

FEATURES

- n **HIGH POWER**
P1dB=41.5dBm at 7.1GHz to 7.9GHz
- n **BROAD BAND INTERNALLY MATCHED FET**
- n **HIGH GAIN**
G1dB=9.0dB at 7.1GHz to 7.9GHz
- n **HERMETICALLY SEALED PACKAGE**

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Gain Compression Point	P1dB	V _{DS} = 10V f = 7.1 to 7.9GHz	dBm	40.5	41.5	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	8.0	9.0	—
Drain Current	IDS1		A	—	3.2	3.8
Gain Flatness	ΔG		dB	—	—	±0.6
Power Added Efficiency	η _{add}		%	—	39	—
3rd Order Intermodulation Distortion	IM3	Two-Tone Test Po=30.5dBm	dBc	-44	-47	—
Drain Current	IDS2	(Single Carrier Level)	A	—	3.2	3.8
Channel Temperature Rise	ΔT _{ch}	(V _{DS} X IDS + Pin – P1dB) X R _{th(c-c)}	°C	—	—	80

Recommended gate resistance(Rg) : Rg= 100 W(MAX.)

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

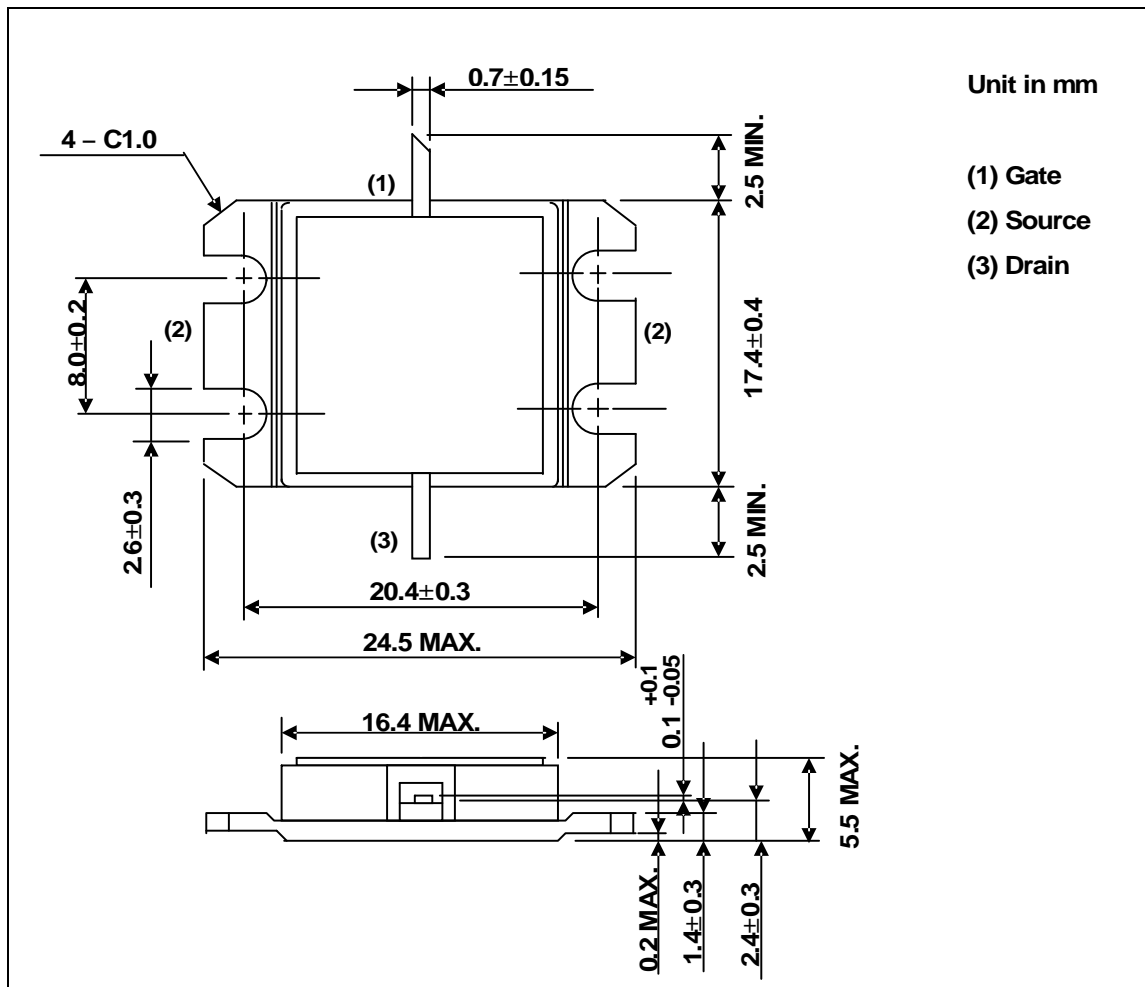
CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	V _{DS} = 3V I _{DS} = 4.0A	mS	—	2500	—
Pinch-off Voltage	V _{GSoff}	V _{DS} = 3V I _{DS} = 40mA	V	-1.0	-2.5	-4.0
Saturated Drain Current	I _{DSS}	V _{DS} = 3V V _{GS} = 0V	A	—	7.2	—
Gate-Source Breakdown Voltage	V _{GS0}	I _{GS} = -140μA	V	-5	—	—
Thermal Resistance	R _{th(c-c)}	Channel to Case	°C/W	—	2.0	2.4

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ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

