

Transient Voltage Suppressors for ESD Protection

SE05N2C01HZ

Features

- u Working voltage : 5V
- u Low capacitance: 0.4pF (Typical)
- u Low leakage current: 1.0 μ A @ V_{RWM}
- u Low clamping voltage
- u Response Time is < 1 ns

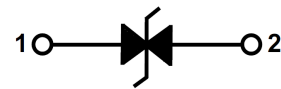
DFN0603



Applications

- u Cell Phone Handsets and Accessories
- u Portable Instrumentation
- u Notebooks, Desktops, and Servers
- u Digital Cameras/MDDI Ports

Circuit Diagram



Mechanical Characteristics

- u DFN0603 Package
- u Molding Compound Flammability Rating : UL 94V-0
- u Quantity Per Reel : 10,000pcs
- u Reel Size : 7 inch

Absolute Maximum Rating

Symbol	Parameter	Value	Units
I_{PP}	Peak Pulse Current (8/20 μ s Waveform)	4	A
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 20	KV
	ESD per IEC 61000-4-2 (Contact)	± 15	
T_J	Operating Temperature	-55 to +125	$^{\circ}$ C
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}$ C

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Electrical Characteristics (@ $T_A=25^\circ\text{C}$ Unless Otherwise Specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	--	--	--	5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5.6	--	9.0	V
Reverse Leakage Current	I_R	$V_R = 5\text{V}$	--	--	1.0	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$	--	9.5	--	V
		$I_{PP} = 4\text{A}$	--	13.5	--	V
Off State Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$	--	0.4	--	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

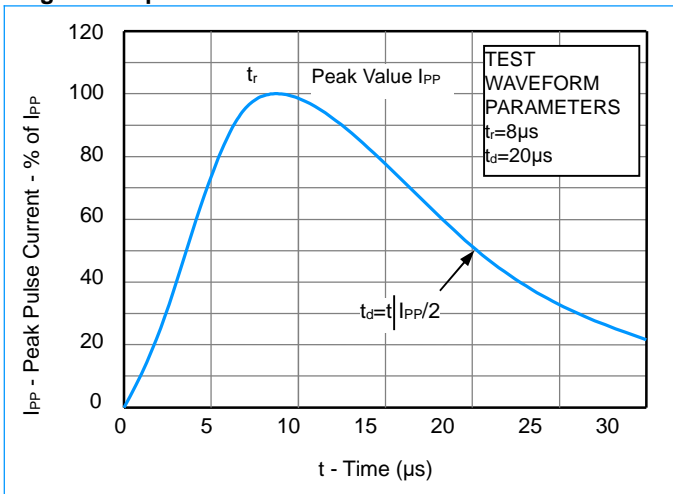


Fig2. ESD Pulse Waveform (according to IEC61000-4-2)

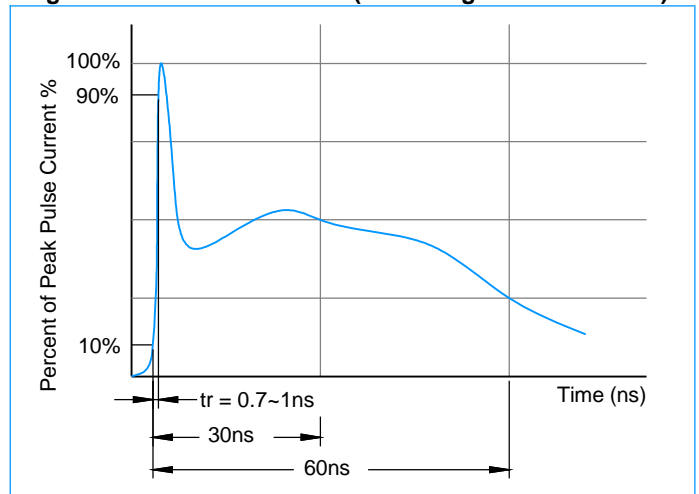


Fig3. Clamped +8 kV ESD Voltage Waveform

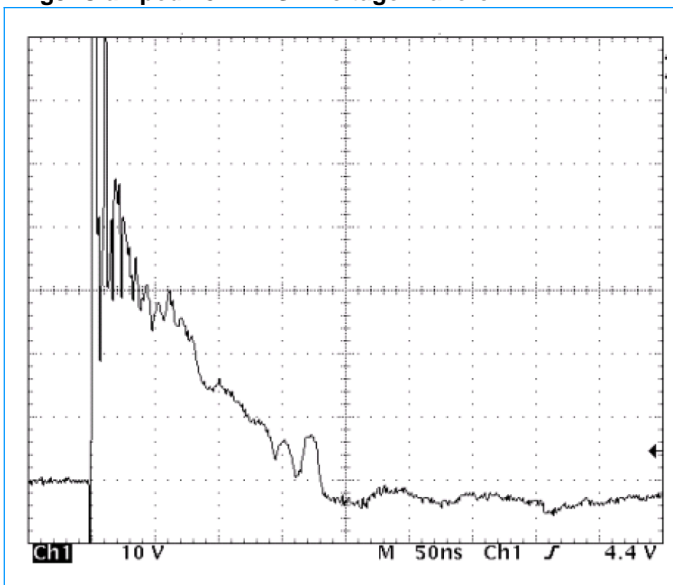
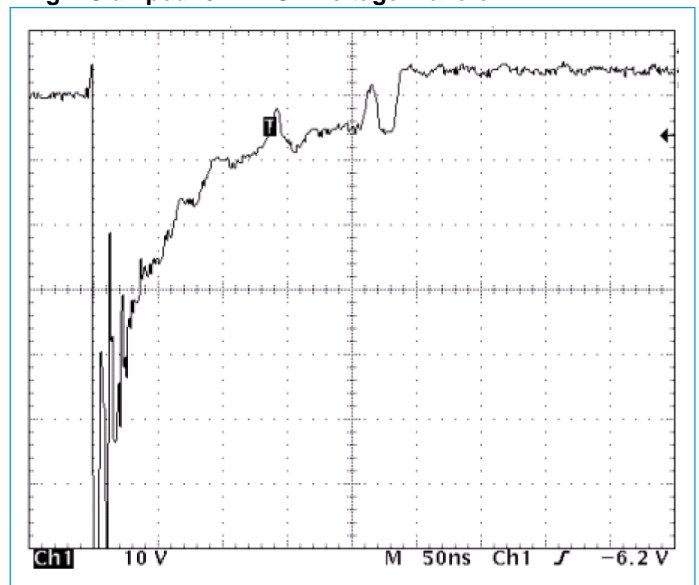


