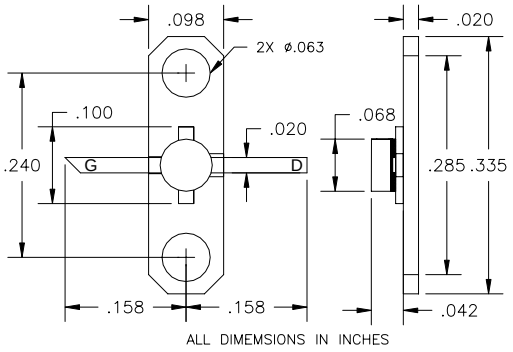
EPA240D-100P

UPDATED 11/14/2005

High Efficiency Heterojunction Power FET

- **NON-HERMETIC 100MIL METAL FLANGE PACKAGE**
- **+33 dBm TYPICAL OUTPUT POWER**
- **20 dB TYPICAL POWER GAIN AT 2GHz**
- **0.4 X 2400 MICRON RECESSED "MUSHROOM" GATE**
- **Si_3N_4 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 Vds=8V, Ids=50% Idss	f= 2GHz f= 4GHz	31.0	33.0 33.0		dBm
G_{1dB}	Gain at 1dB Compression Vds=8V, Ids=50% Idss	f= 2GHz f= 4GHz	18.5	20.0 14.5		dB
PAE	Power Added Efficiency at 1dB Compression Vds=8 V, Ids=50% Idss	f=2GHz		55		%
Idss	Saturated Drain Current	Vds=3V, Vgs=0V	440	720	940	mA
Gm	Transconductance	Vds=3V, Vgs=0V	480	760		mS
Vp	Pinch-off Voltage	Vds=3V, Ids=6mA		-1.0	-2.5	V
BVgd	Drain Breakdown Voltage	Igd=2.4mA	-11	-15		V
BVgs	Source Breakdown Voltage	Igs=2.4mA	-7	-14		V
Rth	Thermal Resistance (Au-Sn Eutectic Attach)			26*		°C/W

* Overall Rth depends on case mounting.

ABSOLUTE MAXIMUM RATING[1,2]

SYMBOLS	PARAMETERS	ABSOLUTE[1]	CONTINUOUS[2]
Vds	Drain-Source Voltage	12V	8V
Vgs	Gate-Source Voltage	-8V	-3V
Ids	Drain Current	Idss	620mA
Igsf	Forward Gate Current	120mA	20mA
Pin	Input Power	30 dBm	@ 3dB Compression
Tch	Channel Temperature	175 °C	150 °C
Tstg	Storage Temperature	-65 to +175 °C	-65 to +150 °C
Pt	Total Power Dissipation	6.0W	5.0W

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.