

FEATURES

■ LOW INTERMODULATION DISTORTION

IM3=-45 dBc at Pout= 25.5dBm
Single Carrier Level

■ HIGH POWER

P1dB=36.5dBm at 7.7GHz to 8.5GHz

■ HIGH GAIN

G1dB=6.5dB at 7.7GHz to 8.5GHz

■ BROAD BAND INTERNALLY MATCHED FET

■ 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= 10V f = 7.7 to 8.5GHz	dBm	35.5	36.5	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	5.5	6.5	—
Drain Current	IDS1		A	—	1.1	1.3
Gain Flatness	ΔG		dB	—	—	±0.6
Power Added Efficiency	ηadd		%	—	32	—
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po=25.5dBm (Single Carrier Level)	dBc	-42	-45	—
Drain Current	IDS2		A	—	1.1	1.3
Channel Temperature Rise	ΔTch	(VDS X IDS + Pin – P1dB) X Rth(c-c)	°C	—	—	80

Recommended Gate Resistance(Rg) : 150 Ω (Max.)

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 1.5A	S	—	900	—
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 15mA	V	-1.0	-2.5	-4.0
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	A	—	2.6	—
Gate-Source Breakdown Voltage	VGSO	IGS= -50mA	V	-5	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	4.5	6.5

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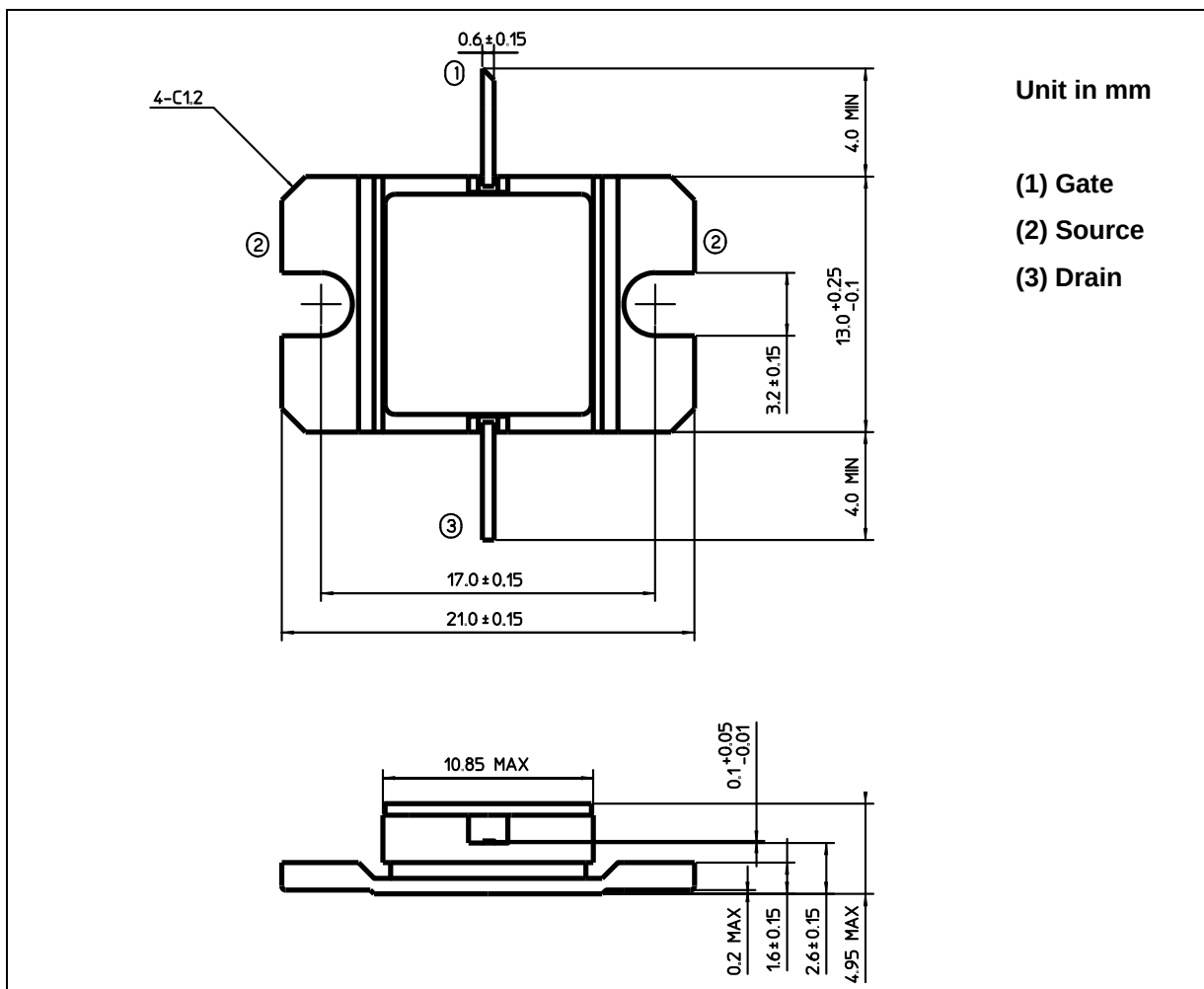
The information contained herein is subject to change without prior notice. It is therefor advisable to contact TOSHIBA before proceeding with design of equipment incorporating this product.

