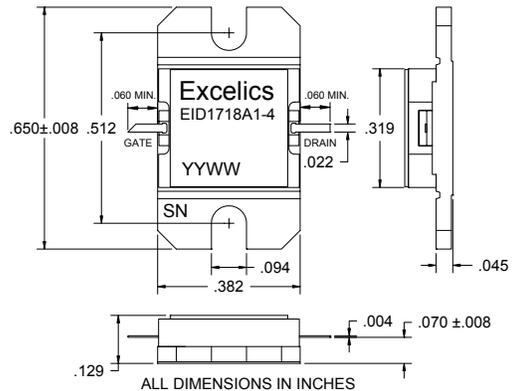


### FEATURES

- 17.3-18.1 GHz Bandwidth
- Input/Output Impedance Matched to 50 Ohms
- +36.0 dBm Output Power at 1dB Compression
- 6.0 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 <sup>1</sup>	MIN	TYP	MAX	UNITS
$P_{1dB}$	Output Power at 1dB Compression $V_{DS} = 10\text{ V}$ , $I_{DSQ} \approx 1200\text{mA}$ $f = 17.3\text{-}18.1\text{GHz}$	35.5	36.0		dBm
$G_{1dB}$	Gain at 1dB Compression $V_{DS} = 10\text{ V}$ , $I_{DSQ} \approx 1200\text{mA}$ $f = 17.3\text{-}18.1\text{GHz}$	5.0	6.0		dB
$\Delta G$	Gain Flatness $V_{DS} = 10\text{ V}$ , $I_{DSQ} \approx 1200\text{mA}$ $f = 17.3\text{-}18.1\text{GHz}$			$\pm 0.6$	dB
PAE	Power Added Efficiency at 1dB Compression $V_{DS} = 10\text{ V}$ , $I_{DSQ} \approx 1200\text{mA}$ $f = 17.3\text{-}18.1\text{GHz}$		25		%
$I_{d1dB}$	Drain Current at 1dB Compression $f = 17.3\text{-}18.1\text{GHz}$		1300	1800	mA
$I_{DSS}$	Saturated Drain Current $V_{DS} = 3\text{ V}$ , $V_{GS} = 0\text{ V}$		2080	2880	mA
$V_P$	Pinch-off Voltage $V_{DS} = 3\text{ V}$ , $I_{DS} = 20\text{ mA}$		-2.5	-4.0	V
$R_{TH}$	Thermal Resistance <sup>2</sup>		4.5	5.5	$^\circ\text{C/W}$

Notes: 1. Tested with 100 Ohm gate resistor.  
2. Overall  $R_{th}$  depends on case mounting.

### ABSOLUTE MAXIMUM RATINGS FOR CONTINUOUS OPERATION<sup>1,2</sup>

SYMBOL	CHARACTERISTIC	VALUE
$V_{DS}$	Drain to Source Voltage	10 V
$V_{GS}$	Gate to Source Voltage	-4.5 V
$I_{DS}$	Drain Current	$I_{DSS}$
$I_{GSF}$	Forward Gate Current	40 mA
$P_{IN}$	Input Power	@ 3dB compression
$P_T$	Total Power Dissipation	23 W
$T_{CH}$	Channel Temperature	150 $^\circ\text{C}$
$T_{STG}$	Storage Temperature	-65/+150 $^\circ\text{C}$

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.



# EID1718A1-4

UPDATED: 07/12/2007

## 17.3–18.1 GHz 4-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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Specifications are subject to change without notice.

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