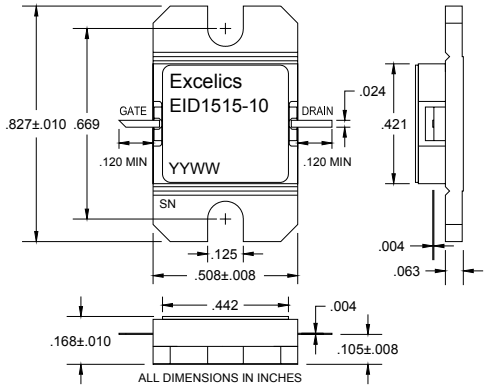
EID1515-10

UPDATED 12/21/2006

15.35-15.75 GHz 10-Watt Internally Matched Power FET

FEATURES

- **15.35– 15.75GHz Bandwidth**
- **Input/Output Impedance Matched to 50 Ohms**
- **+40.0 dBm Output Power at 1dB Compression**
- **5.5 dB Power Gain at 1dB Compression**
- **20% 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 = 15.35-15.75GHz V_{DS} = 10 V, I_{DSQ} ≈ 3200mA	39.0	40.0		dBm
G_{1dB}	Gain at 1dB Compression f = 15.35-15.75GHz V_{DS} = 10 V, I_{DSQ} ≈ 3200mA	4.5	5.5		dB
ΔG	Gain Flatness f = 15.35-15.75GHz V_{DS} = 10 V, I_{DSQ} ≈ 3200mA			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V_{DS} = 10 V, I_{DSQ} ≈ 3200mA f = 15.35-15.75GHz		22		%
Id_{1dB}	Drain Current at 1dB Compression f = 15.35-15.75GHz		3500	4500	mA
I_{DSS}	Saturated Drain Current V_{DS} = 3 V, V_{GS} = 0 V		5000	7500	mA
V_P	Pinch-off Voltage V_{DS} = 3 V, I_{DS} = 60 mA		-1.0	-2.5	V
R_{TH}	Thermal Resistance[2]		2.5	3.0	°C/W

Note:
1. Tested with 50 Ohm gate resistor.
2. Overall Rth depends on case mounting.

MAXIMUM RATING[1,2] (T_a = 25°C)

SYMBOLS	PARAMETERS	ABSOLUTE[1]	CONTINUOUS[2]
V_{DS}	Drain-Source Voltage	15V	10V
V_{GS}	Gate-Source Voltage	-5V	-3V
Igsf	Forward Gate Current	120mA	40mA
Igsr	Reverse Gate Current	-18mA	-6mA
Pin	Input Power	39.0dBm	@ 3dB Compression
Tch	Channel Temperature	175 °C	175 °C
Tstg	Storage Temperature	-65 to +175 °C	-65 to +175 °C
Pt	Total Power Dissipation	50W	50W

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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