

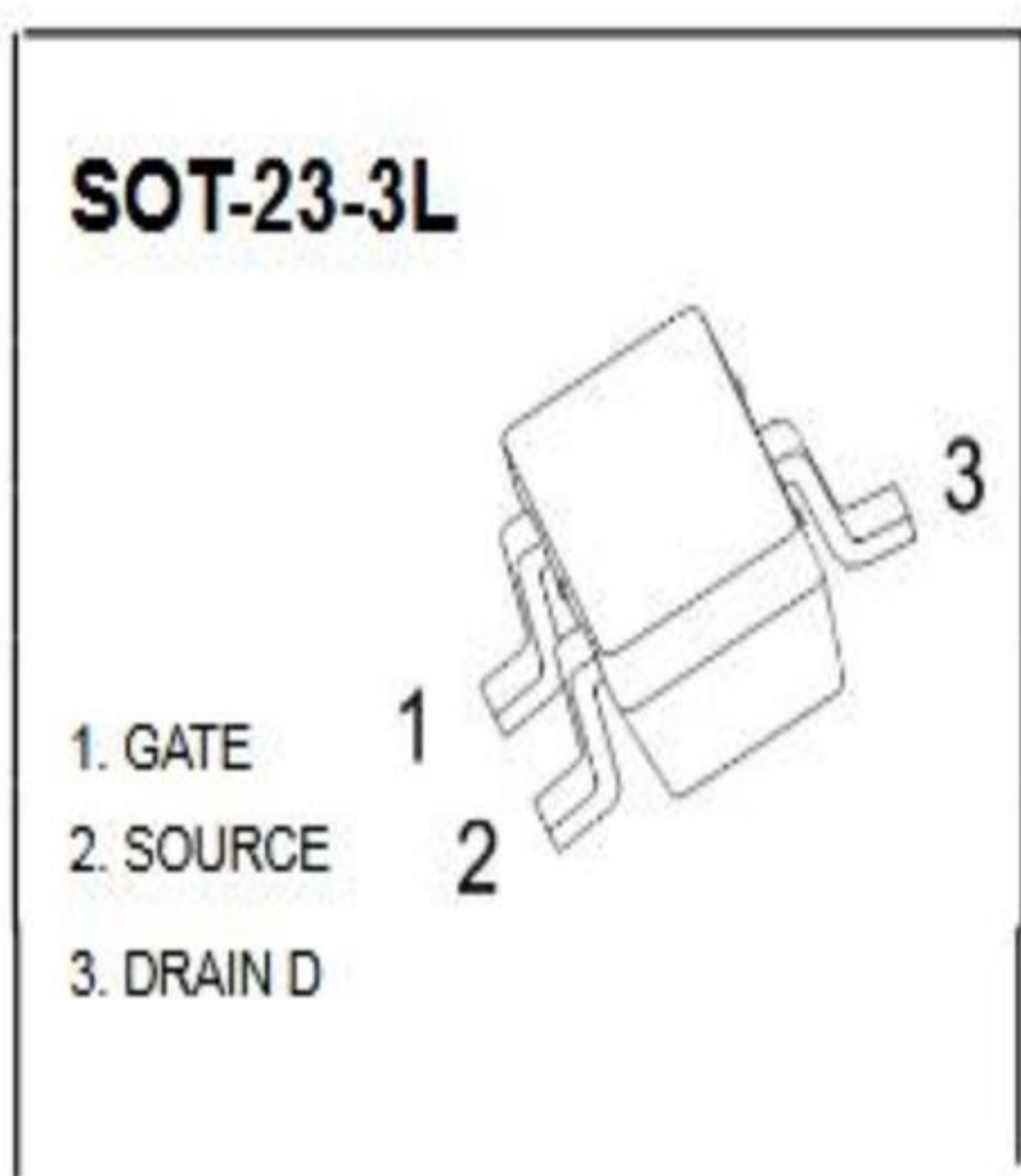
Product Summary

- 30V,5.8A
 $R_{DS(ON)} < 26m\Omega @ V_{GS} = 10V$
 $R_{DS(ON)} < 32m\Omega @ V_{GS} = 4.5V$
 $R_{DS(ON)} < 50m\Omega @ V_{GS} = 2.5V$
- Advanced Trench Technology
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead free product is acquired

