

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

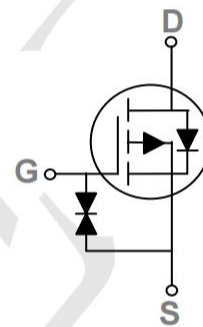
Application

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

Package and Pin Configuration



Circuit diagram



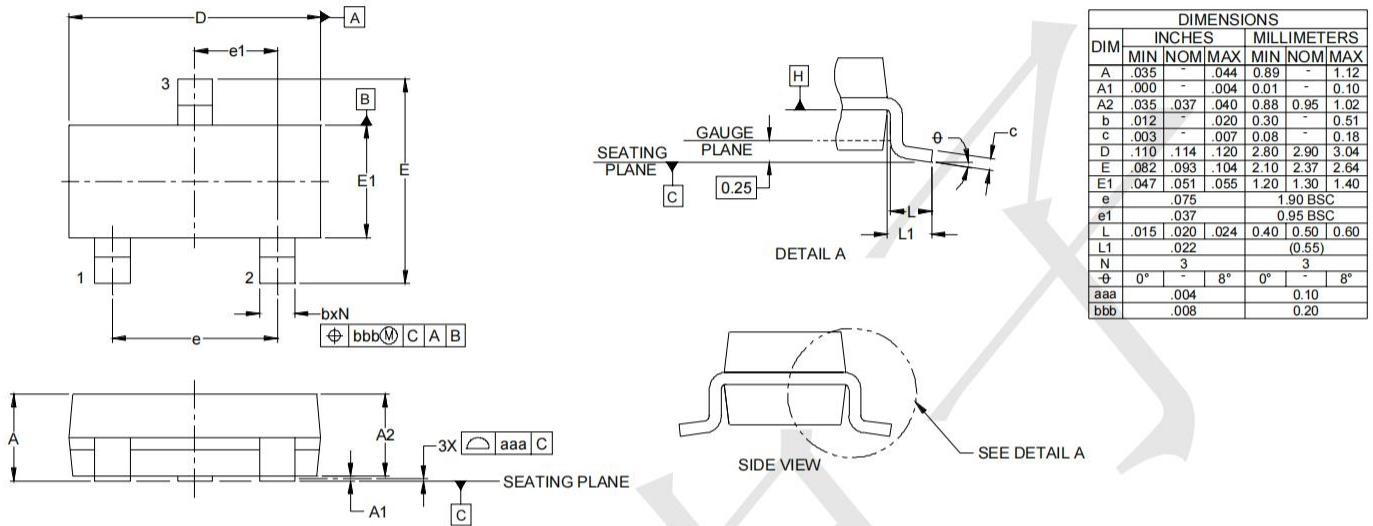
Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	-20	V
Typical gate-source voltage	V_{GS}	± 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
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}^A$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -20V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 20	μA
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 Ω
		$V_{GS} = -2.5V, I_D = -2A$		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
DYNAMIC PARAMETERS (note 4)						
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	
SWITCHING PARAMETERS (note 4)						
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

