

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

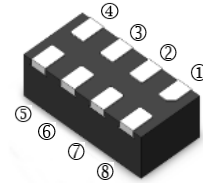
DESCRIPTION

SZESDK2V5C-C is a low capacitance Transient Voltage Suppressor (TVS) array designed to provide electrostatic discharge (ESD) protection for high-speed data interfaces. It is designed to protect parasitic-sensitive systems against over-voltage and over-current transient events.

Each device can protect two high-speed line pairs. The combined features of low capacitance and high ESD robustness make it ideal for high-speed data port and high-frequency line (e.g., Gigabit Ethernet Ports) applications.

The low clamping voltage of the SZESDK2V5C-C guarantees a minimum stress on the protected IC.

DFN2010-8L



FEATURES

- Transient Protection for High-Speed Data Lines
- IEC61000-4-2 Level 4 ESD Protection
- Low Capacitance: 0.8pF (Typ.)
- Low Leakage Current
- Low Operating and Clamping Voltage
- Package Optimized For High-Speed Lines
- Each I/O Pin Can Withstand Over 1000 ESD Strikes For ±8kV Contact Discharge

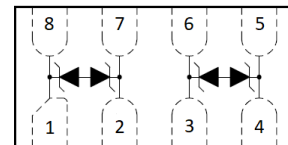
MARKING

2502CW

PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN2010-8L	3K	7 inch

Pin Diagram



ORDER INFORMATION

Part Number	Type
SZESDK2V5C-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage	Air Contact	±30	kV
	Contact Discharge	±30	
Peak Pulse Power @tp=8/20µs	P _{PP}	270	W
Peak Pulse Current @tp=8/20µs	I _{PP}	15	A
Operating & Storage Temperature Range	T _J , T _{STG}	150, -55~150	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Units	Test Condition
Reverse Working Voltage	V_{RWM}	-	-	2.5	V	
Breakdown Voltage	V_{BR}	3.5	-	-	V	$I_R=1\text{mA}$
Reverse Leakage Current	I_R	-	-	100	nA	$V_{RWM}=2.5\text{V}$
Clamping Voltage @ $t_p=8/20\mu\text{s}$	V_C	-	-	6.5	V	$I_{PP}=1\text{A}$ Pin 1, 8 to Pin 2, 7 & Pin 3, 6 to Pin 4, 5
		-	-	12		
		-	-	18		
TLP Clamping Voltage IEC61000-4-2 Level 2 equivalent	V_{CTLP}	-	7.5	-	V	$I_{PP}=8\text{A}$ $\pm 4\text{kV}$ Contact $\pm 8\text{kV}$ Air
		-	8.2	-		$I_{PP}=16\text{A}$ $\pm 8\text{kV}$ Contact $\pm 16\text{kV}$ Air
Dynamic Resistance	R_{DYN}	-	0.11	-	Ω	$I_{TLP}=4\text{A to }16\text{A}$ Any I/O pin to GND
Junction Capacitance @ $V_R=0\text{V}$, $f=1\text{MHz}$	C_J	-	0.8	-	pF	Pin 1, 8 to Pin 2, 7 & Pin 3, 6 to Pin 4, 5

