

Features

- IEC 61000-4-2 Level 4 ESD Protection
 - $\pm 25\text{kV}$ Contact Discharge
 - $\pm 25\text{kV}$ Air Discharge
- 200W Peak pulse Power (8/20us)
- Low clamping voltage
- Working voltage: 3.3V
- Low leakage current
- RoHS compliant
- Protecting one bi-directional lines
- Junction capacitance: 1.2pF Typ.

Description

The ESD3V3B03-323 is Transient Voltage Suppressor that designed to protect components which are connected to data and transmission lines against electrostatic discharge (ESD), electrical fast transient (EFT), and lightning. All pins are rated to withstand 25kV ESD pulses using the IEC61000-4-2 air discharge method.

Applications

- Control & monitoring systems
- Portable electronics
- Servers, notebooks, and desktop PCs
- Set-top box
- Communication systems

Absolute Maximum rating

Over operating free-air temperature range (unless otherwise noted)

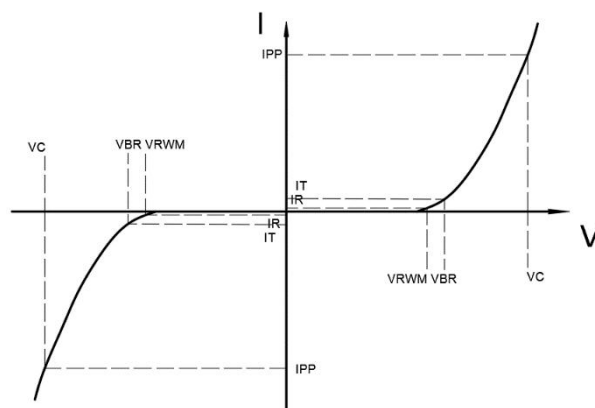
Parameters	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@25°C	P_{pk}	-	180	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@25°C	I_{PP}		15	A
ESD (IEC61000-4-2 air discharge) @25°C	V_{ESD}	-	± 25	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V_{ESD}	-	± 25	kV
Junction temperature	T_J	-	150	°C
Operating temperature	T_{OP}	-40	125	°C
Storage temperature	T_{STG}	-55	150	°C
Lead temperature	T_L	-	260	°C

Electrical Characteristics

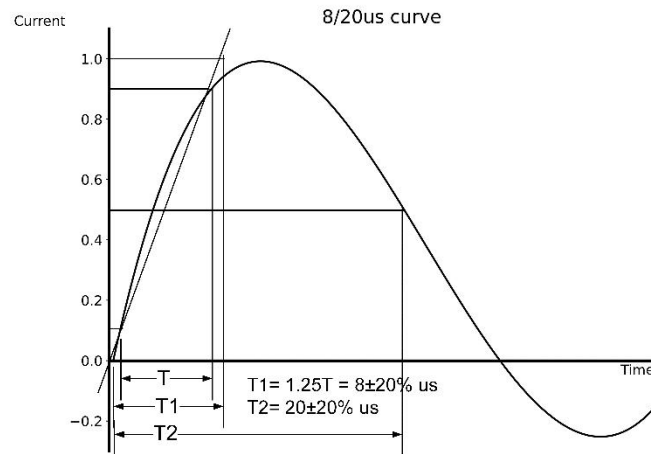
At TA = 25°C unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	3.5			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$			1	μA
Clamping Voltage	V_C	$I_{PP}=1A$; $t_p=8/20\mu s$		7	9	V
Clamping Voltage	V_C	$I_{PP}=15A$; $t_p=8/20\mu s$		17	20	V
Junction Capacitance	C_J	$V_R=0V$; $f=1MHz$		1.2	1.5	pF

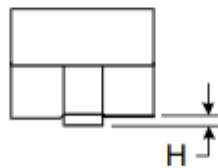
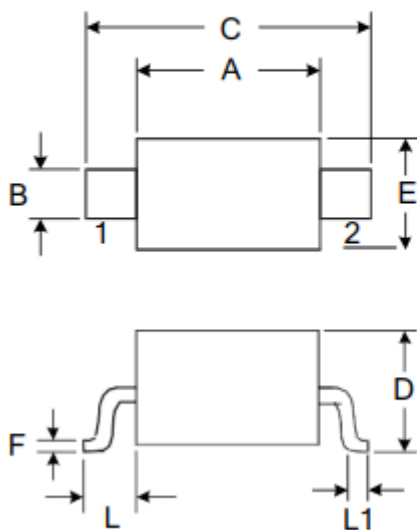
Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}



Typical Characteristic



Outline Drawing – SOD323



SYMBOL	DIMENSIONS			
	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Ordering information

Order code	Package	Baseqty	Deliverymode	Marking
UMW ESD3V3B03-323	SOD-323	3000	Tape and reel	CC