

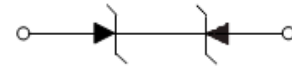
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

SUESD05CL-C is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications where board space comes at a premium. Also because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed, VGA, DVI, SDI and other high speed line applications.

This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), and EFT (electrical fast transients).

DFNWB0603B



FEATURES

- Transient Protection for High-Speed Data Line
- Protects One I/O Line
- Low Leakage Current & Clamping Voltage
- Low Capacitance

MARKING



PACKAGE INFORMATION

Package	MPQ	Leader Size
DFNWB0603B	15K	7 inch

RDER INFORMATION

Part Number	Type
SUESD05CL-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS (T_A=25°C unless otherwise noted.)

Parameter	Symbol	Rating	Unit
IEC 61000-4-2 ESD Voltage	V _{ESD}	±15	kV
		±8	
Peak Pulsed Power	P _{PP}	35	W
Peak Pulsed Current	I _{PP}	3	A
Maximum Lead Solder Temperature @10 Second Duration	T _L	260	°C
Operating Junction Temperature Range	T _J	-55~125	
Storage Temperature Range	T _{STG}	-55~150	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted.)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Stand-off Voltage	V _{RWM}	-	-	5	V	
Breakdown Voltage	V _(BR)	5.6	-	9.4	V	I _T =1mA
Reverse Leakage Current	I _R	-	-	2	μA	V _{RWM} =5V
Clamping Voltage @t _p =8/20μs	V _C	-	-	10.5	V	I _{PP} =1A
		-	-	14		I _{PP} =2A
TLP Clamping Voltage @IEC61000-4-2 Level 4 equivalent (±8kV Contact, ±15kV Air)	V _{CTLP}	-	14.5	-	V	I _{PP} =16A
Dynamic Resistance	R _{DYN}	-	0.3	-	Ω	t _p =100ns
Junction Capacitance	C _J	-	3	4.5	pF	V _R =0V, f=1MHz

