

Surface Mount TVS Diodes Array for ESD Protection

 **Lead(Pb)-Free**

FEATURES

- * ESD Protection to IEC 61000-4-2,30KV(Air), 30KV(Contact)
- * 300 Watts Peak Power Protection(tp=8/20 uS)
- * Excellent Clamping Capability
- * Low Leakage Current
- * Protects one I/O or Power line
- * Solid-state Silicon-avalanche Technology
- * Small Package for use in Portable Electronics
- * Transient Voltage Suppressors Encapsulated in a SOD-323 Package

MECHANICAL DATA

- * CASE: Molded Epoxy
- * TERMINAS: UL 94V-0
- * WEIGHT: 0.0045 gram
- * MOUNTING POSITION: Any

APPLICATIONS

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

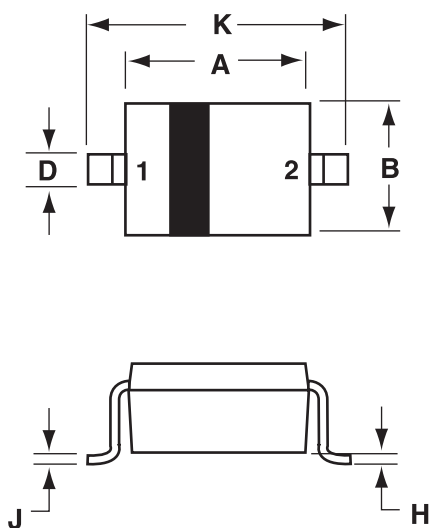
**TRANSIENT
VOLTAGE
SUPPRESSORS**
300 WATTS
3-12 VOLTS



SOD-323

SOD-323 Outline Dimensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15REF	
H	0.00	0.10
J	0.089	0.177
K	2.30	2.70

PIN 1.CATHODE
2.ANODE

Maximum Ratings($T_A=25^{\circ}\text{C}$ Unless Otherwise Noted)

Characteristic	Symbol	Vote	Unit
Peak Pulse Power($t_p = 8/20\mu\text{s}$)	P_{PK}	300	W
ESD Voltage(HBM Waveform per IEC 61000-4-2)	V_{ESD}	30	kV
Lead Soldering Temperature	T_L	260(10s)	$^{\circ}\text{C}$
Operating Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T = 25^{\circ}\text{C}$)

WOSD03					
TYPE NUMBER	Symbol	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	4	V
Reverse Breakdown Voltage $I_t = 1\text{mA}$	V_{BR}	5	-	-	V
Reverse Leakage Current $V_{RWM} = 3.3\text{V}$	I_R	-	-	20	μA
Clamping Voltage $I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$ $I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$	V_C	- -	- -	7 8.5	V
Peak Pulse Current $t_p = 8/20\mu\text{s}$	I_{PP}	-	-	12	A
Junction Capacitance $V_R = 0\text{V}, f = 1\text{MHz}$	C_j	-	-	350	pF
Device Marking		3D			

WOSD05					
TYPE NUMBER	Symbol	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	5	V
Reverse Breakdown Voltage $I_t = 1\text{mA}$	V_{BR}	6	-	-	V
Reverse Leakage Current $V_{RWM} = 5\text{V}$	I_R	-	-	10	μA
Clamping Voltage $I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$ $I_{PP} = 24\text{A}, t_p = 8/20\mu\text{s}$	V_C	- -	- -	9.8 14.5	V
Peak Pulse Current $t_p = 8/20\mu\text{s}$	I_{PP}	-	-	24	A
Junction Capacitance $V_R = 0\text{V}, f = 1\text{MHz}$	C_j	-	-	350	pF
Device Marking		ZA			

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless Otherwise Noted)

WOSD12					
TYPE NUMBER	Symbol	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	12	V
Reverse Breakdown Voltage $I_t = 1\text{mA}$	V_{BR}	13.3	-	-	V
Reverse Leakage Current $V_{RWM} = 12\text{V}$	I_R	-	-	1	μA
Clamping Voltage $I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$ $I_{PP} = 15\text{A}, t_p = 8/20\mu\text{s}$	V_C	- -	- -	19 25	V
Peak Pulse Current $t_p = 8/20\mu\text{s}$	I_{PP}	-	-	15	A
Junction Capacitance $V_R = 1\text{V}, f = 1\text{MHz}$	C_j	-	-	90	pF
Device Marking		6u , ZC			

