

FEATURES :

■ HIGH POWER

$P_{1dB} = 48.0 \text{ dBm at } 1.9 \text{ GHz}$

■ HIGH GAIN

$G_{1dB} = 13 \text{ dB at } 1.9 \text{ GHz}$

■ PARTIALLY MATCHED TYPE

■ HERMETICALLY SEALED PACKAGE

RF PERFORMANCE SPECIFICATIONS ($T_a = 25^\circ\text{C}$)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Compression Point	P_{1dB}	$V_{DS} = 12V$ $f = 1.9 \text{ GHz}$ $I_{DS} \text{ (RF Off)} \doteq 6A$	dBm	47.0	48.0	—
Power Gain at 1dB Compression Point	G_{1dB}		dB	12.0	13.0	—
Drain Current	I_{DS}		A	—	12.0	15.0
Power Added Efficiency	η_{add}		%	—	40	—
Channel-Temperature Rise	ΔT_{ch}	NOTE1	$^\circ\text{C}$	—	—	100

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	$V_{DS} = 3V$ $I_{DS} = 12.0A$	S	—	20.0	—
Pinch-off Voltage	V_{GSoff}	$V_{DS} = 3V$ $I_{DS} = 300mA$	V	-1.0	-1.8	-3.0
Saturated Drain Current	I_{DSS}	$V_{DS} = 3V$ $V_{GS} = 0V$	A	—	38	46
Gate-Source Breakdown Voltage	V_{GSO}	$I_{GS} = -10mA$	V	-5	—	—
Thermal Resistance	$R_{th (C-C)}$	Channel to Case	$^\circ\text{C/W}$	—	0.6	0.8

NOTE1 : $\Delta T_{ch} = (V_{DS} \times I_{DS} + P_{in} - P_o) \times R_{th (C-C)}$

* RECOMMENDED GATE RESISTANCE (R_g) : $R_g = 30 \Omega \text{ (MAX.)}$

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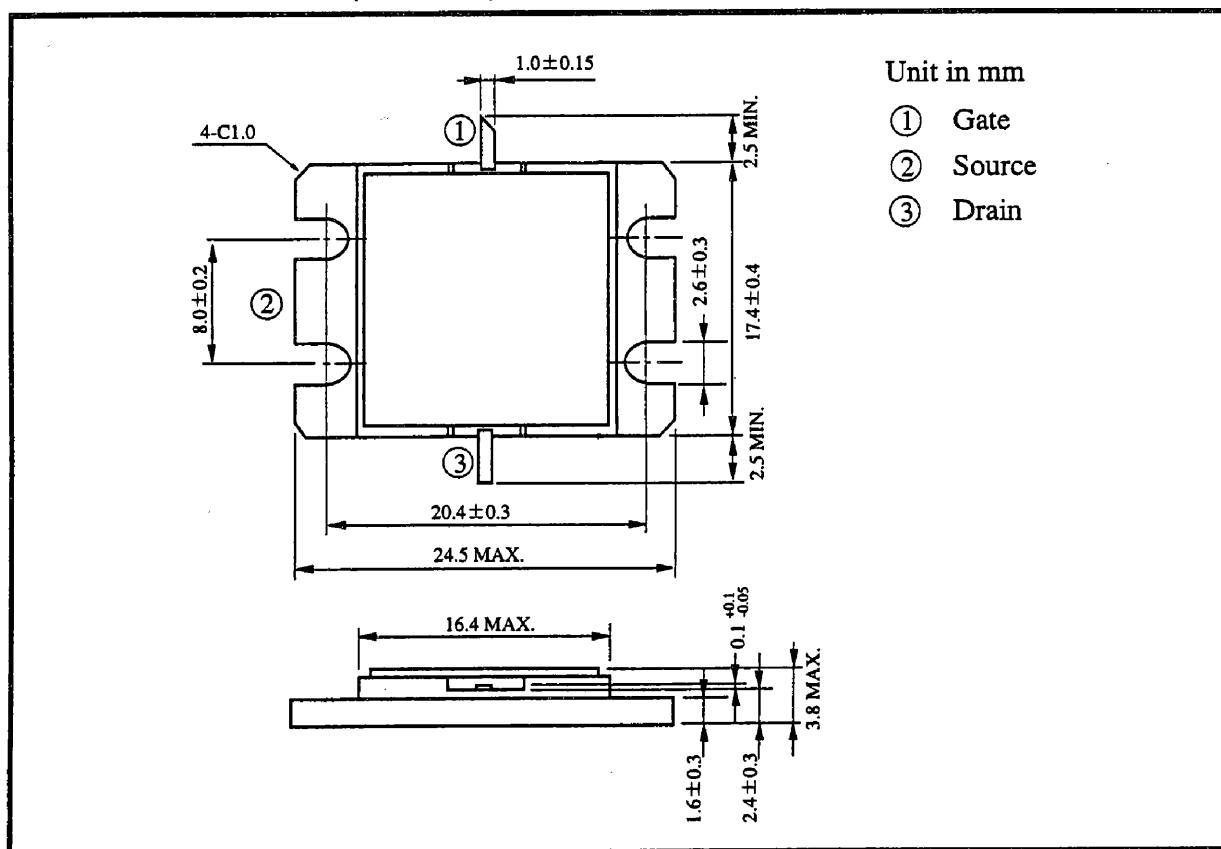


