Description

The CSLxxCBB series low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in bidirectional configurations and is rated at 200 Watts for an 8/20μs waveshape. This series offers a low capacitance and low leakage current in a miniature SOD323 package.

Features

- IEC 61000-4-2 (ESD)
  - ±30kV Contact Discharge
  - ±30kV Air Discharge
- 200W Peak pulse Power (8/20μs)
- IEC 61000-4-4 EFT Protection
  - 40A(5/50ns)
- Halogen free and RoHS compliant
- Protection one directional I/O line
- Transient protection for high-speed data lines
- Low clamping voltage
- Low leakage current

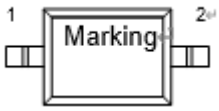
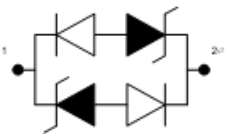
Mechanical Characteristics

- SOD323
- ROHS/ Compliant
- Halogen free
- Molding compound flammability rating：UL 94V-0
- Marking：Part number
- Packing: Tape and Reel per EIA 481

Application

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants
- Notebooks / Desktops / Servers
- Portable Instrumentation
- Peripherals＆Pagers

Dimensions and Pin Configuration

Pin	Name	Description	Outline	Circuit Diagram
1	IO	Connect to IO		
2	IO	Connect to IO		

Ordering Information

Part Number	Package	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
CSLxxCBB	SOD323	Halogen free	Tape & Reel	3000PCS	UL 94V-0	7 inches

Marking for the CSLxxCB series								
V_{RWM}	3.3V	5V	8V	12V	15V	18V	24V	36V
Marking	CC	AC	BC	DC	EC	FC	HC	KC

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp = 8/20μs)@25℃	Ppk	-	200	W
Peak pulse power (tp = 8/20μs)@25℃	I_{PP}	-	Refer to Table-5	A
ESD (IEC61000-4-2 air discharge) @25℃	V_{ESD}	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25℃	V_{ESD}	-	±30	kV
Junction temperature	T_J	-	125	℃
Operating temperature	T_{OP}	-40	125	℃
Storage temperature	T_{STG}	-55	150	℃
Lead temperature	T_L	-	260	℃

Electrical Characteristics (T_A=25°C unless otherwise specified)

Part Number	V_{RWM} (max.)	V_{BR} (min.)	V_{CL}@I=1A (max.)	I_{PP} (max.)	V_{CL}@I=I_{PP} (max.)	I_R (max.)	C_J (typ.)
	(V)	(V)	(V)	(A)	(V)	(μA)	(pF)
CSL03CBB	3.3	4.0	8.5	12	20	1.0	0.8
CSL05CBB	5.0	6.0	9.5	11	21	1.0	0.8
CSL08CBB	8.0	8.5	12.0	9	25	1.0	0.8
CSL12CBB	12.0	13.3	19.0	6	35	1.0	0.8
CSL15CBB	15.0	16.5	24.0	5	45	1.0	0.8
CSL18CBB	18.0	19.0	30.0	4.5	48	1.0	0.8
CSL24CBB	24.0	26.0	34.0	4	55	1.0	0.8
CSL36CBB	36.0	38.0	55.0	3	70	1.0	0.8

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Figure 1. Pulse rating curve

