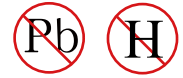


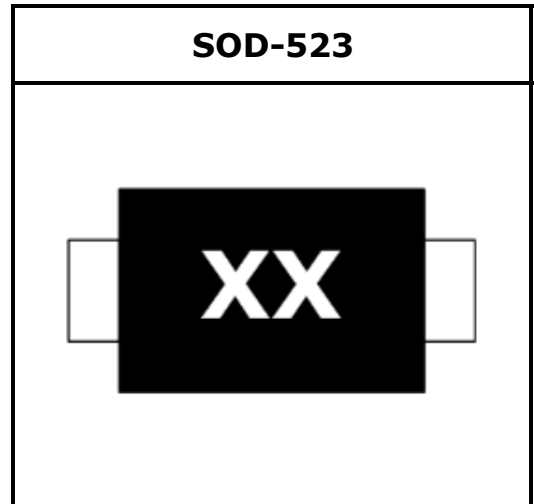


Bidirectional TVS Diode for ESD Protection



Features

- Peak Power Dissipation – 300 W (8 x 20 us Waveform)
- Replacement for MLV (0603)
- Protects I/O Port
- Low Clamping Voltage
- Low Leakage
- Low Body Height: 1.68mm
- Response Time is < 1 ns
- Stand-off Voltage: 5.0 V
- RoHS Compliant
- Meets MSL 1 Requirements
- Solid-state silicon avalanche technology
- ROHS compliant
- Device Meets MSL 1 Requirements

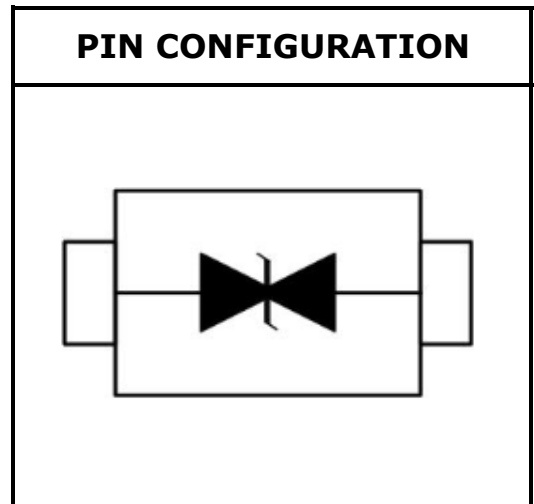


Main applications

- Cellular handsets and accessories
- Portable instrumentation
- Peripherals
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV

Protection solution to meet

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Surge) 30A (8/20us)



Ordering Information

Device	Marking	Qty per Reel	Reel Size
YSESD03CD52CT	3Q	3000	7 Inch

DEVICE CHARACTERISTICS

YSESD03CD52CT

Maximum ratings (Tamb=25°C Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20µs waveform)	P _{PPP}	300	Watts
ESD Rating per IEC61000-4-2:	Contact	30	KV
	Air	30	
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T _L	260	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

*Other voltages may be available upon request.

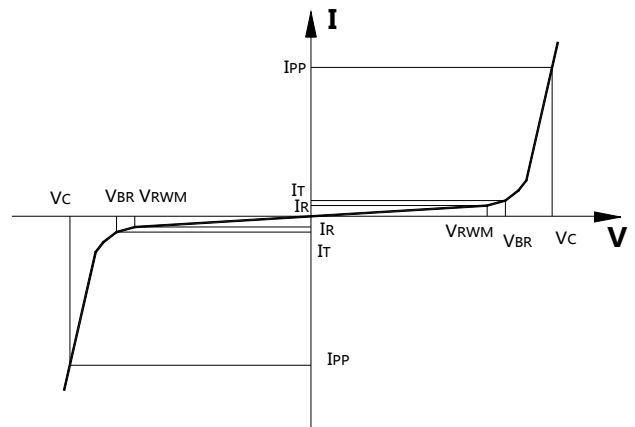
1. Non-repetitive current pulse, per Figure 1.

Electrical characteristics (Tamb=25°C Unless Otherwise Specified)

Device	V _{RWM}	I _R @ V _{RWM}	V _{BR} @1 mA		V _C @1 A	V _C @30A	Capacitance	
		(µA)	(V)		(V)		@ V _R = 0 V, 1 MHz (pF)	
	(V)	Max	Min	Max	Max	Max	Typ	Max
YSESD03CD52CT	3.3	0.1	3.8	6.0	5	10	52	70

