

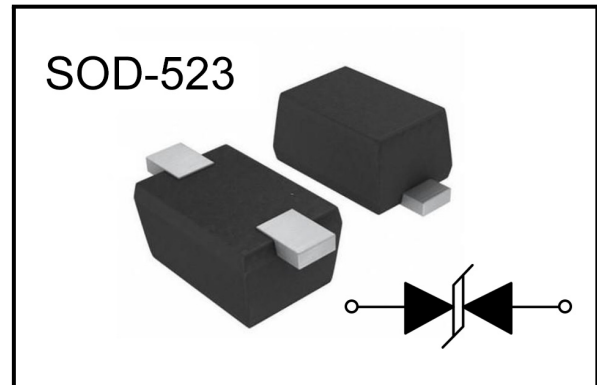
# BSD5C241U

ESD Protection Diode

## Features

- 90Watts peak pulse power (tp = 8/20µs)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping Voltage
- Low leakage current
- Low capacitance (Cj=0.3pF typ.)
- Protection one data/power line
- IEC 61000-4-2 ±15kV contact ; ±15kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 2.0A (8/20µs)

## Package



## Applications

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

## Mechanical Characteristics

- SOD523 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## Marking



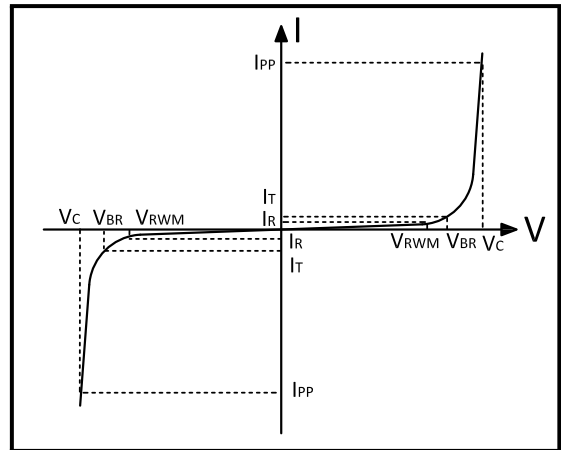
## Ordering information

Order code	Package	Base qty	Delivery mode
BSD5C241U	SOD-523	5k	Tape and reel



### Electrical Parameters ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

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



Note: 8/20us pulse Waveform.

### Absolute Maximum Rating

Rating	Symler	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	$P_{PP}$	90	Watts
Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ )	$I_{PP}$	2.0	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	15	KV
ESD per IEC 61000-4-2 (Contact)		15	
Lead Soldering Temperature	$T_L$	260(10seconds)	$^\circ\text{C}$
Junction Temperature	$T_J$	-55 to + 150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to + 150	$^\circ\text{C}$

### Electrical Characteristics

Parameter	Symler	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$	–	–	–	24.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	26.7	28.5	31.0	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 24\text{V}, T = 25^\circ\text{C}$	–	0.1	0.5	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 2.0\text{A}, t_p = 8/20\mu\text{s}$	–	40	45	V
Junction Capacitance	$C_j$	$V_R = 0\text{V}, f = 1\text{MHZ}$	–	0.3	0.5	pF



