

The device can be used to protect combinations of four bidirectional lines.

WWW.TECHPUBLIC.COM

Description

The of TVS array have been designed to provide bidirectional protection for sensitive electronics from damage due to voltage transients caused by electrostatic discharge (ESD), electrical fast transients (EFT), lightning and other voltage-induced transient events. The device can be used to protect combinations of four bidirectional lines.

Features

- Protects 3.3, 5, 12, 15, 24 V Components
- Bidirectional
- Provides Electrically Isolated Protection
- 300 W @ 8/20 us
- Protects 4 Lines
- SOP-8 Packaging
- “-A” is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



SOP-8

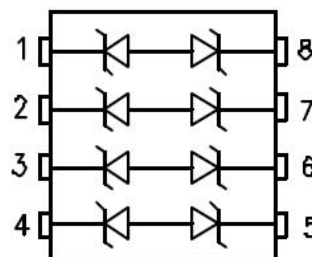
Mechanical Characteristics

- SOP-8 Surface Mount Package
- Approximate Weight: 0.1 grams
- PIN #1 Indicator: DOT on top of package
- Packaging: Tubes or Tape & Reel per EIA Standard 481

Application

- RS-232 & RS-422 Data Lines
- Microprocessor Based Equipment
- Notebooks, Desktops, & Servers
- LAN/WAN Equipment
- Serial and Parallel Port
- Peripherals

Schematic & Pin Configuration



Absolute Maximum Ratings:

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 μ s Wave shape	P	300	W
Operating Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{stg}	-55 to +150	°C
Lead Soldering Temperature	T _L	260 (10 Sec.)	°C

SMDA xx CDR2G-TP Series

The device can be used to protect combinations of four bidirectional lines.

WWW.TECHPUBLIC.COM

Electrical Characteristics:

Part Number	Stand-off Voltage V _{WM} (V) Max	Breakdown Voltage V _{BR} @1mA (V) Min	Clamping Voltage V _C @ 1 A (V) Max	Leakage Current I _R @ V _{WM} (uA) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of V _{BR} a(V _{BR}) mv/°C Max
SMDA03CDR2G-TP	3.3	4	7	200	400	-5
SMDA05CDR2G-TP	5.0	6	9.8	40	300	1
SMDA12CDR2G-TP	12.0	13.3	19	1	94	8
SMDA15CDR2G-TP	15.0	16.7	24	1	70	11
SMDA24CDR2G-TP	24.0	26.7	43	1	45	28

The device can be used to protect combinations of four bidirectional lines.

WWW.TECHPUBLIC.COM

Ratings and Characteristics Curves

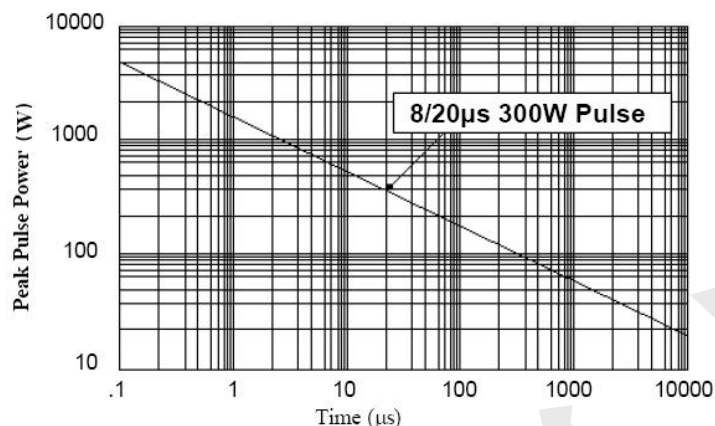


Figure 1. Peak Pulse Power Vs Pulse Time (μs)

