BORN SEMICONDUCTOR

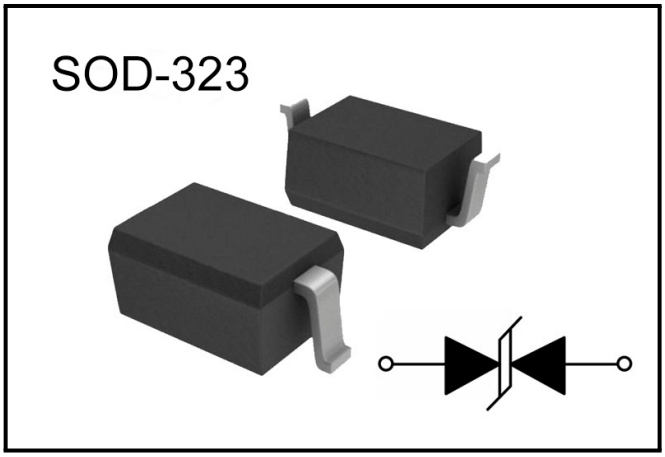
# BSD3C361V

**ESD Protection Diode**

## Features

- 390Watts peak pulse power (tp = 8/20μs)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping Voltage
- Low leakage current
- Protection one data/power line
- IEC 61000-4-2 ±30kV contact ; ±30kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20μs)

## Package




## Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

## Mechanical Characteristics

- SOD-323 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 |
|---|---|---|---|
| BSD3C361V | SOD-323 | 3k | Tape and reel |

*BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED*

Specifications are subject to change without notice.
Please refer to http://*www.born-tw.com* for current information.

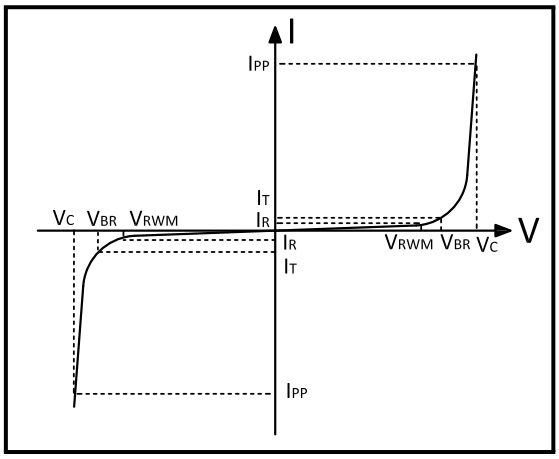
**Revision: 2022-Jan-1-A**

# BSD3C361V

**ESD Protection Diode**

## Electrical Parameters ($T_A$ = 25°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 | Symber | Value | Units |
|---|---|---|---|
| Peak Pulse Power ( tp =8/20μs ) | $P_{PP}$ | 390 | Watts |
| Peak Pulse Current (tp =8/20μs ) | $I_{PP}$ | 6 | A |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | $V_{ESD}$ | 30<br>30 | KV |
| Lead Soldering Temperature | $T_L$ | 260(10seconds) | °C |
| Junction Temperature | $T_J$ | -55 to + 150 | °C |
| Storage Temperature | $T_{stg}$ | -55 to + 150 | °C |

## Electrical Characteristics

| Parameter | Symber | Conditions | Min | Typical | Max | Units |
|---|---|---|---|---|---|---|
| Reverse Stand-Off Voltage | $V_{RWM}$ | – | – | – | 36.0 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_T$=1mA | 40 | 42.5 | 45.0 | V |
| Reverse Leakage Current | $I_R$ | $V_{RWM}$=36V,T=25°C | – | – | 0.2 | uA |
| Clamping Voltage | $V_C$ | $I_{PP}$=6A, tp =8/20us | – | 60 | 65 | V |
| Junction Capacitance | $C_j$ | $V_R$=0V,T=25°C,f=1MHZ | – | 15 | 20 | pF |

*BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED*

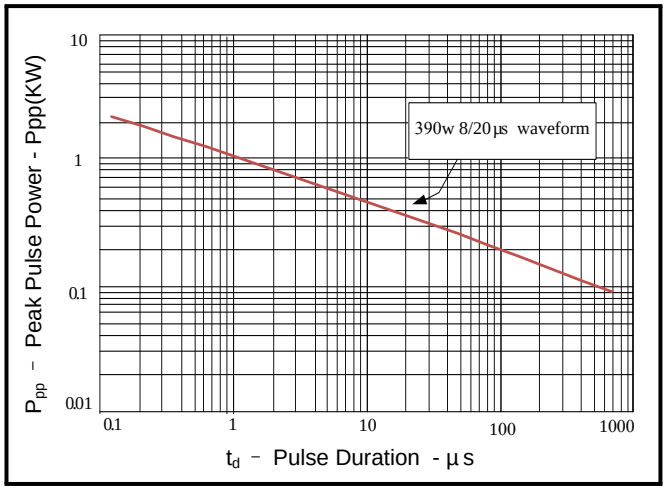
Specifications are subject to change without notice.
Please refer to http://*www.born-tw.com* for current information.

