

# EVVOSEMI<sup>®</sup>

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

## Product Specification

▶ Domestic	Part Number	ESD3B3CM
▶ Overseas	Part Number	ESD3B3CM
▶ Equivalent	Part Number	ESD3B3CM

EV is the abbreviation of name EVVO

## Low Capacitance Bidirectional TVS/ESD Protection Diode

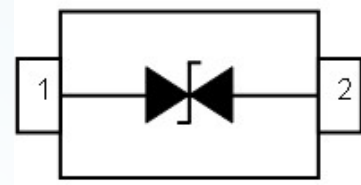
### DESCRIPTION

The ESD3B3CM is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications where board space comes at a premium. Also because of its low capacitance, it is suited for use in high frequency designs such as high speed line applications.

This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), and EFT (electrical fast transients).

### APPLICATIONS

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals



### FEATURES

- ESD per IEC 61000-4-2 ±30 kV (Contact)
- ESD per IEC 61000-4-2 ±30 kV (Air)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Peak power dissipation: 500W (8/20µs)
- Protects one Vcc or data line
- Low clamping voltage
- Working voltages : 3.3V
- Low leakage current
- Low capacitance

### MACHANICAL DATA

- SOD-323 package
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed: 260°C/10s
- Packaging: Tape and Reel
- Reel size: 7 inch

## Low Capacitance Bidirectional TVS/ESD Protection Diode

### ABSOLUTE MAXIMUM RATING

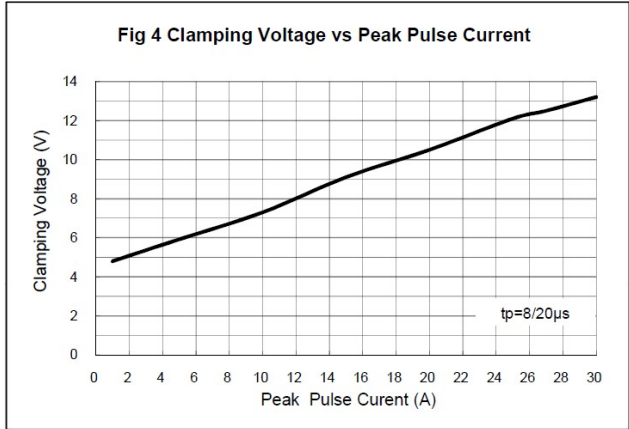
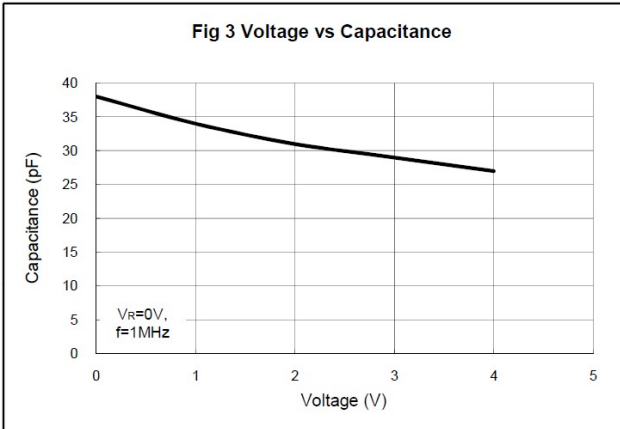
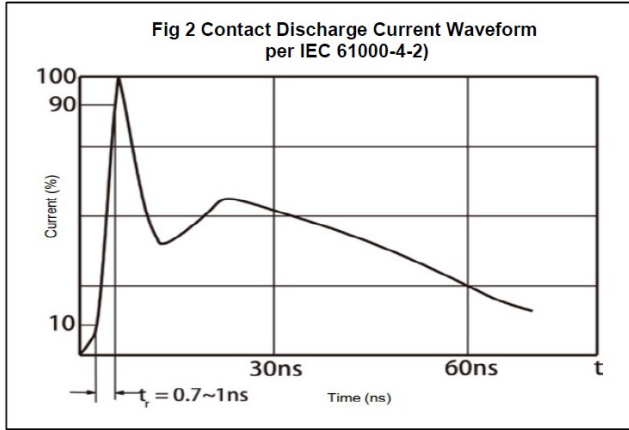
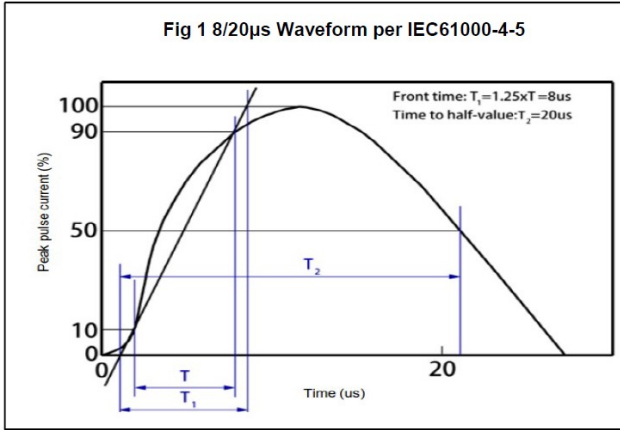
Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	$\pm 30$ $\pm 30$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	500	W
$T_{OPT}$	Operating Temperature	-55~150	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55~150	$^{\circ}$ C

### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25 $^{\circ}$ C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage				3.3	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	4.0		6.0	V
$I_R$	Reverse Leakage Current	$V_{RWM} = 3.3\text{V}$			1.0	$\mu$ A
$V_C$	Clamping Voltage	$I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$			6.5	V
$V_C$	Clamping Voltage	$I_{PP} = 28\text{A}$ , $t_p = 8/20\mu\text{s}$		13	18	V
$C_J$	Junction Capacitance	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		38	45	pF

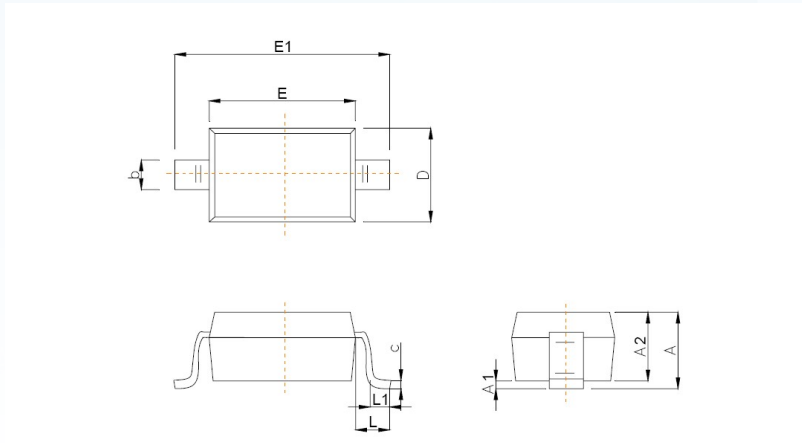
Low Capacitance Bidirectional TVS/ESD Protection Diode

ELECTRICAL CHARACTERISTICS CURVE

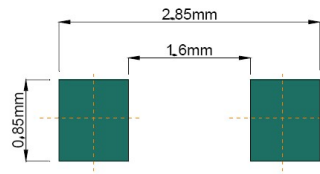


**Low Capacitance Bidirectional TVS/ESD Protection Diode**

**SOD-323 PACKAGE OUTLINE DIMENSIONS**

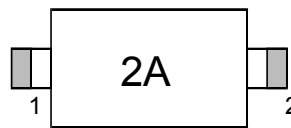


Symbol	Dimensions In Millimeters	
	Min	Max
A		1.00
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°



**Recommended Pad outline**

**Marking**



**Ordering information**

Order code	Package	Base qty	Delivery mode
ESD3B3CM	SOD-323	3000	Tape and reel

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