

**Product Summary**

- \*  $V_{DS(on)} = -20V$
- \*  $I_D = -3A$
- \*  $R_{DS(on)} = 90m\Omega @ V_{GS} = 4.5V (Max)$
- \*  $R_{DS(on)} = 125m\Omega @ V_{GS} = 2.5V (Max)$
- \* ESD protection

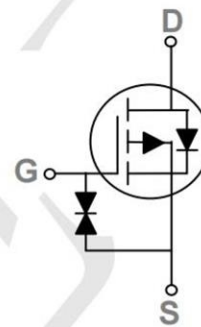
**Application**

- \* Load/Power switch
- \* Interfacing, logic switching
- \* Battery management for ultra portable electronics

**Package and Pin Configuration**



**Circuit diagram**



Marking: YES.F

**Absolute Maximum Ratings ( $T_A=25^\circ C$  unless otherwise noted)**

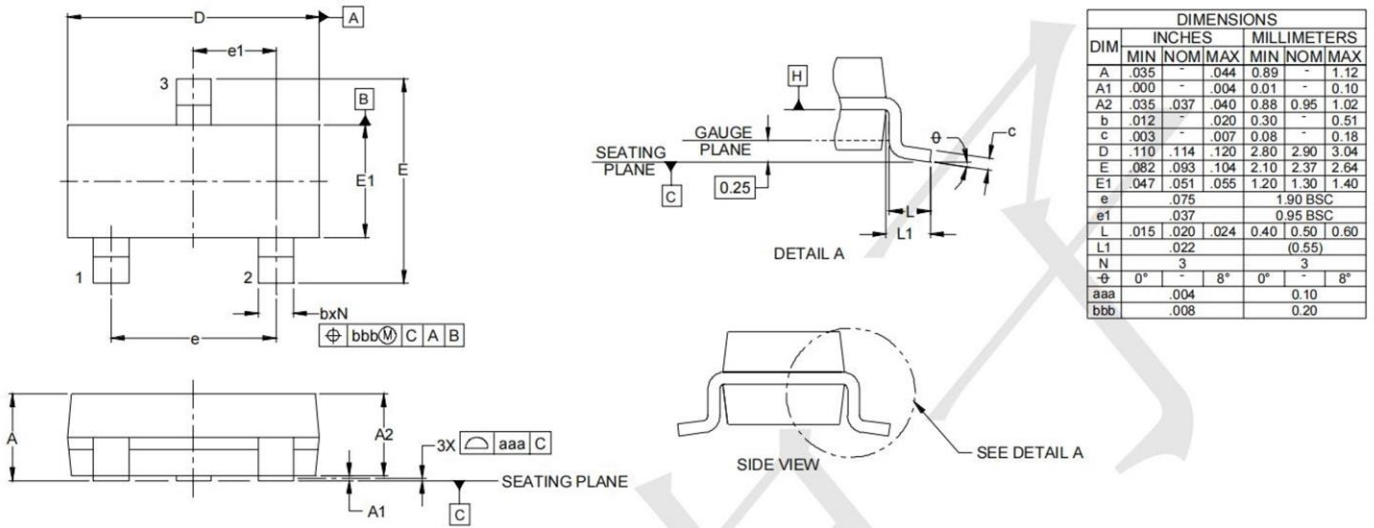
Parameter	Symbol	Value	Unit
Drain-source voltage	$V_{DS}$	-20	V
Typical gate-source voltage	$V_{GS}$	$\pm 10$	V
Continuous drain current (note 1)	$I_D$	-3	A
Pulsed drain current	$I_{DM}$	-13.2	A
Power dissipation (note 2)	$P_D$	1.55	W
Thermal resistance from junction to ambient (note 1)	$R_{\theta JA}$	80	$^\circ C/W$
Junction temperature range	$T_J$	150	$^\circ C$
Storage temperature range	$T_{STG}$	-55 ~ +150	$^\circ C$
Lead temperature for soldering purposes (1/8" from case for 10s)	$T_L$	260	$^\circ C$

**Electrical Characteristics (  $T_A = 25^\circ\text{C}$  unless otherwise noted )**

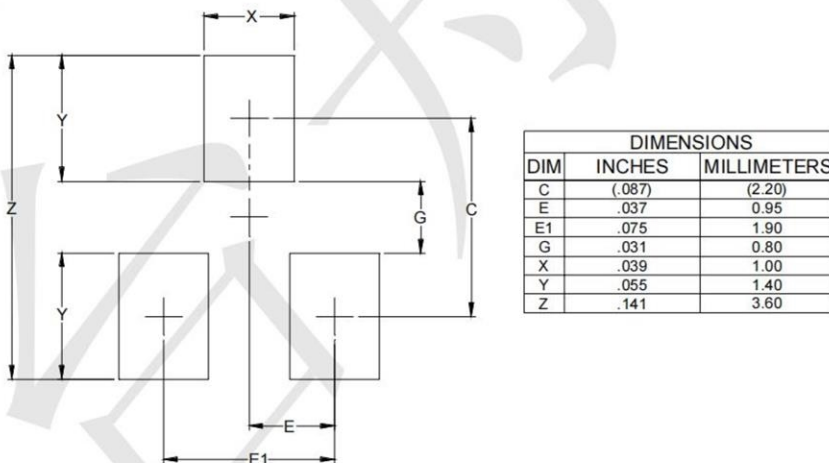
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
<b>STATIC PARAMETERS</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = -20V, V_{GS} = 0V$			-1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 10V, V_{DS} = 0V$			$\pm 20$	$\mu A$
Gate threshold voltage (note 2)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.35		-1.1	V
Drain-source on-resistance (note 2)	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -3A$		75	90	m $\Omega$
		$V_{GS} = -2.5V, I_D = -2A$		100	125	
		$V_{GS} = -1.8V, I_D = -1A$		135	180	
Forward tranconductance (note 2)	$g_{FS}$	$V_{DS} = -10V, I_D = -1A$		2.2		S
Diode forward voltage	$V_{SD}$	$I_S = -1A, V_{GS} = 0V$			-1.2	V
<b>DYNAMIC PARAMETERS (note 4)</b>						
Input capacitance	$C_{iss}$	$V_{DS} = -16V, V_{GS} = 0V, f = 1MHz$		365	520	pF
Output capacitance	$C_{oss}$			75	101	
Reverse transfer capacitance	$C_{rss}$			50	80	
<b>SWITCHING PARAMETERS (note 4)</b>						
Turn-on delay time (note 3)	$t_{d(on)}$	$V_{GS} = -4.5V, V_{DS} = -10V, I_D = -1000mA, R_{GEN} = 25\Omega$			9	ns
Turn-on rise time (note 3)	$t_r$				25	
Turn-off delay time (note 3)	$t_{d(off)}$				65	
Turn-off fall time (note 3)	$t_f$				17	



**SOT23 - Package Outline Drawing**



**Suggested Land Pattern**



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