

Description

The CSLxxCB 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 350 Watts for an 8/20 μ s waveshape. This series offers a low capacitance and low leakage current in a miniature SOD323 package.



Mechanical Characteristics

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

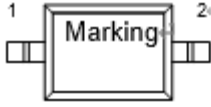
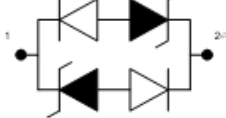
Features

- ◆ IEC 61000-4-2 (ESD)
 - ± 30 kV Contact Discharge
 - ± 30 kV Air Discharge
- ◆ 300W Peak pulse Power (8/20us)
- ◆ 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

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	
CSLxxCB	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
Marking	CC	AC	BC	DC	EC	FC	HC

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p = 8/20\mu\text{s}$)@25°C	Ppk	-	300	W
ESD (IEC61000-4-2 air discharge) @25°C	V_{ESD}	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V_{ESD}	-	±30	kV
Junction temperature	T_J	-	125	°C
Operating temperature	T_{OP}	-40	125	°C
Storage temperature	T_{STG}	-55	150	°C
Lead temperature	T_L	-	260	°C

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Part Number	V_{RWM}	V_{BR}	$V_{CL@I=1A}$	I_{PP}	$V_{CL@I=I_{PP}}$	I_R	C_J
	(max.)	(min.)	(max.)	(max.)	(max.)	(max.)	(typ.)
	(V)	(V)	(V)	(A)	(V)	(μA)	(pF)
CSL03CB	3.3	4.0	8.5	17.0	20	1.0	0.8
CSL05CB	5.0	6.0	9.5	15.0	21	1.0	0.8
CSL08CB	8.0	8.5	12.0	12.0	25	1.0	0.8
CSL12CB	12.0	13.3	19.0	7.0	35	1.0	0.8
CSL15CB	15.0	16.5	24.0	5.0	45	1.0	0.8
CSL18CB	18.0	19.0	30.0	4.5	48	1.0	0.8
CSL24CB	24.0	26.0	34.0	4.0	55	1.0	0.8

Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

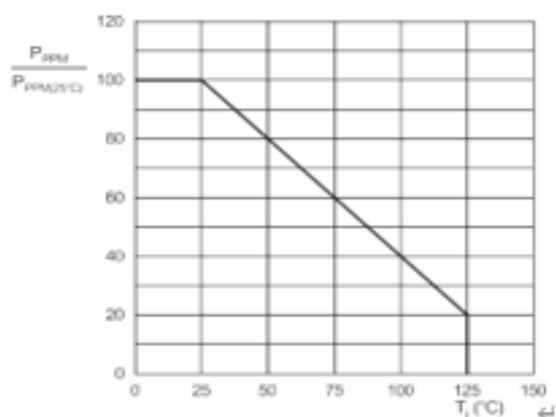


Figure1. Peak pulse power derating curve

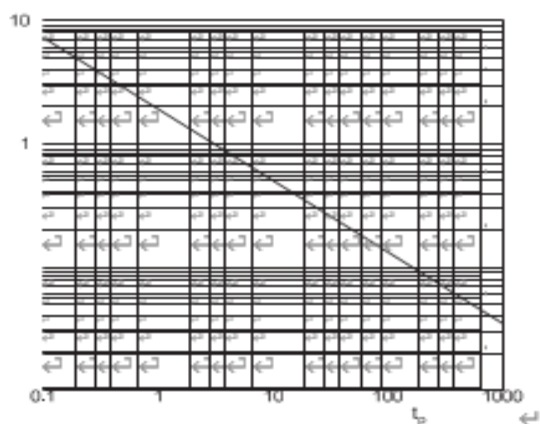


Figure2. Peak Pulse Power vs. Pulse Time

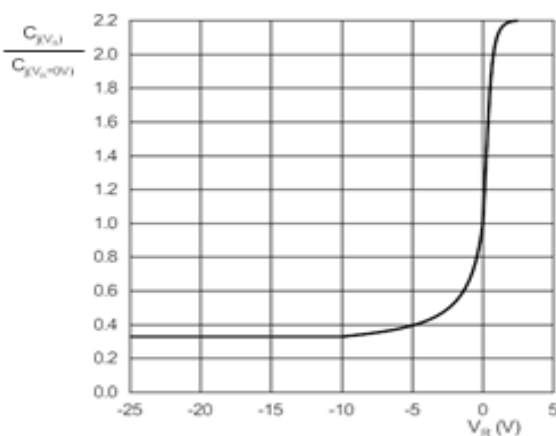
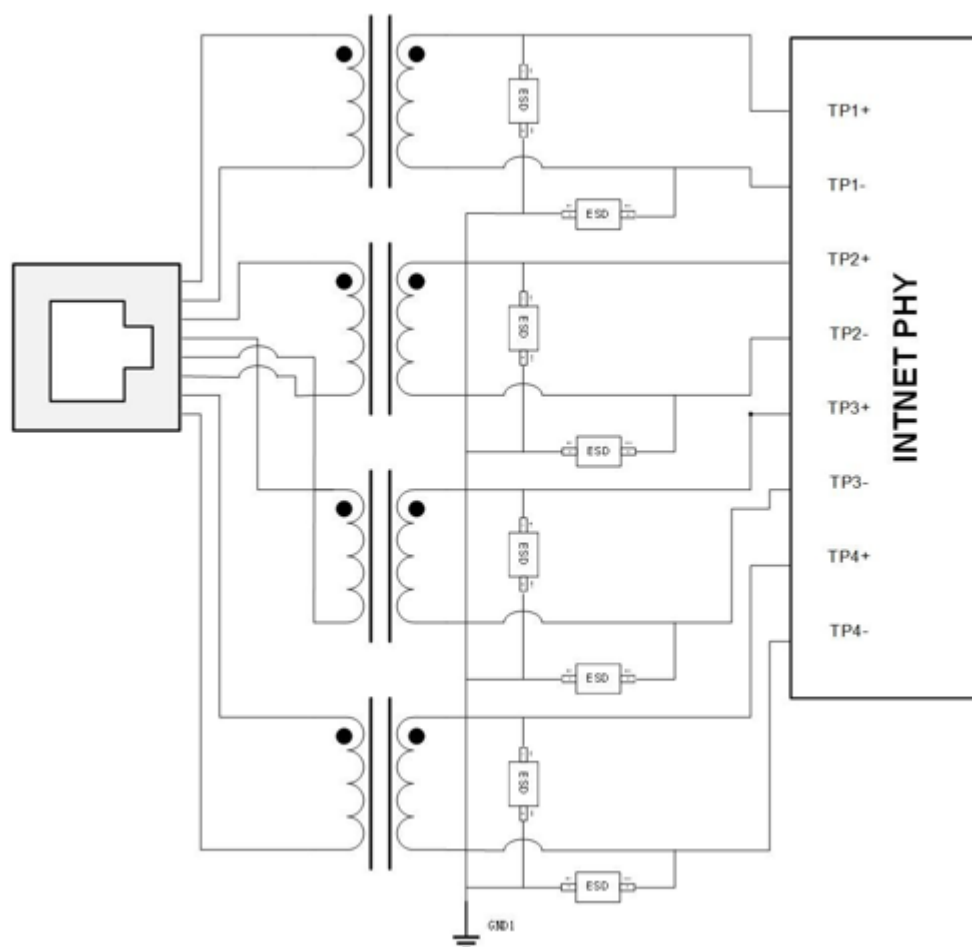


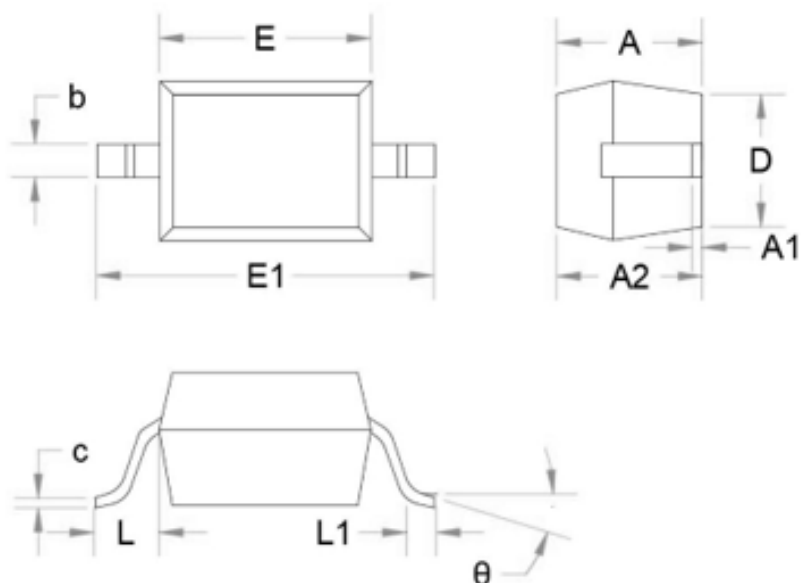
Figure3. Pulse Waveform

Applications Information

Typical Interface 1G Interface Application



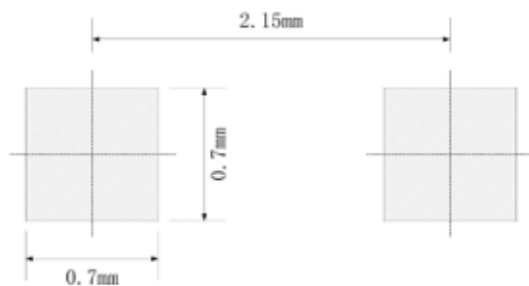
Package Outline Drawing



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: $\pm 0.05\text{mm}$
3. The pad layout is for reference only

Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	13-Aug-2021