

High Power GaAs FETs (L, S-Band)

Features

- High power
 - $P_{1dB} = 44.5$ dBm at 1.8 GHz
- High gain
 - $G_{1dB} = 12$ 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	43.5	44.5	—
Power Gain at 1dB Compression Point	G_{1dB}		dB	11.0	12.0	—
Drain Current	I_{DS}		A	—	7.5	9.0
Power Added Efficiency	N_{add}		%	—	35	—
Channel-Temperature Rise	ΔT_{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	$V_{DS}=3V$ $I_{DS}=7.0A$	mS	—	6300	—
Pinch-off Voltage	V_{GSoff}	$V_{DS}=3V$ $I_{DS}=140mA$	V	-1.0	-3.0	-4.0
Saturated Drain Current	I_{DSS}	$V_{DS}=3V$ $V_{GS}=0V$	A	—	20	26
Gate to Source Breakdown Voltage	V_{GSO}	$I_{GS}=-420 \mu A$	V	-5	—	—
Thermal Resistance	$R_{th (c-c)}$	Channel to case	$^\circ\text{C/W}$	—	1.1	1.4

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

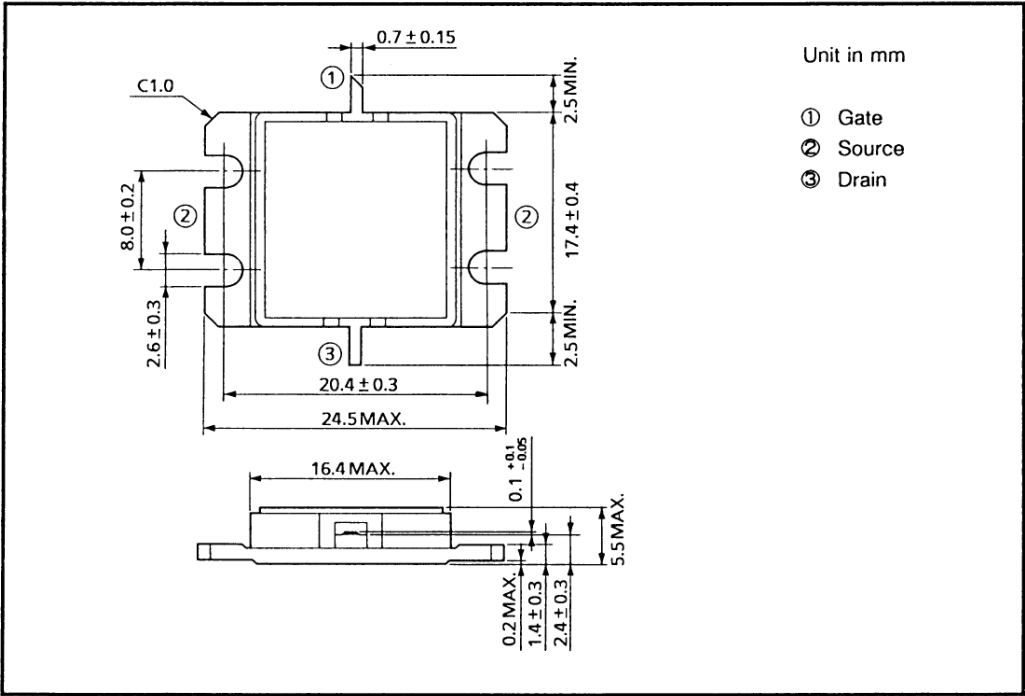
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Absolute Maximum Ratings (T_a = 25° C)

Characteristic	Symbol	Unit	Rating
Drain Source Voltage	V _{DS}	V	15
Gate Source Voltage	V _{GS}	V	-5
Drain Current	I _D	A	20
Total Power Dissipation (T _c = 25°C)	P _T	W	100
Channel Temperature	T _{ch}	°C	175
Storage Temperature	T _{stg}	°C	-65~175

