

RoHS Compliant Product

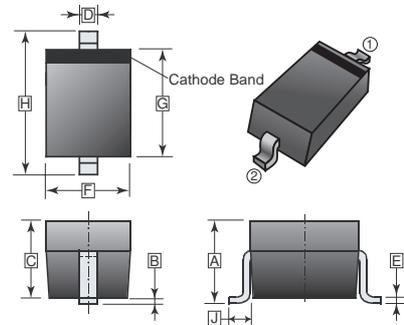
A suffix of "C" specifies halogen and lead-free

DESCRIPTION

The device is designed to protect voltage sensitive electronic components from ESD and other transients. Its excellent clamping capability, low leakage, low capacitance, and fast response time provide the best class protection on the designs exposed to ESD.

The device combines small size, low capacitance, and high level ESD protection and thus it becomes a flexible solution for the applications such as HDMI, Display Port TM, and MDDI interfaces. It is designed to replace multi-layer varistors (MLV) in the applications of the consumers' equipments such as mobile phone, notebook, PAD, STB, LCD TV etc.

SOD-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05 REF.		F	1.15	1.45
B	0.20 REF.		G	1.6	1.8
C	0.80	1.00	H	2.55	2.75
D	0.25	0.40	J	0.475 REF.	
E	0.080	0.180			

FEATURES

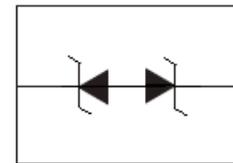
- Low reverse clamping voltage
- Low leakage current
- IEC 61000-4-2 level 4 ESD protection

APPLICATIONS

- Computers and peripherals
- Portable electronics
- Power lines

MARKING

Z



Bi-direction

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323	3K	7 inch

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Rating	Symbol	Value	Unit
ESD Voltage(IEC61000-4-2) ¹	V _{ESD}	±25	kV
		±25	
		±16	
		±0.4	
ESD Voltage(JESD22-A114-B)@ per human body model ¹			
ESD Voltage@ machine model ¹			
Peak Pulse Power@ tp=8/20µs pulse waveform	P _{PK}	85	W
Peak Pulse Current@ tp=8/20µs pulse waveform	I _{PP}	5	A
Maximum Lead Solder Temperature@ 10 second duration	T _L	260	°C
Junction and Storage Temperature Range	T _J , T _{STG}	150, -55~150	°C

Notes:

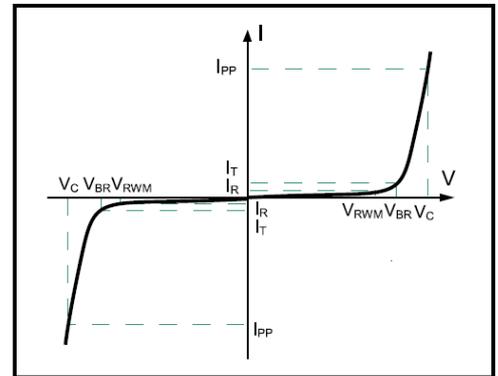
1. The device is stressed with ten non-repetitive ESD pulses.

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse Stand Off Voltage	V_{RWM}		-	-	7	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	8.2	-	10.5	V
		$I_T=100\text{mA}$	7	-	-	
Reveres Leakage Current	I_R	$V_{RWM}=7\text{V}$	-	-	1	μA
Clamping Voltage @ $t_p=8/20\mu\text{s}$ pulse waveform	V_C	$I_{PP}=5\text{A}$	-	-	17	V
Junction Capacitance	C_J	$f=1\text{MHz}, V_R=0$	-	9	-	pF

ELECTRICAL PARAMETER

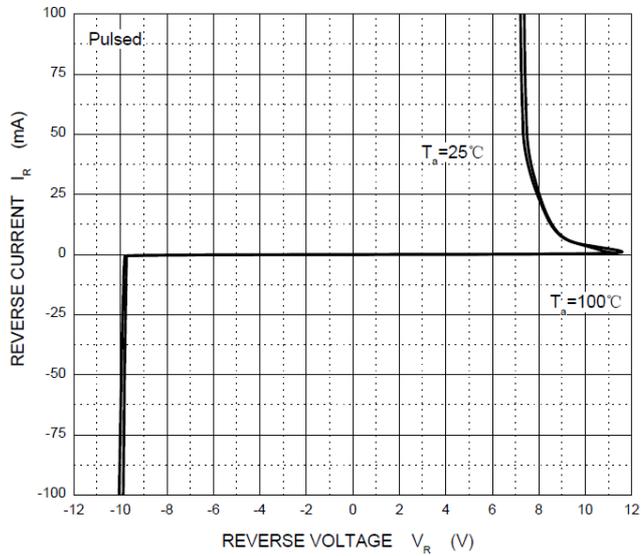
Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage



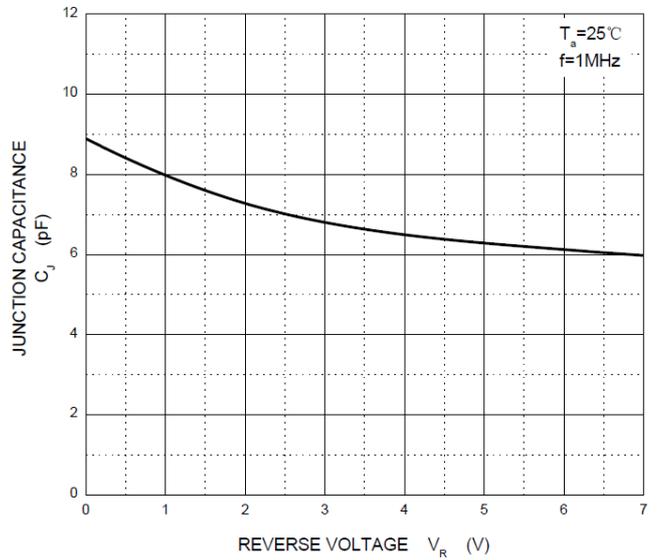
V-I characteristics for a Bi-directional TVS

CHARACTERISTICS CURVES

Reverse Characteristics



Capacitance Characteristics



V_c — I_{PP}

