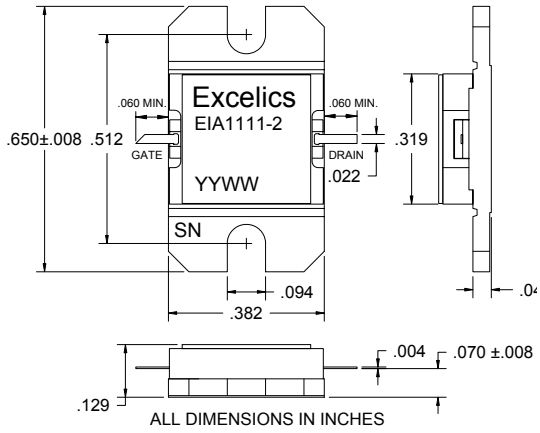
EIA1111-2

UPDATED 02/17/2006

11.0-11.5 GHz 2-Watt Internally Matched Power FET

FEATURES

- **11.0– 11.5GHz Bandwidth**
- **Input/Output Impedance Matched to 50 Ohms**
- **+34.0 dBm Output Power at 1dB Compression**
- **11.0 dB Power Gain at 1dB Compression**
- **32% Power Added Efficiency**
- **Hermetic Metal Flange Package**



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 = 11.0-11.5GHz V_{DS} = 8 V, I_{DSQ} ≈ 800mA	33.0	34.0		dBm
G_{1dB}	Gain at 1dB Compression f = 11.0-11.5GHz V_{DS} = 8 V, I_{DSQ} ≈ 800mA	10.0	11.0		dB
ΔG	Gain Flatness f = 11.0-11.5GHz V_{DS} = 8 V, I_{DSQ} ≈ 800mA			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V_{DS} = 8 V, I_{DSQ} ≈ 800mA f = 11.0-11.5GHz		32		%
Id_{1dB}	Drain Current at 1dB Compression f = 11.0-11.5GHz		900	1100	mA
I_{DSS}	Saturated Drain Current V_{DS} = 3 V, V_{GS} = 0 V		1400	1800	mA
V_P	Pinch-off Voltage V_{DS} = 3 V, I_{DS} = 14 mA		-1.0	-2.5	V
R_{TH}	Thermal Resistance[3]		10	11	°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	12	8V
Vgs	Gate-Source Voltage	-5	-3V
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	13W	13W

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.