

MICROWAVE POWER GaAs FET

TIM0910-5

MICROWAVE SEMICONDUCTOR TECHNICAL DATA

FEATURES

- **BROAD BAND INTERNALLY MATCHED FET**
- ·HIGH POWER

P1dB= 36.5dBm at 9.5GHz to 10.5GHz

·HIGH GAIN

G1dB= 7.0dB at 9.5GHz to 10.5GHz

·HERMETICALLY SEALED PACKAGE



RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Gain Compression Point	P1dB	VDS= 9V IDSset= 2.0A f= 9.5 to 10.5GHz	dBm	37.0	37.5	_
Power Gain at 1dB Gain Compression Point	G1dB		dB	6.0	7.0	_
Drain Current	IDS		Α		2.0	2.5
Gain Flatness	ΔG		dB			±0.8
Power Added Efficiency	ηadd		%		25	_
Channel Temperature Rise	ΔTch	(VDS X IDS + Pin – P1dB) X Rth(c-c)	°C	_	_	80

Recommended Gate Resistance(Rg): 100 Ω

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 2.4A	S	_	1.5	
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 72mA	V	-1.5	-3.0	-4.5
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	А		5.0	_
Gate-Source Breakdown Voltage	VGSO	IGS= -72 _μ A	>	-5	_	_
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W		3.0	3.7

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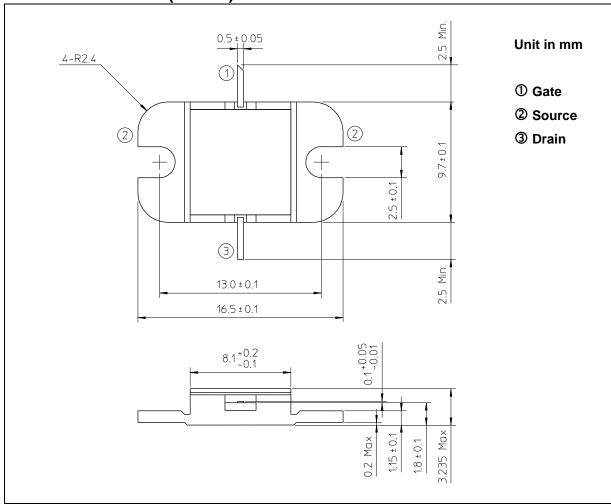


MICROWAVE SEMICONDUCTOR TECHNICAL DATA

ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	А	5.7
Total Power Dissipation (Tc= 25°C)	PT	W	40.5
Channel Temperature	Tch	°C	175
Storage Temperature	Tstg	°C	-65 to +175

PACKAGE OUTLINE (2-9D1B)

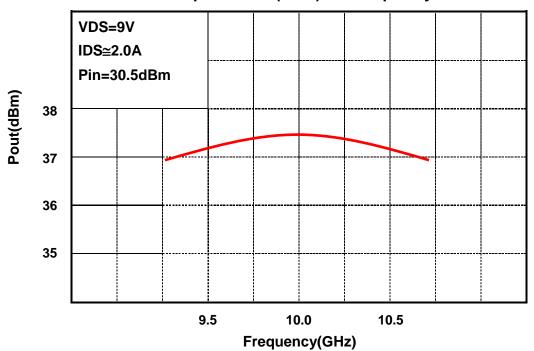


HANDLING PRECAUTIONS FOR PACKAGE MODEL

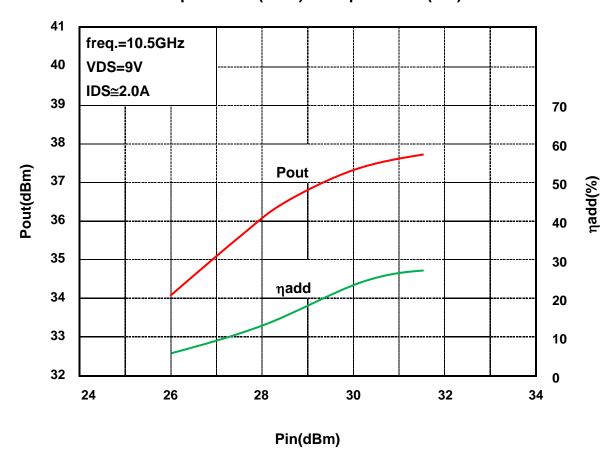
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C or 3 seconds at 350°C.

RF PERFORMANCE

Output Power (Pout) vs. Frequency



Output Power(Pout) vs. Input Power(Pin)





Power Dissipation(PT) vs. Case Temperature(Tc)

