

FEATURES

- 9.20-10.0GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +39.0 dBm Output Power at 1dB Compression
- 7.5 dB Power Gain at 1dB Compression
- 30% Power Added Efficiency
- -46 dBc IM3 at PO = 28dBm SCL
- 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} ≈ 2200mA f = 9.20-10.0GHz	38.5	39.0		dBm
G _{1dB}	Gain at 1dB Compression V _{DS} = 10 V, I _{DSQ} ≈ 2200mA f = 9.20-10.0GHz	6.5	7.5		dB
ΔG	Gain Flatness V _{DS} = 10 V, I _{DSQ} ≈ 2200mA f = 9.20-10.0GHz			±0.6	dB
PAE	Power Added Efficiency at 1dB Compression V _{DS} = 10 V, I _{DSQ} ≈ 2200mA f = 9.20-10.0GHz		30		%
I _{d1dB}	Drain Current at 1dB Compression f = 9.20-10.0GHz		2300	2600	mA
IM3	Output 3rd Order Intermodulation Distortion Δf = 10 MHz 2-Tone Test; P _{out} = 28dBm S.C.L. ² V _{DS} = 10 V, I _{DSQ} ≈ 65% IDSS f = 10.0GHz	-43	-46		dBc
I _{DSS}	Saturated Drain Current V _{DS} = 3 V, V _{GS} = 0 V		4000	5000	mA
V _P	Pinch-off Voltage V _{DS} = 3 V, I _{DS} = 40 mA		-2.5	-4.0	V
R _{TH}	Thermal Resistance ³		3.5	4.0	°C/W

Note: 1. Tested with 100 Ohm gate resistor.
 2. S.C.L. = Single Carrier Level.
 3. Overall R_{th} depends on case mounting.

ABSOLUTE MAXIMUM RATING^{1,2}

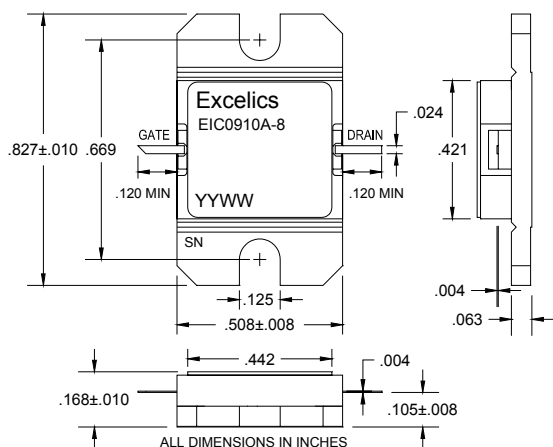
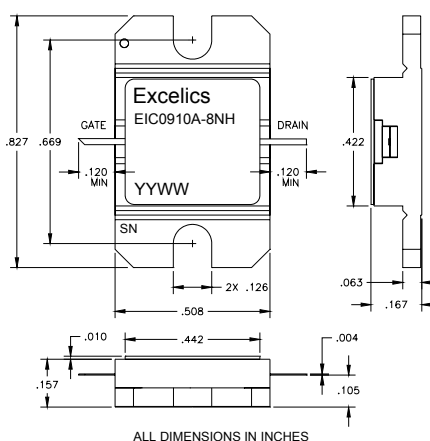
SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
V _{ds}	Drain-Source Voltage	15V	10V
V _{gs}	Gate-Source Voltage	-5V	-4.5V
I _{gsf}	Forward Gate Current	96mA	28.8mA
I _{gsr}	Reverse Gate Current	-19.2mA	-4.8mA
P _{in}	Input Power	38.5dBm	@ 3dB Compression
T _{ch}	Channel Temperature	175 °C	175 °C
T _{stg}	Storage Temperature	-65 to +175 °C	-65 to +175 °C
P _t	Total Power Dissipation	38W	38W

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.

PACKAGES OUTLINE

 Dimensions in inches, Tolerance $\pm .005$ unless otherwise specified

EIC0910A-8 (Hermetic)

EIC0910A-8NH (Non-Hermetic)

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ORDERING INFORMATION

Part Number	Packages	Grade ¹	f _{Test} (GHz)	P _{1dB} (min)	IM ₃ (min) ²
EIC0910A-8	Hermetic	Industrial	9.20-10.00GHz	38.5	-43
EIC0910A-8NH	Non-Hermetic	Industrial	9.20-10.00GHz	38.5	-43

Notes: 1. Contact factory for military and hi-rel grades.
 2. Exact test conditions are specified in "Electrical Characteristics" table.

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