

AS3423B

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-20V	90m Ω @-4.5V	-3A
	110m Ω @-2.5V	

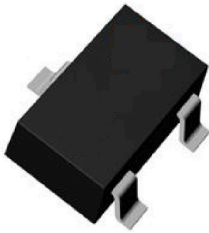
Feature

- Advanced trench process technology
- High density cell design for ultra low on-resistance

Application

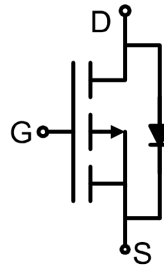
- Load Switch for Portable Devices
- DC/DC Converter

Package

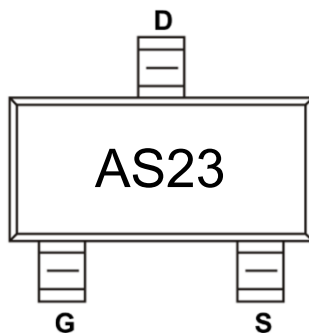


SOT-23-3L

Circuit diagram



Marking



AS3423B

Absolute maximum ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current	I_D	-3	A
Pulsed Drain Current	I_{DM}	-10	A
Power Dissipation	P_D	1	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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

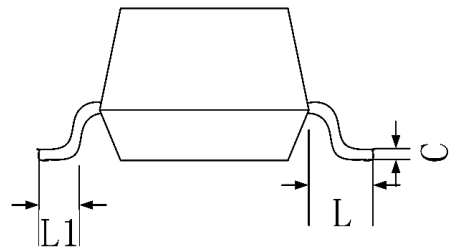
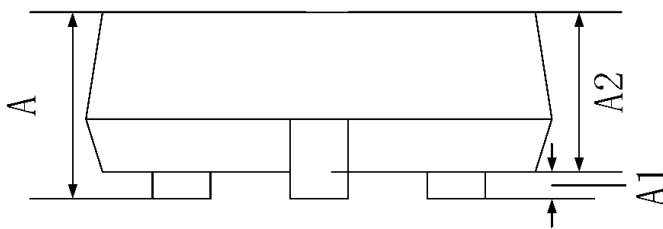
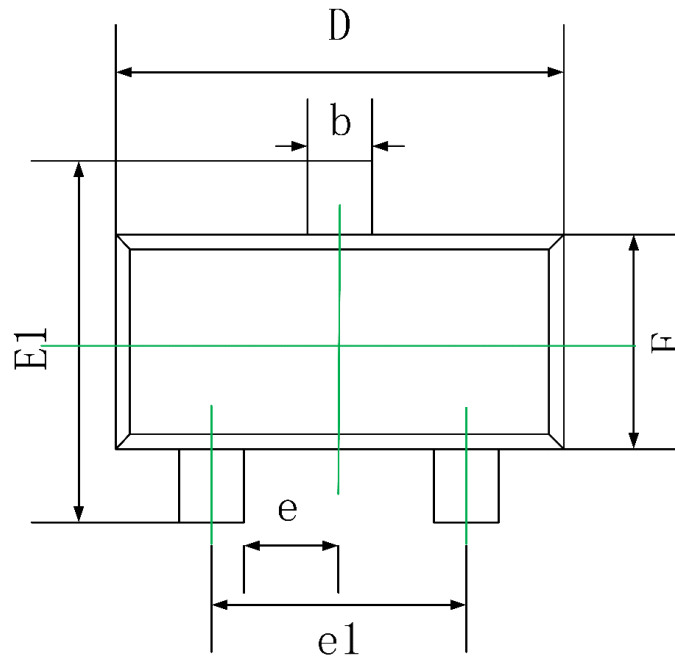
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu\text{A}$	-20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -16V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu\text{A}$	-0.5		-1.5	V
Drain-source on-resistance ¹⁾	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -3A$		70	90	m Ω
		$V_{GS} = -2.5V, I_D = -2A$		90	110	
Dynamic characteristics²⁾						
Input Capacitance	C_{iss}	$V_{DS} = -10V, V_{GS} = 0V, f = 1\text{MHz}$		500		pF
Output Capacitance	C_{oss}			100		
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -10V, I_D = -3A, R_{GEN} = 6\Omega$		10		nS
Turn-off delay time	$t_{d(off)}$			60		
Source-Drain Diode characteristics						
Diode Forward voltage	V_{DS}	$V_{GS} = 0V, I_S = -0.75A$			-1.5	V

Notes:

- 1) Pulse Test: Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.
- 2) Guaranteed by design, not subject to production testing.

AS3423B

SOT-23-3L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.500	1.700	0.059	0.067
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020