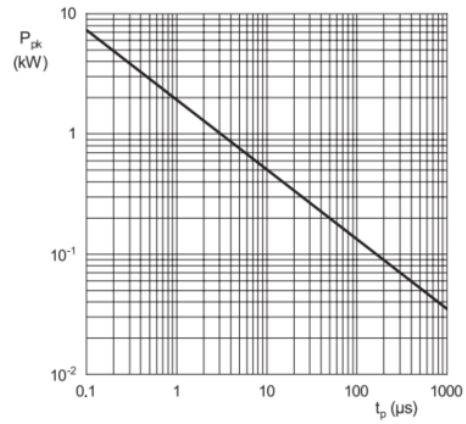


Figure 2 Peak pulse power derating curve

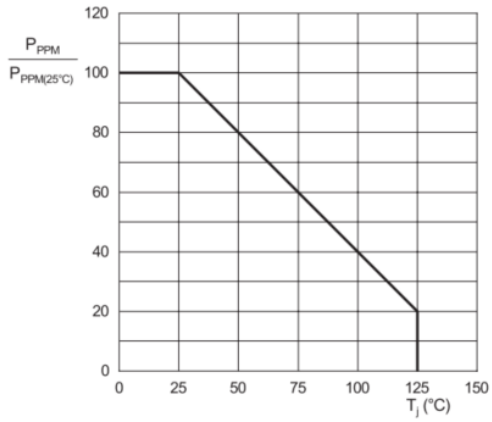


Figure 3 Pulse waveform

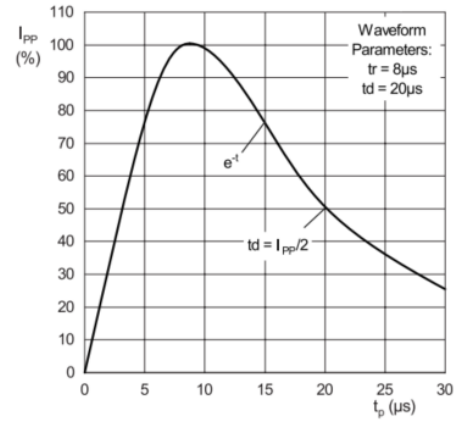
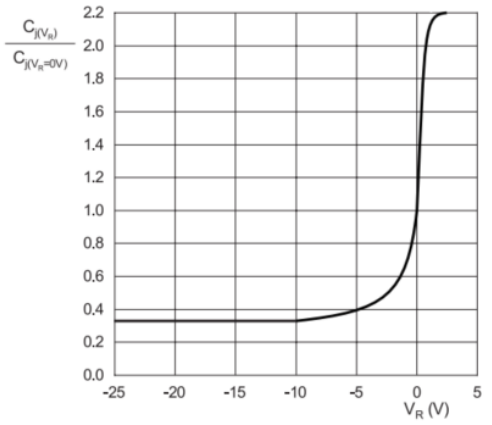
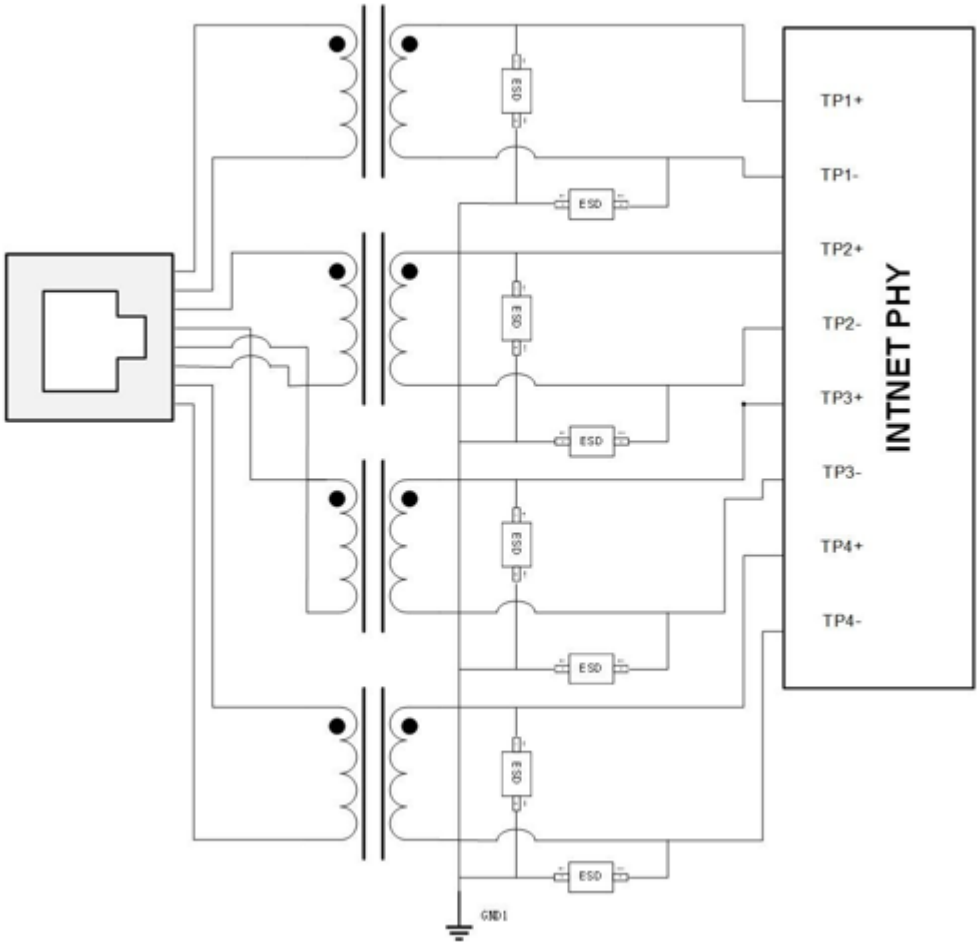


