

FEATURES :

- LOW INTERMODULATION DISTORTION
IM₃ = -43 dBc at Po = 31.5 dBm,
Single Carrier Level
- HIGH POWER
P_{1dB} = 41.5 dBm at 7.1 GHz to 7.9 GHz
- HIGH GAIN
G_{1dB} = 6.5 dB at 7.1 GHz to 7.9 GHz
- BROAD BAND INTERNALLY MATCHED
- HERMETICALLY SEALED PACKAGE

RF PERFORMANCE SPECIFICATIONS (Ta = 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Compression Point	P _{1dB}	V _{DS} = 10 V f = 7.1 ~ 7.9 GHz	dBm	40.5	41.5	—
Power Gain at 1dB Compression Point	G _{1dB}		dB	5.5	6.5	—
Drain Current	I _{DS1}		A	—	4.2	5.0
Gain Flatness	ΔG		dB	—	—	± 0.6
Power Added Efficiency	η _{add}		%	—	26	—
3rd Order Intermodulation Distortion	IM ₃	Note 1	dBc	-40	-43	—
Drain Current	I _{DS2}		A	—	4.2	5.0
Channel-Temperature Rise	ΔT _{ch}	V _{DS} × I _{DS} × R _{th} (c-c)	°C	—	—	80

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

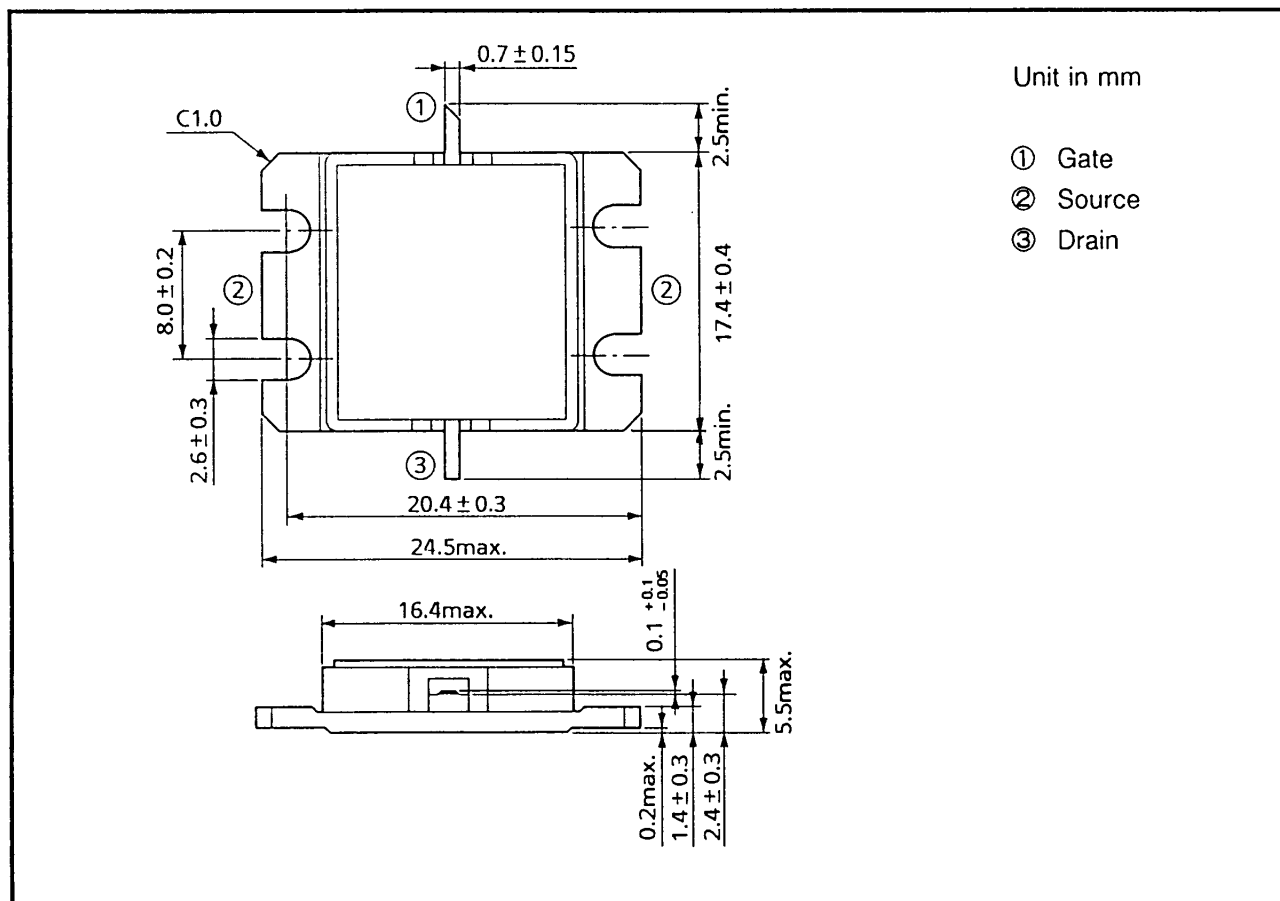
CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	V _{DS} = 3 V I _{DS} = 5.2 A	mS	—	3200	—
Pinch-off Voltage	V _{GSoff}	V _{DS} = 3 V I _{DS} = 70 mA	V	-2	-3.5	-5.0
Saturated Drain Current	I _{DSS}	V _{DS} = 3 V V _{GS} = 0 V	A	—	10.0	13.0
Gate-Source Breakdown Voltage	V _{GSO}	I _{GS} = -210 μA	V	-5	—	—
Thermal Resistance	R _{th} (c-c)	Channel to Case	°C/W	—	1.9	2.5