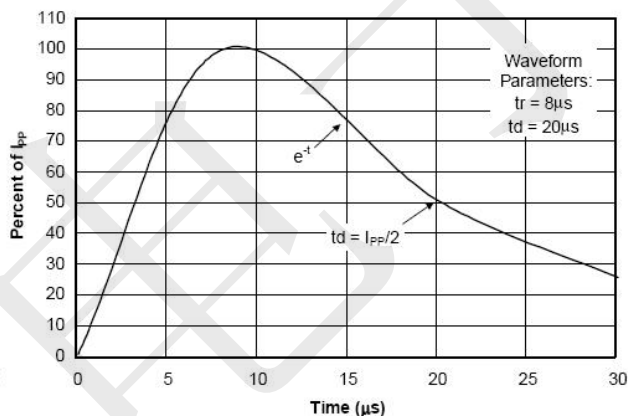


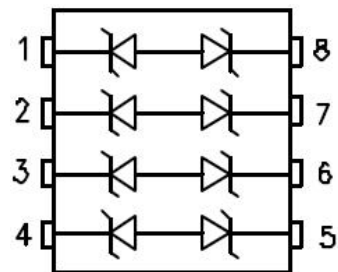
Figure 2. Pulse Wave Form

Circuit Diagram

The SMDA xx CDR2G-TP Series of devices are designed to protect up to four data lines. The devices are connected as follows:

✓ SMDA xx CDR2G-TP are bidirectional devices and are designed for use

on line where the normal operating voltage is above ground. Pins 1, 2, 3, and 4 are connected to the protected lines. Pins 5, 6, 7, and 8 are connected to ground. Since the device is electrically symmetrical, these connections may be reversed. The ground connections should be made directly to the ground plane for best results. The path length is kept as short as possible to reduce the effects of parasitic inductance in the board traces.

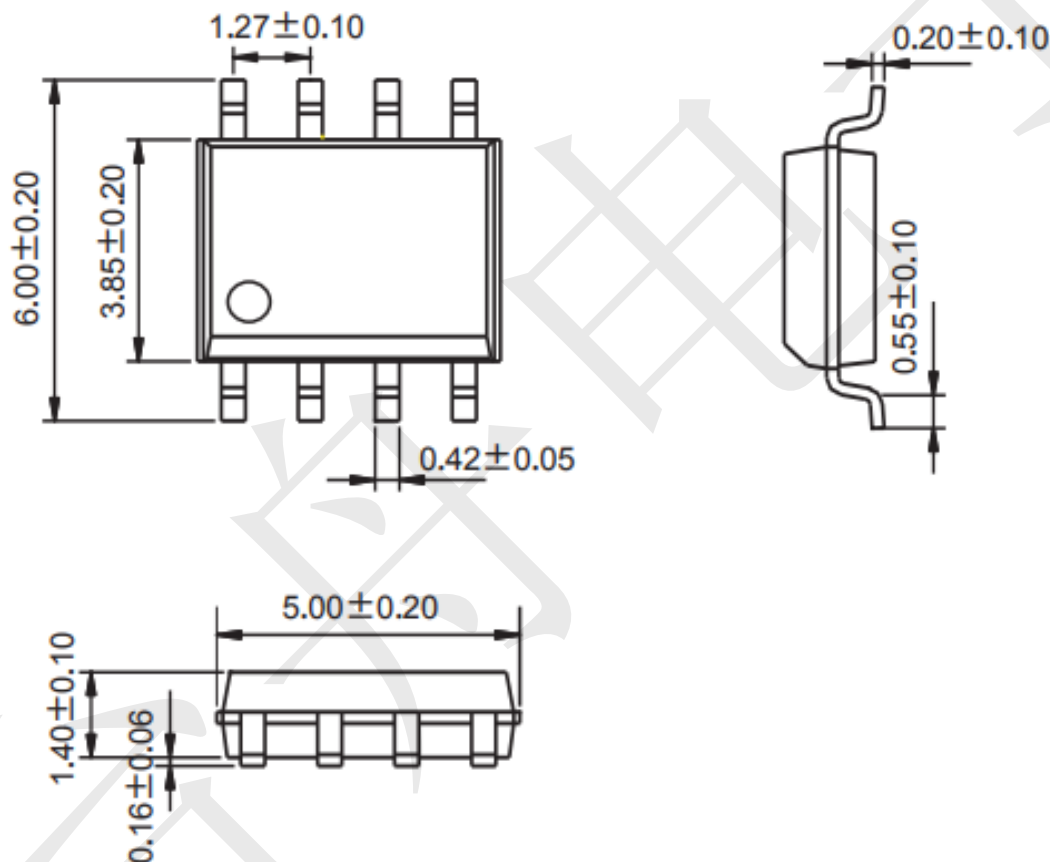


The device can be used to protect combinations of four bidirectional lines.

WWW.TEHPUBLIC.COM

Package Outline Dimensions (unit: mm)

SOP-8



Mounting Pad Layout (unit: mm)

