

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

DESCRIPTION

SCESD0502L-C is an ultra-low capacitance Transient Voltage Suppressor (TVS) designed to provide electrostatic discharge (ESD) protection for high-speed data interfaces. With typical capacitance of 0.2pF (I/O to I/O) only, SCESD0502L-C is designed to protect parasitic-sensitive systems against over-voltage and over-current transient events. It complies with IEC 61000-4-2 (ESD), Level 4 ($\pm 15\text{kV}$ air, $\pm 8\text{kV}$ contact discharge), IEC 61000-4-4 (electrical fast transient - EFT) (40A, 5/50 ns), very fast charged device model (CDM) ESD and cable discharge event (CDE), etc.

SCESD0502L-C uses small DFN1006-3L package. Each SCESD0502L-C device can protect two high-speed data lines. The combined features of low capacitance, small size and high ESD robustness make SCESD0502L-C ideal for high-speed data port and high-frequency line applications. The low clamping voltage of the SCESD0502L-C guarantees a minimum stress on the protected IC.

FEATURES

- Low Capacitance
- Low Leakage Current
- Low Clamping Voltage

APPLICATIONS

- Serial ATA
- Desktops, Servers and Notebooks
- PCI Express
- MDDI Ports
- USB Data Line Protection
- Display Ports
- Digital Visual Interfaces (DVI)

MARKING

52L

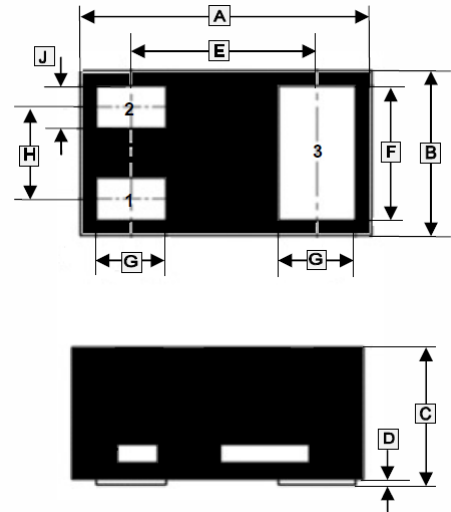
PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN1006-3L	10K	7 inch

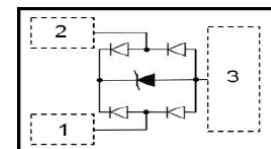
ORDER INFORMATION

Part Number	Type
SCESD0502L-C	Lead (Pb)-free and Halogen-free

DFN1006-3L



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	0.95	1.05	F	0.45	0.55
B	0.55	0.65	G	0.2	0.3
C	0.46	0.5	H	0.35 TYP.	
D	0	0.05	J	0.15 TYP.	
E	0.65 TYP.				



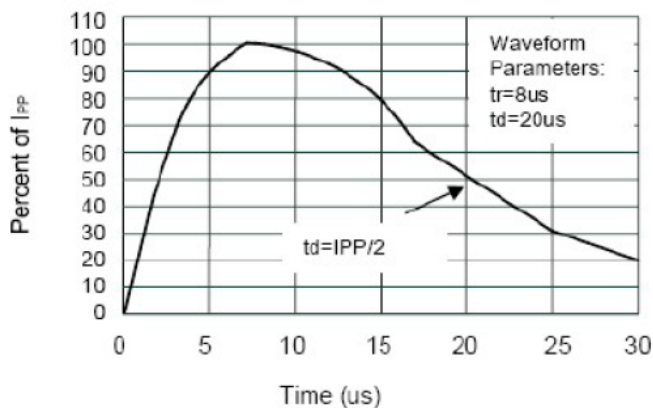
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Ratings	Unit
Peak Pulse Power @tp=8/20µs	P _{PP}	60	W
IEC 61000-4-2	Air Discharge	±20	kV
	Contact Discharge		
Operating Temperature	T _{OPT}	-55~125	°C
Storage Temperature	T _{STG}	-55~150	°C

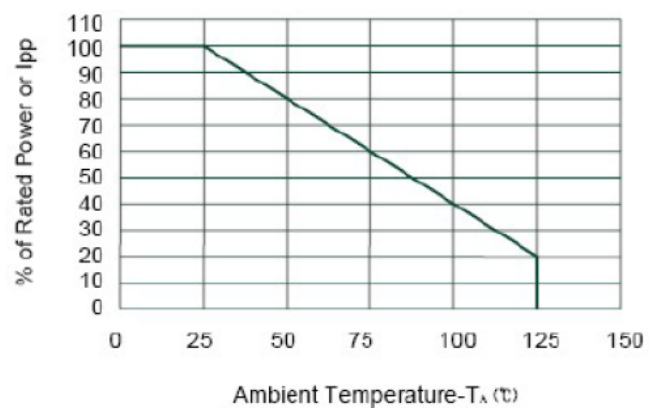
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Working Voltage	V _{RWM}	-	-	5	V	I/O-GND
Reverse Breakdown Voltage	V _{BR}	6	-	-	V	I _T =1mA Between I/O and GND
Reverse Leakage Current	I _R	-	-	100	nA	V _{RWM} =5V Between I/O and GND
Clamping Voltage	V _C	-	-	10	V	I _{PP} =1A, tp=8/20µs Between I/O and GND
		-	-	15		I _{PP} =4A, tp=8/20µs Between I/O and GND
Forward Voltage	V _F	-	-	1.2	V	I _T =10mA Between I/O and GND
Total Capacitance	C _T	-	0.4	0.6	pF	V _R =0, f=1MHz Between I/O and GND
		-	0.2	0.3		V _R =0, f=1MHz Between I/O and I/O

CHARACTERISTICS CURVES



Pulse Waveform



Power Derating Curve