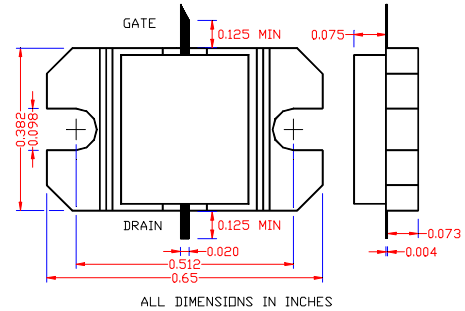


**Not recommended for new designs. Contact factory. Effective 03/2003**  
**13.0-14.5GHz, 4W Internally Matched Power FET**

- **13.0-14.5GHz BANDWIDTH AND INPUT/OUTPUT IMPEDANCE MATCHED TO 50 OHM**
- **FEATURES HIGH PAE (27% TYPICAL)**
- **+36.0dBm TYPICAL P<sub>1dB</sub> OUTPUT POWER**
- **8.5dB TYPICAL G<sub>1dB</sub> POWER GAIN**
- **NON-HERMETIC METAL FLANGE PACKAGE**

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



SYMBOLS	PARAMETERS/TEST CONDITIONS	EIA1314A-4P						UNIT
		MIN	TYP	MAX				
<b>P<sub>1dB</sub></b>	Output Power at 1dB Compression f=13.0-14.5GHz V <sub>ds</sub> =8V, I <sub>dsq</sub> =0.5 I <sub>dss</sub>	35.0	36.0					dBm
<b>G<sub>1dB</sub></b>	Gain at 1dB Compression f=13.0-14.5GHz V <sub>ds</sub> =8V, I <sub>dsq</sub> =0.5 I <sub>dss</sub>	7.5	8.5					dB
<b>PAE</b>	Power Added Efficiency at 1dB compression f=13.0-14.5GHz V <sub>ds</sub> =8V, I <sub>dsq</sub> =0.5 I <sub>dss</sub>		27					%
<b>I<sub>d1dB</sub></b>	Drain Current at 1dB Compression		1760					mA
<b>IP<sub>3</sub></b>	Output 3 <sup>rd</sup> Order Intercept Point f=13.0-14.5GHz V <sub>ds</sub> =8V, I <sub>dsq</sub> =0.5 I <sub>dss</sub>		43					dBm
<b>I<sub>dss</sub></b>	Saturated Drain Current V <sub>ds</sub> =3V, V <sub>gs</sub> =0V	2200	2880	3400				mA
<b>G<sub>m</sub></b>	Transconductance V <sub>ds</sub> =3V, V <sub>gs</sub> =0V		3000					mS
<b>V<sub>p</sub></b>	Pinch-off Voltage V <sub>ds</sub> =3V, I <sub>ds</sub> =24mA		-1.0	-2.5				V
<b>BV<sub>gd</sub></b>	Drain Breakdown Voltage I <sub>gd</sub> =9.6mA	-13	-15					V
<b>R<sub>th</sub></b>	Thermal Resistance (Au-Sn Eutectic Attach)		4.5					°C/W

**MAXIMUM RATINGS AT 25°C**

SYMBOLS	PARAMETERS	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
<b>V<sub>ds</sub></b>	Drain-Source Voltage	12V	8V
<b>V<sub>gs</sub></b>	Gate-Source Voltage	-8V	-3V
<b>I<sub>ds</sub></b>	Drain Current	I <sub>dss</sub>	3120mA
<b>I<sub>gsf</sub></b>	Forward Gate Current	360mA	60mA
<b>P<sub>in</sub></b>	Input Power	35dBm	@ 3dB Compression
<b>T<sub>ch</sub></b>	Channel Temperature	175°C	150°C
<b>T<sub>stg</sub></b>	Storage Temperature	-65/175°C	-65/150°C
<b>P<sub>t</sub></b>	Total Power Dissipation	30W	25W

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.

**Excelics Semiconductor, Inc., 310 De Guine Drive, Sunnyvale, CA 94085**  
 Phone: (408) 737-1711 Fax: (408) 737-1868 Web Site: [www.excelics.com](http://www.excelics.com)