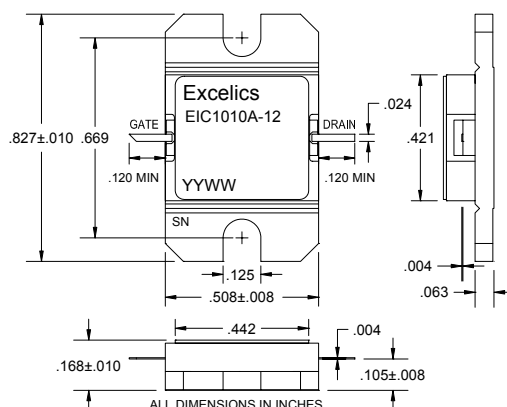


FEATURES

- 10.0-10.25GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +40.5dBm Output Power at 1dB Compression
- 7.0 dB Power Gain at 1dB Compression
- 30% Power Added Efficiency
- Hermetic Metal Flange Package



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 $f = 10.0\text{-}10.25\text{GHz}$ $V_{DS} = 9\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$	39.5	40.5		dBm
G_{1dB}	Gain at 1dB Compression $f = 10.0\text{-}10.25\text{GHz}$ $V_{DS} = 9\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$	6.0	7.0		dB
ΔG	Gain Flatness $f = 10.0\text{-}10.25\text{GHz}$ $V_{DS} = 9\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$			± 0.5	dB
PAE	Power Added Efficiency at 1dB Compression $f = 10.0\text{-}10.25\text{GHz}$ $V_{DS} = 9\text{ V}$, $I_{DSQ} \approx 3200\text{mA}$		30		%
I_{d1dB}	Drain Current at 1dB Compression $f = 10.0\text{-}10.25\text{GHz}$		3300	3700	mA
IM3	Output 3rd Order Intermodulation Distortion $\Delta f = 10\text{MHz}$ 2-Tone Test. $P_{out} = 28.5\text{ dBm S.C.L.}$ $V_{ds} = 9\text{ V}$, $I_{DSQ} \approx 65\% I_{DSS}$ $f = 10.25\text{GHz}$	-40	-43		dBc
I_{DSS}	Saturated Drain Current $V_{DS} = 3\text{ V}$, $V_{GS} = 0\text{ V}$		5800	7200	mA
V_P	Pinch-off Voltage $V_{DS} = 3\text{ V}$, $I_{DS} = 58\text{ mA}$		-2.5	-4.0	V
R_{TH}	Thermal Resistance ³		2.3	2.6	$^\circ\text{C/W}$

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 $^\circ\text{C}$	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	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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ISSUED: 07/24/2007

10.0-10.25 GHz 12-Watt Internally Matched Power FET

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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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