Technical Data
Data Sheet N0286, Rev. C

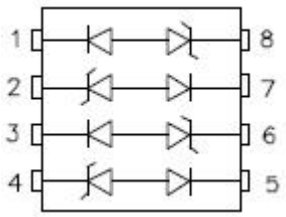
S8ULCC03-2 THRU S8ULCC36-2 TVS ARRAY SERIES

SO-8

Description

The S8ULCCXX-2 series 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 up to 2 bidirectional lines.

Schematic & Pin Configuration



Features

- Protects 3.3, 5, 12, 15, 24, 36V Components
- Bidirectional
- Ultra Low Capacitance 5 pF
- 500 W @ 8/20 us
- Protect 2 Lines
- SO-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

Mechanical Characteristics

- SO-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

- 10/100 Base T Ethernet
- USB
- Cellular Phone Terminals
- Audio/Video Inputs
- xDSL Interfaces

Absolute Maximum Ratings:

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 μs Wave shape	P	500	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

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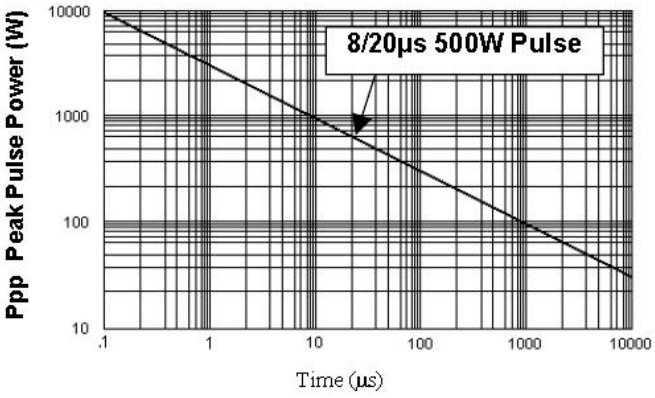
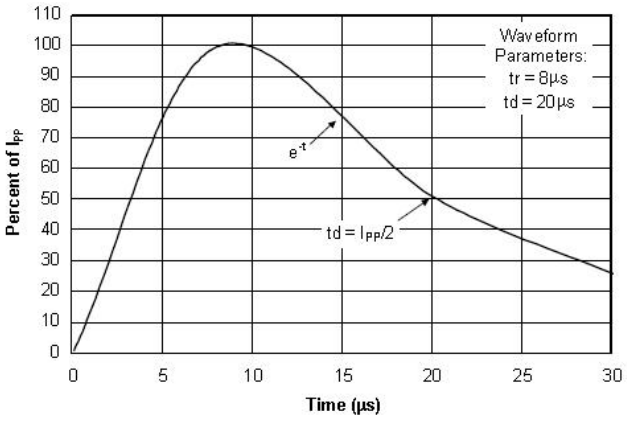
Electrical Characteristics@25°C

Part Number	Stand-off Voltage Vwm (V) Max	Breakdown Voltage V_{BR} @1mA (V) Min	Clamping Voltage Vc @ 1 A (V) Max	Leakage Current I_R @ Vwm (uA) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of V_{BR} $a(V_{BR})$ mv/°C Max
S8ULCC03-2	3.3	4	8	200	5	-5
S8ULCC05-2	5.0	6	9.8	20	5	1
S8ULCC12-2	12.0	13.3	19	1	5	8
S8ULCC15-2	15.0	16.7	24	1	5	11
S8ULCC24-2	24.0	26.7	43	1	5	28
S8ULCC36-2	36.0	40	51	1	5	-

Ratings and Characteristics Curves

TYPICAL CHARACTERISTICS



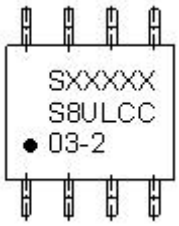


Ordering Information

Device	Package	Shipping
S8ULCC03-2 THRU S8ULCC36-2	SO-8 (Pb-Free)	2500pcs / reel
S8ULCC03-2TR THRU S8ULCC36-2TR	SO-8 (Pb-Free)	2500pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Where XXXXX is YYWWL

S8ULCC03-2 = Part Number
S = S
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

