

FEATURES :

■ HIGH POWER

$P_{1dB} = 40.5 \text{ dBm}$ at 12.7 GHz to 13.2 GHz

■ BROAD BAND INTERNALLY MATCHED

■ HIGH GAIN

$G_{1dB} = 6.0 \text{ dB}$ at 12.7 GHz to 13.2 GHz

■ HERMETICALLY SEALED PACKAGE

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

CHARACTERISTIC	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Compression Point	P_{1dB}	$V_{DS} = 9 \text{ V}$ $f = 12.7 - 13.2 \text{ GHz}$	dBm	40.0	40.5	—
Power Gain at 1dB Compression Point	G_{1dB}		dB	5.0	6.0	—
Drain Current	I_{DS}		A	—	4.0	5.0
Power Added Efficiency	η_{add}		%	—	23	—
Channel-Temperature Rise	ΔT_{ch}	$V_{DS} \times I_{DS} \times R_{th(c-c)}$	$^\circ\text{C}$	—	—	90

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

CHARACTERISTIC	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	$V_{DS} = 3 \text{ V}$ $I_{DS} = 4.8 \text{ A}$	mS	—	2800	—
Pinch-off Voltage	V_{GSoff}	$V_{DS} = 3 \text{ V}$ $I_{DS} = 145 \text{ mA}$	V	-2	-3.5	-5
Saturated Drain Current	I_{DSS}	$V_{DS} = 3 \text{ V}$ $V_{GS} = 0 \text{ V}$	A	—	10.0	11.5
Gate-Source Breakdown Voltage	V_{GS0}	$I_{GS} = -145 \mu\text{A}$	V	-5	—	—
Thermal Resistance	$R_{th(c-c)}$	Channel to Case	$^\circ\text{C/W}$	—	2.0	2.5

Recommended Gate Resistance(R_g) : $R_g = R_{g1}(50 \Omega) + R_{g2}(50 \Omega) = 100 \Omega$ (MAX.)

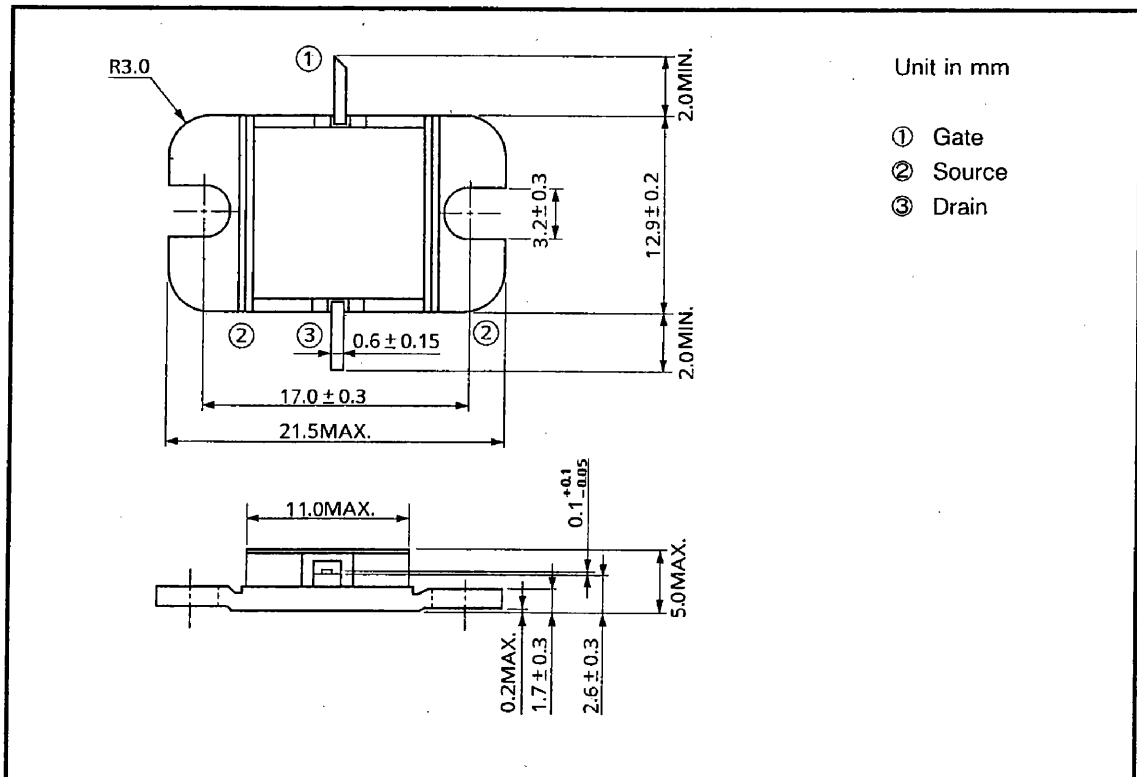
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ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	UNIT	RATING
Drain-Source Voltage	V _{DS}	V	15
Gate-Source Voltage	V _{GS}	V	-5
Drain Current	I _{DS}	A	11.5
Total Power Dissipation (T _C = 25°C)	P _T	W	60
Channel Temperature	T _{ch}	°C	175
Storage Temperature	T _{stg}	°C	-65 ~ 175