Junction capacitance is measured in VR=0V, F=1MHz

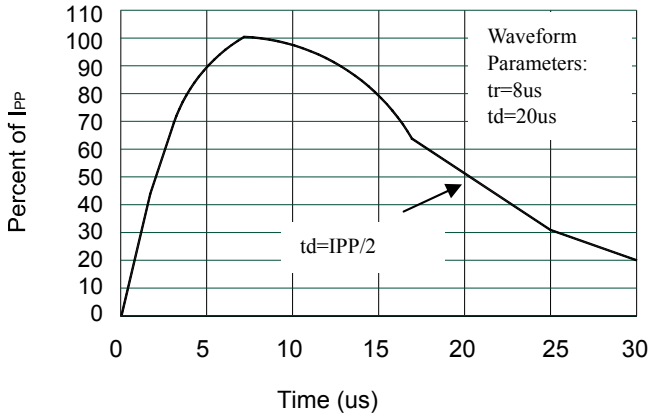
Symbol	Parameter
V _{RWM}	Working Peak Reverse Voltage
V _{BR}	Breakdown Voltage @ I _T
V _C	Clamping Voltage @ I _{PP}
I _T	Test Current
I _{RM}	Leakage current at V _{RWM}
I _{PP}	Peak pulse current
C _O	Off-state Capacitance
C _J	Junction Capacitance



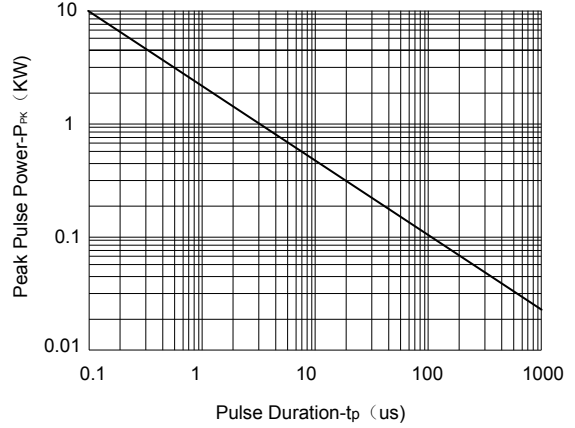
DEVICE CHARACTERISTICS

YSESD03CD52CT

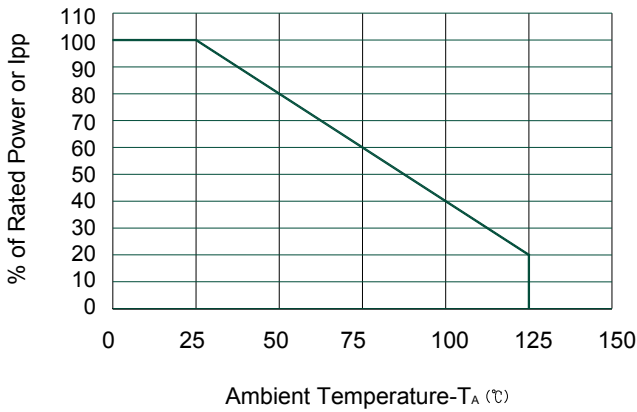
Typical electrical characterist applications



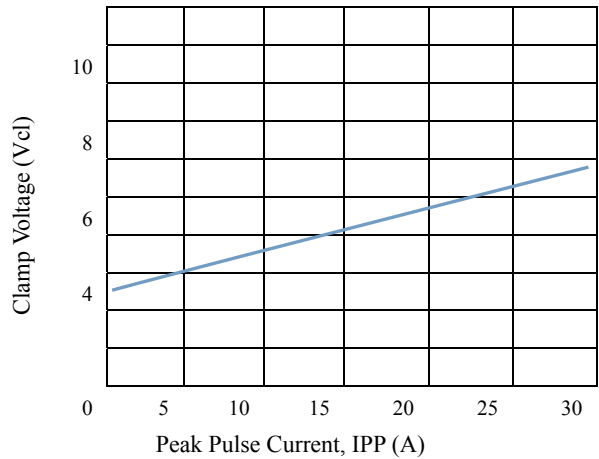
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Clamping Voltage Vs Peak Pulse Current(I_{pp})

PACKAGE OUTLINE & DIMENSIONS

YSESD03CD52CT

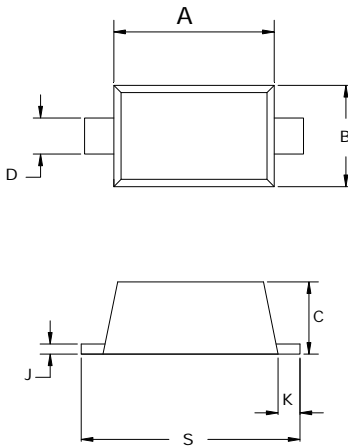
Package Information

SOD-523

Mechanical Data

Case: SOD-523

Case Material: Molded Plastic. UL Flammability



Dim	Millimeters	
	Min	Max
A	1.10	1.30
B	0.75	0.85
C	0.51	0.70
D	0.25	0.35
J	0.08	0.15
K	0.15	0.25
S	1.50	1.70

Recommended Pad outline

