

TOSHIBA

MICROWAVE SEMICONDUCTOR TECHNICAL DATA

MICROWAVE POWER GaAs FET

TIM1414-8-252

RF PERFORMANCE SPECIFICATIONS (Ta=25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Gain Compression Point	P1dB	VDD=9V f = 13.75-14.5GHz	dBm	38.0	39.0	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	4.0	5.0	—
Drain Current	Ids1		A	—	3.4	4.4
Power Added Efficiency	η_{add}		%	—	18	—

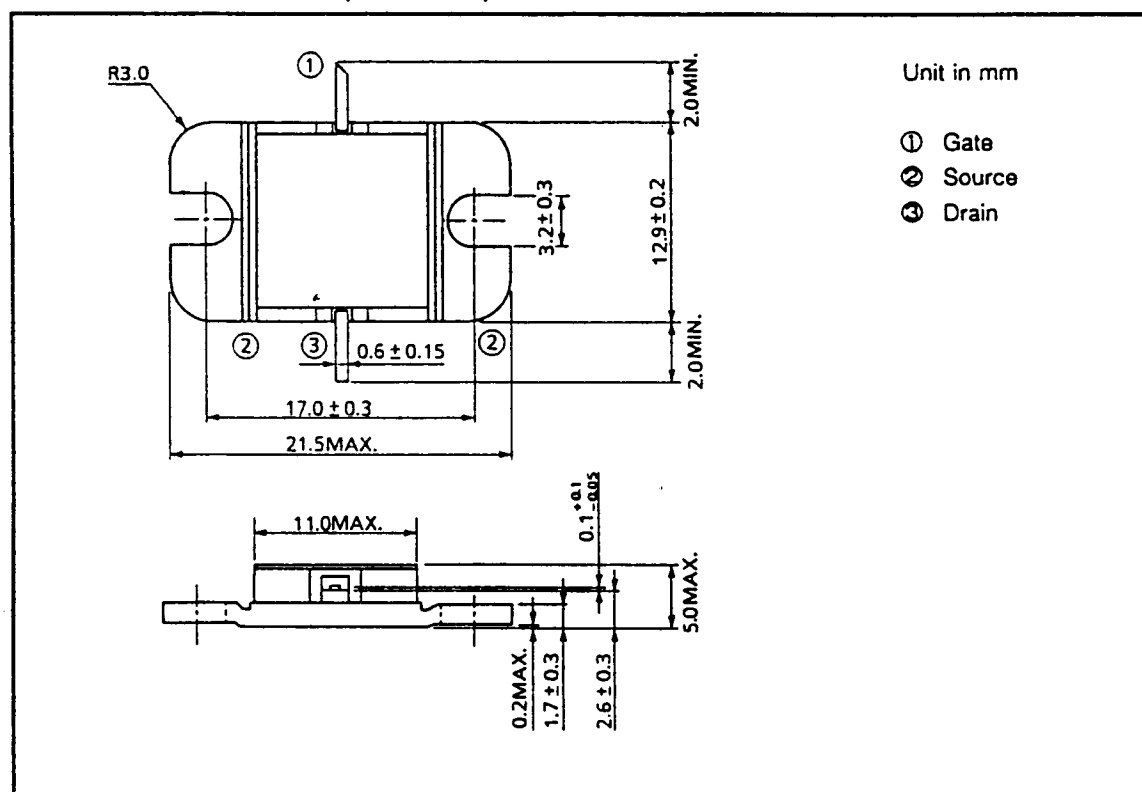
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
DRAIN SUPPLY VOLTAGE	gm	Vds=3V Ids=4.0A	mS	—	2400	—
Pinch-off Voltage	Vgsoff	Vds=3V Ids=120mA	V	-2.0	-3.5	-5.0
Saturated Drain Current	Idss	Vds=3V Vgs=0V	A	—	8.0	10.4
Gate-Source Breakdown Voltage	Vgso	IGS= -120μA	V	-5	—	—
Thermal Resistance	Rth (c-c)	Channel to case	°C/W	—	1.6	2.5

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

CHARACTERISTIC	SYMBOL	UNIT	RATING
Drain-Source Voltage	V_{DS}	V	15
Gate-Source Voltage	V_{GS}	V	-5
Drain Current	I_{DS}	A	10.4
Total Power Dissipation ($T_c=25^{\circ}\text{C}$)	P_T	W	60
Channel Temperature	T_{ch}	$^{\circ}\text{C}$	175
Storage Temperature	T_{stg}	$^{\circ}\text{C}$	-65-175

PACKAGE OUTLINE (2-11C1B)



HANDLING PRECAUTIONS FOR PACKAGED TYPE

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