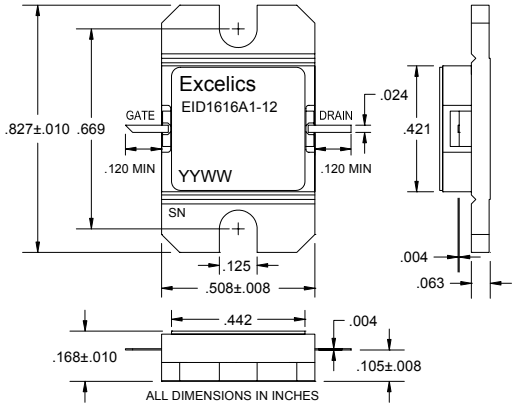
EID1616A1-12

UPDATED 07/12/2007

16.0-16.5 GHz 12-Watt Internally Matched Power FET

FEATURES

- 16.0-16.5 GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +41.0 dBm Output Power at 1dB Compression
- 5.0 dB Power Gain at 1dB Compression
- 23% 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 V_{DS} = 10 V, I_{DSQ} ≈ 3200mA	f = 16.0-16.5GHz	40.0	41.0		dBm
G_{1dB}	Gain at 1dB Compression V_{DS} = 10 V, I_{DSQ} ≈ 3200mA	f = 16.0-16.5GHz	5.0			dB
ΔG	Gain Flatness V_{DS} = 10 V, I_{DSQ} ≈ 3200mA	f = 16.0-16.5GHz			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V_{DS} = 10 V, I_{DSQ} ≈ 3200mA	f = 16.0-16.5GHz		23		%
Id_{1dB}	Drain Current at 1dB Compression	f = 16.0-16.5GHz		3800	4300	mA
I_{DSS}	Saturated Drain Current	V_{DS} = 3 V, V_{GS} = 0 V		6400	8000	mA
V_P	Pinch-off Voltage	V_{DS} = 3 V, I_{DS} = 64 mA		-1.2	-2.5	V
R_{TH}	Thermal Resistance[2]			2.5	2.9	°C/W

Notes:
1. Tested with 50 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	-4.5 V
I_{DS}	Drain Current	IDSS
I_{GSF}	Forward Gate Current	220 mA
P_{IN}	Input Power	@ 3dB compression
P_T	Total Power Dissipation	35 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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