

## SSCT4V512D2

### Mount TVS Diode for ESD Protection

- **Description**

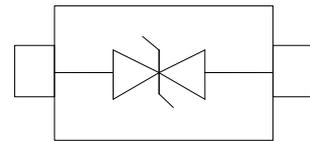
The SSCT4V512D2 Series is designed with SSC technology to protect voltage sensitive components from Surge. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to surge.

It has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), and EFT (electrical fast transients).

- **Feature**

- ✧ 2500W peak pulse power ( $t_P = 8/20\mu s$ )
- ✧ SOD-323 Package
- ✧ Working voltage: 4.5V
- ✧ Low clamping voltage
- ✧ Low capacitance
- ✧ RoHS compliant transient protection for high speed data lines to IEC61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact)

- **PIN configuration**



Topview

- **Applications**

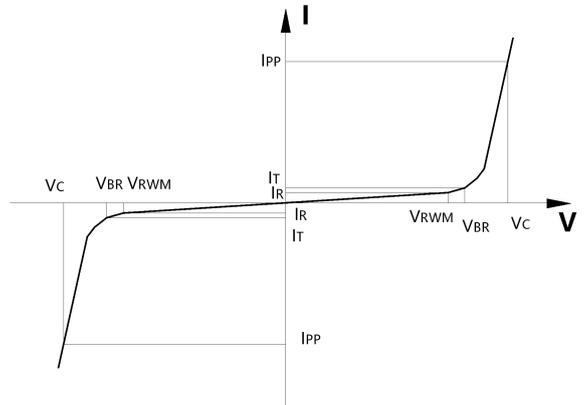
- ✧ DVI & HDMI Port Protection
- ✧ Serial and Parallel Ports
- ✧ Projection TV
- ✧ Notebooks, Desktops, Server
- ✧ USB 1.1/2.0/3.0/3.1/OTG

- **Mechanical data**

- ✧ Lead finish: 100% matte Sn(Tin)
- ✧ Mounting position: Any
- ✧ Qualified max reflow temperature: 260°C
- ✧ Device meets MSL 1 requirements
- ✧ Pure tin plating: 7 ~ 17  $\mu m$
- ✧ Pin flatness:  $\leq 3mil$

## ● Electronic Parameter

Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$P_{PP}$	Peak Pulse Power
$C$	Junction Capacitance



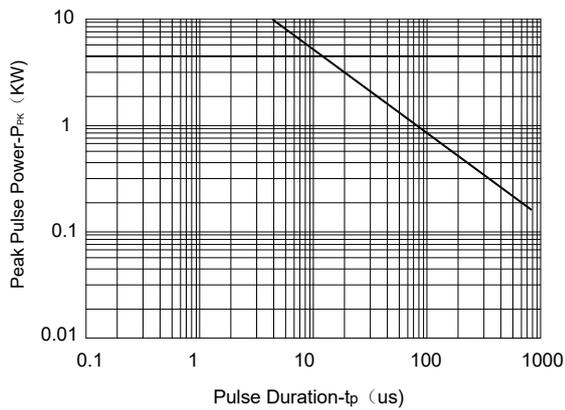
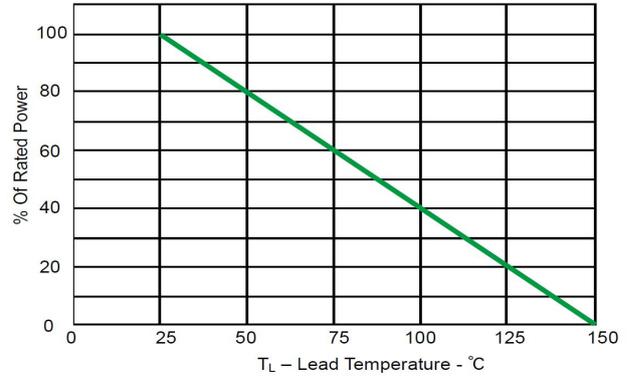
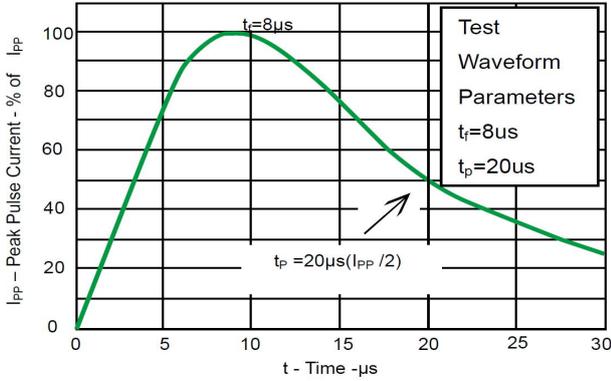
## ● Absolute maximum rating @TA=25°C

