

Low Capacitance TVS Protection

SE03N6S01GZ

Features

- ◆ Protects one data, control or power line
- ◆ Low capacitance: 12pF (Typical)
- ◆ Low clamping voltage

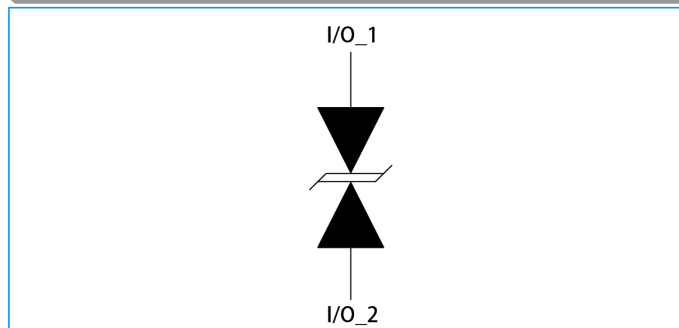
Applications

- ◆ Portable Electronics
- ◆ Desktops, Servers and Notebooks
- ◆ Cellular Phones
- ◆ MP3 Ports
- ◆ Digital Camera Ports
- ◆ Subscriber Identity Module (SIM) card

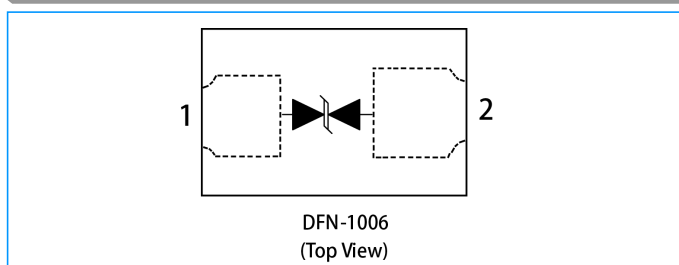
Mechanical Characteristics

- ◆ DFN1006-2L package
- ◆ Flammability Rating: UL 94V-0
- ◆ Packaging: Tape and Reel
- ◆ Quantity per Reel: 10,000pcs
- ◆ Reel Size: 7inch

FeatCircuit Diagram



Pin Configuration

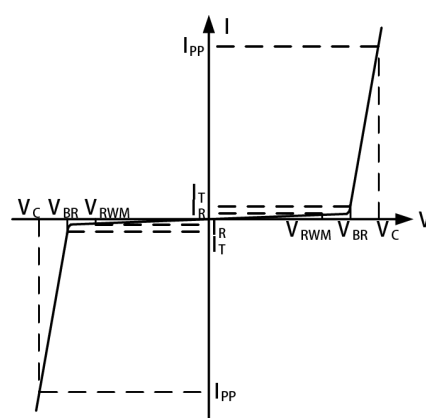


Absolute Maximum Rating

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 30	kV
	ESD per IEC 61000-4-2 (Contact)	± 30	
T_{OPT}	Operating Temperature	$-55/+125$	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	$-55/+150$	$^{\circ}\text{C}$

I-V Curve Characteristics

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



Bi-Directional TVS

Low Capacitance TVS Protection

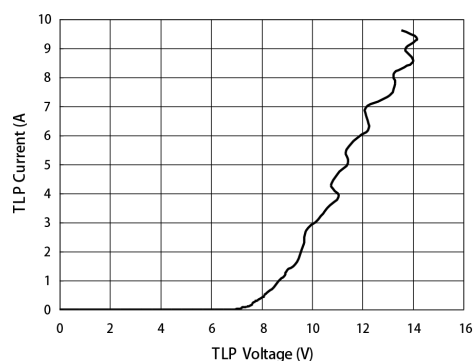
SE03N6S01GZ

Electrical Characteristics (T = 25°C)