TOSHIBA CORPORATION

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ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

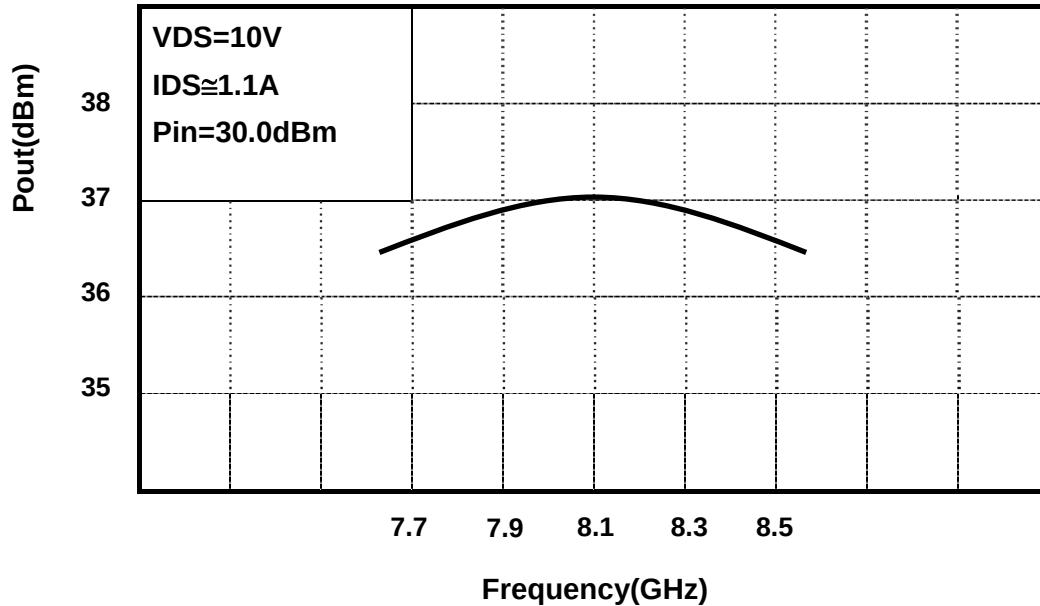
CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	A	3.5
Total Power Dissipation (Tc= 25 °C)	PT	W	23.1
Channel Temperature	Tch	°C	175
Storage Temperature	Tstg	°C	-65 to +175

