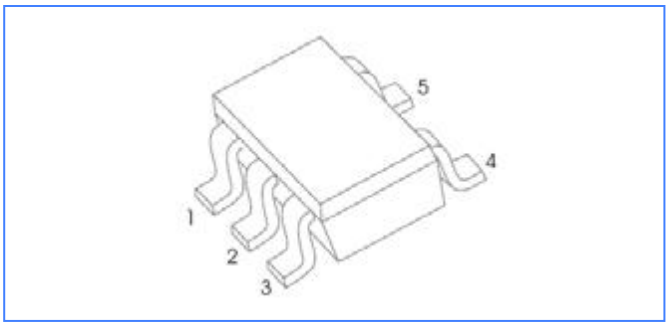
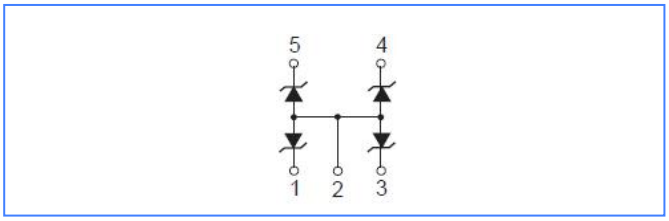
ESD3V0J4

Description

ESD3V0J4 is designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD. The combination of small size, low capacitance, and high level of ESD protection makes them a flexible solution for applications such as HDMI, Display Port TM, and MDDI interfaces. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.



Functional Diagram



Features

- Uni-directional ESD protection of four lines
- Low capacitance: 9 pF(Typ)
- Low reverse stand−off voltage: 3V
- Low reverse clamping voltage
- Low leakage current
- Excellent package:2.10mm×1.25mm×0.96mm
- Fast response time
- IEC 61000-4-2 Level 3 ESD protection

Applications

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipments communication systems

Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{PP}	20	Watts
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±9	KV
ESD per IEC 61000−4−2 (Contact)		±8	KV
Lead Soldering Temperature	TL	260 (10 sec)	°C
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STJ}	-55 to +150	°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				3	V
Reverse Breakdown Voltage	V_{BR}	I_t = 1mA	5.3		5.9	V
Reverse Leakage Current	I_R	V_R =V_{RWM}			1	μA
Forward voltage	V_F	I_F=10mA			0.9	V
Clamping Voltage	V_C	I_{PP}=2.5A, t_P = 8/20μs			8	V
Junction Capacitance	C_J	V_R=0V, f = 1MHz		9		pF

