



# ESDB24VADB

## Transient Voltage Suppressor

### Descriptions

The ESDB24VADB is a Bi-directional transient voltage suppressor (TVS) to protect sensitive electronic components from electrostatic discharge (ESD). It is particularly well-suited for cellular phones, PMP, MID, PDA, digital cameras and other electronic equipment.

The ESDB24VADB is available in DFN1x0.6-2L package. Standard products are Pb-free and Halogen-free.

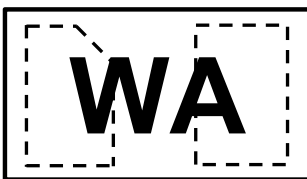
### Features

- Small Body Outline Dimensions
- Low reverse stand-off voltage: 24V
- Ultra Low capacitance
- Low leakage current
- Transient protection for each line according to IEC61000-4-2 (ESD):  $\pm 30\text{kV}$  (contact discharge)

### Applications

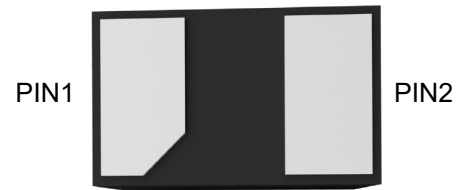
- Display Ports
- MDDI Ports
- Cellular Handsets and Accessories
- Computer and Peripherals

### Marking Code

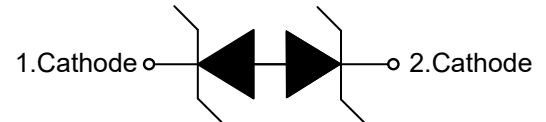


Top View

DFN1x0.6-2L



Bottom View



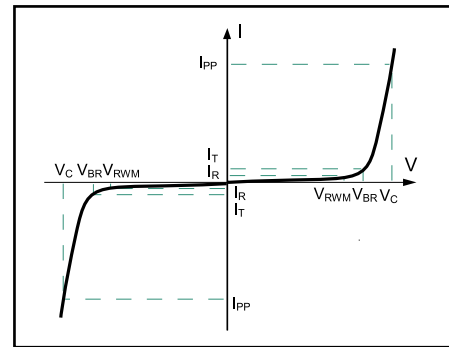


### Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ )

Parameter		Symbols	Value	Unit
IEC61000-4-2 ESD Voltage	Air Model	$V_{ESD}$	$\pm 30$	KV
	Contact Model		$\pm 30$	
Junction Temperature		$T_J$	125	$^\circ\text{C}$
Operating Temperature Range		$T_{OPR}$	-40 to +125	$^\circ\text{C}$
Storage Temperature Range		$T_{STG}$	-55 to +150	$^\circ\text{C}$

### 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



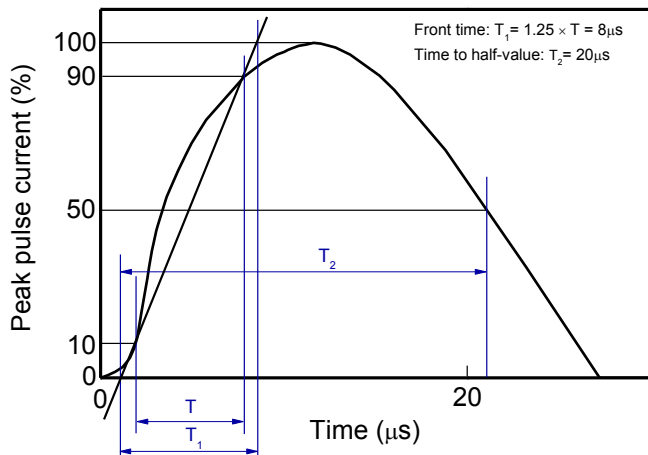
V-I characteristics for a Bi-directional TVS