PACKAGE OUTLINE (2-11C1B)

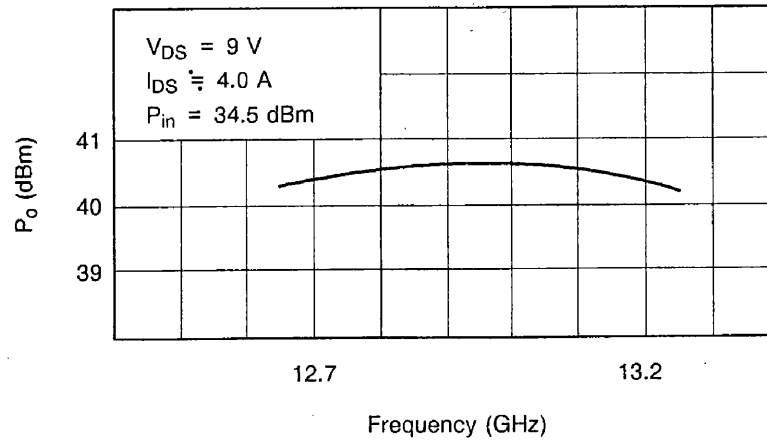


HANDLING PRECAUTIONS FOR PACKAGED TYPE

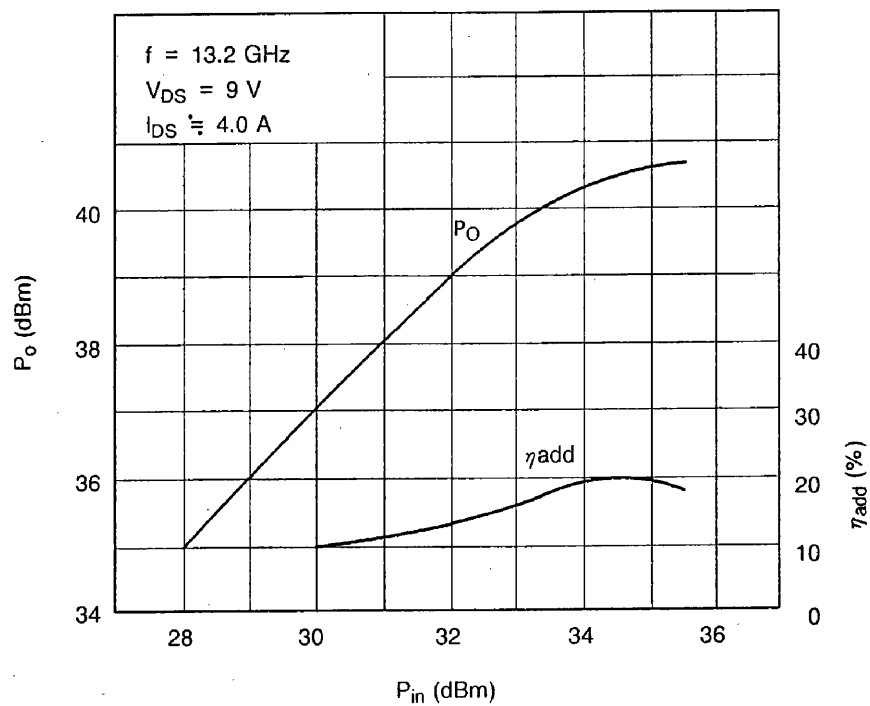
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCES

Output Power vs. Frequency



Output Power vs. Input Power



POWER DISSIPATION VS. CASE TEMPERATURE