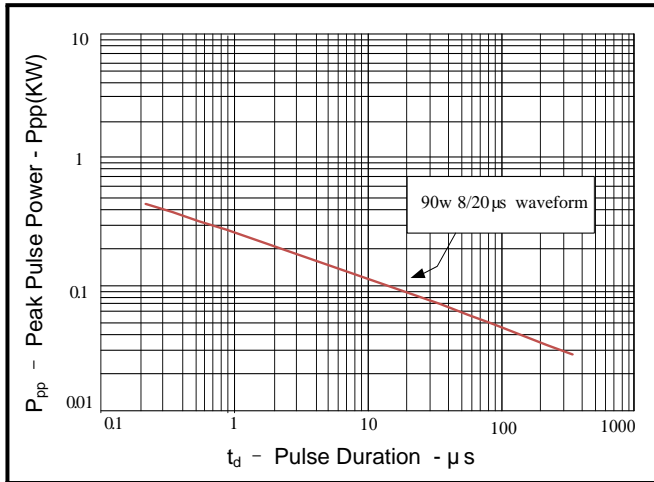


# BSD5C241U

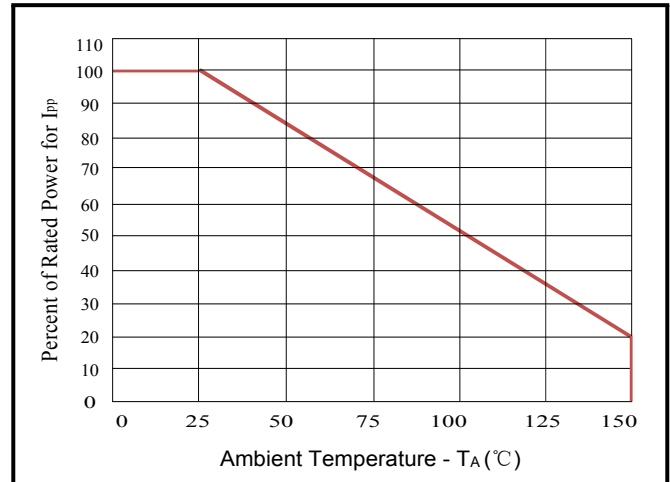
ESD Protection Diode

## Typical Characteristics

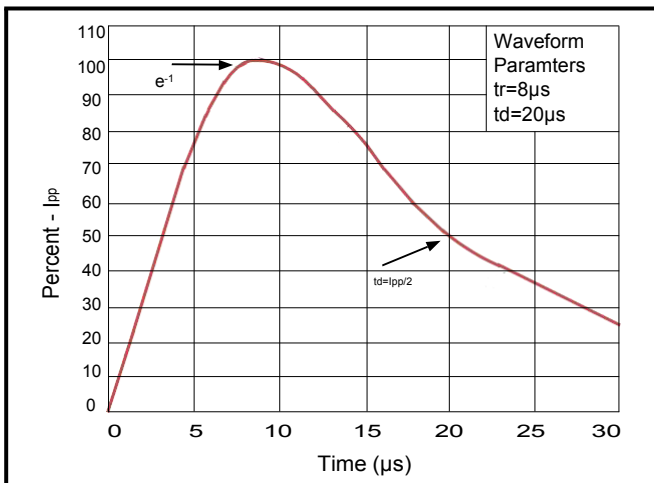
**Figure 1: Peak Pulse Power vs. Pulse Time**



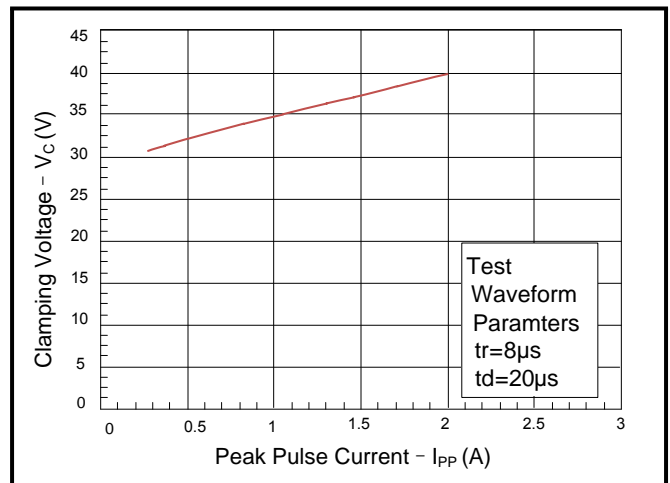
**Figure 2: Power Derating Curve**



**Figure 3: Pulse Waveform**



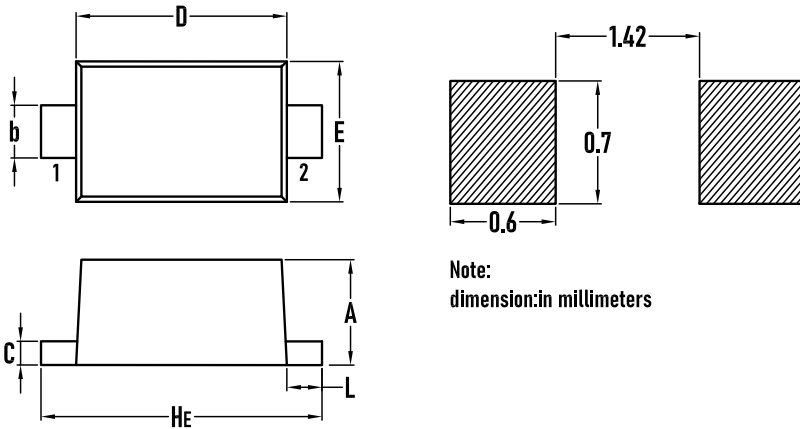
**Figure 4: Clamping Voltage vs. I\_PP**



