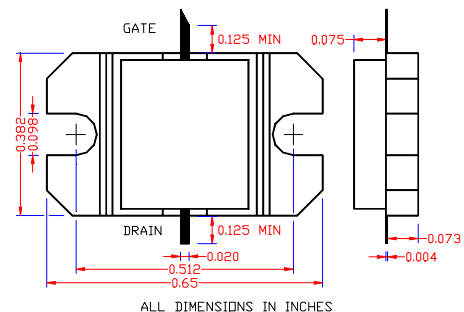


Not recommended for new designs. Contact factory. Effective 03/2003
14.0-15.35GHz, 2W Internally Matched Power FET

- 14.0-15.35GHz BANDWIDTH AND INPUT/OUTPUT IMPEDANCE MATCHED TO 50 OHM
- HIGH PAE(25% TYPICAL)
- +33.0 TYPICAL P_{1dB} OUTPUT POWER
- 7.5dB TYPICAL G_{1dB} POWER GAIN
- NON-HERMETIC METAL FLANGE PACKAGE

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



SYMBOLS	PARAMETERS/TEST CONDITIONS	EIA1415-2P						UNIT
		MIN	TYP	MAX				
P_{1dB}	Output Power at 1dB Compression $f=14.0-15.35\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$	32.0	33.0					dBm
G_{1dB}	Gain at 1dB Compression $f=14.0-15.35\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$	6.5	7.5					dB
PAE	Power Added Efficiency at 1dB compression $f=14.0-15.35\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$		25					%
I_{d1dB}	Drain Current at 1dB Compression		900					mA
IP3	Output 3 rd Order Intercept Point $f=14.0-15.35\text{GHz}$ $V_{ds}=8\text{V}$, $I_{dsq}=0.5 I_{dss}$		40					dBm
I_{dss}	Saturated Drain Current $V_{ds}=3\text{V}$, $V_{gs}=0\text{V}$	1100	1440	1700				mA
G_m	Transconductance $V_{ds}=3\text{V}$, $V_{gs}=0\text{V}$		1500					mS
V_p	Pinch-off Voltage $V_{ds}=3\text{V}$, $I_{ds}=12\text{mA}$		-1.0	-2.5				V
BV_{gd}	Drain Breakdown Voltage $I_{gd}=4.8\text{mA}$	-13	-15					V
R_{th}	Thermal Resistance (Au-Sn Eutectic Attach)		8					$^\circ\text{C/W}$

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}	I_{dss}
I_{gsf}	Forward Gate Current	180mA	30mA
P_{in}	Input Power	32dBm	@ 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	17W	14.2W

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