

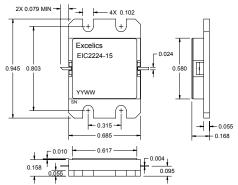
**EIC2224-15** 

ISSUED 04/04/2006

# 2.20 – 2.40 GHz 15W Internally Matched Power FET

#### **FEATURES**

- 2.20- 2.40GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +42.5 dBm Output Power at 1dB Compression
- 13.0 dB Power Gain at 1dB Compression
- 35% Power Added Efficiency
- Hermetic Metal Flange Package
- 100% Tested for DC, RF, and R<sub>TH</sub>





#### Caution! ESD sensitive device.

## **ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)**

SYMBOLS	PARAMETERS/TEST CONDITIONS <sup>1</sup>	MIN	TYP	MAX	UNIT
P <sub>1dB</sub>	Output Power at 1dB Compression $f = 2.20-2.40GHz$ $V_{DS} = 10V$ , $I_{DSQ} \approx 4.6A$	41.5	42.5		dBm
G <sub>1dB</sub>	Gain at 1dB Compression $f = 2.20-2.40GHz$ $V_{DS} = 10V$ , $I_{DSQ} \approx 4.6A$	12.0	13.0		dB
ΔG	Gain Flatness $f = 2.20-2.40 GHz$ $V_{DS} = 10V$ , $I_{DSQ} \approx 4.6 A$			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression $V_{DS}$ = 10V, $I_{DSQ} \approx 4.6A$ f = 2.20-2.40GHz		35		%
Id <sub>1dB</sub>	Drain Current at 1dB Compression f = 2.20-2.40GHz		4.8	5.4	Α
I <sub>DSS</sub>	Saturated Drain Current $V_{DS} = 3 \text{ V}, V_{GS} = 0 \text{ V}$		8.6	10.8	Α
V <sub>P</sub>	Pinch-off Voltage V <sub>DS</sub> = 3 V, I <sub>DS</sub> = 86mA		-2.5	-4.0	V
R <sub>TH</sub>	Thermal Resistance <sup>2</sup>		1.7	1.9	°C/W

Note: 1. Tested with 25 Ohm gate resistor.

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

SYMBOLS	PARAMETERS	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
Vds	Drain-Source Voltage	15V	10V
		-	-
Vgs	Gate-Source Voltage	-5V	-4V
lgsf	Forward Gate Current	192mA	64mA
lgsr	Reserve Gate Current	-33mA	-11mA
Pin	Input Power	42.0dBm	@ 3dB Compression
Tch	Channel Temperature	175 °C	175°C
Tstg	Storage Temperature	-65 to +175 °C	-65 to +175 °C
Pt	Total Power Dissipation	79W	79W

<sup>: 1.</sup> Exceeding any of the above ratings may result in permanent damage.

Overall Rth depends on case mounting.

<sup>2.</sup> Exceeding any of the above ratings may reduce MTTF below design goals.