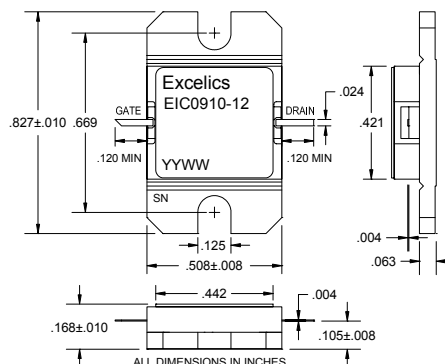


FEATURES

- 9.50–10.50GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +40.5 dBm Output Power at 1dB Compression
- 7.0 dB Power Gain at 1dB Compression
- 30% Power Added Efficiency
- -46 dBc IM3 at PO = 28.5 dBm SCL
- 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 = 9.50-10.50GHz	39.5	40.5		dBm
G _{1dB}	Gain at 1dB Compression V _{DS} = 10 V, I _{DSQ} ≈ 3200mA f = 9.50-10.50GHz	6.0	7.0		dB
ΔG	Gain Flatness V _{DS} = 10 V, I _{DSQ} ≈ 3200mA f = 9.50-10.50GHz			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V _{DS} = 10 V, I _{DSQ} ≈ 3200mA f = 9.50-10.50GHz		30		%
I _{d1dB}	Drain Current at 1dB Compression f = 9.50-10.50GHz		3300	4200	mA
IM3	Output 3rd Order Intermodulation Distortion Δf=10MHz 2-Tone Test. P _{out} =28.5 dBm S.C.L. V _{ds} = 10 V, I _{DSQ} ≈ 65% I _{DSS} f = 10.50GHz	-43	-46		dBc
I _{DSS}	Saturated Drain Current V _{DS} = 3 V, V _{GS} = 0 V		6500	9000	mA
V _P	Pinch-off Voltage V _{DS} = 3 V, I _{DS} = 58 mA		-2.5	-4.0	V
R _{TH}	Thermal Resistance ³		2.3	2.6	°C/W

Note: 1. Tested with 50 Ohm gate resistor. 2. S.C.L. = Single Carrier Level. 3. Overall R_{th} depends on case mounting.

ABSOLUTE MAXIMUM RATING^{1,2}

SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
V _{ds}	Drain-Source Voltage	15	10V
V _{gs}	Gate-Source Voltage	-5	-4V
I _{gsf}	Forward Gate Current	130mA	43mA
I _{gsr}	Reverse Gate Current	-21mA	-7mA
P _{in}	Input Power	40.0dBm	@ 3dB Compression
T _{ch}	Channel Temperature	175 °C	175 °C
T _{stg}	Storage Temperature	-65 to +175 °C	-65 to +175 °C
P _t	Total Power Dissipation	57W	57W

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.

Specifications are subject to change without notice.

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EIC0910-12

UPDATED 03/07/2008

9.50-10.50 GHz 12-Watt Internally Matched Power FET

DISCLAIMER

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness

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