

FEATURES

- n **LOW INTERMODULATION DISTORTION** n **HIGH GAIN**
 IM3=-45 dBc at Pout= 35.0dBm G1dB=10.0dB at 3.7GHz to 4.2GHz
- Single Carrier Level
- n **HIGH POWER** n **BROAD BAND INTERNALLY MATCHED**
 P1dB=45.5dBm at 3.7GHz to 4.2GHz 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	VDS= 10V f = 3.7 to 4.2GHz	dBm	45.0	45.5	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	9.0	10.0	—
Drain Current	IDS1		A	—	8.0	9.0
Gain Flatness	ΔG		dB	—	—	± 0.8
Power Added Efficiency	η_{add}		%	—	40	—
3rd Order Intermodulation Distortion	IM3	Two Tone Test Po=35.0dBm	dBc	-42	-45	—
Drain Current	IDS2	(Single Carrier Level)	A	—	8.0	9.0
Channel Temperature Rise	ΔT_{ch}	(VDS X IDS + Pin - P1dB) X Rth(c-c)	°C	—	—	100

Recommended Gate Resistance(Rg) : 28 W (Max.)

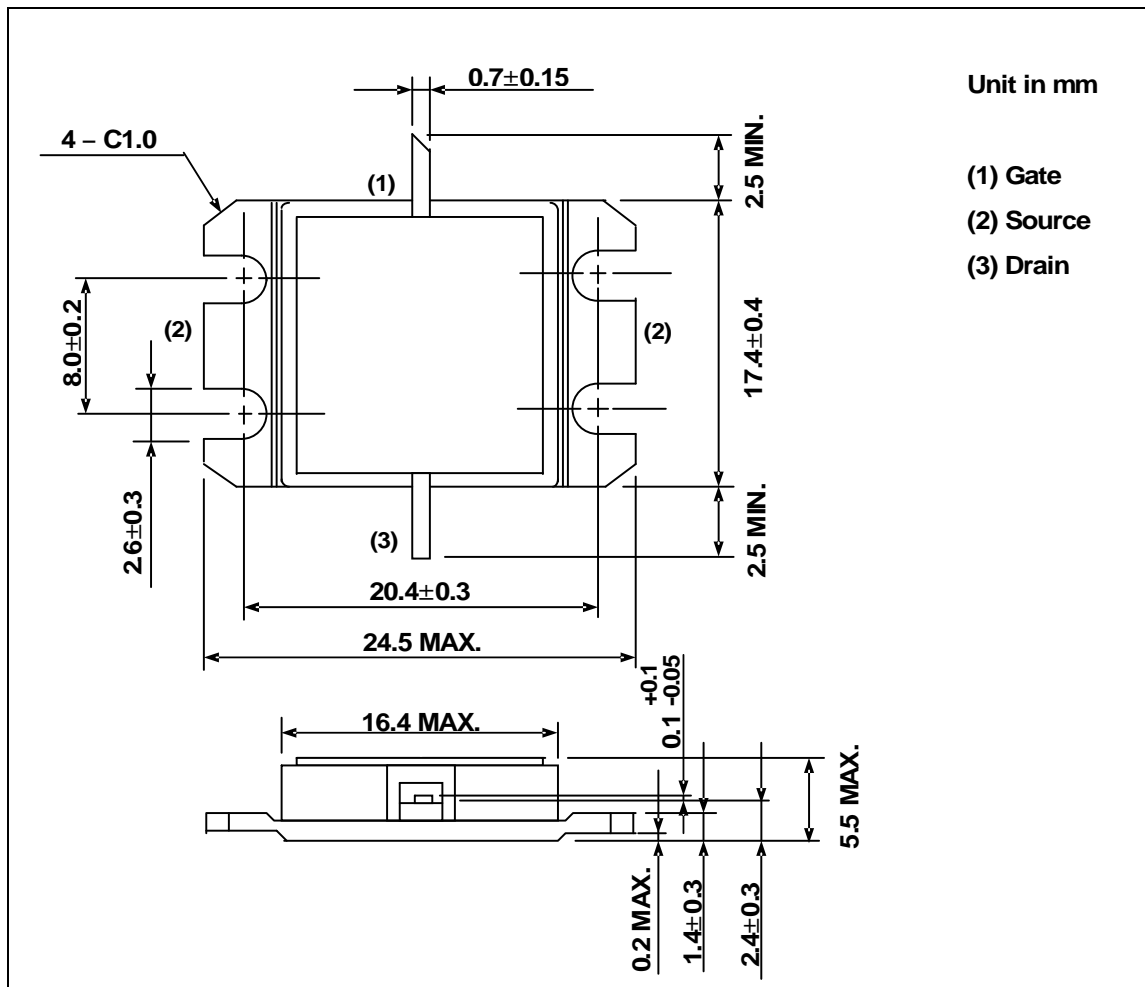
ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 10.5A	mS	—	6500	—
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 140mA	V	-1.0	-2.5	-4.0
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	A	—	20	26
Gate-Source Breakdown Voltage	VGSO	IGS= -420mA	V	-5	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	1.0	1.3

