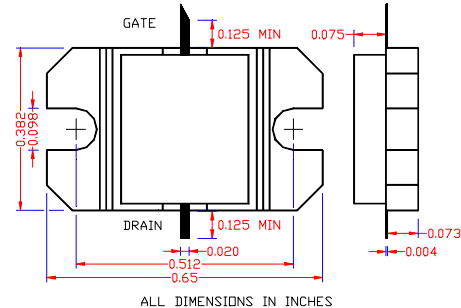


**Not recommended for new designs. Contact factory. Effective 03/2003**  
**13.0-14.5GHz, 8W Internally Matched Power FET**

- 13.0-14.5GHz BANDWIDTH AND INPUT/OUTPUT IMPEDANCE MATCHED TO 50 OHM
- HIGH PAE(25% TYPICAL)
- +39dBm TYPICAL  $P_{1dB}$  OUTPUT POWER
- 6.5dB TYPICAL  $G_{1dB}$  POWER GAIN
- NON-HERMETIC METAL FLANGE PACKAGE


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

SYMBOLS	PARAMETERS/TEST CONDITIONS	EIA1314A-8P						UNIT
		MIN	TYP	MAX				
$P_{1dB}$	Output Power at 1dB Compression $f=13.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$ , $I_{dsq}=0.5 I_{dss}$	38	39					dBm
$G_{1dB}$	Gain at 1dB Compression $f=13.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$ , $I_{dsq}=0.5 I_{dss}$	5.5	6.5					dB
PAE	Power Added Efficiency at 1dB compression $f=13.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$ , $I_{dsq}=0.5 I_{dss}$		25					%
$I_{d1dB}$	Drain Current at 1dB Compression		3520					mA
IP3	Output 3 <sup>rd</sup> Order Intercept Point $f=13.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$ , $I_{dsq}=0.5 I_{dss}$		46					dBm
$I_{dss}$	Saturated Drain Current $V_{ds}=3\text{V}$ , $V_{gs}=0\text{V}$	4400	5760	6800				mA
$G_m$	Transconductance $V_{ds}=3\text{V}$ , $V_{gs}=0\text{V}$		6000					mS
$V_p$	Pinch-off Voltage $V_{ds}=3\text{V}$ , $I_{ds}=48\text{mA}$		-1.0	-2.5				V
$BV_{gd}$	Drain Breakdown Voltage $I_{gd}=19.2\text{mA}$	-13	-15					V
$R_{th}$	Thermal Resistance (Au-Sn Eutectic Attach)		2.3					$^\circ\text{C/W}$

**MAXIMUM RATINGS AT  $25^\circ\text{C}$** 

SYMBOLS	PARAMETERS	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
$V_{ds}$	Drain-Source Voltage	12V	8V
$V_{gs}$	Gate-Source Voltage	-8V	-3V
$I_{ds}$	Drain Current	$I_{dss}$	6240mA
$I_{gsf}$	Forward Gate Current	720mA	120mA
$P_{in}$	Input Power	38dBm	@ 3dB Compression
$T_{ch}$	Channel Temperature	175 $^\circ\text{C}$	150 $^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65/175 $^\circ\text{C}$	-65/150 $^\circ\text{C}$
$P_t$	Total Power Dissipation	60W	50W

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.

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