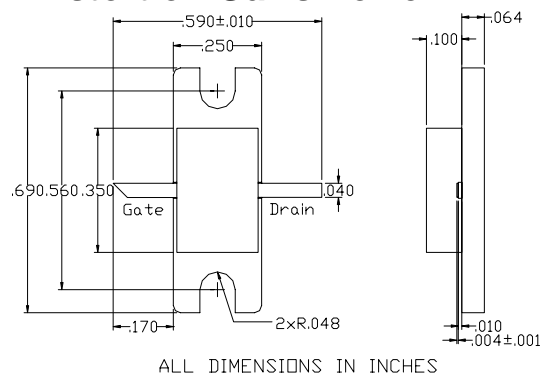


# EFE960EV-250P

## Low Distortion GaAs Power FET

### FEATURES

- Non-Hermetic 250mil Metal Flange Package
- +36.5 dBm Typical Output Power
- 15.0 dB Typical Power Gain at 2GHz
- 0.6 x 9600 Micron Recessed "Mushroom" Gate
- Si<sub>3</sub>N<sub>4</sub> Passivation
- Advanced Epitaxial Heterojunction Profile Provides Extra High Power Efficiency and High Reliability



Caution! ESD sensitive device.

### ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)

SYMBOL	PARAMETERS/TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>1dB</sub>	Output Power at 1dB Compression V <sub>DS</sub> = 10 V, I <sub>DS</sub> ≈ 50% I <sub>DSS</sub> f = 2GHz f = 4GHz	35.0	36.5 36.5		dBm
G <sub>1dB</sub>	Gain at 1dB Compression V <sub>DS</sub> = 10 V, I <sub>DS</sub> ≈ 50% I <sub>DSS</sub> f = 2GHz f = 4GHz	13.5	15.0 11.0		dB
PAE	Power Added Efficiency at 1dB Compression V <sub>DS</sub> = 10 V, I <sub>DS</sub> ≈ 50% I <sub>DSS</sub> f = 2GHz		36		%
I <sub>DSS</sub>	Saturated Drain Current V <sub>DS</sub> = 3 V, V <sub>GS</sub> = 0 V	1500	2000	2500	mA
G <sub>M</sub>	Transconductance V <sub>DS</sub> = 3 V, V <sub>GS</sub> = 0 V		1000		mS
V <sub>P</sub>	Pinch-off Voltage V <sub>DS</sub> = 3 V, I <sub>DS</sub> = 20 mA		-2.5	-4.0	V
BV <sub>GD</sub>	Drain Breakdown Voltage I <sub>GD</sub> = 9.6 mA	-19	-22		V
BV <sub>GS</sub>	Source Breakdown Voltage I <sub>GS</sub> = 9.6 mA	-10	-20		V
R <sub>TH</sub>	Thermal Resistance		5.5*	6.0*	°C/W

\* Overall R<sub>th</sub> depends on case mounting.

### MAXIMUM RATINGS<sup>1,2</sup> (T<sub>a</sub> = 25°C)

SYMBOL	CHARACTERISTIC	ABSOLUTE	CONTINUOUS
V <sub>DS</sub>	Drain to Source Voltage	15 V	10 V
V <sub>GS</sub>	Gate to Source Voltage	-5 V	-4 V
I <sub>DS</sub>	Drain Current	I <sub>DSS</sub>	2.5 A
I <sub>GSF</sub>	Forward Gate Current	43.2 mA	14.4 mA
I <sub>GSR</sub>	Reverse Gate Current	-7.2 mA	-2.4 mA
P <sub>IN</sub>	Input Power	33.5 dBm	@ 3dB compression
P <sub>T</sub>	Total Power Dissipation	25 W	25 W
T <sub>CH</sub>	Channel Temperature	175°C	175°C
T <sub>STG</sub>	Storage Temperature	-65/+175°C	-65/+175°C

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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