

Transient Voltage Suppressors for ESD Protection

SE05N2C01GK

Features

- ◆ Working voltage : 5V.
- ◆ Low capacitance: 0.6pF (Typical).
- ◆ Low leakage current: 0.1 μ A @ V_{RWM} .
- ◆ Low clamping voltage.
- ◆ Response Time is < 1 ns.

DFN0603



Applications

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

Circuit Diagram



Mechanical Characteristics

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

Absolute Maximum Rating

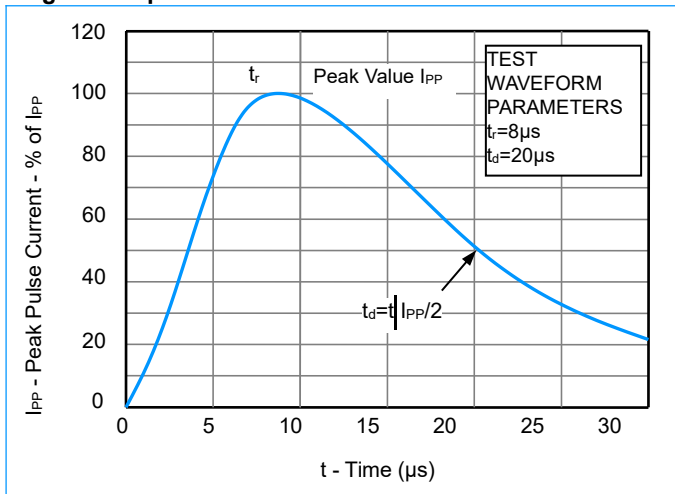
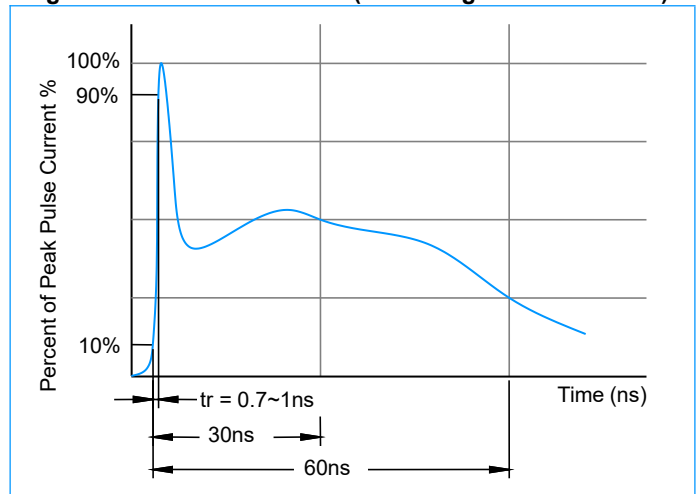
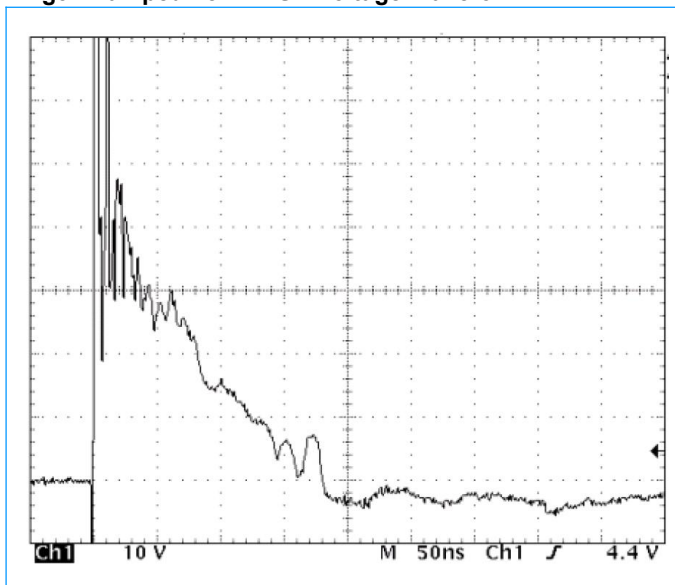
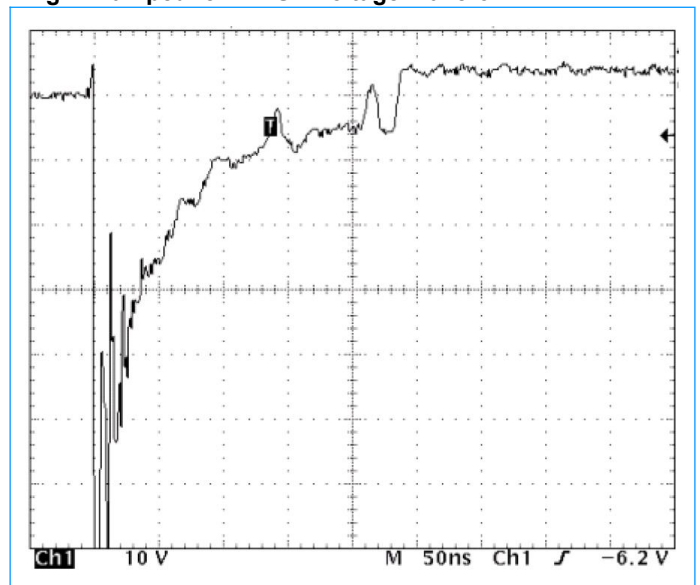
Symbol	Parameter	Value	Unit
I_{PP}	Peak Pulse Current (8/20 μ s Waveform)	4	A
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 30	KV
	ESD per IEC 61000-4-2 (Contact)	± 30	
T_J	Operating Temperature	-55 to +150	$^{\circ}$ C
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}$ C

