

ECTHCCB12VUL

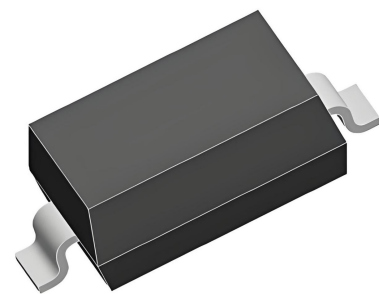
Mount TVS Diode for ESD Protection

The ECTHCCB12VUL Series is designed with ECORE 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.

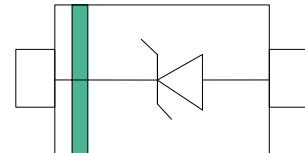
It has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD(electrostatic discharge), and EFT (electrical fast transients).

Features

- Peak Power Dissipation – 2200W (8 x 20 us Waveform)
- Protects I/O Port
- Low Clamping Voltage
- Low Leakage
- Response Time is < 1 ns
- Meets MSL 1 Requirements
- Solid-state silicon avalanche technology
- Lead Orientation in Tape: Cathode Lead to Sprocket Holes
- ROHS compliant



SOD-323



Main applications

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

Protection solution to meet

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)

Ordering Information

Device	Qty per Reel	Reel Size
ECTHCCB12VUL	3000	7 Inch

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PPP}	2200	Watts
ESD Rating per IEC61000-4-2:		30	KV
Contact 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.

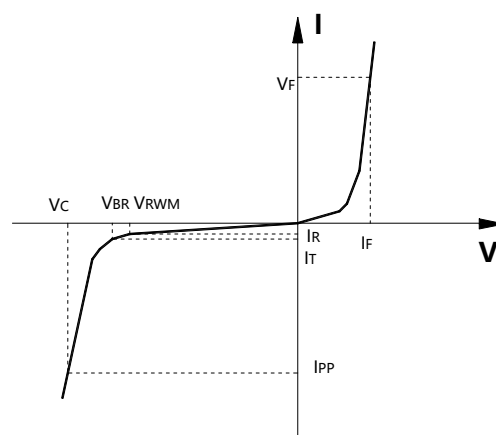
**Other voltages may be available upon request.*

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

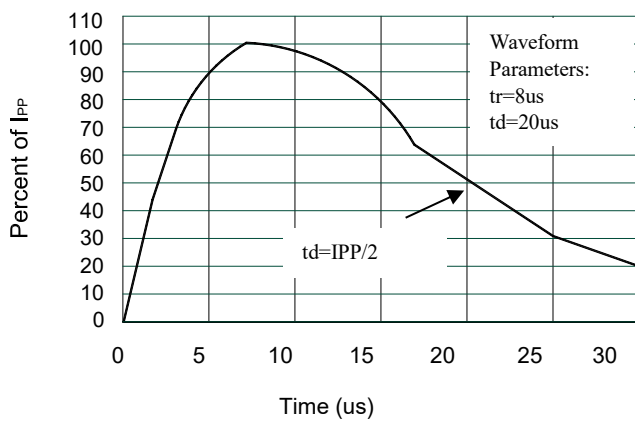
Device	V _{RWM}	V _{BR} @ I _T (V)		I _T	I _R @ V _{RWM}	V _C @I _{PP}	I _{PP} (Max)	Capacitance (Typ) (nF)	
	(V)	Min	Max	(mA)	(uA)	(V)	(A)	Typ	Max
ECTHCCB12VUL	12	13.0	17.0	1	1	30V@80A	85	0.40	0.58

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

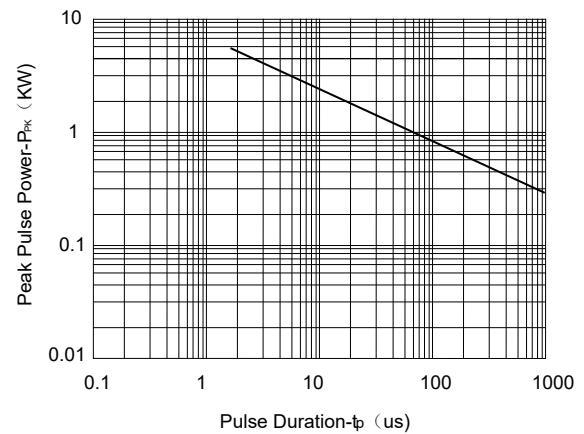
Symbol	Parameter
V_{RWM}	Working Peak Reverse Voltage
V_{BR}	Breakdown Voltage @ I_T
V_C	Clamping Voltage @ I_{PP}
I_T	Test Current
I_{RM}	Leakage current at V_{RWM}
I_{PP}	Peak pulse current
C_O	Off-state Capacitance
C_J	Junction Capacitance



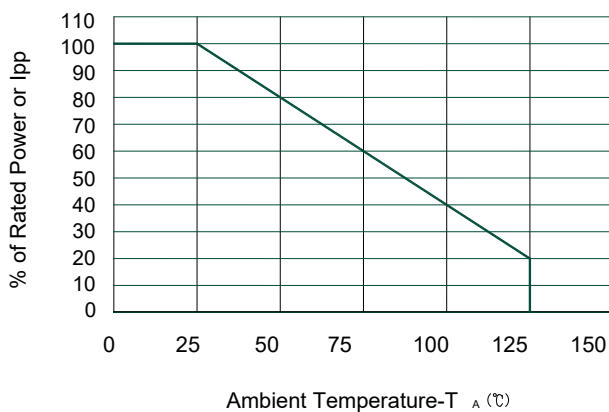
Typical electrical characterist applications



Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve

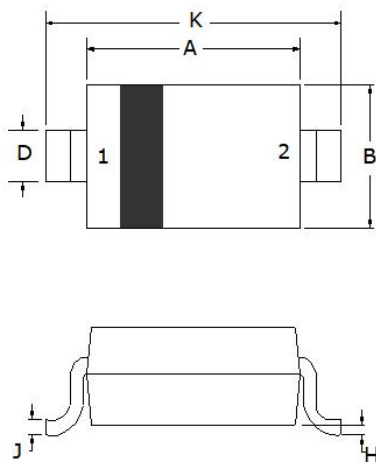
Package Information

SOD-323

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

