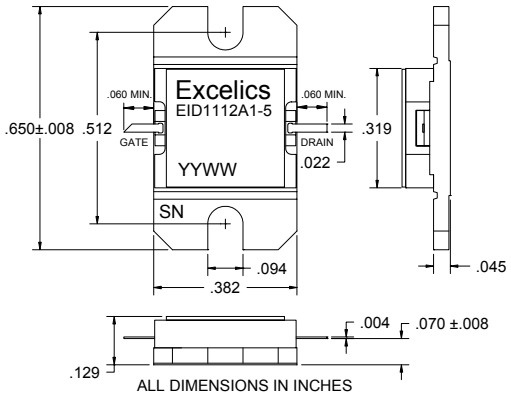
EID1112A1-5

UPDATED 07/12/2007

11.70-12.70 GHz 5-Watt Internally Matched Power FET

FEATURES

- **11.70-12.70 GHz Bandwidth**
- **Input/Output Impedance Matched to 50 Ohms**
- **+37.5 dBm Output Power at 1dB Compression**
- **8.0 dB Power Gain at 1dB Compression**
- **35% Power Added Efficiency**
- **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 = 11.70-12.70GHz V_{DS} = 10 V, I_{DSQ} ≈ 1200mA	37.0	37.5		dBm
G_{1dB}	Gain at 1dB Compression f = 11.70-12.70GHz V_{DS} = 10 V, I_{DSQ} ≈ 1200mA	7.0	8.0		dB
ΔG	Gain Flatness f = 11.70-12.70GHz V_{DS} = 10 V, I_{DSQ} ≈ 1200mA			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V_{DS} = 10 V, I_{DSQ} ≈ 1200mA f = 11.70-12.70GHz		35		%
Id_{1dB}	Drain Current at 1dB Compression f = 11.70-12.70GHz		1400	1800	mA
I_{DSS}	Saturated Drain Current V_{DS} = 3 V, V_{GS} = 0 V		2300	2800	mA
V_P	Pinch-off Voltage V_{DS} = 3 V, I_{DS} = 24 mA		-1.2	-2.5	V
R_{TH}	Thermal Resistance[3]		5.5	6.0	°C/W

Notes: 1. Tested with 100 Ohm gate resistor.
2. Overall Rth depends on case mounting.

ABSOLUTE MAXIMUM RATINGS FOR CONTINUOUS OPERATION[1,2]

SYMBOL	CHARACTERISTIC	VALUE
V_{DS}	Drain to Source Voltage	10 V
V_{GS}	Gate to Source Voltage	-3.0 V
I_{DS}	Drain Current	IDSS
I_{GSF}	Forward Gate Current	40 mA
P_{IN}	Input Power	@ 3dB compression
P_T	Total Power Dissipation	20 W
T_{CH}	Channel Temperature	150°C
T_{STG}	Storage Temperature	-65/+150°C

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.

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