Figure 4 Capacitance vs reverse voltage

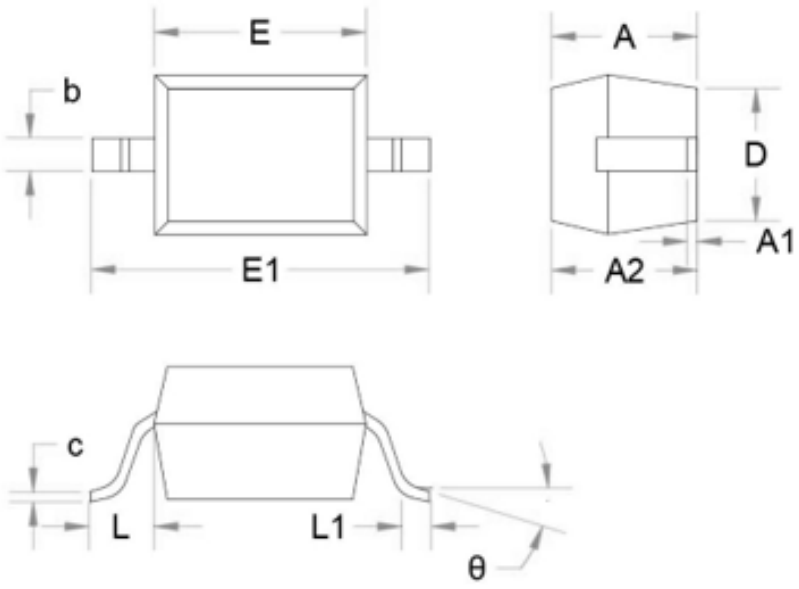


Applications Information

Typical Interface 1G Interface Application



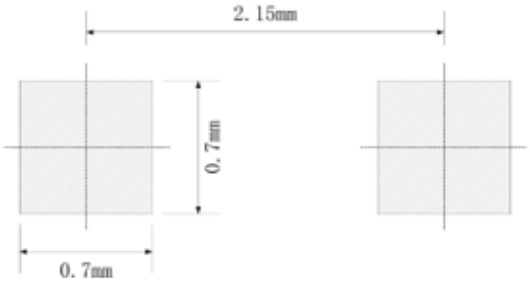
Package Outline Drawing



Units in millimeters

Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
C	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Recommended Land Pattern



Note:

1. Controlling dimension: in millimeters
2. General tolerance: ±0.05mm
3. The pad layout is for reference only

Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	2-NOV-2022