PACKAGE OUTLINE (2-11D1B)**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

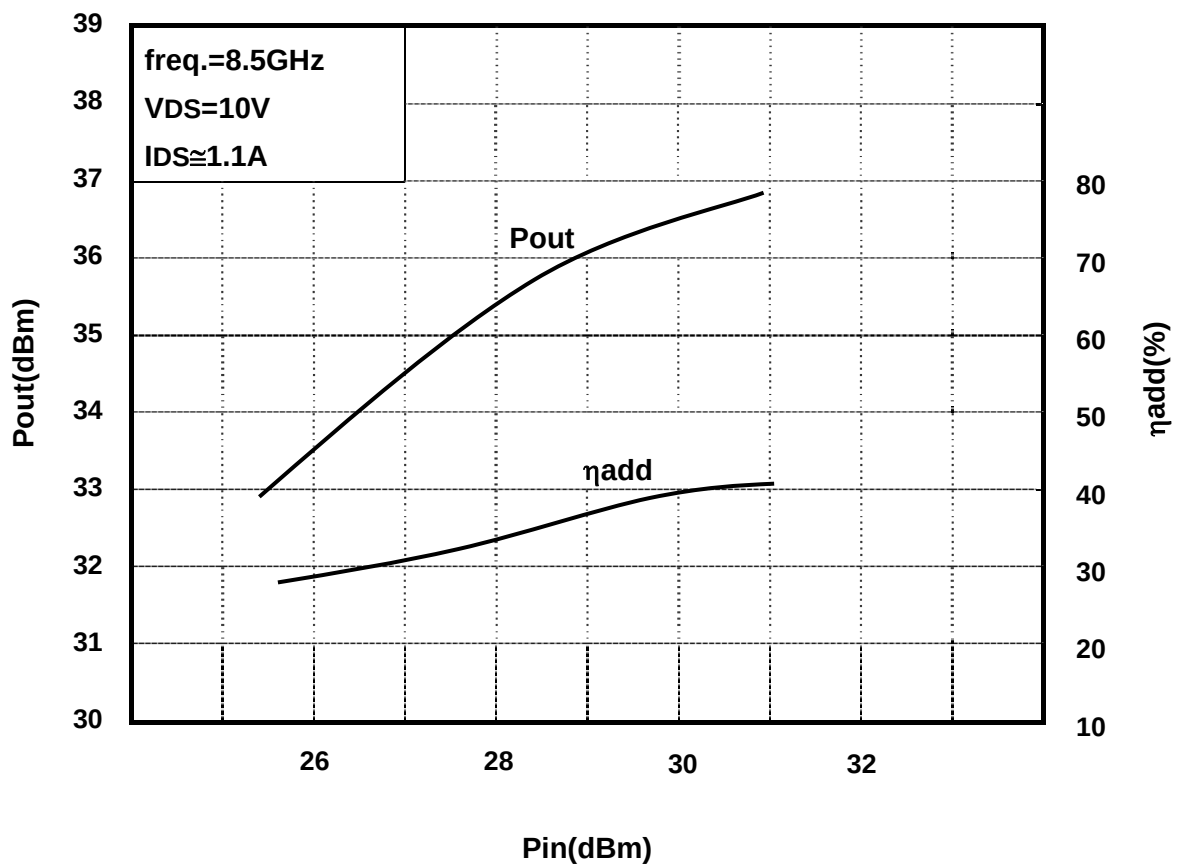
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCE

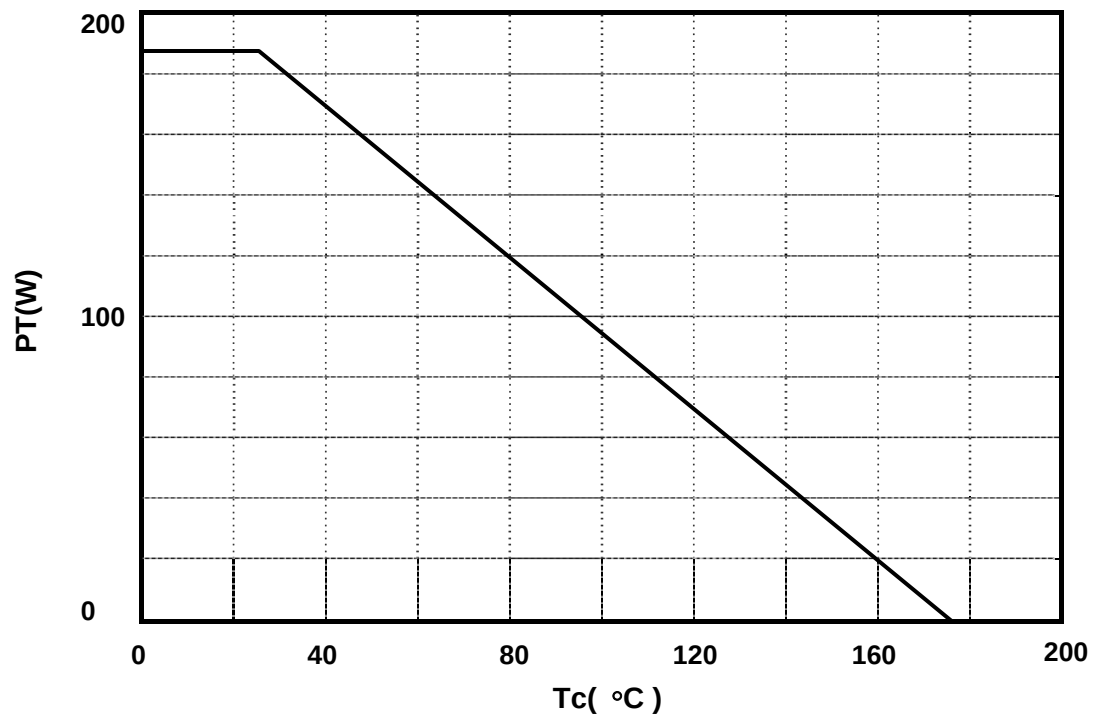
Output Power (Pout) vs. Frequency



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



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



IM3 vs. Power Characteristics