### Electrical Characteristics ( $T_A=25^\circ\text{C}$ )

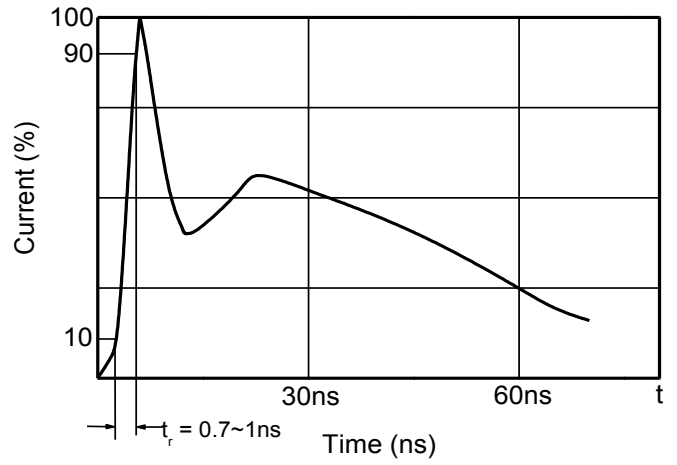
Parameter	Symbols	Min.	Max.	Unit
Reverse stand-off voltage	$V_{RWM}$	--	24	V
Forward Voltage at $I_F = 10\text{ mA}$	$V_F$	--	1.1	V
Reverse Leakage Current at $V_{RWM} = \pm 24\text{ V}$	$I_R$	--	0.1	$\mu\text{A}$
Breakdown Voltage at $I_T = 1\text{ mA}$	$V_{R(BR)}$	26.5	30	V
Peak Pulse Current $t_p = 8/20\mu\text{s}$	$I_{PP}$	--	5	A
Clamping Voltage at $I_{PP} = 1\text{ A}$ , $t_p=8/20\mu\text{s}$ at $I_{PP} = 5\text{ A}$ , $t_p=8/20\mu\text{s}$	$V_C$	--	38 51	V
Junction Capacitance at $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_J$	--	32	pF



### Typical Characteristic Curves



8/20 $\mu\text{s}$  waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2



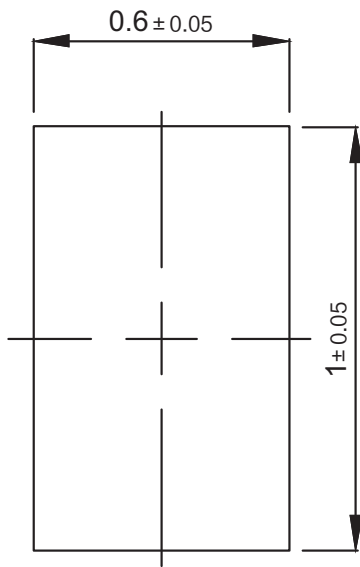
# ESDB24VADB

## Transient Voltage Suppressor

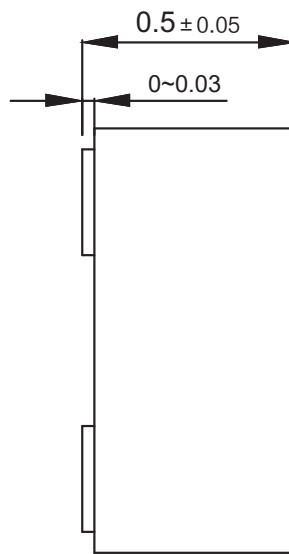
### Package Outline

DFN1x0.6-2L-0011

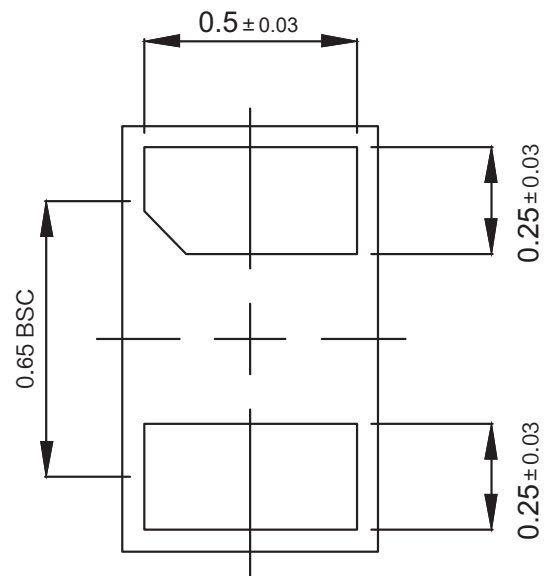
Dimensions in mm



TOP VIEW



SIDE VIEW



BOTTOM VIEW

### Ordering Information

Device	Package	Shipping
ESDB24VADB	DFN1x0.6-2L	10,000PCS/Reel&7inches

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