



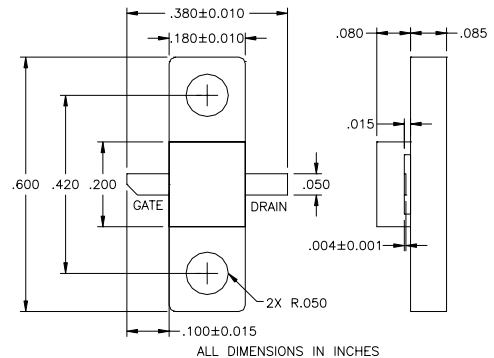
EFC240B-180F

ISSUED 10/04/2006

Low Distortion GaAs Power FET

FEATURES

- NON-HERMETIC 180MIL METAL FLANGE PACKAGE
- +31.0 dBm TYPICAL OUTPUT POWER
- 16.5 dB TYPICAL POWER GAIN AT 2GHz
- 0.3 x 2400 MICRON RECESSED “MUSHROOM” GATE
- Si₃N₄ PASSIVATION
- ADVANCED EPITAXIAL DOPING PROFILE PROVIDES HIGH POWER EFFICIENCY, LINEARITY AND RELIABILITY



ELECTRICAL CHARACTERISTICS (T_a = 25°C)



Caution! ESD sensitive device.

SYMBOL	PARAMETERS/TEST CONDITIONS ¹	MIN	TYP	MAX	UNITS
P _{1dB}	Output Power at 1dB Compression V _{DS} = 10 V, I _{DS} ≈ 50% I _{DSS} f = 2GHz f = 4GHz	29.0	31.0 31.0		dBm
G _{1dB}	Gain at 1dB Compression V _{DS} = 10 V, I _{DS} ≈ 50% I _{DSS} f = 2GHz f = 4GHz	15.0	16.5 11.5		dB
PAE	Power Added Efficiency at 1dB Compression V _{DS} = 10 V, I _{DS} ≈ 50% I _{DSS} f = 2GHz		40		%
I _{DSS}	Saturated Drain Current V _{DS} = 3 V, V _{GS} = 0 V	320	520	720	mA
G _M	Transconductance V _{DS} = 3 V, V _{GS} = 0 V	200	280		mS
V _P	Pinch-off Voltage V _{DS} = 3 V, I _{DS} = 6 mA		-2.5	-4.0	V
BV _{GD}	Drain Breakdown Voltage I _{GD} = 2.4 mA	-18	-20		V
BV _{GS}	Source Breakdown Voltage I _{GS} = 2.4 mA	-10	-17		V
R _{th}	Thermal Resistance		22*		°C/W

* Overall R_{th} depends on case mounting.

MAXIMUM RATINGS AT 25°C

SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
V _{DS}	Drain-Source Voltage	15V	10V
V _{GS}	Gate-Source Voltage	5V	-4.5V
I _{gf}	Forward Gate Current	10.8mA	3.6mA
I _{gr}	Reverse Gate Current	-1.8mA	-0.6mA
P _{in}	Input Power	29dBm	@ 3dB Compression
T _{ch}	Channel Temperature	175°C	175°C
T _{stg}	Storage Temperature	-65/175°C	-65/175°C
P _t	Total Power Dissipation	6W	6W

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.

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