

Transient Voltage Suppressors for ESD Protection

SE03N2S01GH

Features

- ◆ Working voltage: 3.3V
- ◆ Low leakage current: 0.5 μ A @ V_{RWM}
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

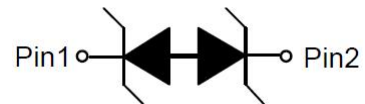
DFN0603-2L



Applications

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

Pin Configuration



Mechanical Characteristics

- ◆ DFN0603-2L Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Quantity Per Reel : 10,000pcs
- ◆ Reel Size : 7 inch

Absolute Maximum Rating

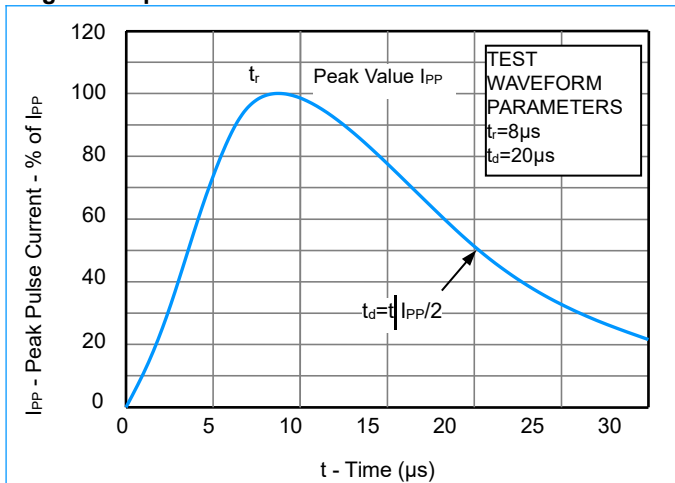
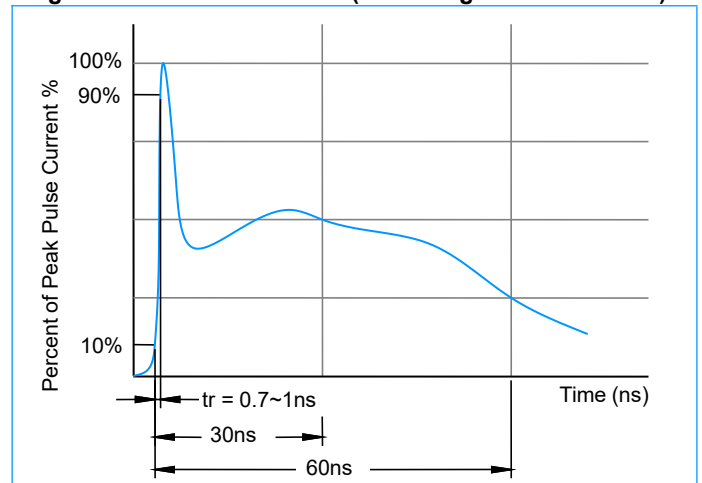
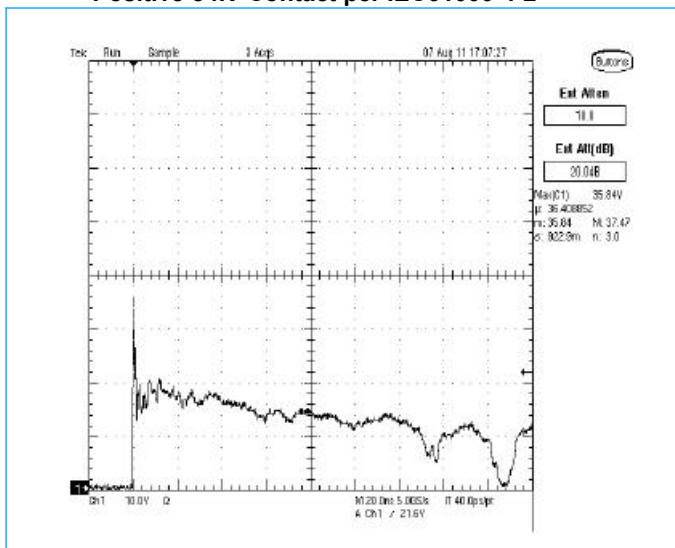
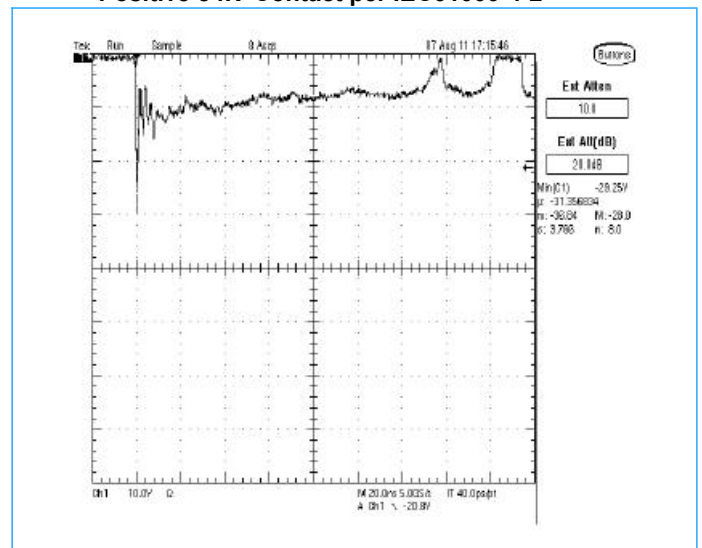
Symbol	Parameter	Value	Units
I_{PP}	Peak Pulse Current ($t_P = 8/20\mu s$)	8	A
V_{ESD}	ESD according to IEC61000-4-2 air discharge ESD according to IEC61000-4-2 contact	± 30 ± 30	KV
T_L	Lead Soldering Temperature	260 (10 sec)	$^{\circ}C$
T_{OP}	Operating Temperature	-55 to +150	$^{\circ}C$
T_{STG}	Storage 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}	--	--	--	± 3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	3.5	--	5.0	V
Reverse Leakage Current	I_R	$V_{RWM} = \pm 3.3\text{V}$	--	--	0.5	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{A}$, $t_P = 8/20\mu\text{s}$	--	4.5	--	V
		$I_{PP} = 8\text{A}$, $t_P = 8/20\mu\text{s}$	--	8.0	--	V
Off State Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$	--	10.0	--	pF