# BSD3C361V

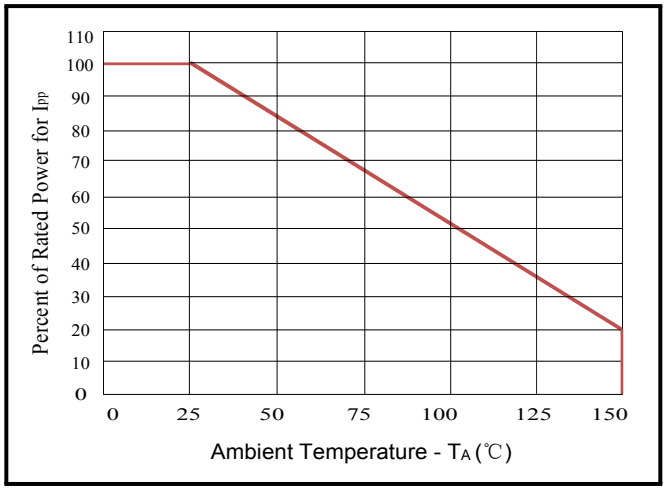
**ESD Protection Diode**

## Typical Characteristics

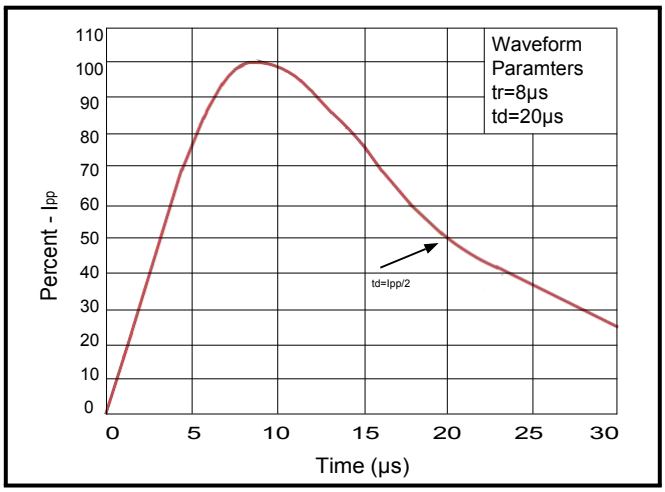
### Figure 1: Peak Pulse Power vs. Pulse Time



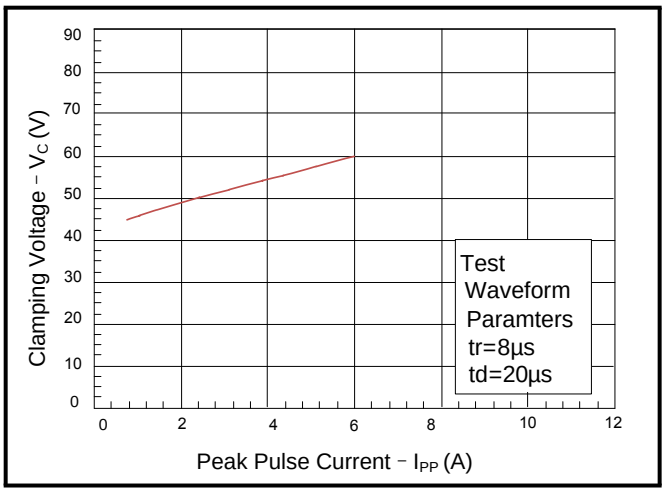

### Figure 2: Power Derating Curve




### Figure 3: Pulse Waveform




### Figure 4: Clamping Voltage vs. $I_{PP}$



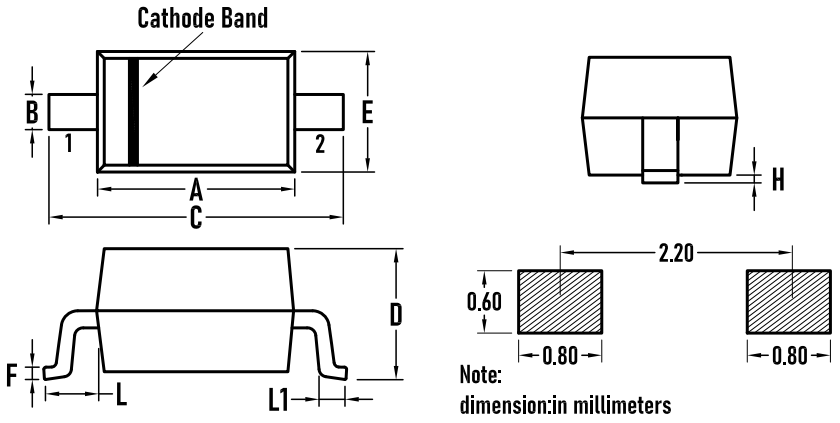

*BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED*

Specifications are subject to change without notice.
Please refer to http://*www.born-tw.com* for current information.