RATINGS AND CHARACTERISTICS CURVES

Fig 1 8/20 μs Waveform per IEC61000-4-5

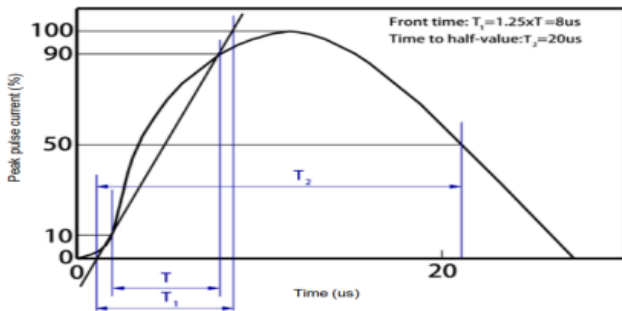


Fig 3 Voltage vs Capacitance

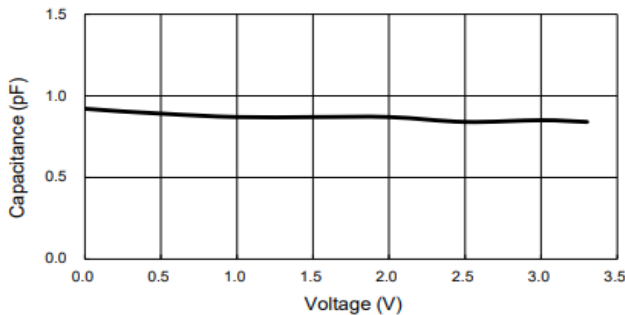


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

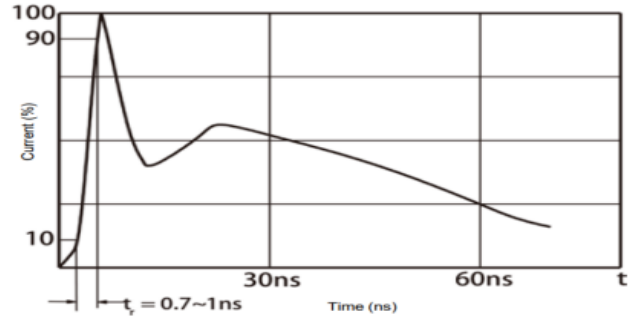


Fig 4 Clamping Voltage vs Peak Pulse Current

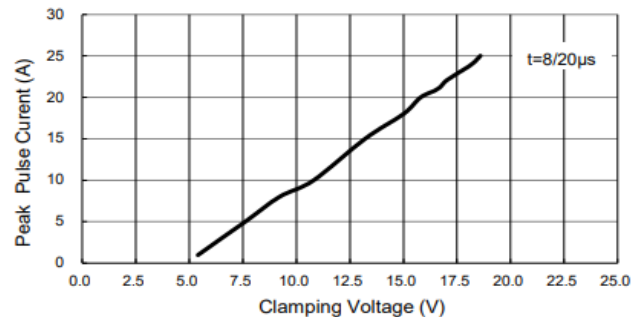
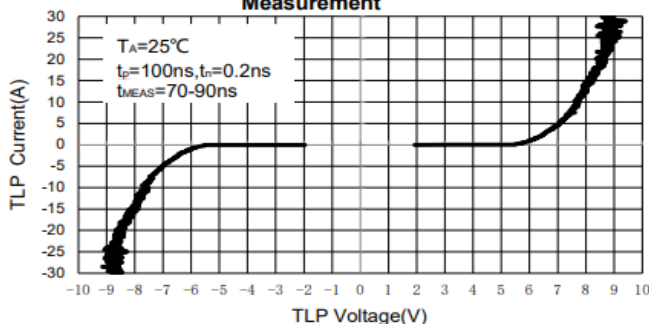
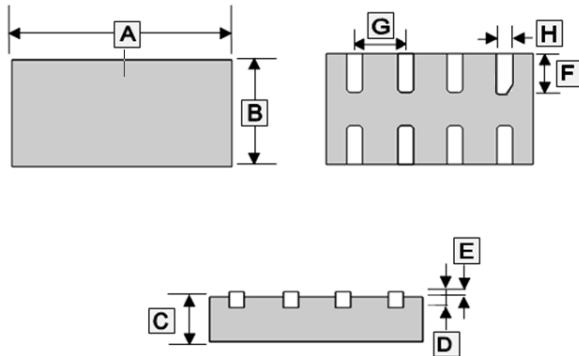


Fig5 Transmission Line Pulsing (TLP) Measurement



PACKAGE OUTLINE DIMENSIONS

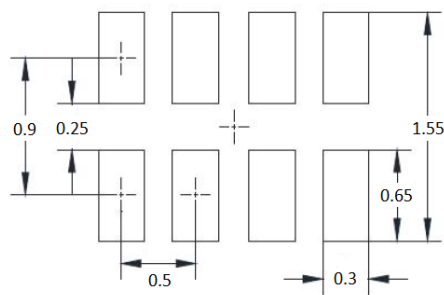
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REF.	Millimeter	
	Min.	Max.
A	1.90	2.10
B	0.90	1.10
C	0.32	0.51
D	0.20 REF.	
E	0	0.05
F	0.30	0.43
G	0.50 BSC.	
H	0.20	0.30

MOUNTING PAD LAYOUT

DFN2010-8L



*Dimensions in millimeters