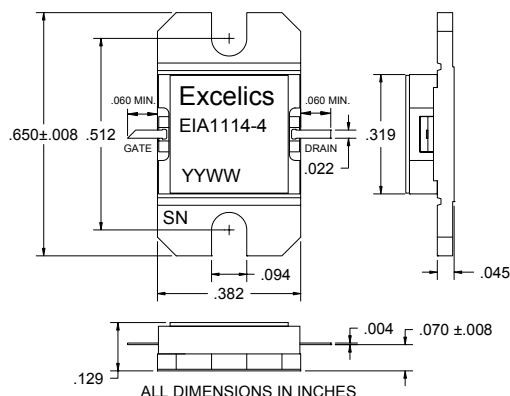


### FEATURES

- 11.0– 14.0GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +36.5 dBm Output Power at 1dB Compression
- 7.0 dB Power Gain at 1dB Compression
- 25% Power Added Efficiency
- -36 dBc IM3 at  $P_o = 25.5$  dBm SCL
- Hermetic Metal Flange Package
- 100% Tested for DC, RF, and  $R_{TH}$



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



Caution! ESD sensitive device.

SYMBOL	PARAMETERS/TEST CONDITIONS <sup>1</sup>	MIN	TYP	MAX	UNITS
$P_{1dB}$	Output Power at 1dB Compression $f = 11.0-14.0\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1500\text{mA}$	35.5	36.5		dBm
$G_{1dB}$	Gain at 1dB Compression $f = 11.0-14.0\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1500\text{mA}$	6.0	7.0		dB
$\Delta G$	Gain Flatness $f = 11.0-14.0\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1500\text{mA}$			$\pm 0.8$	dB
PAE	Power Added Efficiency at 1dB Compression $f = 11.0-14.0\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1500\text{mA}$		25		%
$I_{d1dB}$	Drain Current at 1dB Compression $f = 11.0-14.0\text{GHz}$		1700	2000	mA
IM3	Output 3rd Order Intermodulation Distortion $\Delta f = 10\text{ MHz}$ 2-Tone Test; $P_{out} = 25.5\text{ dBm S.C.L}^2$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 65\% IDSS$ $f = 14.0\text{GHz}$		-36		dBc
$I_{DSS}$	Saturated Drain Current $V_{DS} = 3\text{ V}, V_{GS} = 0\text{ V}$		2880	3600	mA
$V_P$	Pinch-off Voltage $V_{DS} = 3\text{ V}, I_{DS} = 29\text{ mA}$		-1.0	-2.5	V
$R_{TH}$	Thermal Resistance <sup>3</sup>		5.5	6.0	$^\circ\text{C/W}$

Note: 1) Tested with 100 Ohm gate resistor.

2) S.C.L. = Single Carrier Level.

3) Overall  $R_{th}$  depends on case mounting.

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

SYMBOLS	PARAMETERS	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
$V_{ds}$	Drain-Source Voltage	10	8V
$V_{gs}$	Gate-Source Voltage	-5	-3V
$I_{gsf}$	Forward Gate Current	43.2mA	14.4mA
$I_{gsr}$	Reverse Gate Current	-7.2mA	-2.4mA
$P_{in}$	Input Power	35.5dBm	@ 3dB Compression
$T_{ch}$	Channel Temperature	175 $^\circ\text{C}$	175 $^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65 to +175 $^\circ\text{C}$	-65 to +175 $^\circ\text{C}$
$P_t$	Total Power Dissipation	25W	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.

Specifications are subject to change without notice.

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