

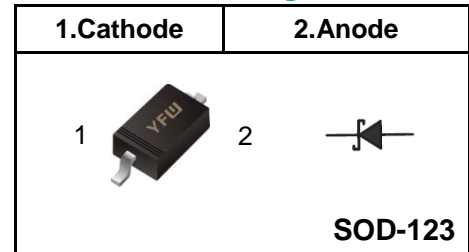
**Transient Voltage Suppressors**

for ESD Protection

**FEATURES**

- ◆ Low clamping voltage
- ◆ Low leakage

**Pinning**



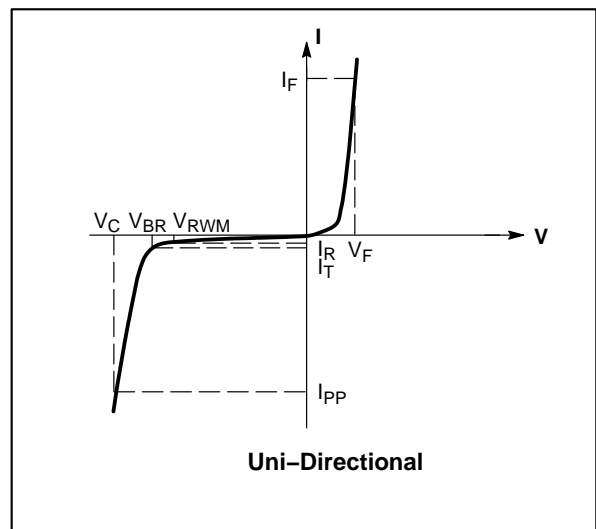
**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbols	Value	Units
Peak Pulse Power (tp = 8/20 μs)	<b>P<sub>pk</sub></b>	350	<b>W</b>
Peak Pulse Current (tp = 8/20 μs)	<b>I<sub>pp</sub></b>	24	<b>A</b>
ESD Voltage (HRB Waveform per IEC61000-4-2)	<b>V<sub>pp</sub></b>	30	<b>KV</b>
Operating Junction Temperature	<b>T<sub>J</sub></b>	- 55 to + 125	<b>°C</b>
Storage Temperature Range	<b>T<sub>stg</sub></b>	- 55 to + 150	<b>°C</b>

**Electrical Characteristics**

(T<sub>A</sub> = 25°C unless otherwise noted)

Symbol	Parameter
<b>I<sub>pp</sub></b>	Maximum Reverse Peak Pulse Current
<b>V<sub>c</sub></b>	Clamping Voltage @ I <sub>pp</sub>
<b>V<sub>RWM</sub></b>	Working Peak Reverse Voltage
<b>I<sub>R</sub></b>	Maximum Reverse Leakage Current @ V <sub>RWM</sub>
<b>V<sub>BR</sub></b>	Breakdown Voltage @ I <sub>T</sub>
<b>I<sub>T</sub></b>	Test Current
<b>I<sub>F</sub></b>	Forward Current
<b>V<sub>F</sub></b>	Forward Voltage @ I <sub>F</sub>
<b>P<sub>pk</sub></b>	Peak Power Dissipation
<b>C</b>	Max. Capacitance @V <sub>R</sub> = 0 and f = 1 MHz



\*See Application Note AND8308/D for detailed explanations of datasheet parameters.

## Characteristics at Ta=25°C(V<sub>F</sub>=0.9V Max.at I<sub>F</sub>=10mA)

Type	Marking Code	Reverse Stand-off Voltage	Reverse Current	Breakdown Voltage		Clamping Voltage <sup>1)</sup>				Capacitance	
		V <sub>RWM</sub>	I <sub>R</sub> at V <sub>RWM</sub>	V <sub>BR</sub>	at I <sub>r</sub>	V <sub>C</sub>	at I <sub>PP</sub>	V <sub>C</sub>	at I <sub>PP</sub>	C <sub>j</sub>	at f
		Max. (V)	Max.(μA)	Min.(V)	mA	Typ.(V)	A	Max.(V)	A	Max.(pF)	MHz
ESD1Z2V5	02	2.5	5	4	1	6.5	5	10.9	11	145	1
ESD1Z3V3	03	3.3	10	5	1	8.4	5	14.1	16	105	1
ESD1Z5V0	05	5	10	6	1	9.8	5	14.5	24	350	1
ESD1Z6V0	06	6	5	6.8	1	12.4	5	20.5	8.8	70	1
ESD1Z7V0	07	7	1	7.5	1	13.5	5	22.7	8.8	65	1
ESD1Z12	12	12	1	13.3	1	19	5	25	7	150	1
ESD1Z18	18	18	1	19.8	1	26.5	5	40	5	100	1
ESD1Z24	24	24	1	25.5	1	29	4	52	5	150	1
ESD1Z36	36	36	1	40	1	/	3	80	3	100	1

1)tp = 8/20 μs

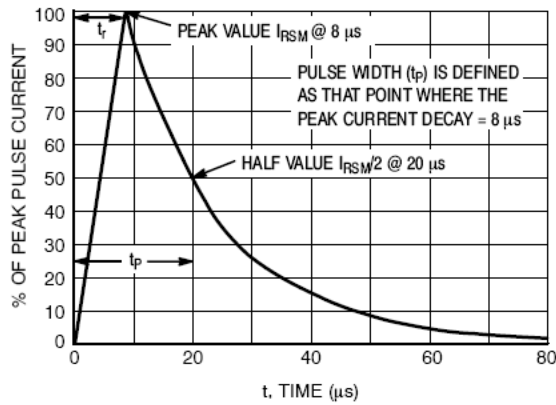
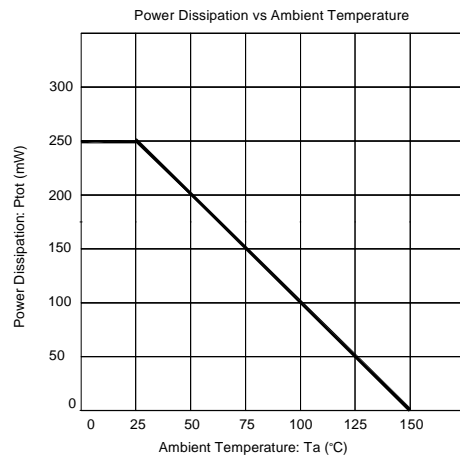


Figure 1. 8 x 20 μs Pulse Waveform



**Ordering information**

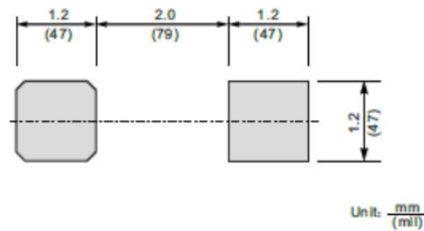
Package	Packing Description	Packing Quantity
SOD-123	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

**Package Dimensions**

**SOD-123**

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.3	35	51
C	0.09	0.22	3.5	8.7
D	1.5	1.8	59	71
E	2.5	2.8	98	110
E1	3.6	3.9	142	154
b	0.5	0.7	20	28
L1	0.25	0.45	10	18
A1	-	0.2	-	8
∠	9°			

**The recommended mounting pad size**



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