Note 1 : 2 tone Test Pout = 31.5 dBm Single Carrier Level.

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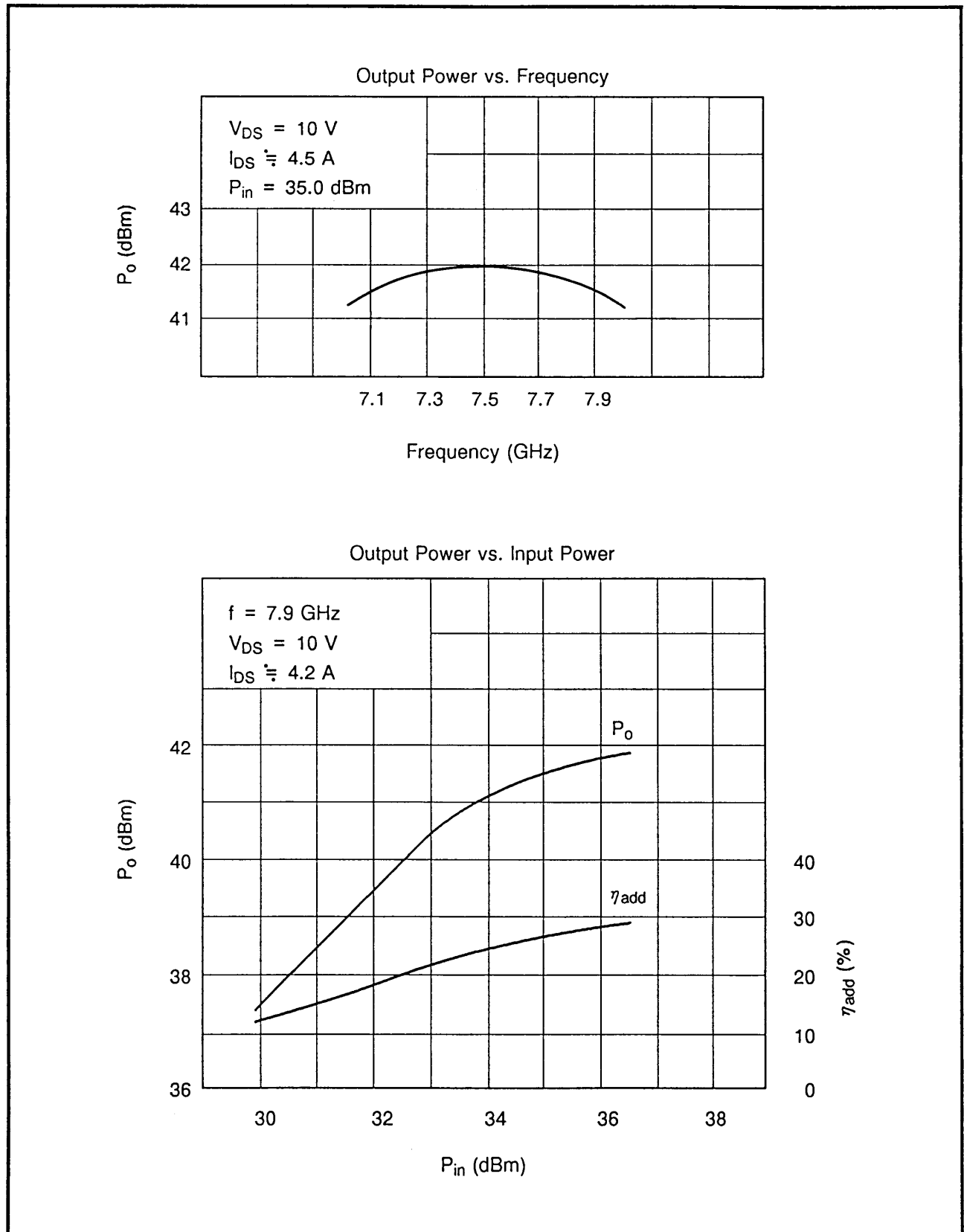
ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V_{DS}	V	15
Gate-Source Voltage	V_{GS}	V	-5
Drain Current	I_{DS}	A	13
Total Power Dissipation ($T_C = 25^\circ\text{C}$)	P_T	W	60
Channel Temperature	T_{ch}	$^\circ\text{C}$	175
Storage Temperature	T_{stg}	$^\circ\text{C}$	-65 ~ 175

