

FEATURES

- BROAD BAND INTERNALLY MATCHED HEMT
- HIGH POWER
Pout= 51.0dBm at Pin= 43.0dBm
- HIGH GAIN
GL= 13.5dB at Pin= 20.0dBm
- LOW INTERMODULATION DISTORTION
IM3(Min.)= -25dBc at Pout= 44.0dBm
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= 4.0A f = 5.9 to 6.4GHz @Pin= 43dBm	dBm	50.0	51.0	—
Drain Current	IDS1		A	—	10.0	12.0
Power Added Efficiency	η_{add}		%	—	42	—
Linear Gain	GL	@Pin= 20dBm	dB	12.5	13.5	—
Gain flatness	ΔG		dB	—	—	± 0.8
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po= 44.0dBm, Δf = 5MHz (Single Carrier Level)	dBc	-25	-30	—
Drain Current	IDS2		A	—	—	8.0
Channel Temperature Rise	ΔT_{ch}	(VDS X IDS + Pin – P1dB) X Rth(c-c)	°C	—	120	140

Recommended Gate Resistance(Rg): 28 Ω

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

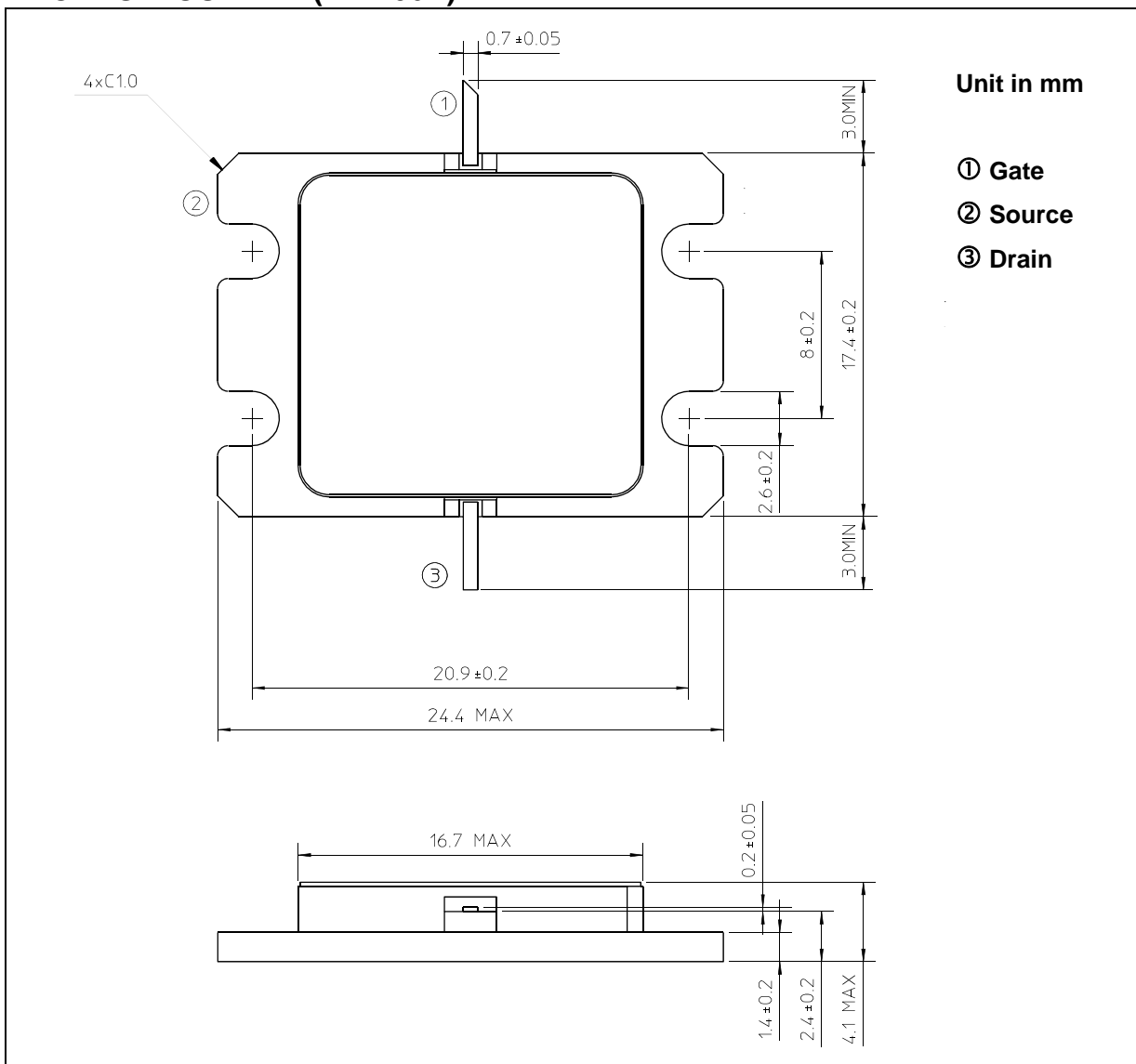
CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 5V IDS= 10.0A	S	—	8.0	—
Pinch-off Voltage	VGSoff	VDS= 5V IDS= 46mA	V	-2.6	-4	-6
Saturated Drain Current	IDSS	VDS= 5V VGS= 0V	A	—	28	36
Gate-Source Breakdown Voltage	VGSO	IGS= -20mA	V	-10	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	0.6	0.8

- ◆ The information contained herein is presented as guidance for product use. No responsibility is assumed by TOSHIBA for any infringement of patents or any other intellectual property rights of third parties that may result from the use of product. No license to any intellectual property right is granted by this document. The information contained herein is subject to change without prior notice. It is advisable to contact TOSHIBA before proceeding with design of equipment incorporating this product.

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	18.0
Total Power Dissipation (Tc= 25°C)	PT	W	280
Channel Temperature	Tch	°C	250
Storage Temperature	Tstg	°C	-65 to +175

PACKAGE OUTLINE (7-AA06A)



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.