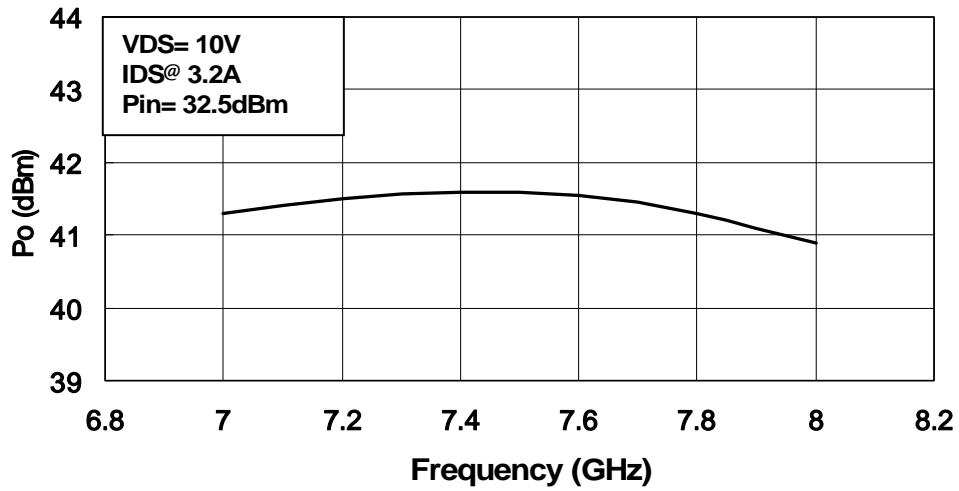
CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V _{DS}	V	15
Gate-Source Voltage	V _{GS}	V	-5
Drain Current	I _{DS}	A	10.0
Total Power Dissipation (T _c = 25 °C)	PT	W	62.5
Channel Temperature	T _{ch}	°C	175
Storage	T _{stg}	°C	-65 to +175

PACKAGE OUTLINE (2-16G1B)**HANDLING PRECAUTIONS FOR PACKAGE MODEL**

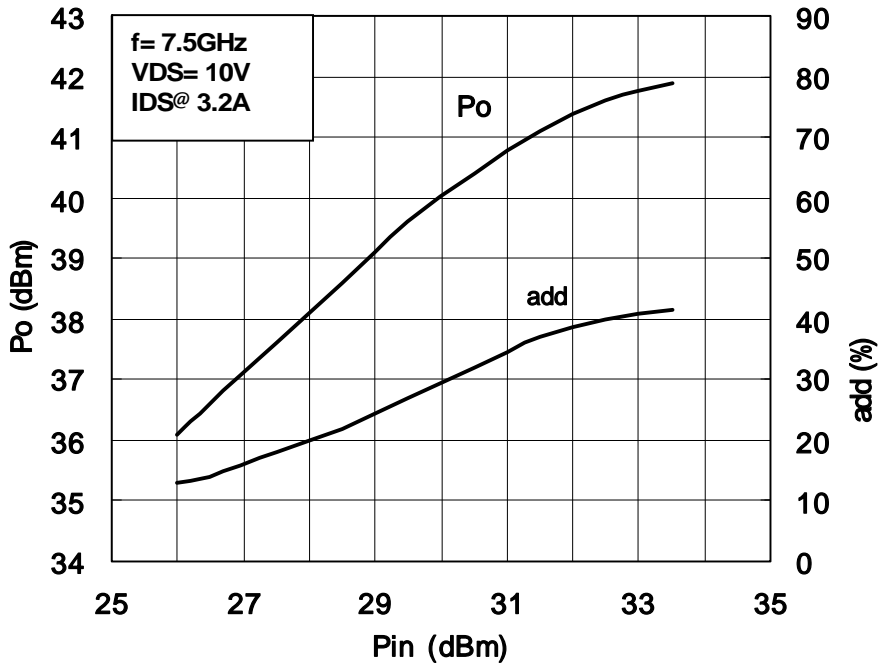
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCE

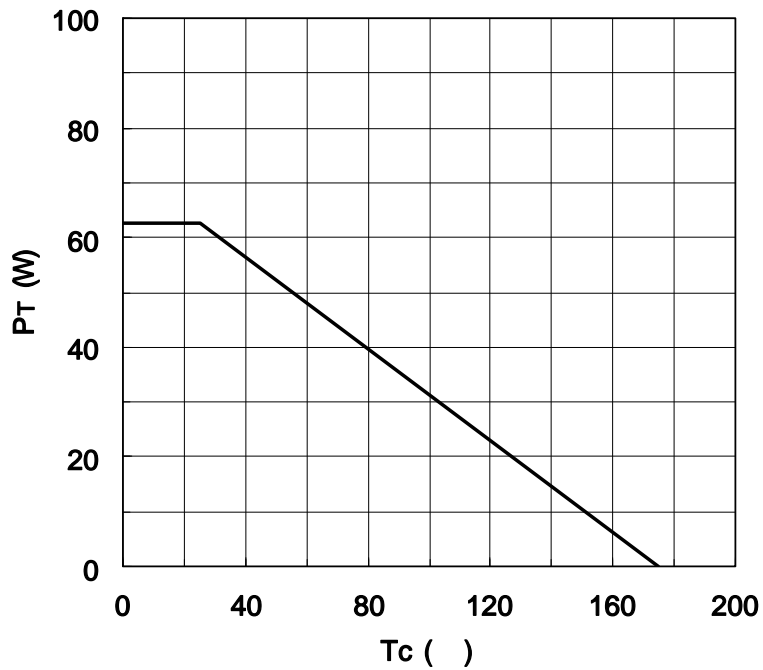
Output Power vs. Frequency



Output Power vs. Input Power



Power Dissipation vs. Case Temperature



IM3 vs. Output Power Characteristics

