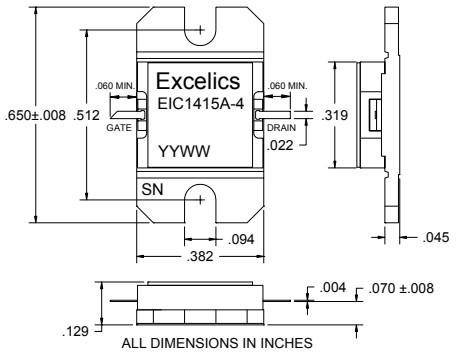
EIC1415A-4

ISSUED 08/21/2007

14.40-15.40GHz 4-Watt Internally Matched Power FET

FEATURES

- **14.40– 15.40GHz Bandwidth**
- **Input/Output Impedance Matched to 50 Ohms**
- **+36.0 dBm Output Power at 1dB Compression**
- **5.0 dB Power Gain at 1dB Compression**
- **25% Power Added Efficiency**
- **-43 dBc IM3 at Po = 25.0 dBm SCL**
- **Hermetic Metal Flange Package**
- **100% Tested for DC, RF, and R_{TH}**



ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Caution! ESD sensitive device.

SYMBOL	PARAMETERS/TEST CONDITIONS[1]	MIN	TYP	MAX	UNITS
P_{1dB}	Output Power at 1dB Compression f = 14.40-15.40GHz V_{DS} = 10 V, I_{DSQ} ≈ 1100mA	35.5	36.0		dBm
G_{1dB}	Gain at 1dB Compression f = 14.40-15.40GHz V_{DS} = 10 V, I_{DSQ} ≈ 1100mA	4.5	5.0		dB
ΔG	Gain Flatness f = 14.40-15.40GHz V_{DS} = 10 V, I_{DSQ} ≈ 1100mA			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V_{DS} = 10 V, I_{DSQ} ≈ 1100mA f = 14.40-15.40GHz		25		%
Id_{1dB}	Drain Current at 1dB Compression f = 14.40-15.40GHz		1100	1400	mA
IM3	Output 3rd Order Intermodulation Distortion Δf = 10 MHz 2-Tone Test; Pout = 25.0 dBm S.C.L[2] V_{DS} = 10 V, I_{DSQ} ≈ 65% IDSS f = 15.40GHz	-40	-43		dBc
I_{DSS}	Saturated Drain Current V_{DS} = 3 V, V_{GS} = 0 V		2080	2880	mA
V_P	Pinch-off Voltage V_{DS} = 3 V, I_{DS} = 20 mA		-2.5	-4.0	V
R_{TH}	Thermal Resistance[3]		5.5	6.0	°C/W

Note: 1. Tested with 100 Ohm gate resistor.
2. S.C.L. = Single Carrier Level.
3. Overall Rth depends on case mounting.

ABSOLUTE MAXIMUM RATING

SYMBOLS	PARAMETERS	ABSOLUTE	CONTINUOUS
Vds	Drain-Source Voltage	15V	10V
Vgs	Gate-Source Voltage	-5V	-4V
Igf	Forward Gate Current	48mA	14.4mA
Igr	Reverse Gate Current	-7.2mA	-2.4mA
Pin	Input Power	35.5dBm	@ 3dB Compression
Tch	Channel Temperature	175C	175C
Tstg	Storage Temperature	-65C to +175C	-65C to +175C
Pt	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.