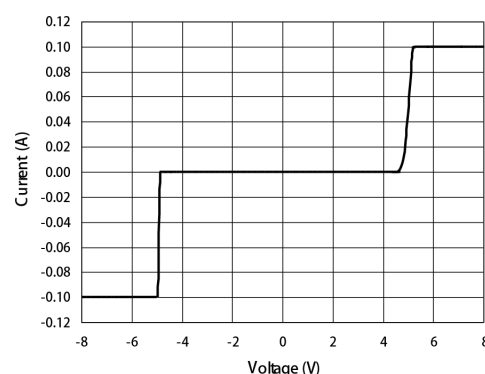
Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}	—	—	—	3.3	V
I_R	$V_{RWM} = 3.3V$, T = 25 °C Between I/O_1 and I/O_2	—	—	0.5	μA
V_{BR}	$I_T = 1mA$ Between I/O_1 and I/O_2	3.5	4.1	5.0	V
V_C	$I_{PP} = 1A$, $t_p = 8/20\mu s$ Between I/O_1 and I/O_2	—	6.0	—	V
V_C	$I_{PP} = 8A$, $t_p = 8/20\mu s$ Between I/O_1 and I/O_2	—	10	—	V
C_{ESD}	$V_R = 0V$, $f = 1MHz$ Between I/O_1 and I/O_2	—	12	—	pF

Characteristics Curve

TLP Measurement of I/O_1 to I/O_2

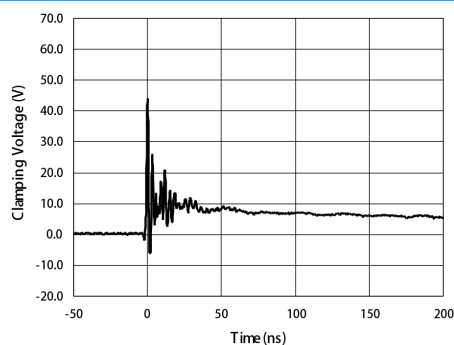


Voltage Sweeping of I/O_1 to I/O_2



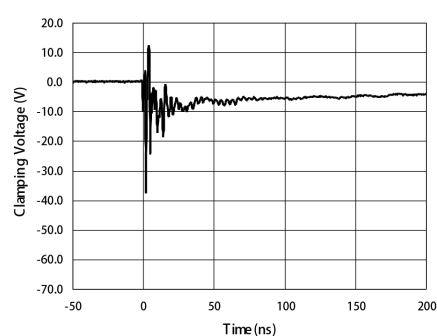
ESD Clamping of I/O_1 to I/O_2

(+8kV Contact per IEC 61000-4-2)



ESD Clamping of I/O_1 to I/O_2

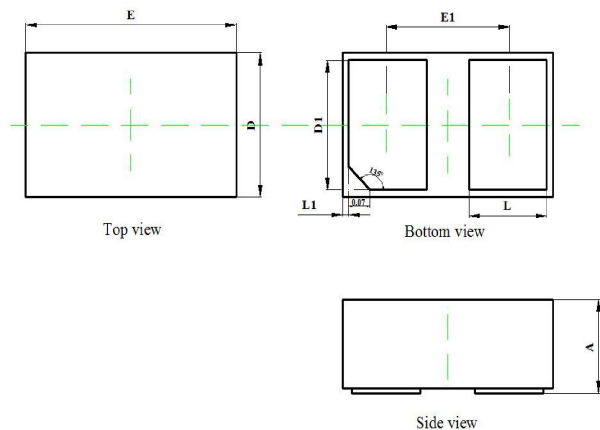
(-8kV Contact per IEC 61000-4-2)



Low Capacitance TVS Protection

SE03N6S01GZ

DFN1006-2L Dimensions



Symbol	Millimeter		Inches	
	Min	Max	Min	Max
A	0.450	0.550	0.018	0.021
D	0.550	0.650	0.022	0.026
E	0.950	1.050	0.037	0.041
D1	0.420	0.520	0.017	0.020
E1	0.550	0.650	0.022	0.026
L	0.270	0.370	0.011	0.015
L1	0.000	0.100	0.000	0.004