# BSD3C361V

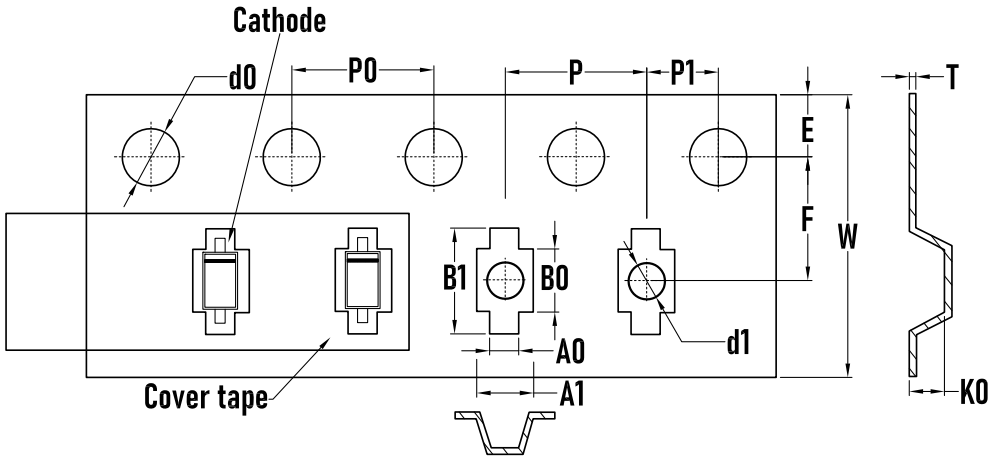
**ESD Protection Diode**

## Outline Drawing – SOD-323



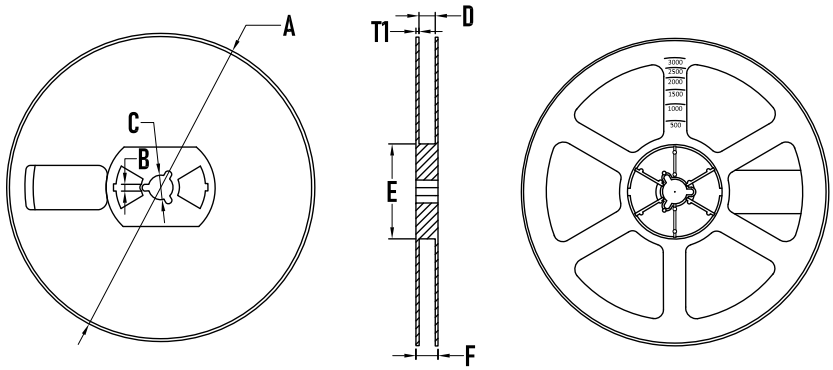

| SYMBOL | MILLIMETER | | INCHES | |
|---|---|---|---|---|
| | MIN. | MAX. | MIN. | MAX. |
| A | 1.600 | 1.800 | 0.063 | 0.071 |
| B | 0.250 | 0.350 | 0.010 | 0.014 |
| C | 2.400 | 2.800 | 0.094 | 0.110 |
| D | – | 1.100 | – | 0.043 |
| E | 1.100 | 1.500 | 0.043 | 0.059 |
| F | 0.080 | 0.150 | 0.003 | 0.006 |
| L | 0.475REF | | 0.019REF | |
| L1 | 0.250 | 0.400 | 0.010 | 0.016 |
| H | 0.000 | 0.100 | 0.000 | 0.004 |

## Packaging Tape - SOD-323




| SYMBOL | MILLIMETER |
|---|---|
| A0 | 0.80±0.10 |
| A1 | 1.48±0.10 |
| B0 | 1.80±0.10 |
| B1 | 3.00±0.10 |
| d0 | 1.55±0.10 |
| d1 | 1.00±0.05 |
| E | 1.75±0.10 |
| F | 3.50±0.10 |
| K0 | 1.05±0.10 |
| P | 4.00±0.10 |
| P0 | 4.00±0.10 |
| P1 | 2.00±0.10 |
| W | 8.00±0.30 |
| T | 0.25 ±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 | 3000PCS |

*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**