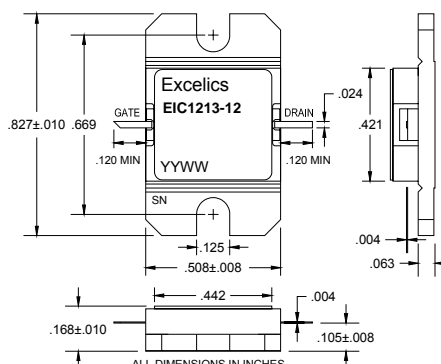


FEATURES

- 12.75– 13.25 GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +41 dBm Output Power at 1dB Compression
- 6 dB Power Gain at 1dB Compression
- 25% Power Added Efficiency
- Hermetic Metal Flange Package
- 100% Tested for DC, RF, and R_{TH}



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



Caution! ESD sensitive device.

SYMBOL	PARAMETERS/TEST CONDITIONS ¹	MIN	TYP	MAX	UNITS
P_{1dB}	Output Power at 1dB Compression $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3700\text{mA}$ $f = 12.75\text{-}13.25\text{GHz}$	40.5	41		dBm
G_{1dB}	Gain at 1dB Compression $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3700\text{mA}$ $f = 12.75\text{-}13.25\text{GHz}$	5	6		dB
ΔG	Gain Flatness $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3700\text{mA}$ $f = 12.75\text{-}13.25\text{GHz}$			± 0.6	dB
IMD3	Output 3rd Order Intermodulation Distortion $\Delta f = 10\text{ MHz}$ 2-Tone Test; $P_{out} = 30.0\text{ dBm S.C.L.}^2$ $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 65\% IDSS$ $f = 13.25\text{ GHz}$	-41	-45		dBc
PAE	Power Added Efficiency at 1dB Compression $V_{DS} = 10\text{ V}$, $I_{DSQ} \approx 3700\text{mA}$ $f = 12.75\text{-}13.25\text{GHz}$		25		%
I_{d1dB}	Drain Current at 1dB Compression $f = 12.75\text{-}13.25\text{GHz}$		3800	4300	mA
I_{DSS}	Saturated Drain Current $V_{DS} = 3\text{ V}$, $V_{GS} = 0\text{ V}$		8	10	A
V_P	Pinch-off Voltage $V_{DS} = 3\text{ V}$, $I_{DS} = 75\text{ mA}$		-2.5	-4.0	V
R_{TH}	Thermal Resistance ³		1.8	2.1	$^\circ\text{C/W}$

Note: 1) Tested with 30 Ohm gate resistor.

2) S.C.L. = Single Carrier Level.

3) Overall R_{th} depends on case mounting.

MAXIMUM RATING AT $25^\circ\text{C}^{1,2}$

SYMBOLS	PARAMETERS	ABSOLUTE ¹	CONTINUOUS ²
V_{ds}	Drain-Source Voltage	15	10V
V_{gs}	Gate-Source Voltage	-5	-4V
P_{in}	Input Power	37.5dBm	@ 3dB Compression
T_{ch}	Channel Temperature	175 $^\circ\text{C}$	175 $^\circ\text{C}$
T_{stg}	Storage Temperature	-65 to +175 $^\circ\text{C}$	-65 to +175 $^\circ\text{C}$
P_t	Total Power Dissipation	71.5W	71.5W

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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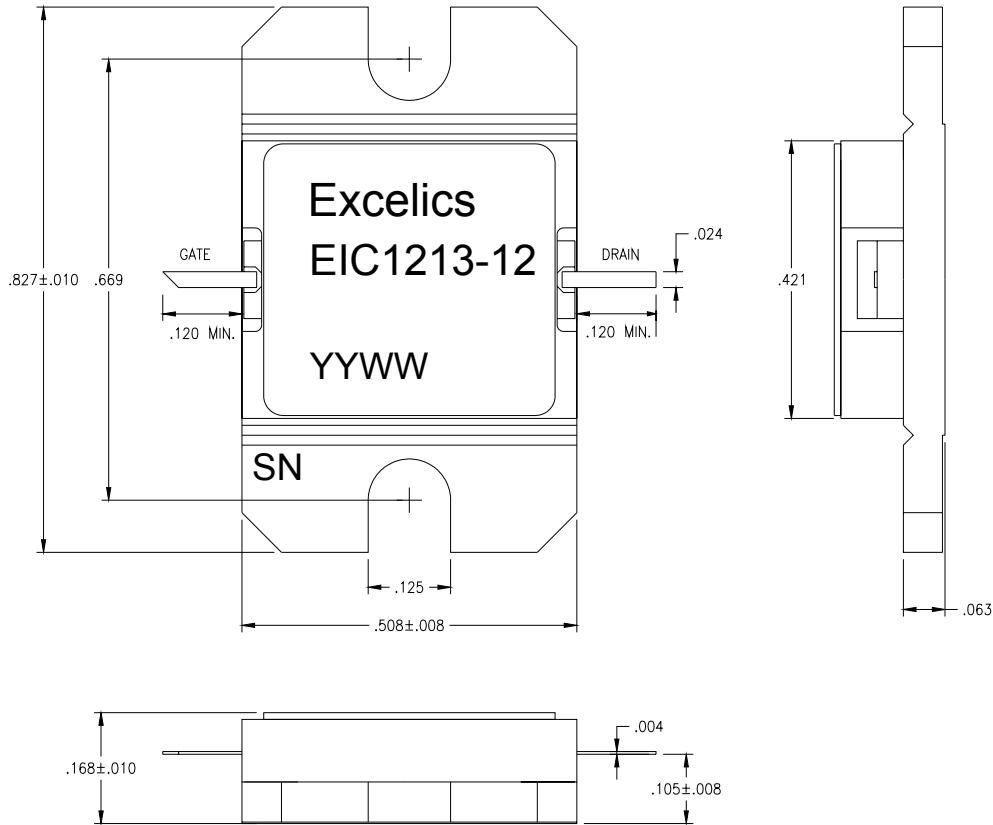
EIC1213-12

ISSUED 3-19-09

12.75-13.25 GHz 12-Watt Internally Matched Power FET

PACKAGE OUTLINE

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



DISCLAIMER

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AS HERE IN:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.
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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