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ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

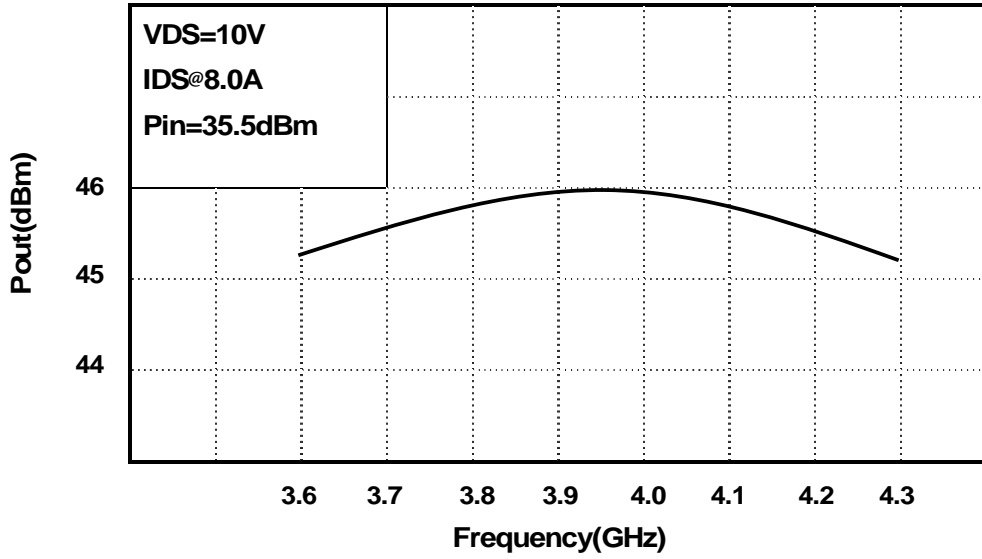
CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V _{DS}	V	15
Gate-Source Voltage	V _{GS}	V	-5
Drain Current	I _{DS}	A	20
Total Power Dissipation (T _c = 25 °C)	P _T	W	115.4
Channel Temperature	T _{ch}	°C	175
Storage Temperature	T _{stg}	°C	-65 to +175