Transient Voltage Suppressors for ESD Protection

SE05N2C01GK
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}	$I_T = 1\text{mA}$	6.0	--	9.0	V
Reverse Leakage Current	I_R	$V_R = 5\text{V}$	--	--	0.1	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$	--	11.0	--	V
		$I_{PP} = 4\text{A}$	--	19.0	--	V
Off State Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$	--	0.6	--	pF

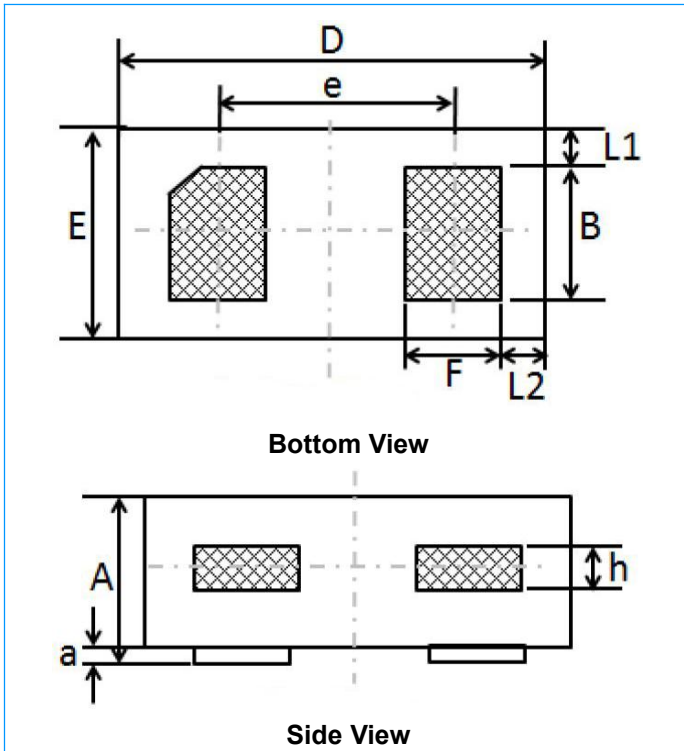
Characteristic Curves

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


Transient Voltage Suppressors for ESD Protection

SE05N2C01GK

DFN0603 Package Outline & Dimensions



Symbol	Dimension in Millimeters	
	Min.	Max.
A	0.26	0.35
B	0.20	0.30
D	0.55	0.65
E	0.25	0.35
F	0.13	0.23
L1	0.025 BSC.	
L2	0.035 BSC.	
a	0.00	0.05
e	0.35 BSC.	
h	0.05 BSC.	

Warning



- ◆ SOCAY owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property.
- ◆ SOCAY reserves the right to make changes without further notice to any products herein.
- ◆ SOCAY makes no warranties, representations or warranties as to the fitness of its products for any particular purpose, and disclaims any liability.
- ◆ The parameters provided in the SOCAY datasheet specification may vary from application to application, and the actual performance may vary over time. All operating parameters must be verified by the customer's technical expert before application.
- ◆ Any and all responsibilities and liabilities are disclaimed if any item under this notice of warning is not complied with.