Characteristics Curves

Figure 1- Forward Characteristics

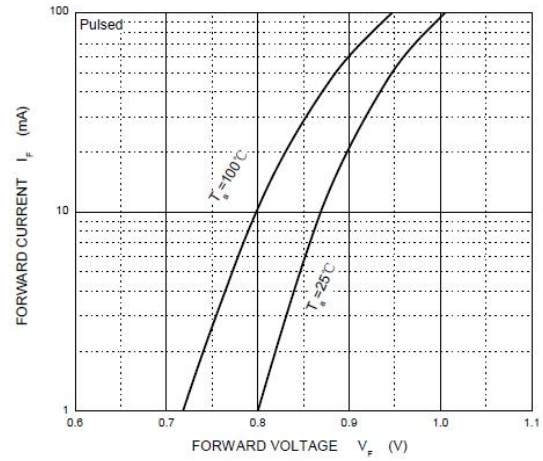


Figure 2- Reverse Characteristics

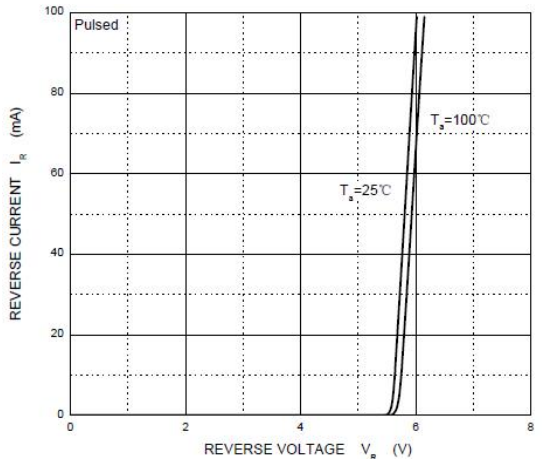


Figure3- VC —— IPP

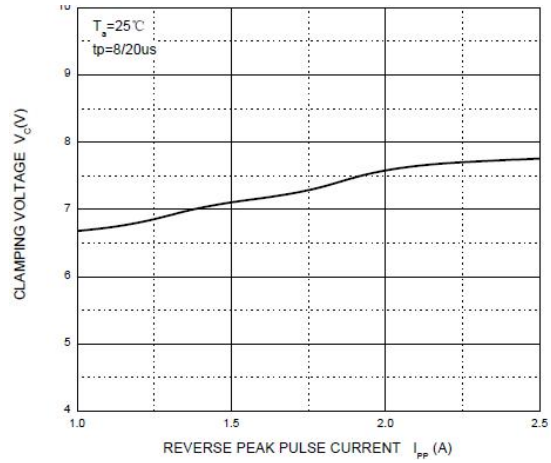
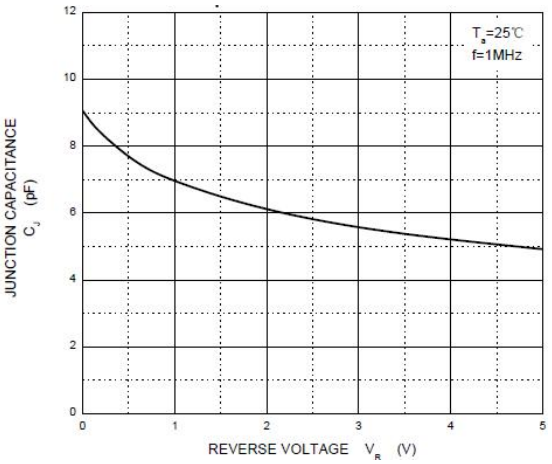
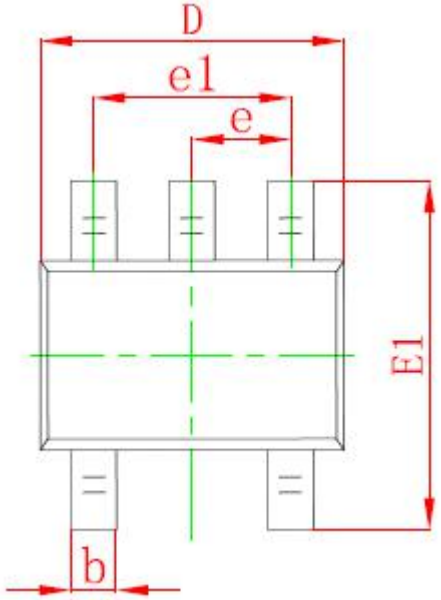


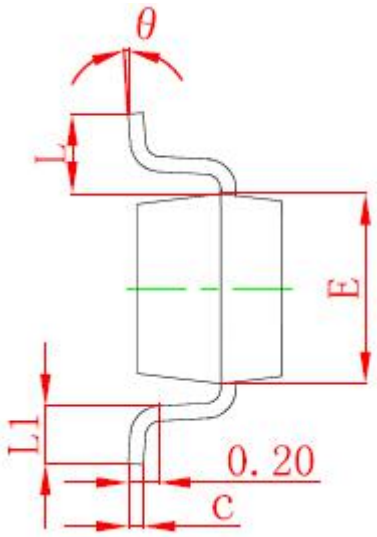
Figure3-Capacitance Characteristics

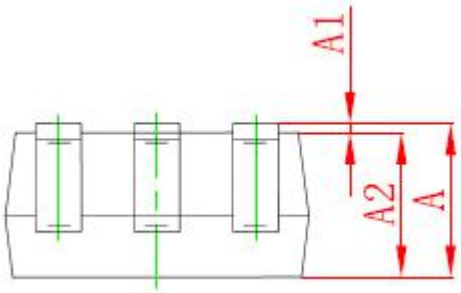


ACKAGE OUTLINE DIMENSIONS in millimeters (inches) :SOD-353



symbol	Dimensions in millimeters		Dimensions in Inches	
	min	max	min	max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
C	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.026	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°





Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.