

• General Description

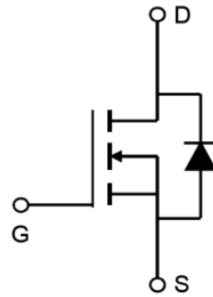
AP2310B combines advanced MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$. This device is most suitable to load-switch or PWM applications.

• Applications

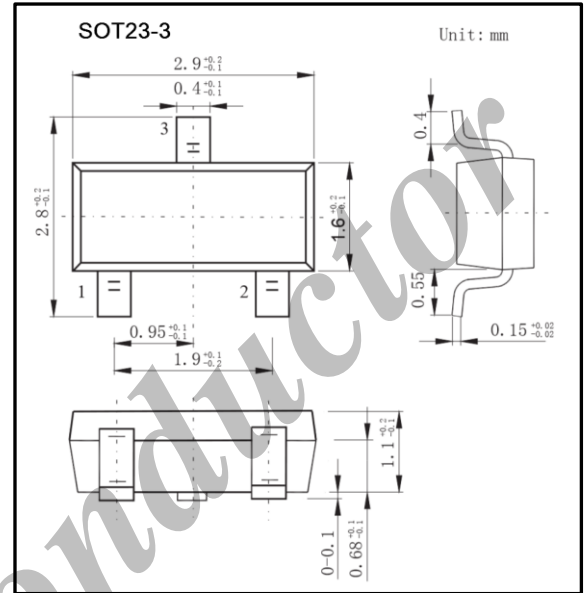
- DC/DC converter for portable devices
- Load switch

• Product Summary

V_{DS}	20V
I_D	6.5A
$R_{DS(ON)}$ (at $V_{GS} = 4.5V, I_D = 6.5A$)	< 22m Ω
$R_{DS(ON)}$ (at $V_{GS} = 2.5V, I_D = 5.5A$)	< 30m Ω



Top View



• Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$ unless noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 10	
Continuous Drain Current ^{*b}	I_D ($T_a = 25^\circ\text{C}$)	6.5	A
	I_D ($T_a = 70^\circ\text{C}$)	4.8	
Pulsed Drain Current ^{*a}	I_{DM}	30	
Power Dissipation ^{*b}	P_D ($T_a = 25^\circ\text{C}$)	1.3	W
	P_D ($T_a = 70^\circ\text{C}$)	0.8	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	

Notes

- *a Pulse width limited by maximum junction temperature
- *b Surface Mounted on FR4 Board, $t \leq 5s$.
- *c Surface Mounted on FR4 Board.

• **Electrical Characteristics (Ta = 25°C unless noted)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	$I_D=250\mu A, V_{GS}=0V$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V, V_{GS}=0V$			1	μA
		$V_{DS}=20V, V_{GS}=0V, T_J=55^\circ C$			10	
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 10V$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.45		1	V
Static Drain-Source On-Resistance *d	$R_{DS(on)}$	$V_{GS}=4.5V, I_D=6.5A$			22	m Ω
		$V_{GS}=2.5V, I_D=5.5A$			30	
Forward Transconductance *d	g_{FS}	$V_{DS}=5V, I_D=6.5A$		6		S
Maximum Body-Diode Continuous Current	I_S				1.6	A
Diode Forward Voltage *d	V_{SD}	$I_S=1.6A, V_{GS}=0V$		0.76	1.2	V

Note

*d Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

• **Ordering Information**

Ordering Part Number	Package	MOQ
AP2310B	SOT23-3	3,000 pcs / reel

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