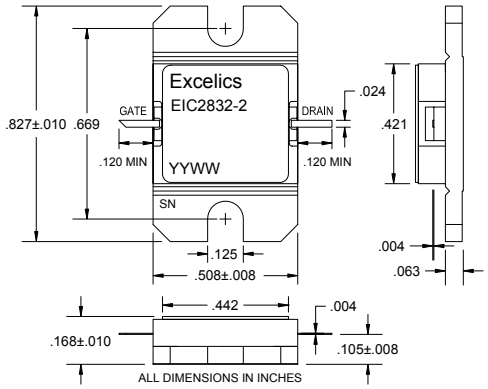
EIC2832-2

UPDATED 02/14/2006

2.80-3.20 GHz 2-Watt Internally Matched Power FET

FEATURES

- 2.80– 3.20GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +33.5 dBm Output Power at 1dB Compression
- 12.0 dB Power Gain at 1dB Compression
- 35% Power Added Efficiency
- -46 dBc IM3 at PO = 22.5 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 = 2.80-3.20GHz V_{DS} = 10 V, I_{DSQ} ≈ 550mA	32.5	33.5		dBm
G_{1dB}	Gain at 1dB Compression f = 2.80-3.20GHz V_{DS} = 10 V, I_{DSQ} ≈ 550mA	11.0	12.0		dB
ΔG	Gain Flatness f = 2.80-3.20GHz V_{DS} = 10 V, I_{DSQ} ≈ 550mA			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V_{DS} = 10 V, I_{DSQ} ≈ 550mA f = 2.80-3.20GHz		35		%
Id_{1dB}	Drain Current at 1dB Compression f = 2.80-3.20GHz		600	700	mA
IM3	Output 3rd Order Intermodulation Distortion Δf = 10 MHz 2-Tone Test; Pout = 22.5 dBm S.C.L[2] V_{DS} = 10 V, I_{DSQ} ≈ 65% IDSS f = 3.20GHz	-43	-46		dBc
I_{DSS}	Saturated Drain Current V_{DS} = 3 V, V_{GS} = 0 V		1000	1250	mA
V_P	Pinch-off Voltage V_{DS} = 3 V, I_{DS} = 10 mA		-2.5	-4.0	V
R_{TH}	Thermal Resistance[3]		11	12	°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[1,2]

SYMBOLS	PARAMETERS	ABSOLUTE[1]	CONTINUOUS[2]
Vds	Drain-Source Voltage	15	10V
Vgs	Gate-Source Voltage	-5	-4V
Igsf	Forward Gate Current	21.6mA	7.2mA
Igsr	Reserve Gate Current	-3.6mA	-1.2mA
Pin	Input Power	32.5dBm	@ 3dB Compression
Tch	Channel Temperature	175 °C	175 °C
Tstg	Storage Temperature	-65 to +175 °C	-65 to +175 °C
Pt	Total Power Dissipation	12.5W	12.5W

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.