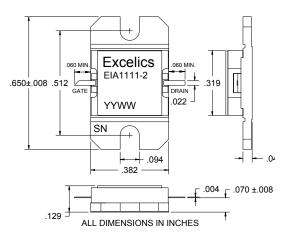


UPDATED 02/17/2006

# 11.0-11.5 GHz 2-Watt Internally Matched Power FET

#### FEATURES

- 11.0-11.5GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +34.0 dBm Output Power at 1dB Compression
- 11.0 dB Power Gain at 1dB Compression
- 32% Power Added Efficiency
- Hermetic Metal Flange Package



Caution! ESD sensitive device.

EIA1111-2

## ELECTRICAL CHARACTERISTICS ( $T_a = 25^{\circ}C$ )

#### SYMBOL PARAMETERS/TEST CONDITIONS<sup>1</sup> MAX UNITS MIN TYP Output Power at 1dB Compression f = 11.0-11.5GHz P<sub>1dB</sub> 33.0 34.0 dBm V<sub>DS</sub> = 8 V, I<sub>DSQ</sub> ≈ 800mA Gain at 1dB Compression f = 11.0-11.5GHz 10.0 11.0 dB G<sub>1dB</sub> V<sub>DS</sub> = 8 V, I<sub>DSQ</sub> ≈ 800mA Gain Flatness f = 11.0-11.5GHz ΔG ±0.6 dB V<sub>DS</sub> = 8 V, I<sub>DSQ</sub> ≈ 800mA Power Added Efficiency at 1dB Compression PAE 32 % V<sub>DS</sub> = 8 V, I<sub>DSQ</sub> ≈ 800mA f = 11.0-11.5GHz Drain Current at 1dB Compression f = 11.0-11.5GHz 1100 Id<sub>1dB</sub> 900 mΑ Saturated Drain Current V<sub>DS</sub> = 3 V, V<sub>GS</sub> = 0 V IDSS 1400 1800 mΑ VP Pinch-off Voltage $V_{DS} = 3 V, I_{DS} = 14 mA$ -1.0 -2.5 V Thermal Resistance<sup>3</sup> 10 °C/W R<sub>TH</sub> 11 3) Overall Rth depends on case mounting.

Note: 1) Tested with 100 Ohm gate resistor. 2) S.C.L. = Single Carrier Level.

### **ABSOLUTE MAXIMUM RATING<sup>1,2</sup>**

SYMBOLS	PARAMETERS	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
Vds	Drain-Source Voltage	12	8V
Vgs	Gate-Source Voltage	-5	-3V
lgsf	Forward Gate Current	21.6mA	7.2mA
lgsr	Reserve Gate Current	-3.6mA	-1.2mA
Pin	Input Power	32.5dBm	@ 3dB Compression
Tch	Channel Temperature	175 °C	175 °C
Tstg	Storage Temperature	-65 to +175 °C	-65 to +175 °C
Pt	Total Power Dissipation	13W	13W

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.