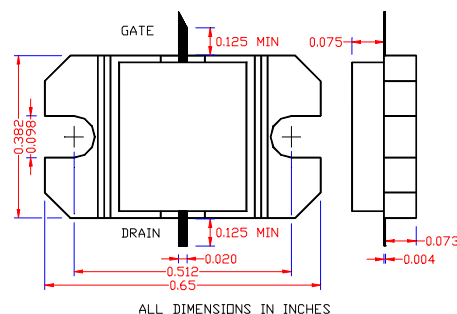


Not recommended for new designs. Contact factory. Effective 03/2003
14.0-14.5GHz, 8W Internally Matched Power FET

- **14.0-14.5GHz BANDWIDTH AND INPUT/OUTPUT IMPEDANCE MATCHED TO 50 OHM**
- **HIGH PAE(25% TYPICAL)**
- **+39dBm TYPICAL P_{1dB} OUTPUT POWER**
- **7.0dB TYPICAL G_{1dB} POWER GAIN**
- **NON-HERMETIC METAL FLANGE PACKAGE**



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

SYMBOLS	PARAMETERS/TEST CONDITIONS	EIA1414-8P						UNIT
		MIN	TYP	MAX				
P_{1dB}	Output Power at 1dB Compression $f=14.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$	38	39					dBm
G_{1dB}	Gain at 1dB Compression $f=14.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$	6.0	7.0					dB
PAE	Power Added Efficiency at 1dB compression $f=14.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$		25					%
I_{d1dB}	Drain Current at 1dB Compression		3520					mA
IP3	Output 3 rd Order Intercept Point $f=14.0-14.5\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$		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°C

SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
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.

Excelics Semiconductor, Inc., 310 De Guine Drive, Sunnyvale, CA 94085

Phone: (408) 737-1711 Fax: (408) 737-1868 Web Site: www.excelics.com