

■ Transient Voltage Suppressors for ESD Protection

**Description**

The ESD5Z24 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.

**Features**

- IEC61000-4-2 Level 4 ESD Protection
- Protects one directional I/O line
- Low clamping voltage
- Working voltages : 24V
- Low leakage current

**Applications**

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- Pagers

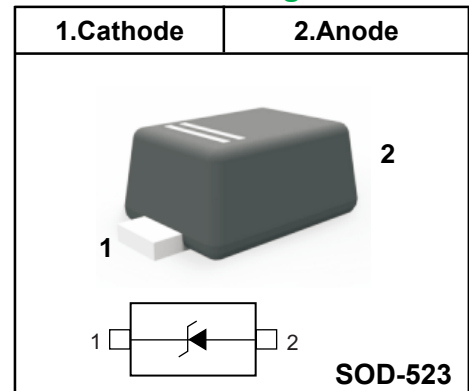
**Absolute Maximum Ratings** T<sub>a</sub> = 25°C

Symbol	Parameter	Value	Unit
V <sub>ESD</sub>	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±15 ±8	kV
P <sub>D</sub>	Total Power Dissipation on FR-5 Board (Note 1) @ T <sub>a</sub> =25°C	150	mW
T <sub>OPT</sub>	Operating Temperature	-55~125	°C
T <sub>STG</sub>	Storage Temperature	-55~150	°C

These ratings are limiting values above which the serviceability of the diode may be impaired.

Note 1: FR-5=1.0x0.75x0.62 in.

**Pinning**



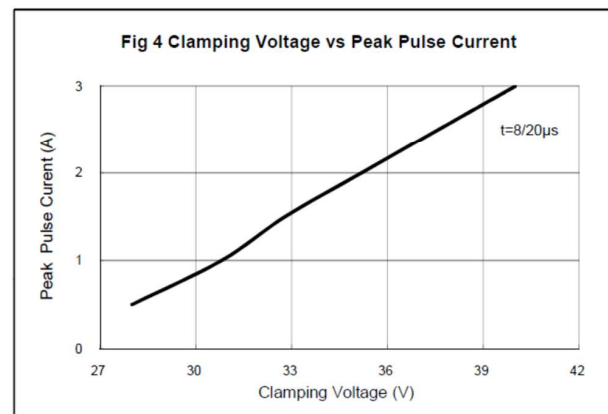
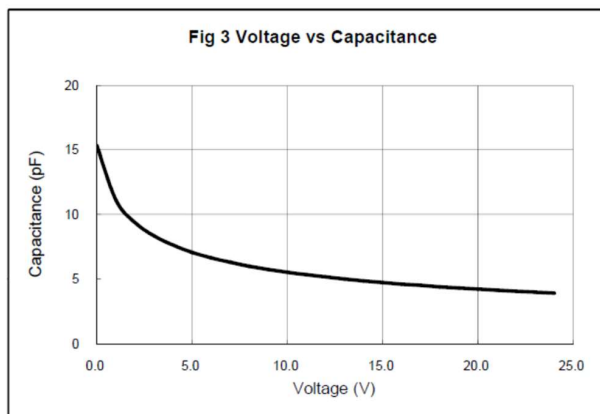
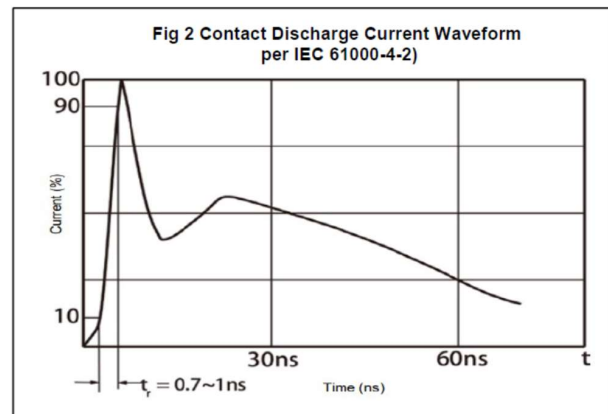
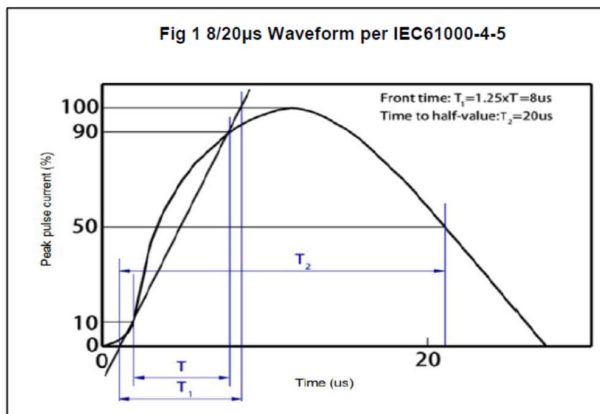
**Marking Code**

ESD5Z24	24
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**Electrical Characteristics**  $T_a = 25^\circ\text{C}$

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage				24	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	26			V
$I_R$	Reverse Leakage Current	$V_{RWM} = 24\text{V}$			1	$\mu\text{A}$
$V_C$	Clamping Voltage	$I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$			35	V
$C_J$	Junction Capacitance	$V_R = 0\text{V}$ , $f = 1\text{MHz}$			50	pF

**Electrical Characteristic Curve**



**Ordering information**

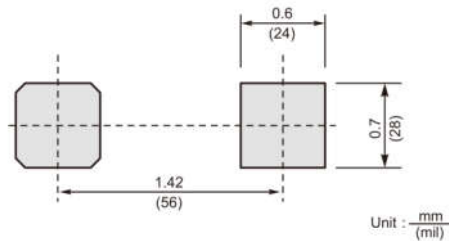
Package	Packing Description	Packing Quantity
SOD-523	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

**Package Dimensions**

**SOD-523**

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.51	0.77	20	30
e	0.25	0.35	10	14
C	0.08	0.15	3	6
D	1.10	1.30	43	51
E	0.75	0.99	30	39
HE	1.50	1.70	59	67
N	0.35ref		14ref	
L	0.2ref		8ref	
P	R0.1 ALL ROUND		R4.0 ALL ROUND	
∠	10°			

**The recommended mounting pad size**



## Disclaimer

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