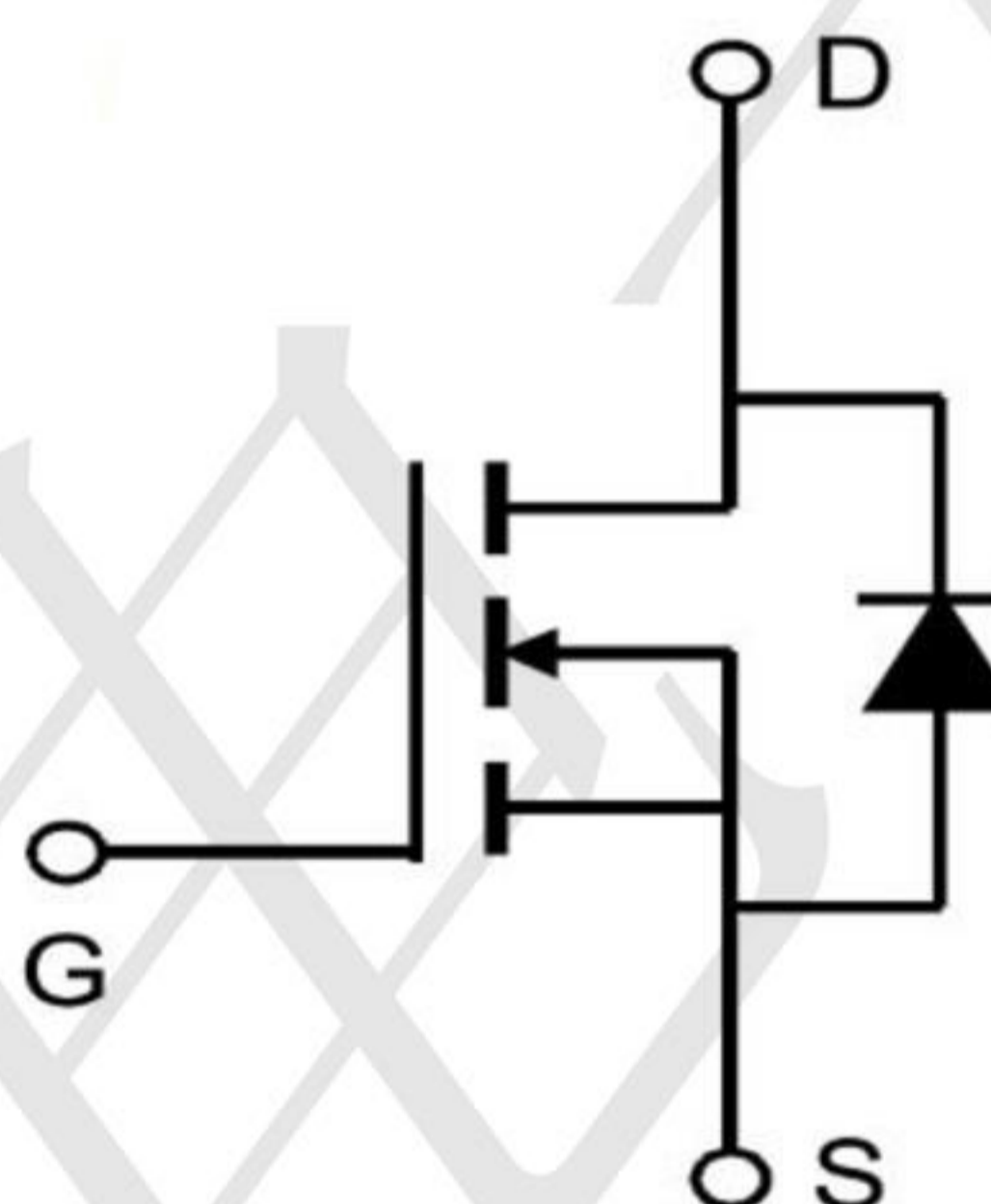
Application

- PWM Applications
- Load Switch
- Power Management

Package and Pin Configuration



Circuit diagram



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

Symbol	Parameter	Max.	Units
V_{DSS}	Drain-Source Voltage	30	V
V_{GSS}	Gate-Source Voltage	± 12	V
I_D	Continuous Drain Current	$T_A = 25^\circ C$	5.8
		$T_A = 100^\circ C$	3.8
I_{DM}	Pulsed Drain Current ^{note1}	23.2	A
P_D	Power Dissipation	$T_A = 25^\circ C$	1.36
$R_{\theta JA}$	Thermal Resistance, Junction to Case	92	$^\circ C/W$
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to +150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristic						
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	30	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=30V, V_{GS}=0V,$	-	-	1.0	μA
I_{GSS}	Gate to Body Leakage Current	$V_{DS}=0V, V_{GS}= \pm 12V$	-	-	± 100	nA
On Characteristics						
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	0.5	0.9	1.4	V
$R_{DS(on)}$	Static Drain-Source on-Resistance note2	$V_{GS}=10V, I_D=4.2A$	-	20.4	26	m Ω
		$V_{GS}=4.5V, I_D=4A$	-	23	32	
		$V_{GS}=2.5V, I_D=1A$	-	30	50	
Dynamic Characteristics						
C_{iss}	Input Capacitance	$V_{DS}=15V, V_{GS}=0V,$ $f=1.0MHz$	-	702	-	pF
C_{oss}	Output Capacitance		-	66	-	pF
C_{rss}	Reverse Transfer Capacitance		-	52	-	pF
Q_g	Total Gate Charge	$V_{DS}=15V, I=4A,$ $V_{GS}=4.5V$	-	4.8	-	nC
Q_{gs}	Gate-Source Charge		-	1.2	-	nC
Q_{gd}	Gate-Drain("Miller") Charge		-	1.7	-	nC
Switching Characteristics						
$t_{d(on)}$	Turn-on Delay Time	$V_{DS}=15V,$ $I_D=4A, R_{GEN}=3\Omega,$ $V_{GS}=4.5V$	-	12	-	ns
t_r	Turn-on Rise Time		-	52	-	ns
$t_{d(off)}$	Turn-off Delay Time		-	17	-	ns
t_f	Turn-off Fall Time		-	10	-	ns
Drain-Source Diode Characteristics and Maximum Ratings						
I_S	Maximum Continuous Drain to Source Diode Forward Current		-	-	5.8	A
I_{SM}	Maximum Pulsed Drain to Source Diode Forward Current		-	-	23.2	A
V_{SD}	Drain to Source Diode Forward Voltage	$V_{GS}=0V, I_S=5.8A$	-	-	1.2	V



