <sub>3</sub>	NOTE	-42	-45	—	dBc
Drain Current	I <sub>DS2</sub>		—	8.0	9.0	A

NOTE : Two Tone Test, P<sub>o</sub>= 34.5dBm (Single Carrier Level)

### 2. ELECTRICAL CHARACTERISTICS (Ta= 25 °C)

CHARACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Transconductance	gm	V <sub>DS</sub> = 3V I <sub>DS</sub> = 10.5A	—	6300	—	mS
Pinch-off Voltage	V <sub>GSoFF</sub>	V <sub>DS</sub> = 3V I <sub>DS</sub> = 140mA	-2.0	-3.5	-5.0	V
Saturated Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 3V V <sub>GS</sub> = 0V	—	20	26	A
Gate-Source Breakdown Voltage	V <sub>GSO</sub>	I <sub>GS</sub> = -420 μA	-5	—	—	V
Thermal Resistance	R <sub>th(c-c)</sub>	Channel to Case	—	0.8	1.0	°C/W
Channel-Temperature Rise	ΔT <sub>ch</sub>	V <sub>DS</sub> ×I <sub>DS</sub> ×R <sub>th(c-c)</sub>	—	—	80	°C

Applications Engineering

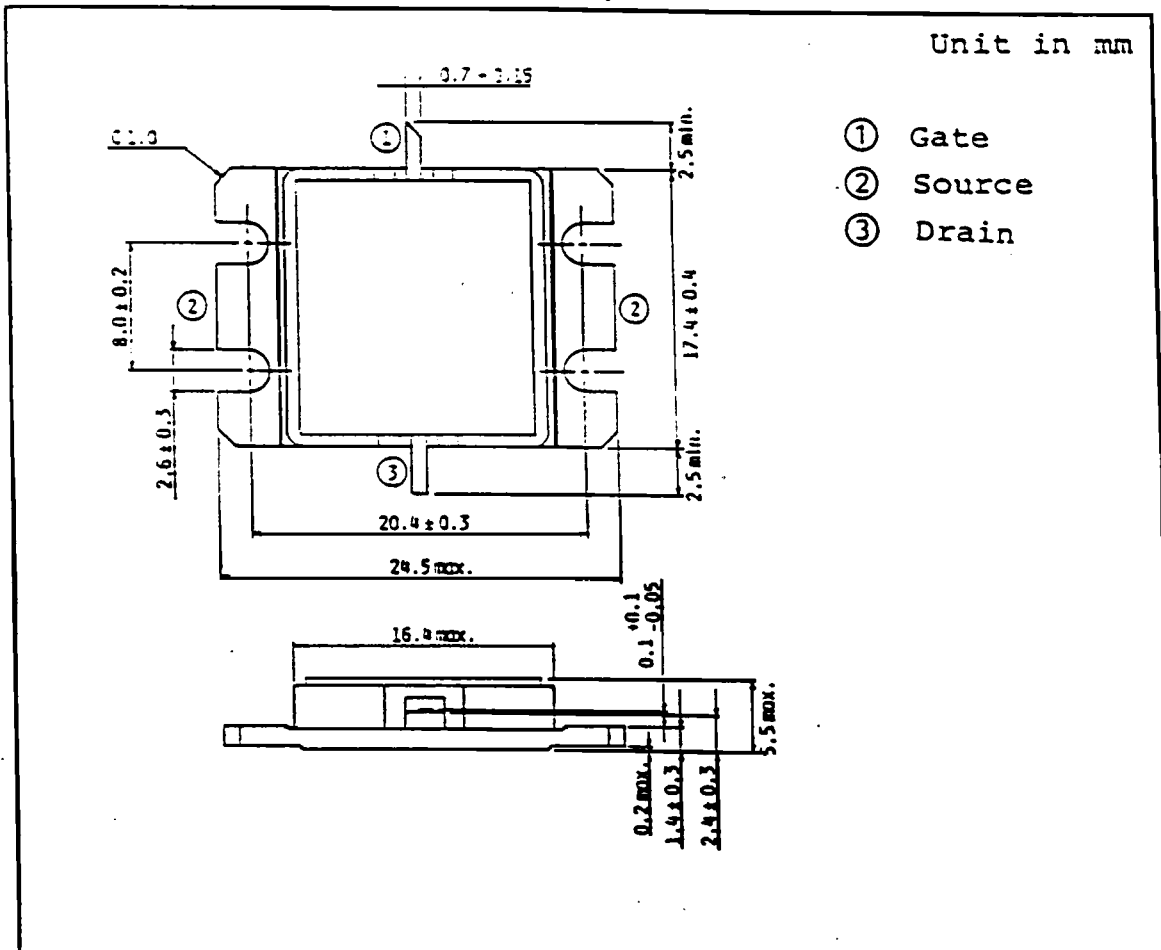
Solid-State Engineering Department

**TOSHIBA** CORPORATION, Komukai Works

### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	$V_{DS}$	V	15
Gate-Source Voltage	$V_{GS}$	V	-5
Drain Current	$I_{DS}$	A	26
Total Power Dissipation ( $T_c=25^\circ\text{C}$ )	$P_T$	W	120
Channel Temperature	$T_{ch}$	$^\circ\text{C}$	175
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-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  $260^\circ\text{C}$ .