

**MICROWAVE SEMICONDUCTOR
TECHNICAL DATA**

**MICROWAVE POWER GaAs FET
S9G73**

Preliminary

■ HIGH POWER

$P_{1dB}=40dBm$

■ NON-MATCHED TYPE

■ HIGH GAIN

$G_{1dB}=13dB$

■ HERMETICALLY SEALED PACKAGE

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

CHARACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Power at 1dB Compression Point	P_{1dB}	$V_{DS}= 10V$ $f= 1.5GHz$	39.0	40.0	—	dBm
Power Gain at 1dB Compression Point	G_{1dB}		12.0	13.0	—	dB
Drain Current	I_{DS}		—	2.0	2.5	A
Power Added Efficiency	η_{add}		—	42	—	%
Thermal Resistance	$R_{th}(c-c)$		Channel to Case	—	—	5.0

2. ELECTRICAL CHARACTERISTICS (Ta= 25 °C)

CHARACTERISTICS	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Transconductance	g_m	$V_{DS}= 3V$ $I_{DS}= 2.0A$	—	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}	$I_{GS}= -300 \mu A$	-5	—	—	V
Channel-Temperature Rise	ΔT_{ch}	Note 1	—	—	80	°C

Note 1 : $\Delta T_{ch}=(10V \times I_{DS} + P_{in} - P_{1dB}) \times R_{th}(c-c)$

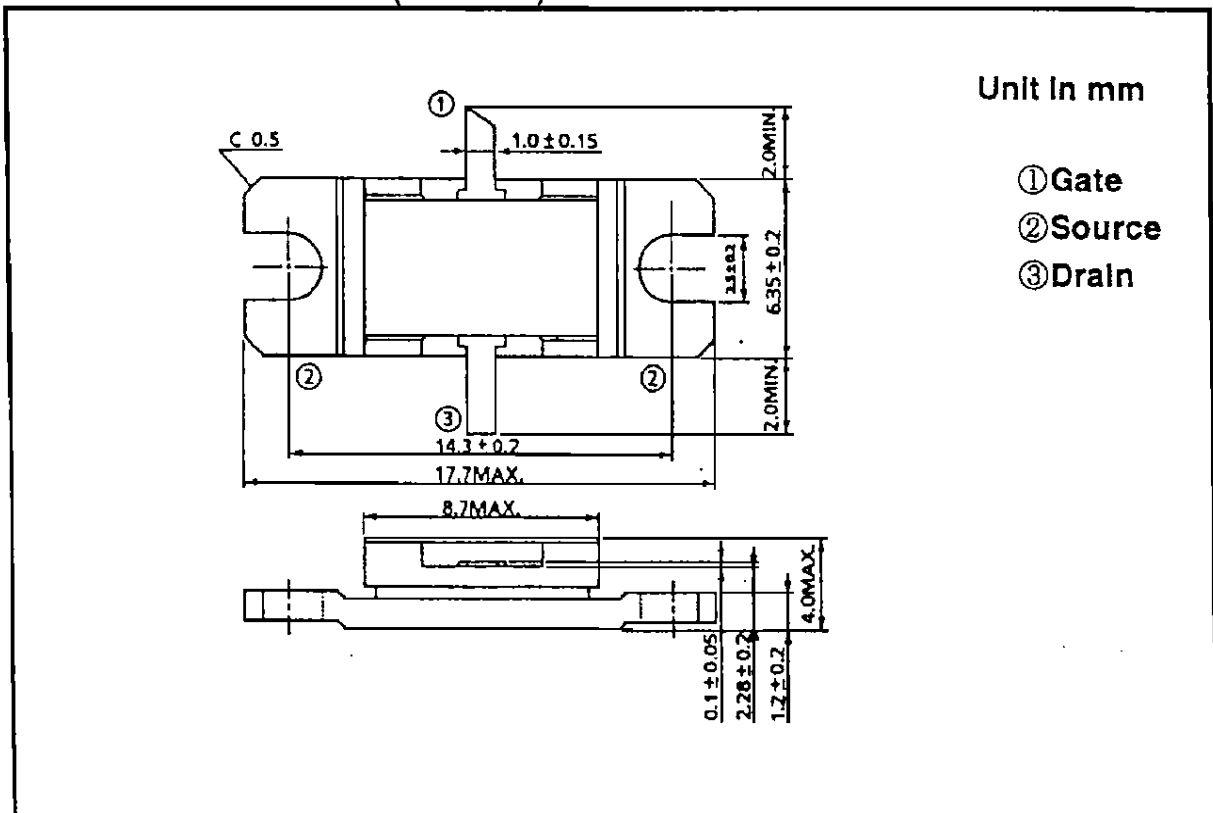
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3. ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYBBOL	RATINGS	UNIT
Drain-Source Voltage	VDS	15	V
Gate-Source Voltage	VGS	-5	V
Drain Current	IDS	6.5	A
Total Power Dissipation(Tc=25°C)	PT	25	W
Channel Temperature	Tch	175	°C
Storage Temperature	Tstg	-65 - +175	°C

PACKAGE OUTLINE (2- 9D2A)

HANDLING PRECAUTIONS FOR PACKAGED TYPE

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