

FEATURES

■ **HIGH POWER**

P_{out}=47.0dBm at P_{in}=42.0dBm

■ **HIGH GAIN**

GL=8.0dB at 13.75GHz to 14.5GHz

■ **BROAD BAND INTERNALLY MATCHED HEMT**

HERMETICALLY SEALED PACKAGE

■ **LOW INTERMODULATION DISTORTION**

IM3(Min.)=-25dBc at P_o=40.0dBm

Single Carrier Level

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power	P _{out}	V _{DS} = 24V I _{DSset} ≒2.0A f = 13.75 to 14.5GHz @ P _{in} =42dBm	dBm	46.0	47.0	—
Gain Flatness	ΔG		dB	—	—	±0.8
Drain Current	I _{DS1}		A	—	5.0	6.0
Power Added Efficiency	η _{add}		%	—	29	—
Gate Current	I _{gRF}		mA	-40	—	+100
Linear Gain	GL	@P _{in} =20dBm	dB	7.0	8.0	—
3rd Order Intermodulation Distortion	IM3	Two-Tone Test P _o = 40.0dBm (Single Carrier Level)	dBc	-25	—	—
Drain Current	I _{DS2}		A	—	3.5	4.5
Channel Temperature Rise	ΔT _{ch}	(V _{DS} X I _{DS} + P _{in} - P _{out}) X R _{th(c-c)}	°C	—	130	150

Recommended gate resistance(R_g) : R_g= 13.3 Ω (TYP.)

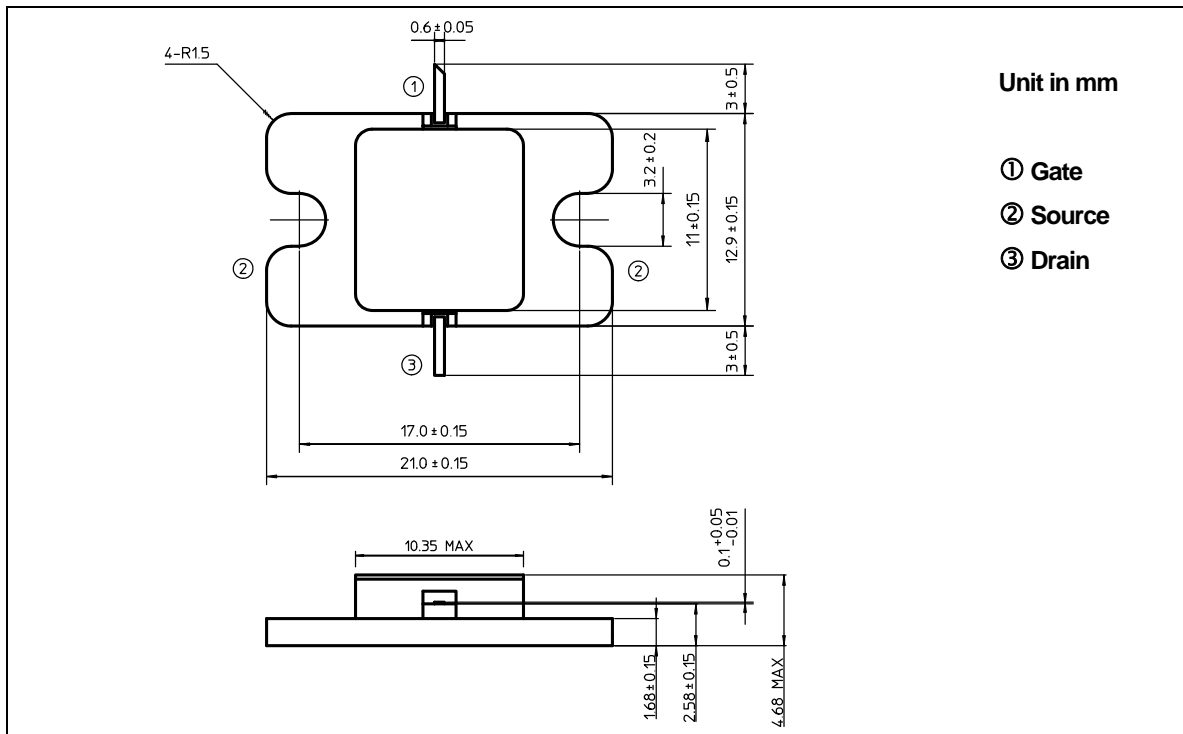
ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	V _{DS} = 5V I _{DS} = 5.0A	S	—	4.5	—
Pinch-off Voltage	V _{GSoff}	V _{DS} = 5V I _{DS} = 23mA	V	-1	-4	-6
Saturated Drain Current	I _{DSS}	V _{DS} = 5V V _G S= 0V	A	—	15	—
Gate-Source Breakdown Voltage	V _{GSO}	I _G S= -10mA	V	-10	—	—
Thermal Resistance	R _{th(c-c)}	Channel to Case	°C/W	—	—	1.6

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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	15
Total Power Dissipation (Tc= 25 °C)	PT	W	140
Channel Temperature	Tch	°C	250
Storage	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.