

Transient Voltage Suppressors

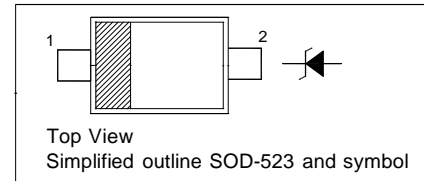
for ESD Protection

Features

- Excellent clamping capability
- Low leakage
- Fast response time

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



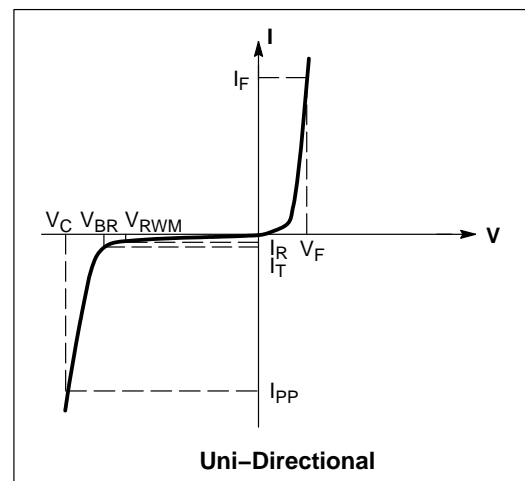
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
IEC61000-4-2 (ESD) Air Contact	-	± 30 ± 30	KV
IEC61000-4-4 (EFT)	-	12	A
ESD Voltage Per Human Body Model Per Machine Model	-	16	KV
	-	400	V
Power Dissipation on FR-5 Board	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

($T_a = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Max. Capacitance @ $V_R = 0$ and $f = 1\text{ MHz}$



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

Characteristics at $T_a = 25^\circ\text{C}$ ($V_F = 1.1\text{ V Max.}$ at $I_F = 10\text{ mA}$)

Type	Marking Code	Reverse Stand-off Voltage	Reverse Current	Breakdown Voltage		Clamping Voltage			Reverse Peak Pulse Current	Peak Power Dissipation	Capacitance
		V_{RWM}	I_R at V_{RWM}	V_{BR}	at I_T	V_C	at I_{PP}	V_C at Max. I_{PP}	I_{PP}	P_{pk}	C_j
		Max. (V)	Max. (μA)	Min. (V)	(mA)	Typ. (V)	(A)	Max. (V)	Max. (A)	Max. (W)	Typ. (pF)
ESD5Z2V5	02	2.5	6	4	1	6.5	5	10.9	11	120	145
ESD5Z3V3	03	3.3	0.05	5	1	8.4	5	14.1	11.2	158	105
ESD5Z5V0	05	5	0.05	6.2	1	11.6	5	18.6	9.4	174	80
ESD5Z6V0	06	6	0.01	6.8	1	12.4	5	20.5	8.8	181	70
ESD5Z7V0	07	7	0.01	7.5	1	13.5	5	22.7	8.8	200	65
ESD5Z12	12	12	0.01	14.1	1	17	5	25	9.6	240	55
ESD5Z18	18	18	0.5	19.8	1	26.5	5	40	5.0	240	50
ESD5Z24	24	24	0.5	25.5	1	29	4	52	5.0	240	40
ESD5Z36	36	36	1	40	1	/	3	80	3.0	240	35

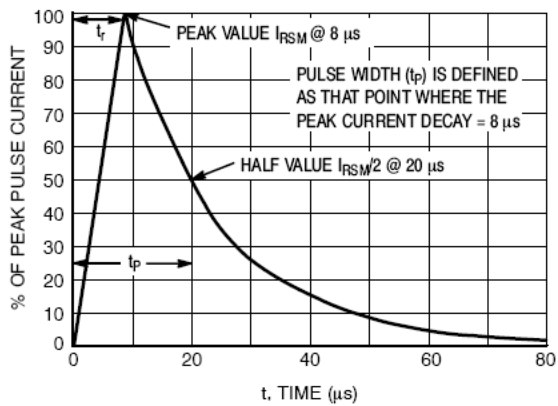


Figure 1. $8 \times 20\ \mu\text{s}$ Pulse Waveform

