

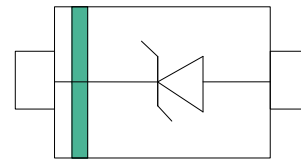
ECEHCCE3V3U

1-Line Uni-directional TVS Diode

The ECEHCCE3V3U is an uni-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The ECEHCCE3V3U complies with the IEC 61000-4-2 (ESD) with $\pm 15\text{kV}$ air and $\pm 8\text{kV}$ contact discharge. It is assembled into a small lead-free SOD-523 package. The small size and high ESD surge protection make ECEHCCE3V3U an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

Features

- Protects one data or power line
- Working voltage: 3.3 V
- 2-pin SOD-523 package
- Complies with following standards:
IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 15\text{kV}$
Contact discharge: $\pm 8\text{kV}$
- ROHS compliant



SOD-523

Main applications

- Cellular handsets and accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Keypads, Side Keys, LCD Displays

Protection solution to meet

- IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)

Ordering Information

Device	Qty per Reel	Reel Size
ECEHCCE3V3U	3000	7 Inch

Maximum ratings (Tamb=25°C Unless Otherwise Specified)			
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20µs waveform)	P _{PP}	150	Watts
Peak Pulse Current (tp=8/20µs waveform)	I _{PP}	11	A
ESD Rating per IEC61000-4-2:	Contact Air	±8 ±15	KV
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 125	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T _L	260	°C

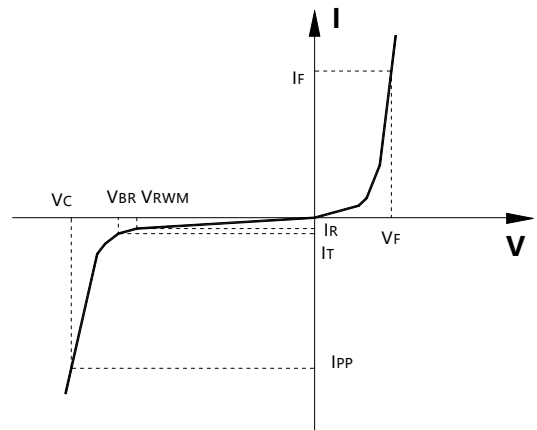
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur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

*Other voltages may be available upon request.

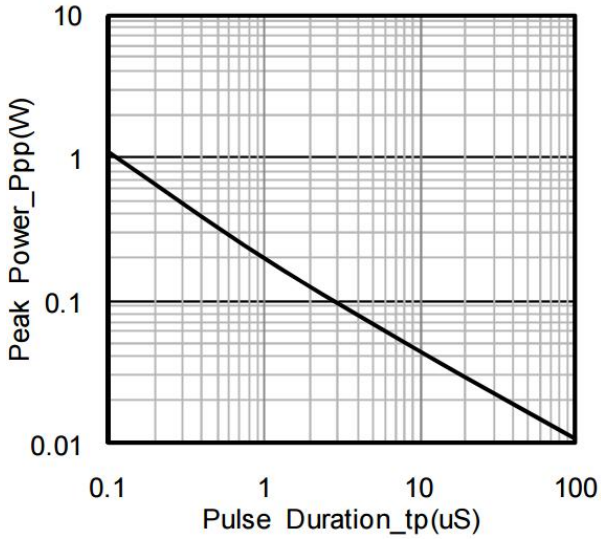
1. Non-repetitive current pulse, per Figure 1.

Electrical characteristics (Tamb=25°C Unless Otherwise Specified)						
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			3.3	V	
Breakdown Voltage	V _{BR}	5.0			V	I _T =1mA
Reverse Leakage Current	I _R			0.9	uA	V _{RWM} =3.3V
Clamping Voltage	V _C		9.4		V	I _{PP} =1A (8 x 20us pulse)
Clamping Voltage	V _C			15	V	I _{PP} =11.2A (8 x 20us pulse)
Junction Capacitance	C _J		105		pF	V _R =0V, f =1MHz

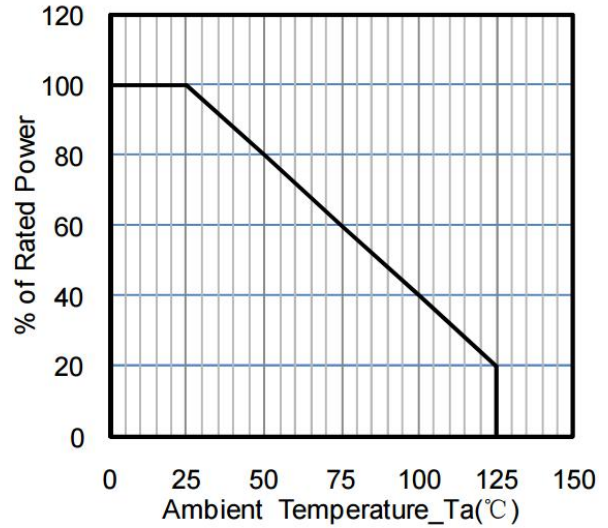
Symbol	Parameter
V _{RWM}	Working Peak Reverse Voltage
V _{BR}	Breakdown Voltage @ I _T
V _C	Clamping Voltage @ I _{PP}
I _T	Test Current
I _{RM}	Leakage current at V _{RWM}
I _{PP}	Peak pulse current
C _O	Off-state Capacitance
C _J	Junction Capacitance



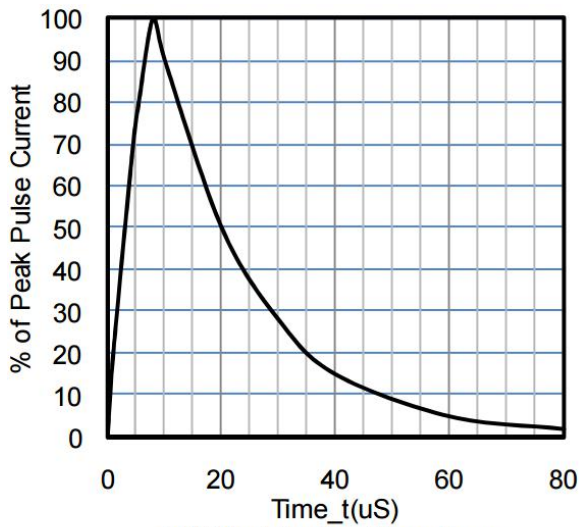
Typical electrical characterist applications



Peak Pulse Power vs. Pulse Time



Power Derating Curve



8 X 20uS Pulse Waveform

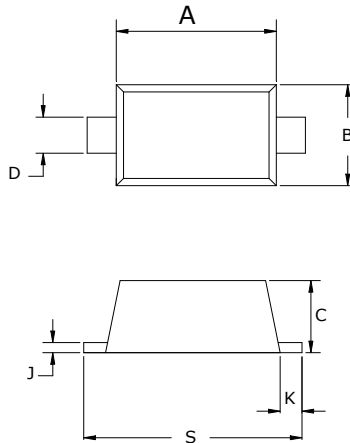
Package Information

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	0.77
D	0.25	0.35
J	0.08	0.15
K	0.15	0.25
S	1.50	1.70

Recommended Pad outline

