

# RClamp®4041ZA

Ultra-Small RClamp® ESD & EOS Protection for USB Data Lines

## Product Overview

06-17-2021

For the most up-to-date information, visit [www.mouser.com](http://www.mouser.com) or the supplier's website.

## Description

RClamp®4041 Transient Voltage Suppressor (TVS) Diode is designed to protect sensitive electronics from damage and latch-up due to ESD and EOS. RClamp®4041ZA diode operates at 4V, protects one data line, and provides low ESD clamping voltage. The suppressor provides fast response time, low operating and clamping voltage, and no device degradation characteristics for board level protection. RClamp4041ZA is in a 2-pin SLP0603P2X3F package measuring 0.6mm x 0.3mm with a nominal height of only 0.25mm. The small package gives the designer the flexibility to protect single lines in applications where arrays are not practical. RClamp®4041ZA diode is ideal for use in applications such as USB 2.0, MiPi/MDDI, Mobile High-definition Link (MHL), and wearables.

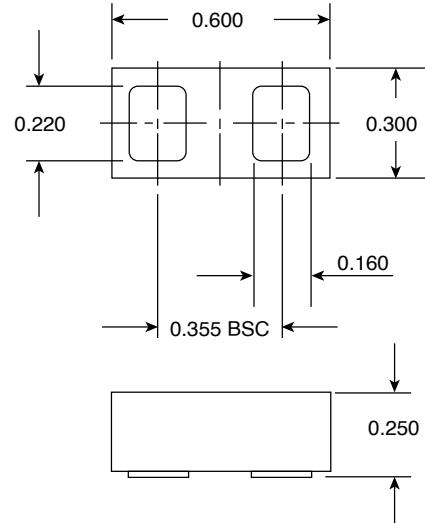


## Features

- ESD protection for high-speed lines to:
  - $\pm 30\text{kV}$  (contact & air): IEC 61000-4-2 (ESD)
  - 4kV, 80A: IEC 61000-4-4 (EFT)
  - 20A ( $\text{tp} = 8/20\mu\text{s}$ ): IEC 61000-4-5 (Lightning)
- Ultra-small package
- Protects one data line
- Low ESD clamping voltage
- 4V operating voltage
- 0.65pF low capacitance
- Low leakage current
- 0.07 $\Omega$  (typ.) low dynamic resistance
- Solid-state silicon-avalanche technology

## Mechanical Characteristics

- SLP0603P2X3F package
- Pb-Free, Halogen Free, RoHS/WEEE compliant
- Nominal Dimensions: 0.6 x 0.3 x 0.25 mm
- Lead Finish: NiAu
- Marking: Marking code
- Packaging: Tape and Reel



## Applications

- USB 2.0
- MiPi/MDDI
- MHL
- Wearables

## Mouser Part Number(s)

[RCLAMP4041ZATFT](#)

To learn more, visit <https://www.mouser.com/new/semtech/semtech-rclamp4041-tvs-diode/>.