

ESDA6V1L ESD Protection Diodes

Features

- Uni-directional ESD protection of two lines
- 300Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5.25V(Max)
- Junction Capacitance: 140pF(Typ)
- IEC 61000-4-2 $\pm 9kV$ contact $\pm 16kV$ air
- IEC 61000-4-5 (Lightning) 18.5A (8/20 μs)

Mechanical Data

- Package: SOT-23
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Ordering Information

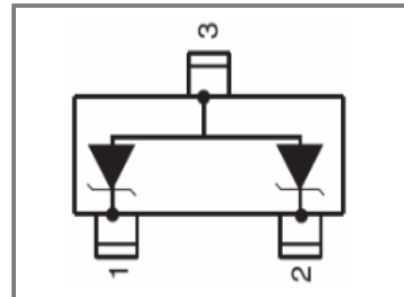
Part Number	Package	Marking	Packing	Reel Size
ESDA6V1L	SOT-23	EL61	3000 Tape & Reel	7 inches

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

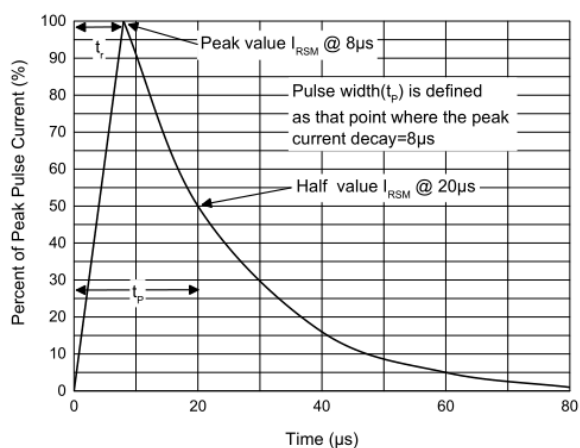
Symbol	Parameter	Value	Units
I_{PP}^{*1}	Maximum Reverse Peak Pulse Current	18.5	A
$V_{ESD-Air}$	ESD Voltage IEC61000-4-2 Air	± 16	kV
$V_{ESD-contact}$	ESD Voltage IEC61000-4-2 Contact	± 9	kV
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	-55 to +150	$^\circ C$
P_{PK}	Peak Pulse Power (8/20 μs)	300	W

Electrical Characteristics ($T_A = 25^\circ C$ unless otherwise specified)

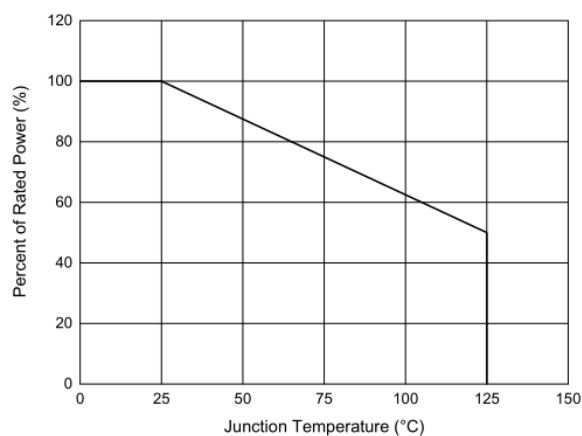
Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Working Peak Voltage				5.25	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$	6.1	6.65	7.2	V
I_R	Reverse Current	$V_{RWM} = 5.25V$			20	μA
V_F	Forward Voltage	$I_F = 200mA$			1.25	V
V_C	Clamping Voltage	$I_{PP} = 18.5A$, $t_p = 8/20\mu s$			16.5	V
C_D	Diode Capacitance	$V_R = 0V$, $f = 1MHz$		140		pF



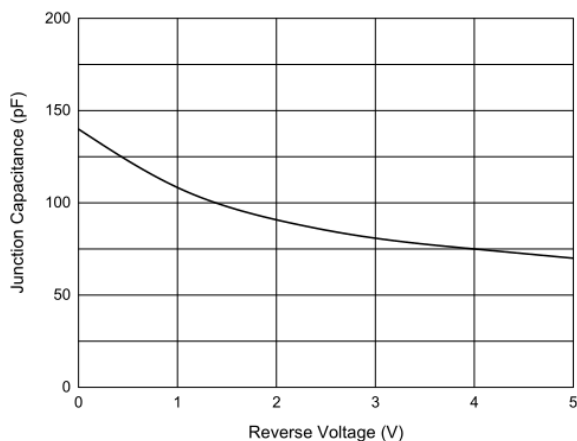
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



8 X 20 μs Pulse Waveform



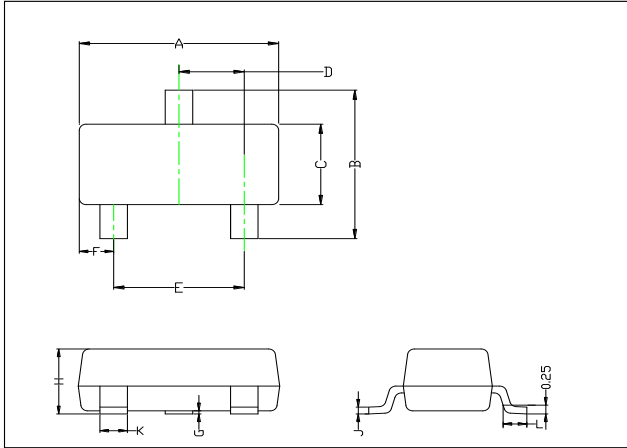
Pulse Derating Curve



Capacitance Characteristics

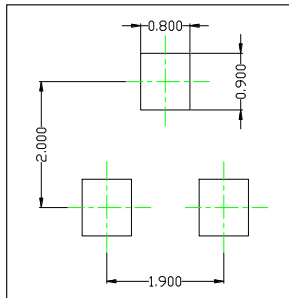
Package Dimensions

Package outline : SOT-23



Symbol	Dimensions in mm	
	Min.	Max.
A	2.800	3.040
B	2.100	2.640
C	1.200	1.400
D	0.890	1.030
E	1.780	2.050
F	0.450	0.600
G	0.013	0.100
H	0.900	1.110
J	0.085	0.180
K	0.370	0.510
L	0.300	0.500

SOT-23 Package Outline



Notice:

1. Lead plating: Pb free solder
2. Lead thickness includes solder plating
3. Lead frame: CAC-5
4. Other Tolerance: ± 0.05
5. Unit: mm