

### General Features

- 20V, 2.8A,  $R_{DS(ON)} = 83m\Omega$  (typ) @ $V_{GS} = 4.5V$ .
- $R_{DS(ON)} = 120m\Omega$  (typ) @ $V_{GS} = 2.5V$ .
- Lead free product is acquired.
- Rugged and reliable.
- SOT-23 package.

### Application

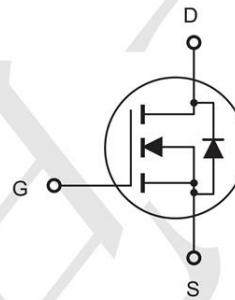
- Battery protection
- Load switch
- Power management

### Package and Pin Configuration



MARKING =A2SHB

### Circuit diagram



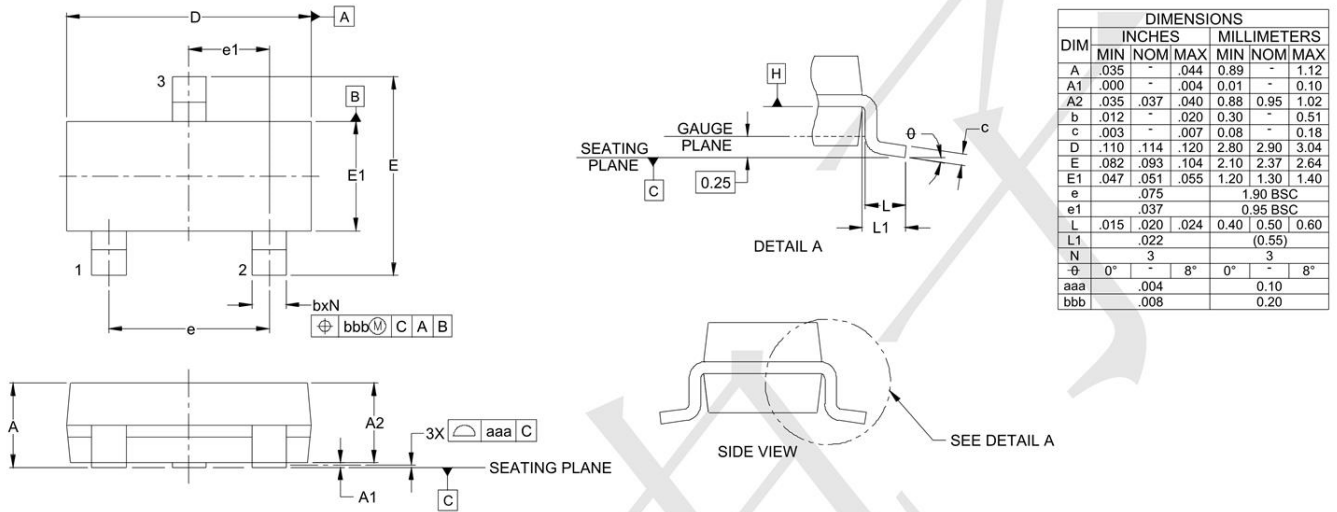
### Absolute Maximum Ratings ( $T_A=25^\circ C$ unless otherwise specified)

Characteristic	Symbol	Max	Unit
Drain-Source Voltage	$BV_{DSS}$	20	V
Gate- Source Voltage	$V_{GS}$	$\pm 8$	V
Drain Current (continuous)	$I_D$	2.8	A
Drain Current (pulsed)	$I_{DM}$	10	A
Total Device Dissipation $T_A=25^\circ C$	$P_D$	900	mW
Junction	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55to+150	$^\circ C$

**Electrical Characteristics** (TA=25°C unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage ( $I_D = 250\mu A, V_{GS} = 0V$ )	$BV_{DSS}$	20	—	—	V
Gate Threshold Voltage ( $I_D = 250\mu A, V_{GS} = V_{DS}$ )	$V_{GS(th)}$	0.4	—	1.5	V
Drain-Source On Voltage ( $I_D = 50mA, V_{GS} = 5V$ ) ( $I_D = 500mA, V_{GS} = 10V$ )	$V_{DS(ON)}$	—	—	0.375 3.75	V
Diode Forward Voltage Drop ( $I_S = 0.75A, V_{GS} = 0V$ )	$V_{SD}$	—	—	1.2	V
Zero Gate Voltage Drain Current ( $V_{GS} = 0V, V_{DS} = 16V$ ) ( $V_{GS} = 0V, V_{DS} = 16V, T_A = 55^\circ C$ )	$I_{DSS}$	—	—	1 10	$\mu A$
Gate Body Leakage ( $V_{GS} = \pm 8V, V_{DS} = 0V$ )	$I_{GSS}$	—	—	$\pm 100$	nA
Static Drain-Source On-State Resistance ( $I_D = 2.8A, V_{GS} = 4.5V$ ) ( $I_D = 2A, V_{GS} = 2.5V$ )	$R_{DS(ON)}$	—	—	85 120	$m\Omega$
Input Capacitance ( $V_{GS} = 0V, V_{DS} = 6V, f = 1MHz$ )	$C_{ISS}$	—	—	880	pF
Common Source Output Capacitance ( $V_{GS} = 0V, V_{DS} = 6V, f = 1MHz$ )	$C_{OSS}$	—	—	270	pF
Turn-ON Time ( $V_{DS} = 6V, I_D = 1A, R_{GEN} = 6\Omega$ )	$t_{(on)}$	—	—	20	ns
Turn-OFF Time ( $V_{DS} = 6V, I_D = 1A, R_{GEN} = 6\Omega$ )	$t_{(off)}$	—	—	65	ns

**Outline Drawing - SOT23**



**Land Pattern - SOT23**

