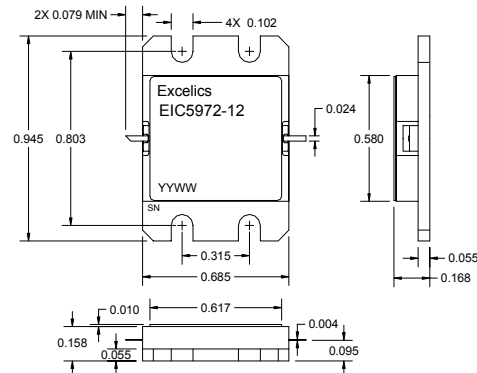


### FEATURES

- 5.90– 7.20GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +41.5 dBm Output Power at 1dB Compression
- 8.0 dB Power Gain at 1dB Compression
- 36% Power Added Efficiency
- -46 dBc IM3 at PO = 30.5 dBm SCL
- 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 <sup>1</sup>	MIN	TYP	MAX	UNITS
$P_{1dB}$	Output Power at 1dB Compression $f = 5.90\text{-}7.20\text{GHz}$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 3200\text{mA}$	40.5	41.5		dBm
$G_{1dB}$	Gain at 1dB Compression $f = 5.90\text{-}7.20\text{GHz}$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 3200\text{mA}$	7.0	8.0		dB
$\Delta G$	Gain Flatness $f = 5.90\text{-}7.20\text{GHz}$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 3200\text{mA}$			$\pm 0.8$	dB
PAE	Power Added Efficiency at 1dB Compression $f = 5.90\text{-}7.20\text{GHz}$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 3200\text{mA}$		36		%
$I_{d1dB}$	Drain Current at 1dB Compression $f = 5.90\text{-}7.20\text{GHz}$		3300	3700	mA
IM3	Output 3rd Order Intermodulation Distortion $\Delta f = 10\text{ MHz}$ 2-Tone Test; $P_{out} = 30.5\text{ dBm S.C.L}^2$ $V_{DS} = 10\text{ V}, I_{DSQ} \approx 65\% IDSS$ $f = 7.20\text{GHz}$	-43	-46		dBc
$I_{DSS}$	Saturated Drain Current $V_{DS} = 3\text{ V}, V_{GS} = 0\text{ V}$		6200	7800	mA
$V_P$	Pinch-off Voltage $V_{DS} = 3\text{ V}, I_{DS} = 62\text{ mA}$		-2.5	-4.0	V
$R_{TH}$	Thermal Resistance <sup>3</sup>		2.5	3.0	$^\circ\text{C/W}$

Note: 1) Tested with 50 Ohm gate resistor.

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

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

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

SYMBOLS	PARAMETERS	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
$V_{ds}$	Drain-Source Voltage	15	10V
$V_{gs}$	Gate-Source Voltage	-5	-4V
$I_{gsf}$	Forward Gate Current	129.6mA	43.2mA
$I_{gsr}$	Reverse Gate Current	-21.6mA	-7.2mA
$P_{in}$	Input Power	40.5dBm	@ 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	50W	50W

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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