Fig4. Clamped -8 kV ESD Voltage Waveform

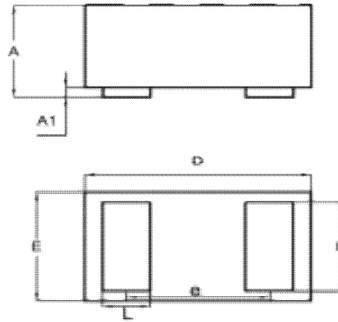


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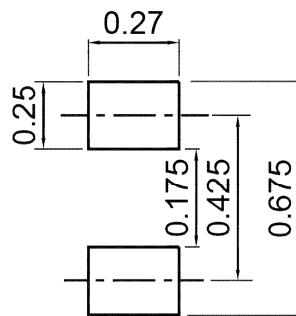
DFN0603-2L Package Outline & Dimensions

Plastic surface mounted package; 2 leads DFN0603



Unit		A	A1	b	D	E	e	L
mm	Min.	0.27	0.000	0.21	0.57	0.28	0.355	0.14
	Max.	0.33	0.025	0.29	0.65	0.35		0.22

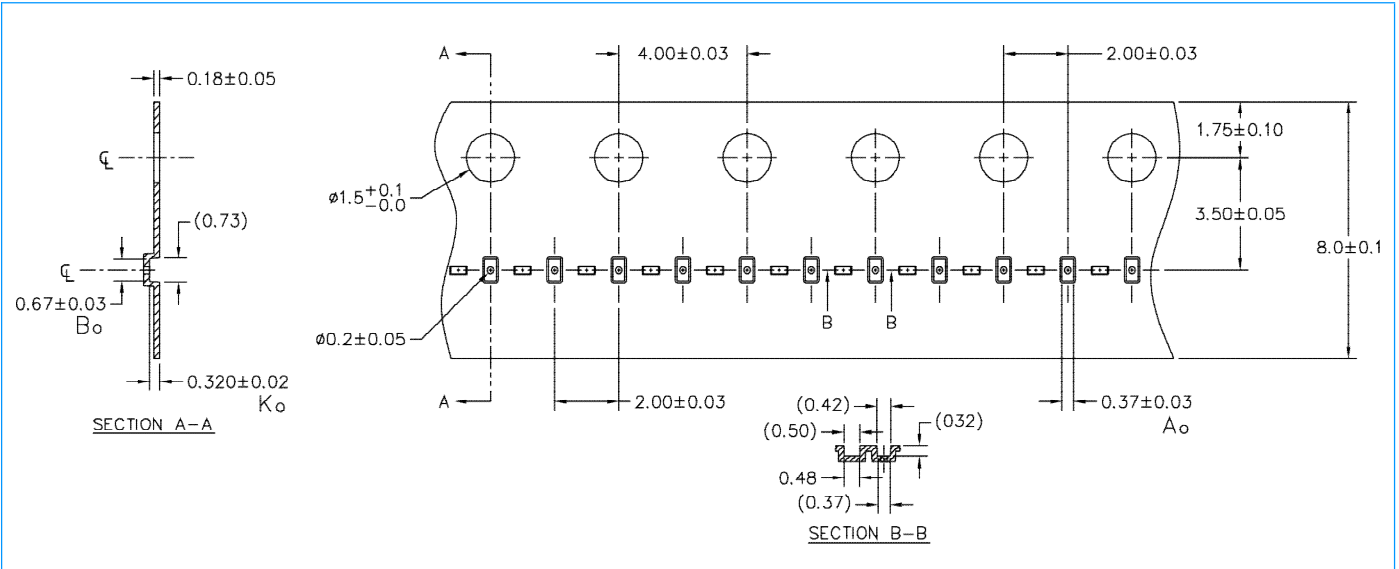
Recommended Soldering Footprint (Unit: mm)



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Tape and Reel Specification (Unit: mm)



A0	B0	K0
0.37 +/- 0.03	0.67 +/- 0.03	0.32 +/- 0.02