

### FEATURES

- BROAD BAND INTERNALLY MATCHED HEMT
- HIGH POWER  
Pout= 44.5dBm at Pin= 35.0dBm
- HIGH GAIN  
GL= 12.0dB at 7.7GHz to 8.5GHz
- LOW INTERMODULATION DISTORTION  
IM3(Min.)= -40dBc at Po=29.0dBm  
Single Carrier Level
- HERMETICALLY SEALED PACKAGE



### RF PERFORMANCE SPECIFICATIONS ( Ta= 25°C )

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power	Pout	VDS= 24V IDSset= 1.75A f= 7.7 to 8.5 GHz @Pin= 35.0dBm	dBm	44.0	44.5	—
Drain Current	IDS1		A	—	2.7	3.2
Power Added Efficiency	$\eta_{add}$		%	—	39	—
Linear Gain	GL	@Pin= 20dBm	dB	11.0	12.0	—
Gain Flatness	$\Delta G$		dB	—	—	$\pm 0.8$
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po= 29.0dBm, $\Delta f$ = 5MHz (Single Carrier Level)	dBc	-40	-42	—
Drain Current	IDS2		A	—	—	2.0
Channel Temperature Rise	$\Delta T_{ch}$	(VDS X IDS + Pin – P1dB) X Rth(c-c)	°C	40	130	150

Recommended Gate Resistance(Rg): 60  $\Omega$  (TYP.)

### ELECTRICAL CHARACTERISTICS ( Ta= 25°C )

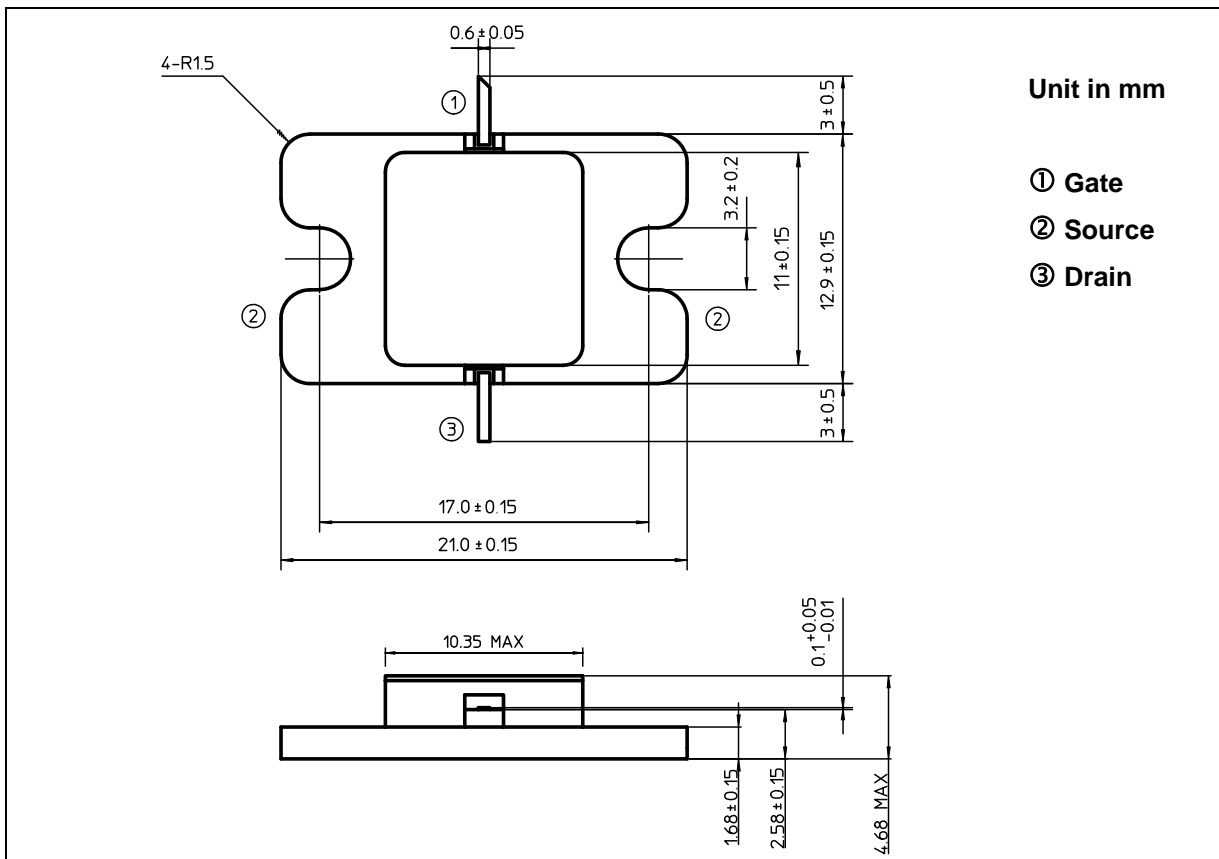
CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 5V IDS= 2.5A	S	—	4.5	—
Pinch-off Voltage	VGSoff	VDS= 5V IDS= 12mA	V	-2.6	-4.0	-6.0
Saturated Drain Current	IDSS	VDS= 5V VGS= 0V	A	—	15.0	18.0
Gate-Source Breakdown Voltage	VGSO	IGS= -5mA	V	-10.0	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	2.8	3.2

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**ABSOLUTE MAXIMUM RATINGS ( Ta= 25°C )**

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	50
Gate-Source Voltage	VGS	V	-10
Drain Current	IDS	A	4.5
Total Power Dissipation (Tc= 25 °C)	PT	W	70
Channel Temperature	Tch	°C	250
Storage Temperature	Tstg	°C	-65 to +175

**PACKAGE OUTLINE (7-AA04A)**



**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.