Symbol	Parameter	Value	Units
$P_{PP}$	Peak Pulse Power(8/20uS)	2500	W
$T_{STG}$	Storage Temperature	-55/+150	°C
$T_L$	Operating Temperature	-55/+150	°C

## ● Electrical Characteristics @TA=25°C

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	$V_{RWM}$	Any I/O to Ground			4.5	V
Breakdown Voltage	$V_{BR}$	$I_T = 1mA$ Any I/O to Ground		5		V
Reverse Leakage Current	$I_R$	$VRWM = 5.0V, T = 25°C$			1	uA
Clamping Voltage	$V_C$	$IPP = 50A, tP = 8/20\mu s$		8		V
Clamping Voltage	$V_C$	$IPP = 180A, tP = 8/20\mu s$		12	13.8	V
Junction Capacitance	$C_J$	$VR = 0V, f = 1MHz,$ Between I/O pins		400		pF

● **Typical Performance Characteristics**

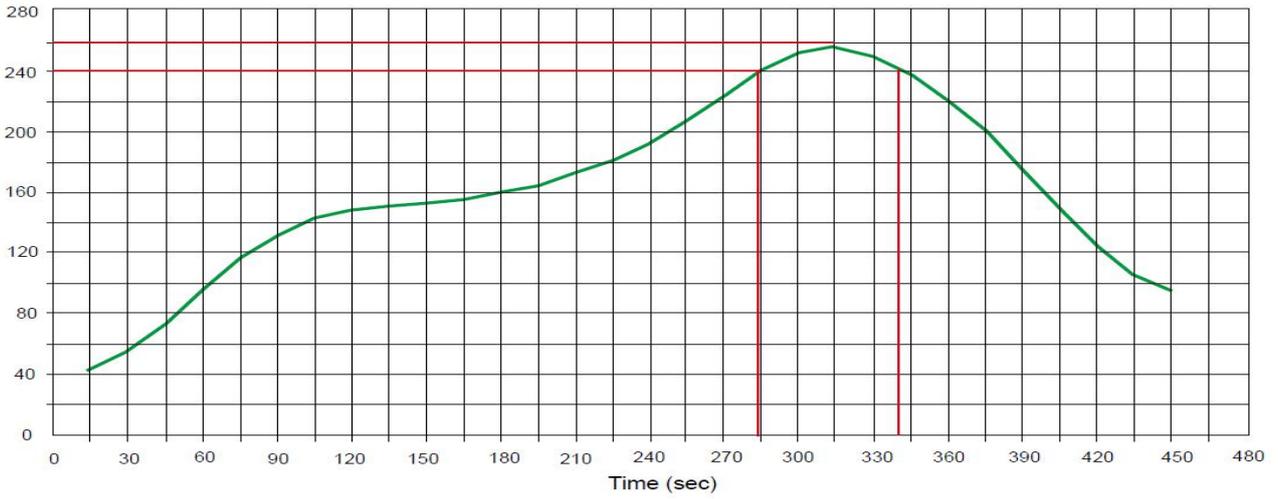




# SSCT4V512D2

- Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec



- **Package Information**

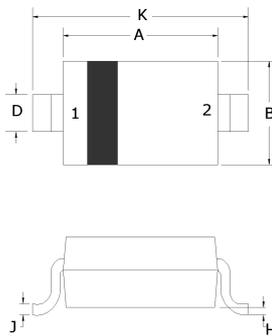
### Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCT4V512D2	SOD-323	3000	7 Inch

### Mechanical Data

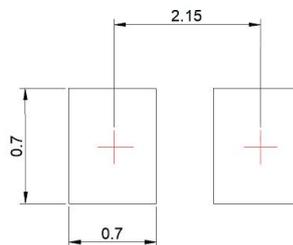
Case: SOD-323

Case Material: Molded Plastic. UL Flammability



Dim	Millimeters	
	Min	Max
A	1.60	1.80
B	1.2	1.40
C	0.80	0.90
D	0.25	0.35
E	0.15REF	
H	0	0.10
J	0.08	0.15
K	2.50	2.70

### Recommended Pad outline



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