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ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V_{DS}	V	15
Gate-Source Voltage	V_{GS}	V	-5
Drain Current	I_{DS}	A	46
Total Power Dissipation ($T_C = 25^\circ\text{C}$)	P_T	W	185
Channel Temperature	T_{ch}	$^\circ\text{C}$	175
Storage Temperature	T_{stg}	$^\circ\text{C}$	-65 ~ 175

PACKAGE OUTLINE (2-16G6A)



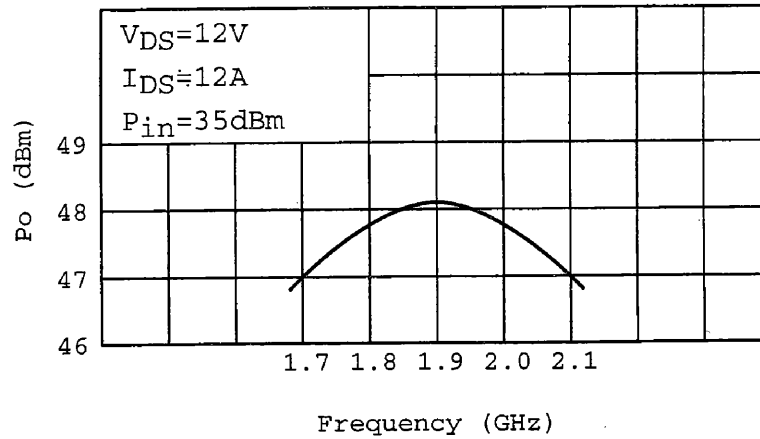
HANDLING PRECAUTIONS FOR PACKAGED TYPE

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

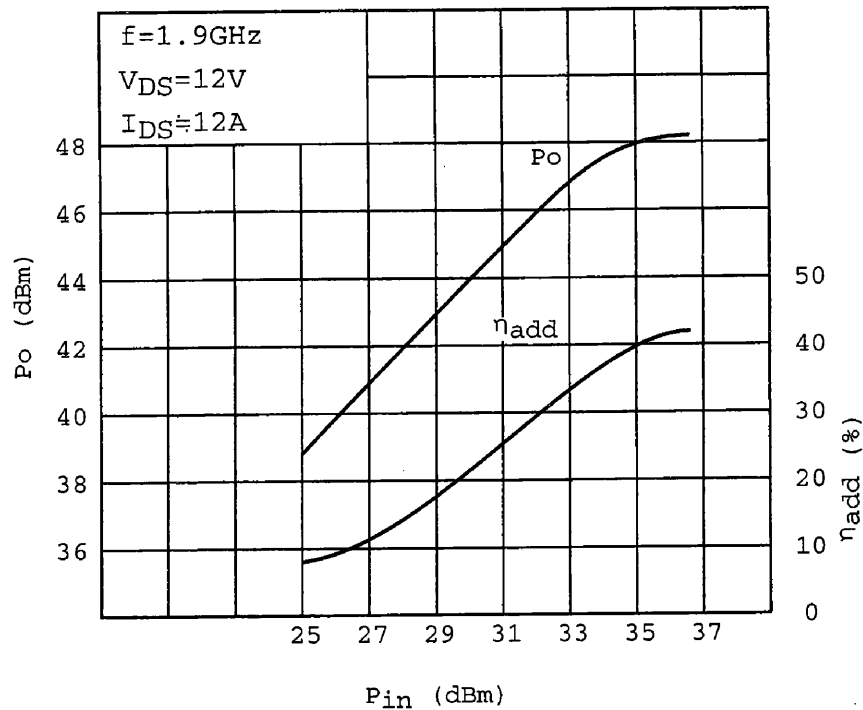
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RF PERFORMANCES.

Output Power vs. Frequency



Output Power vs. Input Power



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POWER DISSIPATION VS. CASE TEMPERATURE