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

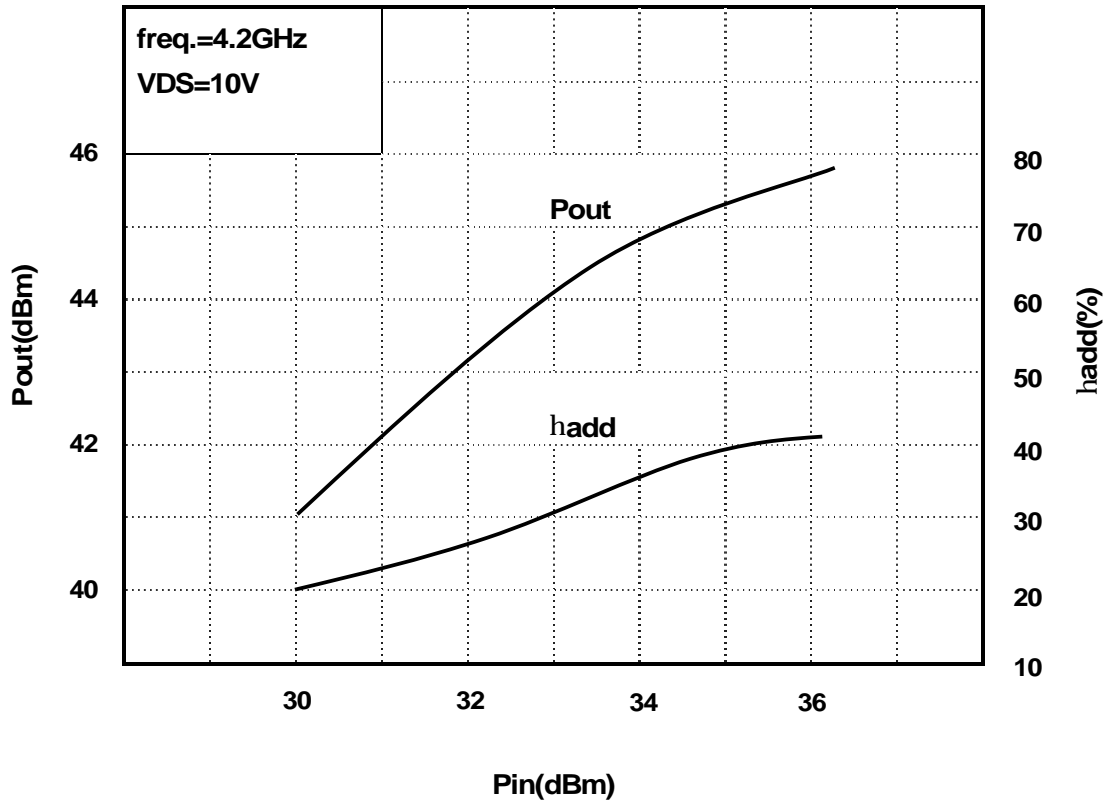
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCES

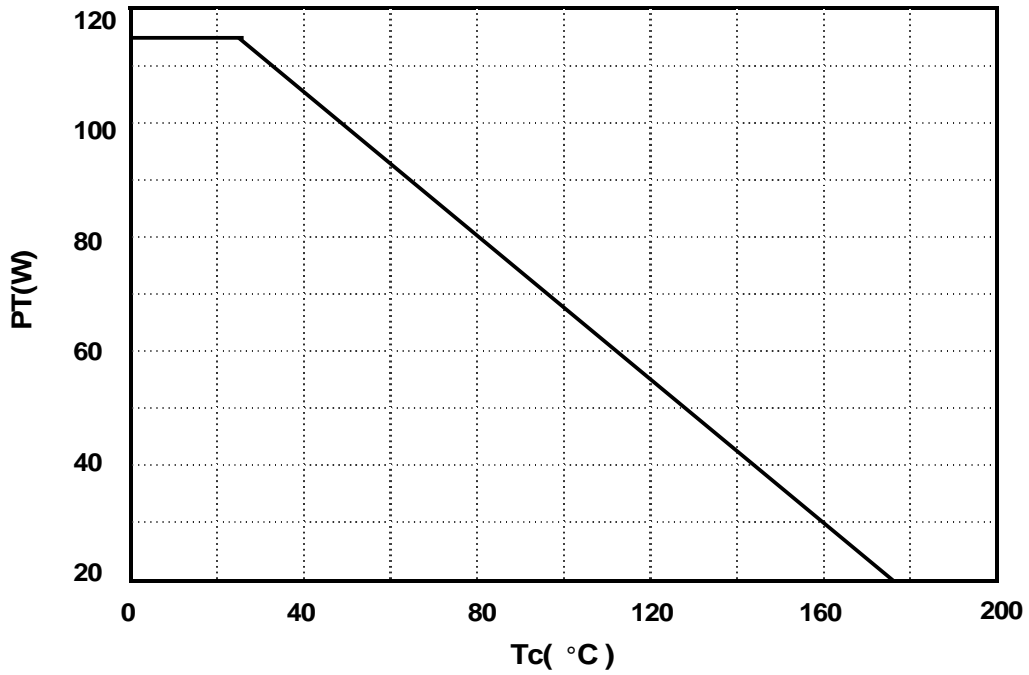
Output Power (Pout) vs. Frequency



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



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



IM3 vs. Power Characteristics

