

TOSHIBA

MICROWAVE SEMICONDUCTOR TECHNICAL DATA

MICROWAVE POWER GaAs FET
Partially Matched

S9G77A
Preliminary

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

CHARACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power at 1dB Compression Point	P _{1dB}	V _{DS} = 9V f= 3.7GHz	32.0	—	—	dBm
Power Gain at 1dB Compression Point	G _{1dB}		9.5	—	—	dB
Drain Current	I _{DS}		—	—	0.65	A
Thermal Resistance	R _{th(c-c)}	Channel to Case	—	8.0	9.5	°C/W

2. ELECTRICAL CHARACTERISTICS (Ta= 25 °C)

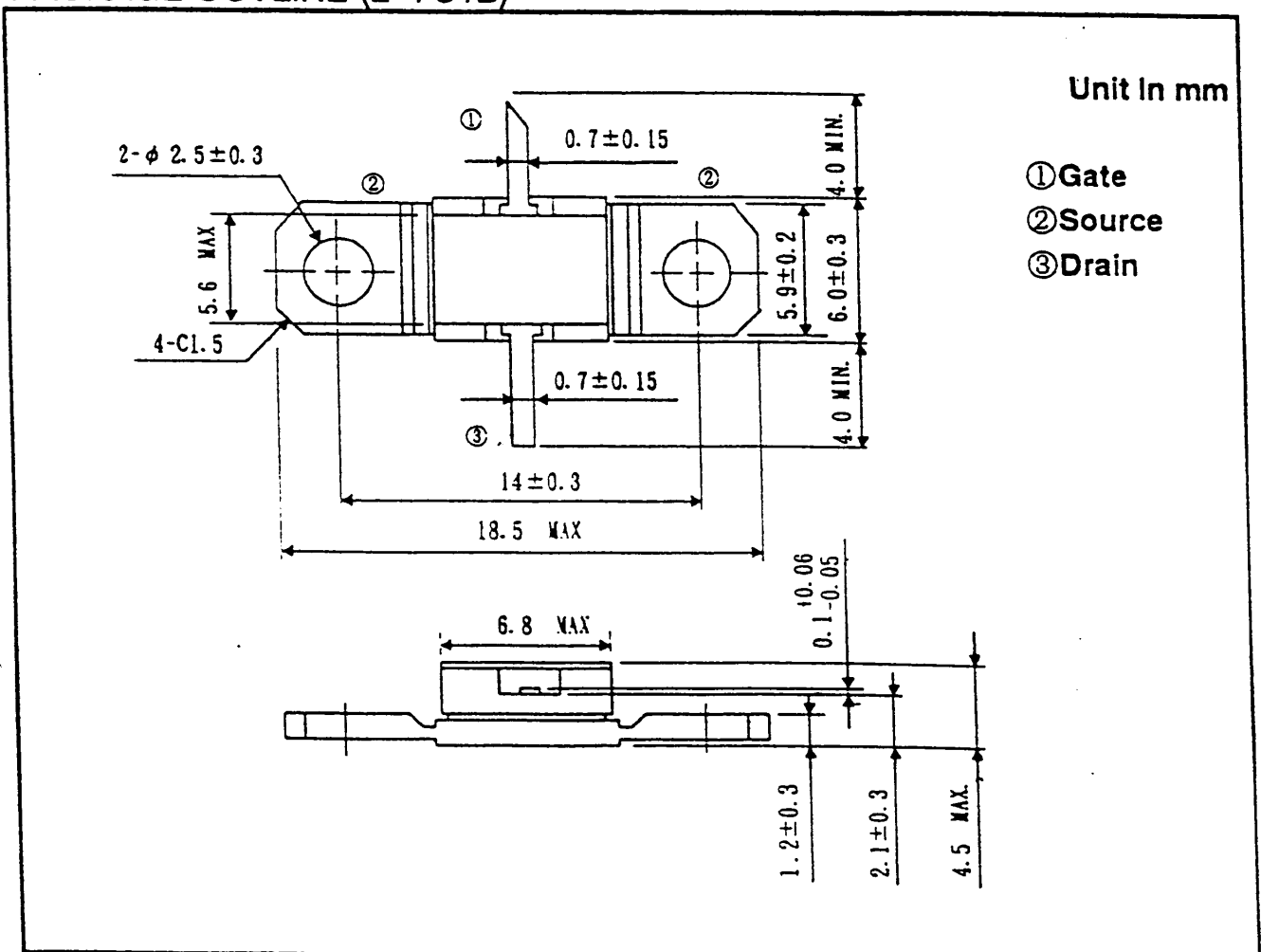
CHARACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Transconductance	g _m	V _{DS} = 3V I _{DS} = 1.0A	—	1100	—	mS
Pinch-off Voltage	V _{GSoff}	V _{DS} = 3V I _{DS} = 18mA	-1.0	-2.0	-3.0	V
Saturated Drain Current	I _{DSS}	V _{DS} = 3V V _{GS} = 0V	—	2.2	3.5	A
Gate-Source Breakdown Voltage	V _{GSO}	I _{GS} = -50 μA	-5	—	—	V

PRELIMINARY

3. ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	VDS	15	V
Gate-Source Voltage	VGS	-5	V
Drain Current	IDS	3.5	A
Total Power Dissipation(Tc=25°C)	PT	15	W
Channel Temperature	Tch	175	°C
Storage Temperature	Tstg	-65 - +175	°C

PACKAGE OUTLINE (2- 7C1B)



Applications Engineering
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