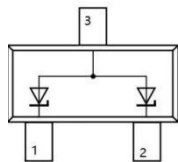

**2-Line unidirectional ESD Protection Diode**
**SOT23**
**schematic & pin configuration**

simplified outline and symbol

pinning


 PIN1 cathode 1  
 PIN2 cathode 2  
 PIN3 common anode

**General description**

These dual monolithic silicon surge protection diodes are designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD Sensitive equipment. as computers, printers, business machines, communication systems, medical equipment and other applications. Their dual junction common anode design protects two separate lines using only one package. These devices are ideal for situations where board space is at a premium.

**Features and benefits**

- 2 unidirectional transil functions
- Reverse stand-off voltage: 24v Max
- Low clamping voltage
- Low leakage current: nA Level
- Response time is typically < 1 ns
- ESD Protection: 15kv(air)/8kv(contact) ( IEC61000-4-2)

**Application information**

- computers
- printers
- communication systems
- cellular Handsets and Accessories
- portable Electronis
- Industrial controls

**ordering information**

Device	package	Marking	packaging
SM24	SOT23	M24	3000/Tape & Reel

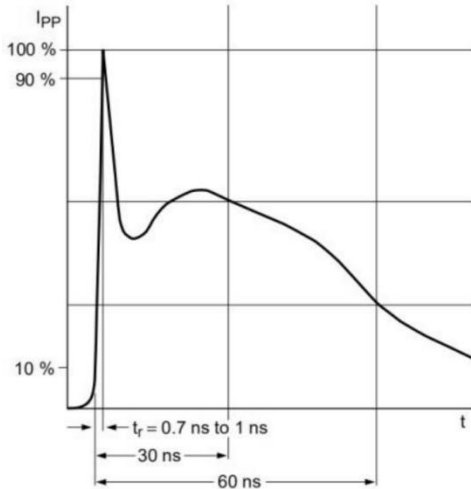
Maximum Ratings (Top = 25 °C, unless otherwise specified)

parameter	syμβo	value	unit
peak pulse power (tp = 8/20 μ S)	PPPM	180	W
peak pulse current(tp = 8/20 μ S)	I PPM	3	A
Maximum lead temperature for soldering during 10s	TL	260	°C
storage Temperature Range	Tstg	-55 to +150	°C
operating Temperature Range	Top	-40 to +125	°C
Maximum junction temperature	Tj	150	°C
ESD Voltage IEC 61000-4-2 (air discharge)	VESD	15	KV
ESD Voltage IEC 61000-4-2 (contact discharge)	VESD	8	KV

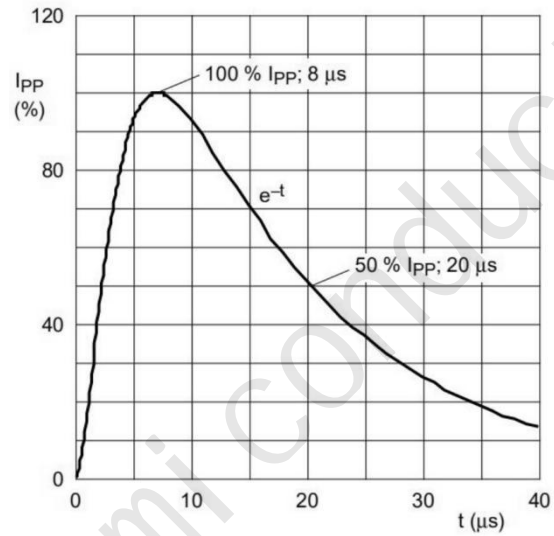
Electrical characteristics (Top = 25 °C, unless otherwise specified)

parameter	symbol	Min	TYP	Max	unit	condition
Reverse working voltage	VRWM	--	--	24.0	V	
Breakdown voltage	VBR	26.5	--	--	V	IT= 1mA
Leakage current Leak	IR	--	--	100	nA	VRWM=24V
clamping voltage	VC	--	--	60.0	V	Ipp=3A,TP=8/20μS
Junction capacitance	CJ	--	14	18	PF	VR=0V, f= 1MHz (pin 1 or 2 to 3)
		--	7	10	PF	VR=0V, f= 1MHz (pin 1 to P2 and 2 to 1)

Typical characteristics



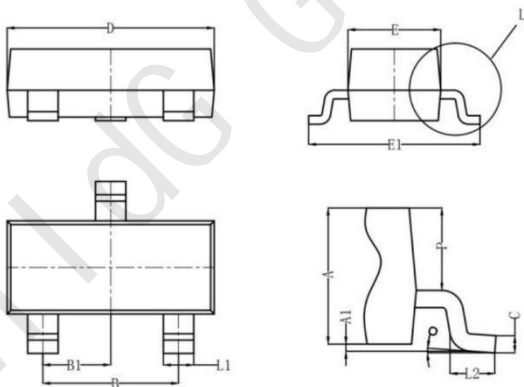
IEC61000-4-2 waveform



IEC 61000-4-5 waveform( 8/20μS Pulse)

package outline Dimensions

SOT23



sympo	Dimensions (mm)		
	Min	TYP	Max
A	0.900	1.000	1.1100
A1	0.000	0.050	0.100
L1	0.350	0.400	0.500
C	0.100	0.110	0.120
D	2.800	2.900	3.000
E	1.250	1.300	1.350
E1	2.250	2.400	2.550
B	1.800	1.900	2.000
B1	0.950 TYP		
L2	0.200	0.350	0.450
P	0.550	0.575	0.600

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[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)  
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