TOSHIBA

MICROWAVE SEMICONDUCTOR
TECHNICAL DATA

MICROWAVE POWER GasAs FET
Non-Matched

S9G65
Preliminary

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

CHARACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power at Saturation Point	Psat	V_{DS}=10V f=1.9GH	39.5	40.0	—	dBm
Drain Current	I_{DS}	Pin=32dBm	—	2.0	2.3	A
Power Added Efficiency	η add		—	47	—	%
Linear Gain	GL	V_{DS}=10V, f=1.9GHz	13.0	14.0	—	
Adjacent Channel Leakage Power	Padj	V_{DS}=10V, f = 1.9 GHz Po=36dBm, I_{DS}=1.6A π/4-QPSK Modulation 600MHz Offset	-69	-72	—	dBc

2. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

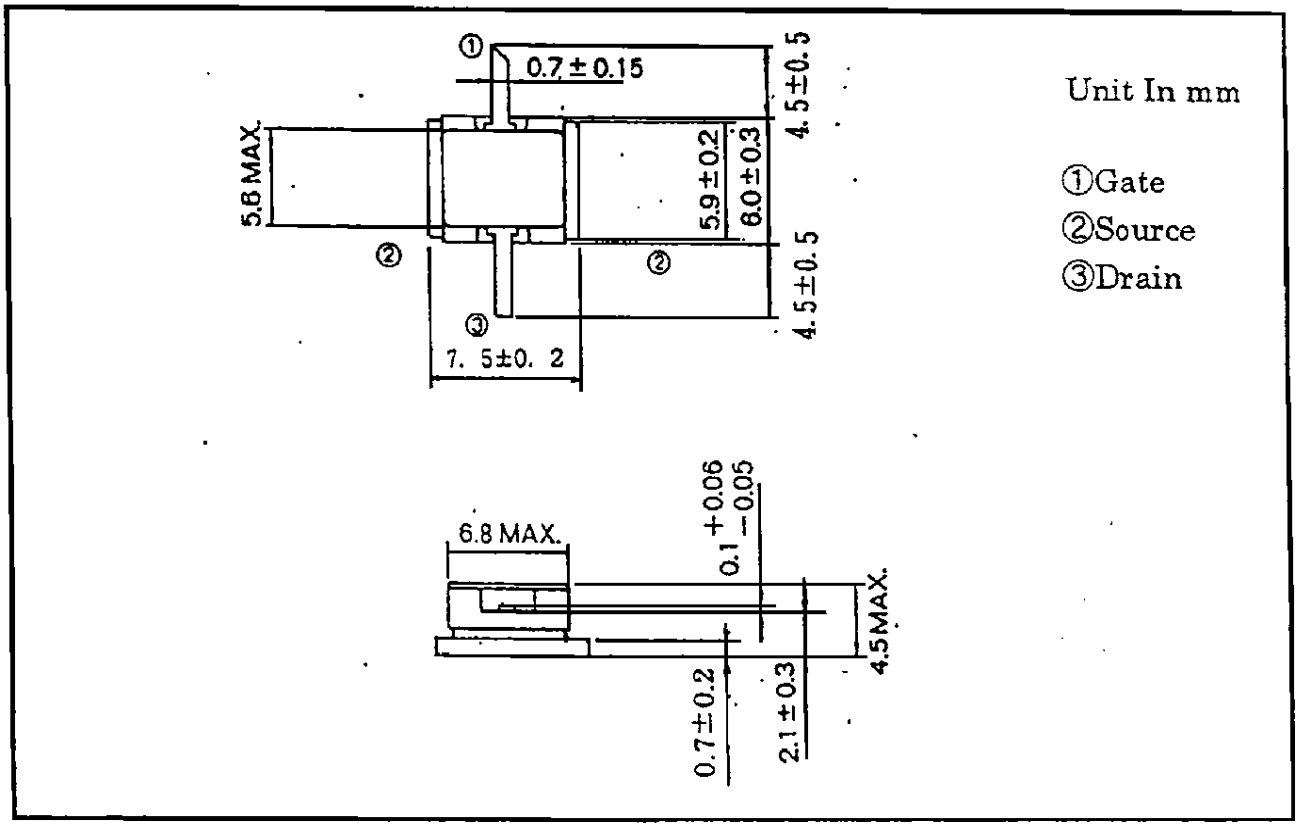
CHRACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Transconductance	gm	V_{DS}=3V I_{DS}=2.0A		2600		mS
Pinch-off Voltage	V_{GSoff}	V_{DS}=3V I_{DS}=30mA	-1.8	-2.3	-2.8	V
Saturated Drain Current	I_{DSS}	V_{DS}=3V V_{GS}=0V		5.5	7.0	A
Gate-Source Breakdown Voltage	V_{GSO}	I_{GS}=-300 μ A	-5			V
Thermal Resistance	Rth(c-c)	Channel to Case		3.5	6.0	°C/W

PRELIMINARY

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

CHARACTERISTICS	SYBBOL	RATINGS	UNIT
Drain-Source Voltage	V_{DS}	15	V
Gate-Source Voltage	V_{GS}	-5	V
Drain Current	I_{DS}	6.5	A
Total Power Dissipation(Tc=25°C)	P_T	25	W
Channel Temperature	Tch	175	°C
Storage Temperature	Tstg	-65 - +175	°C

PACKAGE OUTLINE



Applications Engineering
Solid-State Engineering Department
TOSHIBA CORPORATION, Komukai Works