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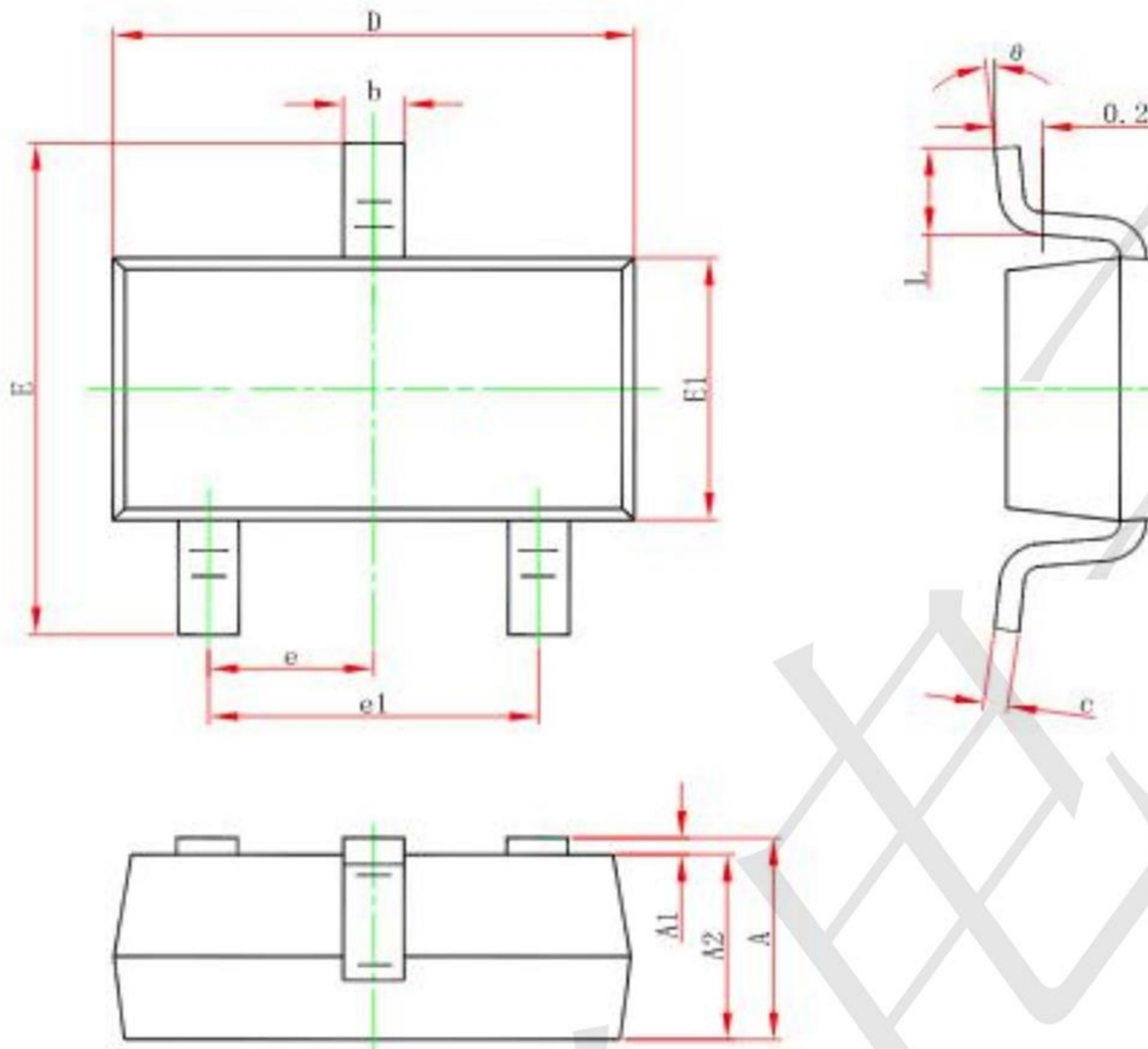
—台舟电子—

AO3400

N-channel Enhancement Mode Power MOSFET

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SOT-23-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°