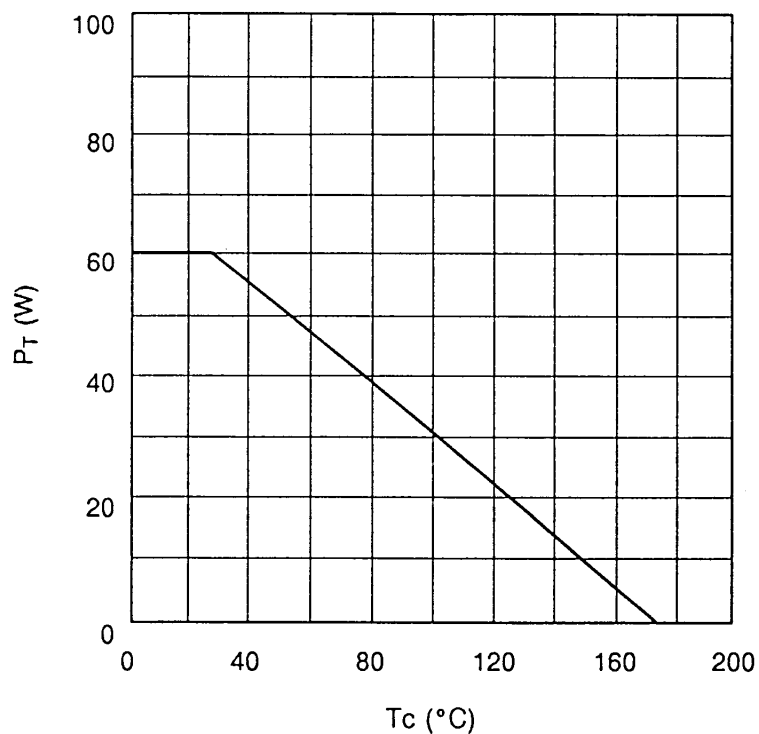
PACKAGE OUTLINE (2-16G1B)**HANDLING PRECAUTIONS FOR PACKAGED TYPE**

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

RF PERFORMANCES



POWER DISSIPATION VS. CASE TEMPERATURE



IM₃ VS. OUTPUT POWER CHARACTERISTICS