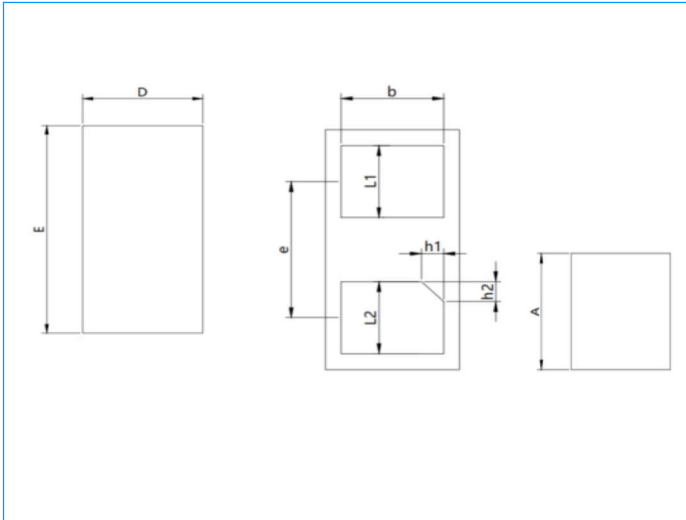
Characteristic Curves

Fig. 1. 8/20 μs Pulse Waveform

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

**Fig. 3. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2**

**Fig. 4. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2**


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DFN0603-2L Package Outline & Dimensions



DIM	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D	0.25	0.30	0.35	0.0098	0.0118	0.0138
E	0.55	0.60	0.65	0.022	0.024	0.026
L1	0.155	0.18	0.205	0.0061	0.007	0.008
L2	0.155	0.18	0.205	0.0061	0.007	0.008
b	0.205	0.23	0.255	0.008	0.009	0.010
e	0.205	0.34	0.365	0.008	0.0133	0.0143
h1	0.025	0.05	0.075	0.0009	0.0019	0.0029
h2	0.025	0.05	0.075	0.0009	0.0019	0.0029
A	--	0.30	0.35	--	0.0118	0.0138

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