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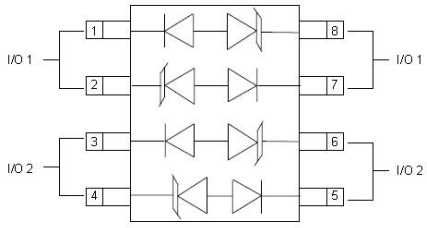
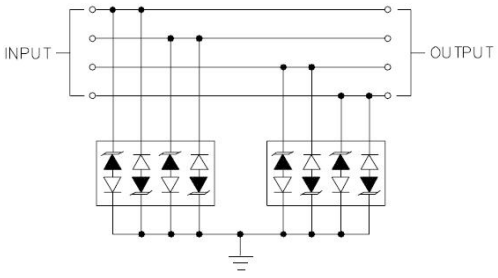
Circuit Diagram



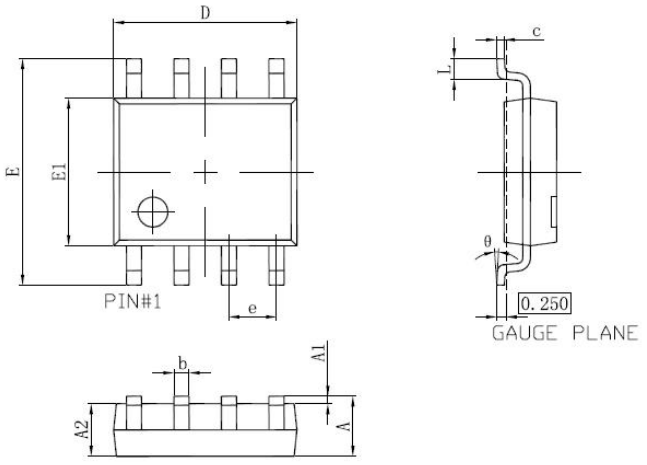


The devices are connected as follows:

✔ Pins 1, 2, 7, and 8 are used to protect one data line. Pins 3, 4, 5, and 6 are used to protect the second data line.

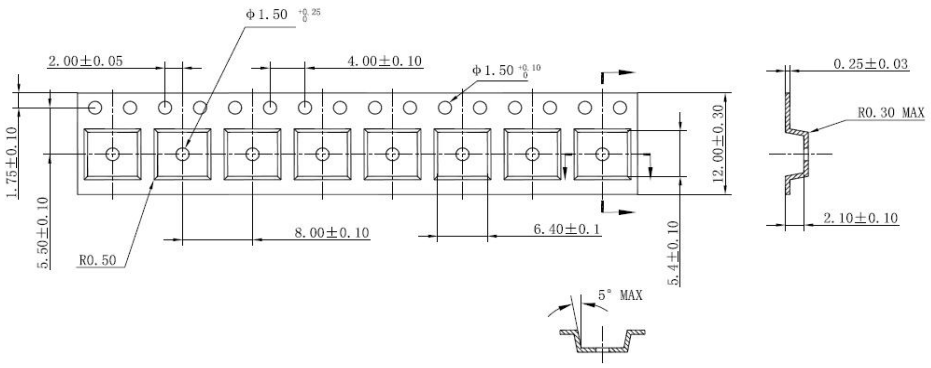
✔ Pins 1 and 2 are tied together and pins 7 and 8 are tied together providing the protection circuit for one I/O line. Pins 3 and 4 are tied together and pins 5 and 6 are tied together providing the protection circuit for the second I/O line. Since the device is electrically symmetrical, either side of the connected pairs may be used to protect the lines. The other side of the pair is used to make the ground connection. 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.

Mechanical Dimensions SO-8



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.350	1.800	0.053	0.071
A1	0.100	0.250	0.004	0.010
A2	1.350	1.750	0.053	0.069
b	0.306	0.510	0.012	0.020
c	0.150	0.300	0.006	0.012
D	4.720	5.120	0.186	0.202
e	1.140	1.400	0.045	0.055
E	5.700	6.300	0.224	0.248
E1	3.750	4.150	0.148	0.163
L	0.300	1.270	0.012	0.050
θ	0°	8°	0°	8°

Carrier Tape Specification SO-8



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