ELECTRICAL CHARACTERISTICS CURVES

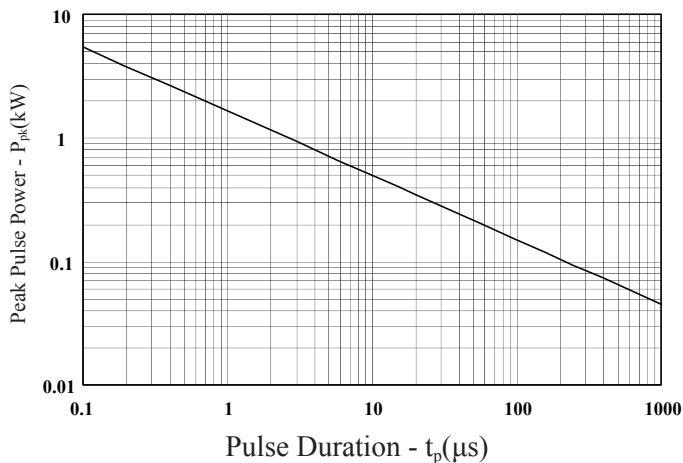


Fig.1 Non-Repetitive Peak Pulse Power vs. Pulse Time

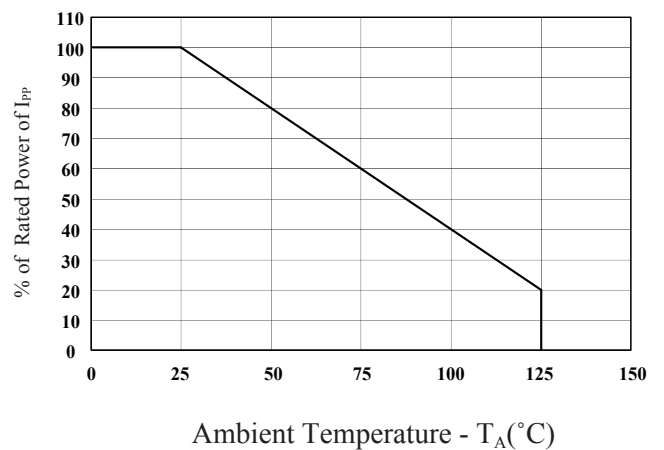


Fig.2 Power Derating Curve

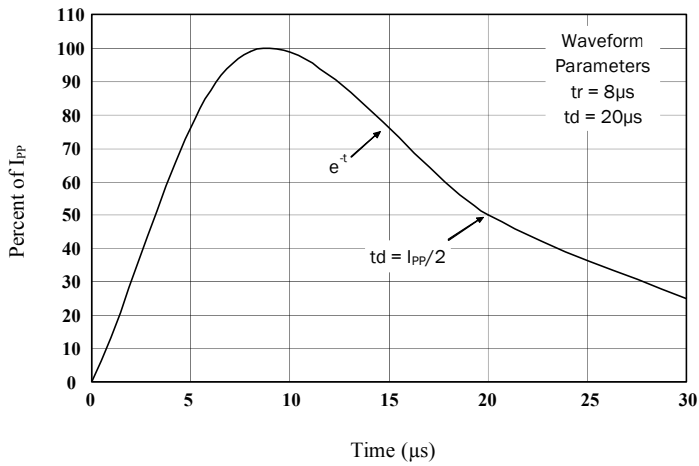


Fig.3 Pulse Waveform

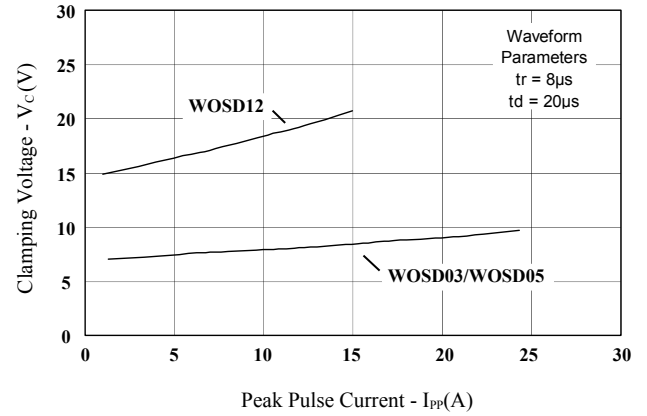


Fig.4 Clamping Voltage vs. Peak Pulse Current

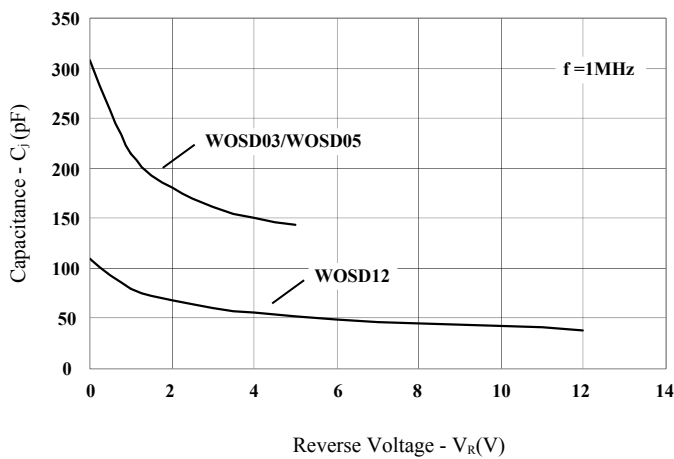


Fig.5 Capacitance vs. Reverse Voltage

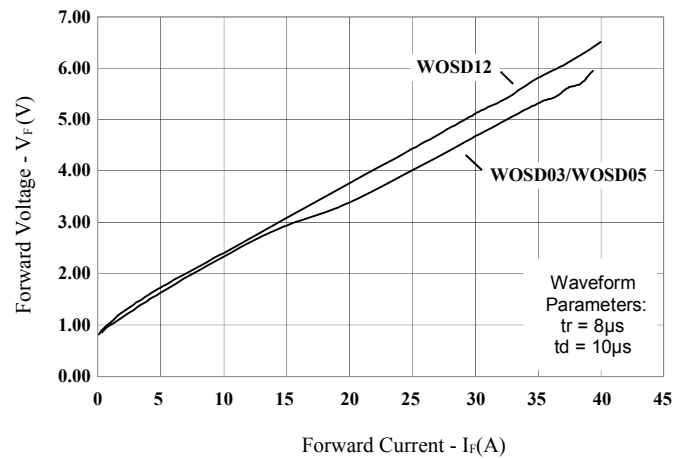


Fig.6 Forward Voltage vs. Forward Current