CHARACTERISTICS CURVES

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

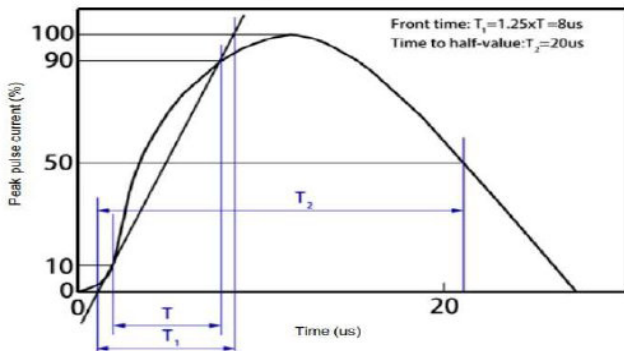


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

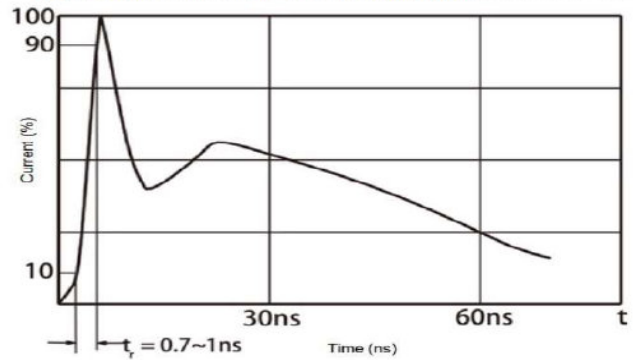


Fig 3 Power Derating Curve

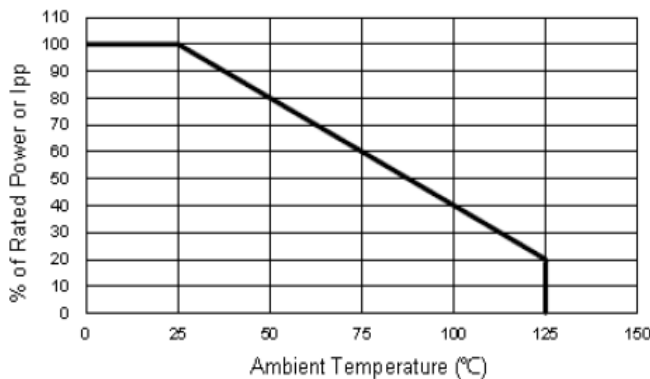


Fig 4 Voltage vs Capacitance

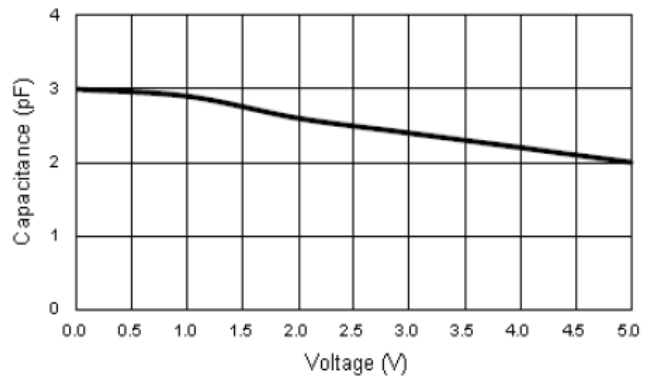


Fig 5 Transmission Line Pulsing (TLP) Measurement

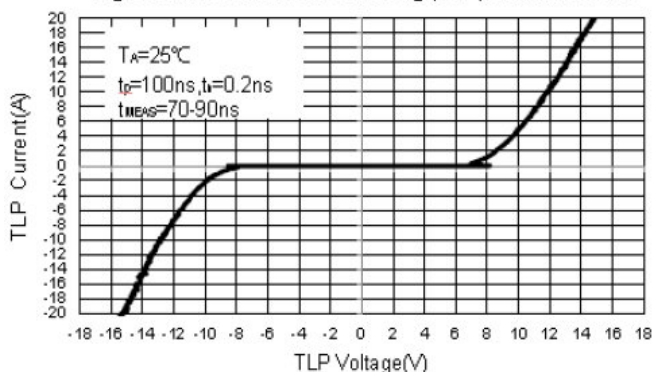
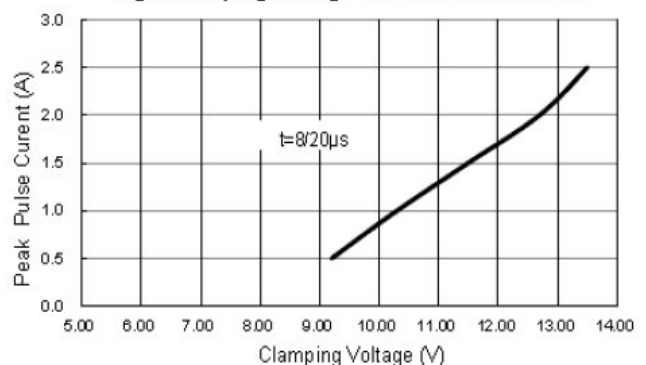
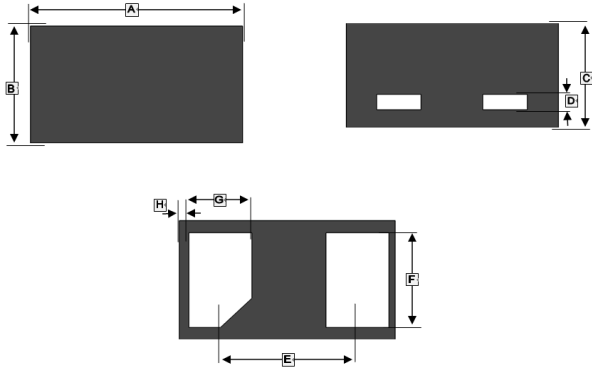


Fig 6 Clamping Voltage vs Peak Pulse Current



PACKAGE OUTLINE DIMENSIONS

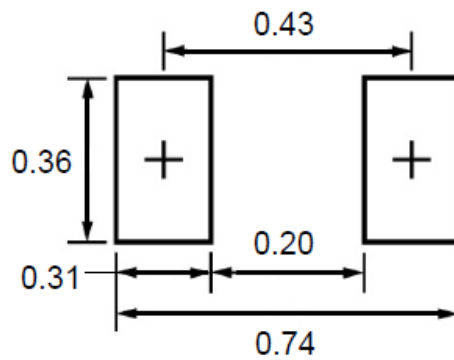
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REF.	Millimeter	
	Min.	Max.
A	0.55	0.67
B	0.25	0.37
C	0.27	0.34
D	0.05 REF.	
E	0.36 REF.	
F	0.20	0.35
G	0.12	0.24
H	0.03 REF.	

MOUNTING PAD LAYOUT

DFNWB0603B



*Dimensions in millimeters