# BSD5C241U

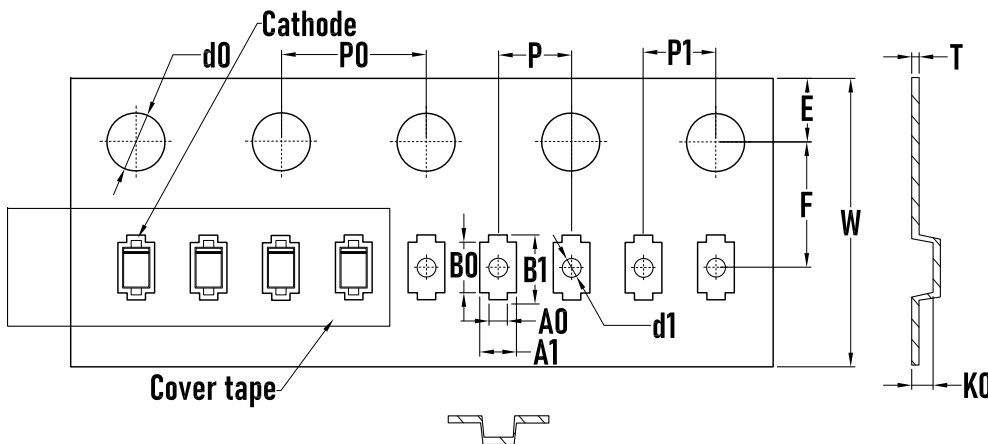
ESD Protection Diode

## Outline Drawing – SOD-523



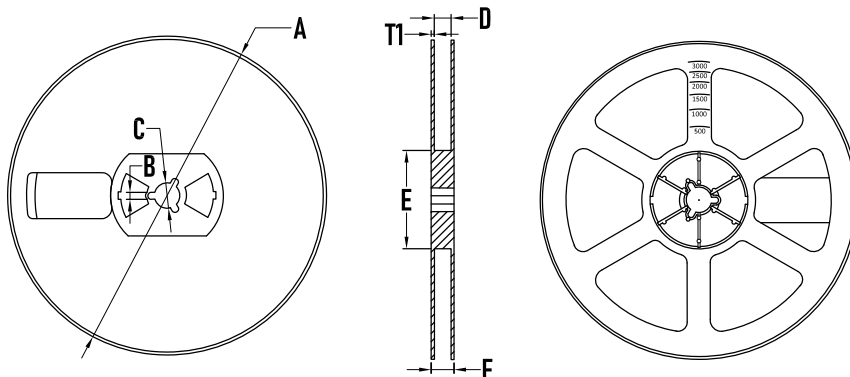
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H <sub>E</sub>	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

## Packaging Tape - SOD-523



SYMBOL	MILLIMETER
A0	0.50±0.10
A1	1.00±0.10
B0	1.30±0.10
B1	1.80±0.10
d0	1.55±0.10
d1	0.50±0.05
E	1.75±0.10
F	3.50±0.10
K0	0.65±0.10
P	2.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.2 ±0.05

## Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	5000PCS

**BORN SEMICONDUCTOR, INC. ALL  
RIGHT RESERVED**

Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

Revision: 2022-Jan-1-A



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:*

*Click to view products by [Bourne](#) manufacturer:*

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE8.2A](#) [JANTX1N6053A](#) [SA60CA](#) [SA64CA](#)  
[SMBJ12CATR](#) [SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#) [ESD7451N2T5G](#) [19180-510](#)  
[CPDT-5V0USP-HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#)  
[SCM1293A-04SO](#) [ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [CEN955 W/DATA](#) [VESD12A1A-HD1-GS08](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#)  
[ESD101-B1-02EL E6327](#) [AOZ8808DI-03](#) [5KP15A](#) [5KP48A](#) [5KP90A](#) [ESD3V3D7-TP](#) [15KPA36A-LF](#) [P4KE56CA](#) [P4KE68A](#)  
[P4KE91CATR](#) [P6KE120A](#) [P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#)