

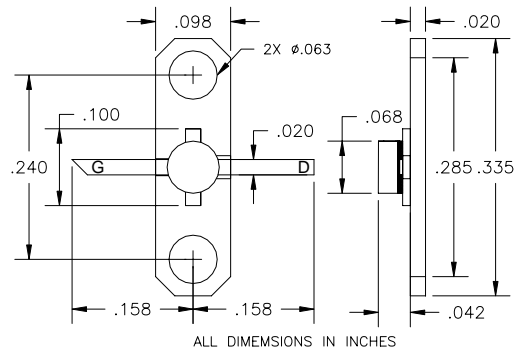


EPA240B-100P

UPDATED 02/15/2005

High Efficiency Heterojunction Power FET

- NON-HERMETIC 100MIL METAL FLANGE PACKAGE
- +32.5dBm TYPICAL OUTPUT POWER
- 10.5dB TYPICAL POWER GAIN AT 12GHz
- 0.3 X 2400 MICRON RECESSED “MUSHROOM” GATE
- Si₃N₄ PASSIVATION
- ADVANCED EPITAXIAL HETEROJUNCTION PROFILE PROVIDES EXTRA HIGH POWER EFFICIENCY, AND HIGH RELIABILITY



ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

SYMBOLS	PARAMETERS/TEST CONDITIONS	MIN	TYP	MAX	UNIT
P_{1dB}	Output Power at 1dB Compression V _{ds} =8V, I _{ds} =50% I _{ds}	31.0	32.5 32.5		dBm
G_{1dB}	Gain at 1dB Compression V _{ds} =8V, I _{ds} =50% I _{ds}	9.0	10.5 7.5		dB
PAE	Power Added Efficiency at 1dB Compression V _{ds} =8 V, I _{ds} =50% I _{ds}		44		%
I_{ds}	Saturated Drain Current V _{ds} =3V, V _{gs} =0V	440	720	940	mA
G_m	Transconductance V _{ds} =3V, V _{gs} =0V	480	760		mS
V_p	Pinch-off Voltage V _{ds} =3V, I _{ds} =6mA		-1.0	-2.5	V
BV_{gd}	Drain Breakdown Voltage I _{gd} =2.4mA	-11	-15		V
BV_{gs}	Source Breakdown Voltage I _{gs} =2.4mA	-7	-14		V
R_{th}	Thermal Resistance (Au-Sn Eutectic Attach)		23*		°C/W

- Overall R_{th} depends on case mounting.

ABSOLUTE MAXIMUM RATINGS FOR CONTINUOUS OPERATION AT 25°C

SYMBOLS	PARAMETERS	CONTINUOUS ^{1,2}
V_{ds}	Drain-Source Voltage	8V
V_{gs}	Gate-Source Voltage	-3V
I_{ds}	Drain Current	710mA
I_{gsf}	Forward Gate Current	20mA
P_{in}	Input Power	@ 3dB Compression
T_{ch}	Channel Temperature	150 °C
T_{stg}	Storage Temperature	-65 to +150 °C
P_t	Total Power Dissipation	5.7W

- Note: 1. Exceeding any of the above ratings may result in permanent damage.
 2. Exceeding any of the above ratings may reduce MTTF below design goals.

Specifications are subject to change without notice.

Excelics Semiconductor, Inc. 310 De Guigne Drive, Sunnyvale, CA 94085
 Phone: 408-737-1711 Fax: 408-737-1868 Web: www.excelics.com

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 Revised February 2005