

### High Power GaAs FETs (L, S-Band)

#### Features

- High power
  - $P_{1dB} = 42.0$  dBm at 1.8 GHz
- High gain
  - $G_{1dB} = 14.0$  dB at 1.8 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	$P_{1dB}$	$V_{DS} = 10V$ $f = 1.8 \text{ GHz}$	dBm	41.0	42.0	—
Power Gain at 1dB Compression Point	$G_{1dB}$		dB	13.0	14.0	—
Drain Current	$I_{DS}$		A	—	4.0	5.0
Power Added Efficiency	$N_{add}$		%	—	38	—
Channel-Temperature Rise	$\Delta T_{ch}$	NOTE 1	$^\circ\text{C}$	—	—	80

#### Electrical Characteristics ( $T_a = 25^\circ \text{C}$ )

Characteristic	Symbol	Condition	Unit	Min.	Typ.	Max
Trans-conductance	gm	$V_{DS}=3V$ $I_{DS}=3.5A$	mS	—	3200	—
Pinch-off Voltage	$V_{GSoff}$	$V_{DS}=3V$ $I_{DS}=70mA$	V	-1.0	-3.0	-4.0
Saturated Drain Current	$I_{DSS}$	$V_{DS}=3V$ $V_{GS}=0V$	A	—	10	13
Gate to Source Breakdown Voltage	$V_{GSO}$	$I_{GS}=-210 \mu A$	V	-5	—	—
Thermal Resistance	$R_{th (c-c)}$	Channel to case	$^\circ\text{C/W}$	—	1.9	2.5

NOTE 1:  $\Delta T_{ch} = (V_{DS} \times I_{DS} + P_{in} - P_{1dB}) \times R_{th(c-c)}$

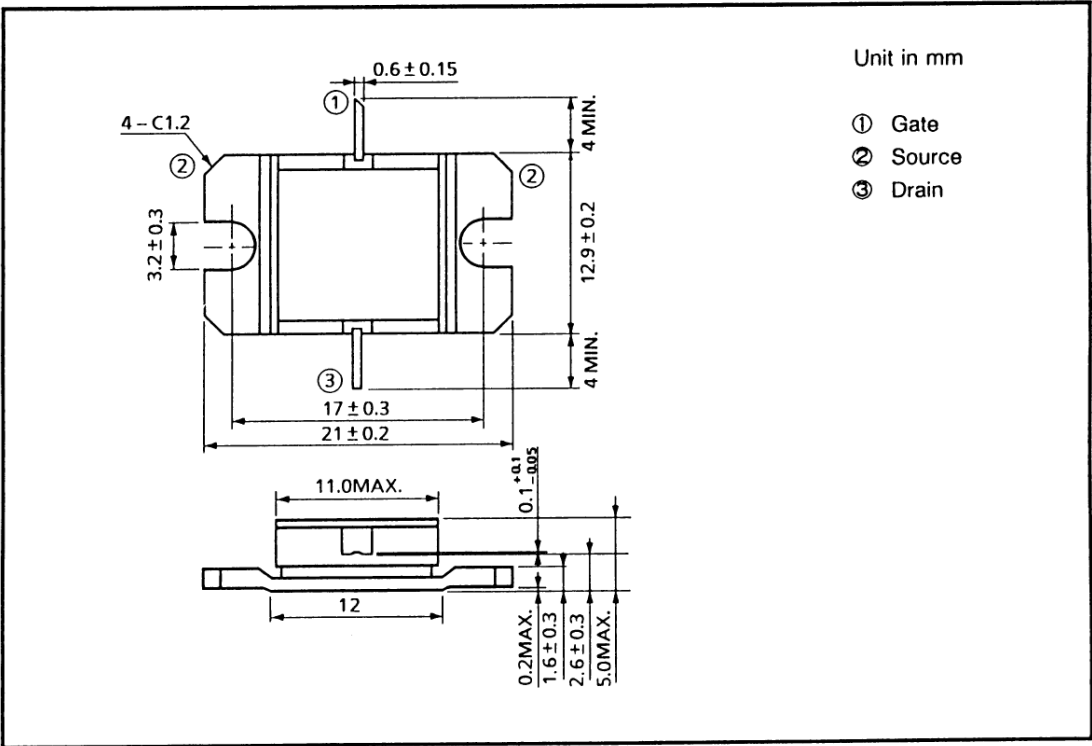
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Absolute Maximum Ratings (T<sub>a</sub> = 25° C)

