



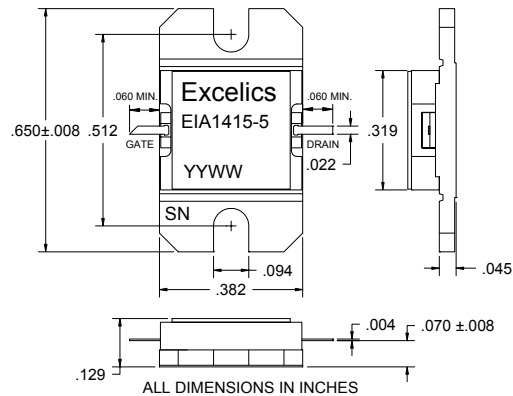
EIA1415-5

UPDATED 11/17/2006

14.40-15.35GHz 5-Watt Internally Matched Power FET

FEATURES

- 14.40– 15.35GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +36.5 dBm Output Power at 1dB Compression
- 7.0 dB Power Gain at 1dB Compression
- 33% Power Added Efficiency
- 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 ¹	MIN	TYP	MAX	UNITS
P_{1dB}	Output Power at 1dB Compression $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1400\text{mA}$	35.5	36.5		dBm
G_{1dB}	Gain at 1dB Compression $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1400\text{mA}$	6.0	7.0		dB
ΔG	Gain Flatness $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1400\text{mA}$			± 0.6	dB
PAE	Power Added Efficiency at 1dB Compression $f = 14.40\text{-}15.35\text{GHz}$ $V_{DS} = 8\text{ V}, I_{DSQ} \approx 1400\text{mA}$		33		%
I_{d1dB}	Drain Current at 1dB Compression $f = 14.40\text{-}15.35\text{GHz}$		1700	2000	mA
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 ²		5.5	6.0	$^\circ\text{C/W}$

Note: 1) Tested with 100 Ohm gate resistor.
2) Overall R_{th} depends on case mounting.

ABSOLUTE MAXIMUM RATING^{1,2}

SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
V_{DS}	Drain-Source Voltage	10	8V
V_{GS}	Gate-Source Voltage	-5	-3V
I_{gf}	Forward Gate Current	43.2mA	14.4mA
I_{gr}	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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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness

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