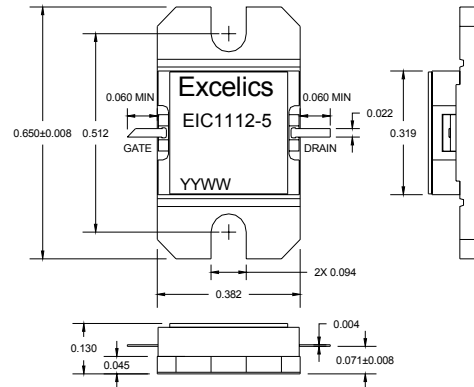


ISSUED 07/03/2007

11.7-12.7 GHz 5-Watt Internally Matched Power FET

FEATURES

- 11.7– 12.7GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +37.5 dBm Output Power at 1dB Compression
- 6.5 dB Power Gain at 1dB Compression
- 25% Power Added Efficiency
- Hermetic Metal Flange Package


Caution! ESD sensitive device.

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

SYMBOL	PARAMETERS/TEST CONDITIONS ¹	MIN	TYP	MAX	UNITS
P_{1dB}	Output Power at 1dB Compression $f = 11.7\text{-}12.7\text{GHz}$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 1600\text{mA}$	36.5	37.5		dBm
G_{1dB}	Gain at 1dB Compression $f = 11.7\text{-}12.7\text{GHz}$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 1600\text{mA}$	5.5	6.5		dB
ΔG	Gain Flatness $f = 11.7\text{-}12.7\text{GHz}$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 1600\text{mA}$			± 0.6	dB
PAE	Power Added Efficiency at 1dB Compression $V_{DS} = 10\text{ V}, I_{DSQ} \approx 1600\text{mA}$ $f = 11.7\text{-}12.7\text{GHz}$		25		%
I_{d1dB}	Drain Current at 1dB Compression $f = 11.7\text{-}12.7\text{GHz}$		1700	2000	mA
IM3	Output 3rd Order Intermodulation Distortion $\Delta f = 10\text{MHz}$ 2-Tone Test. $P_{out} = 26.5\text{ dBm}$ S.C.L $V_{ds} = 10\text{ V}, I_{DSQ} \approx 65\% I_{DSS}$ $f = 12.7\text{GHz}$	-40	-43		dBc
I_{DSS}	Saturated Drain Current $V_{DS} = 3\text{ V}, V_{GS} = 0\text{ V}$		2800	3500	mA
V_P	Pinch-off Voltage $V_{DS} = 3\text{ V}, I_{DS} = 24\text{ mA}$		-2.5	-4.0	V
R_{TH}	Thermal Resistance ³		5.0	5.5	$^\circ\text{C/W}$

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	15	10V
V_{gs}	Gate-Source Voltage	-5	-4V
I_{gsf}	Forward Gate Current	61.2mA	20.4mA
I_{gsr}	Reserve Gate Current	-10.2mA	-3.4mA
P_{in}	Input Power	35.5dBm	@ 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	27W	27W

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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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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