Characteristic	Symbol	Unit	Rating
Drain Source Voltage	V <sub>DS</sub>	V	15
Gate Source Voltage	V <sub>GS</sub>	V	-5
Drain Current	I <sub>D</sub>	A	10
Total Power Dissipation (T <sub>c</sub> = 25°C)	P <sub>T</sub>	W	60
Channel Temperature	T <sub>ch</sub>	°C	175
Storage Temperature	T <sub>stg</sub>	°C	-65~175

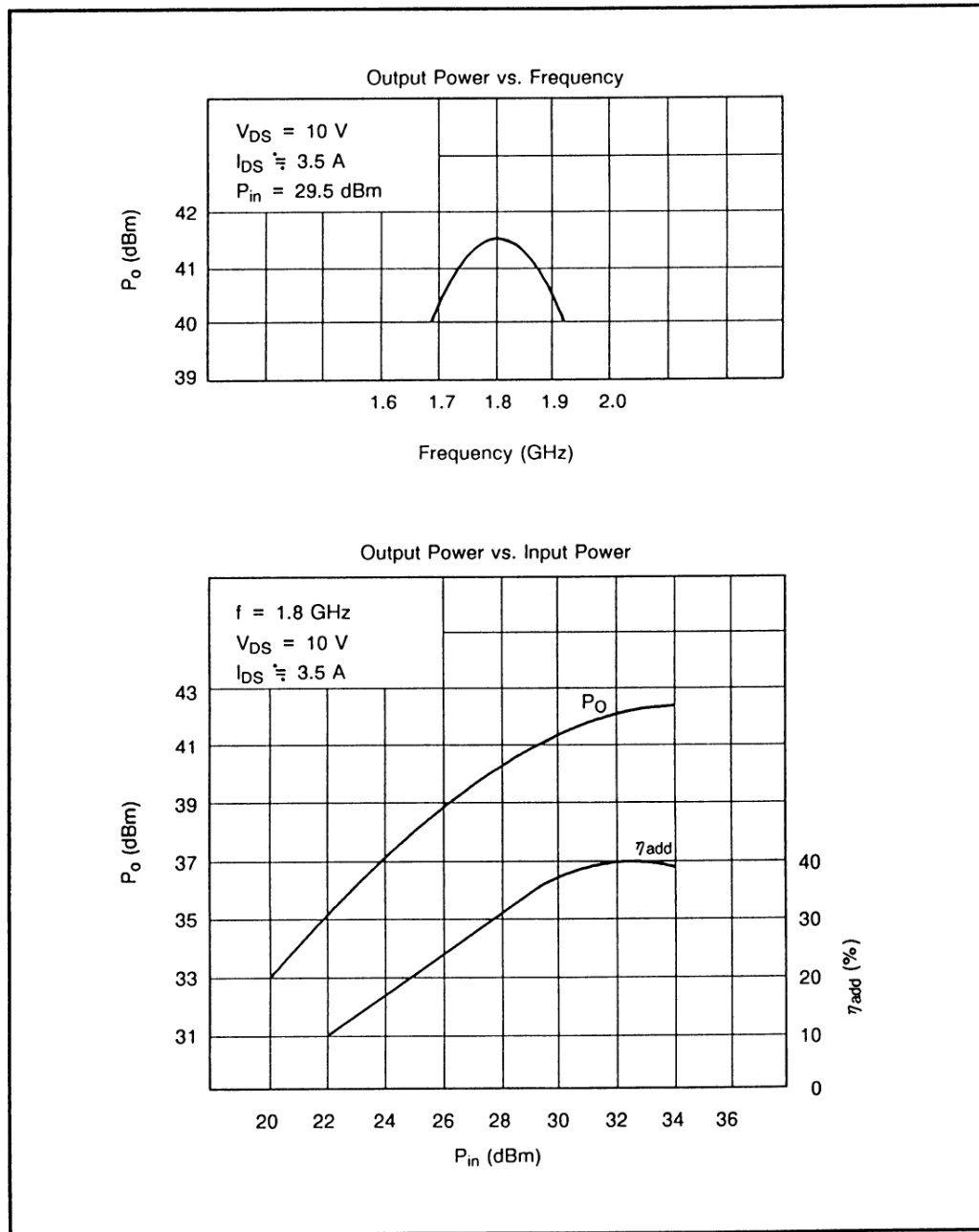
Package Outline (2-11D1B)



Handling Precautions for Packaged Type

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

## RF Performances



Power Dissipation vs. Case Temperature