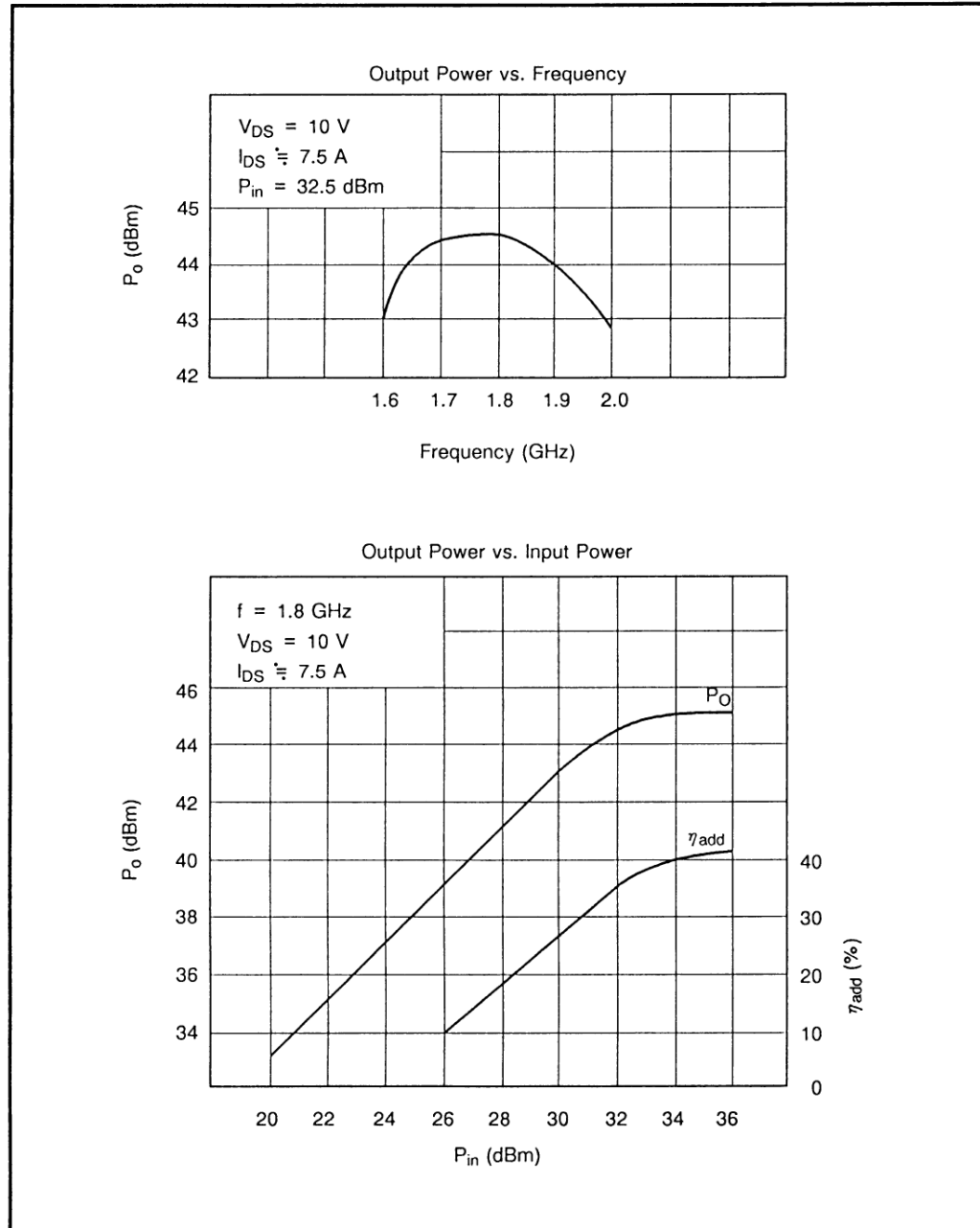
Package Outline (2-16G1B)



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

