SD8Dxxx Series

Unidirectional TVS Diodes

DESCRIPTION

The SD8Dxxx Series is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

This series has been specifically designed to protect sensitive components which are connected to power、data and transmission lines from overvoltage caused by ESD(electrostatic discharge), CDE (Cable Discharge Events),and EFT (electrical fast transients).

FEATURES

- ✧IEC61000-4-2 (ESD) ±30kV (Contact)
  ±30kV (Air)
- ✧IEC61000-4-4 (EFT) 40A (5/50ηs)
- ✧Protects one I/O line (unidirectional)
- ✧Low clamping voltage
- ✧Working voltages: 3.3V to 36V
- ✧Low leakage current

MACHANICAL DATA

- ✧DFN1006 package
- ✧Flammability Rating: UL 94V-0
- ✧Packaging: Tape and Reel
- ✧High temperature soldering guaranteed: 260℃/10s
- ✧Reel size: 7 inch

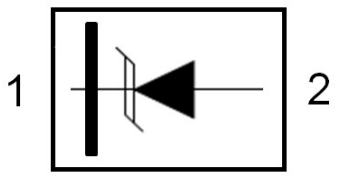
ORDERING INFORMATION

- ✧Device: SD8Dxxx
- ✧Package: DFN1006
- ✧Material: RoHS compliant & Halogen free
- ✧Packing: Tape & Reel
- ✧Quantity per reel: 10,000pcs

APPLICATIONS

- ✧Cell Phone Handsets and Accessories
- ✧Microprocessor based equipment
- ✧Personal Digital Assistants (PDA's)
- ✧Notebooks, Desktops, and Servers
- ✧Portable Instrumentation
- ✧Networking and Telecom
- ✧Serial and Parallel Ports
- ✧Peripherals

PIN CONFIGURATION



PACKAGE OUTLINE

SD8Dxxx Series

Unidirectional TVS Diodes

ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	±30 ±30	kV
T_{OPT}	Operating Temperature	-55/+150	°C
T_{STG}	Storage Temperature	-55/+150	°C
T_L	Lead Soldering Temperature	260 (10 sec.)	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

PART NUMBER	DEVICE MARKING	V_{RWM} (V) Max	V_B (V) Min	I_T (mA)	V_C@1A (V) Max	V_C (V) Max	V_C (V) (@A)	I_R (μA) Max	Ppk (W) Max	C_T (pF) Max
SD8D3V3	03W	3.3	4	1	6.5	16.0	32	5	512	450
SD8D5V0	05W	5	6	1	9.8	18.5	27	2	500	300
SD8D8V0	08W	8	8.5	1	10.5	20	23	1	460	240
SD8D12V	12W	12	13.3	1	19	28	14	1	392	130
SD8D15V	15W	15	16.7	1	24	32	12	1	384	120
SD8D18V	18W	18	20.0	1	29	35	10	1	350	100
SD8D24V	24W	24	26.7	1	43	45	8	1	360	80
SD8D36V	36W	36	40	1	60	73	5	1	365	60

ELECTRICAL CHARACTERISTICS CURVE

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

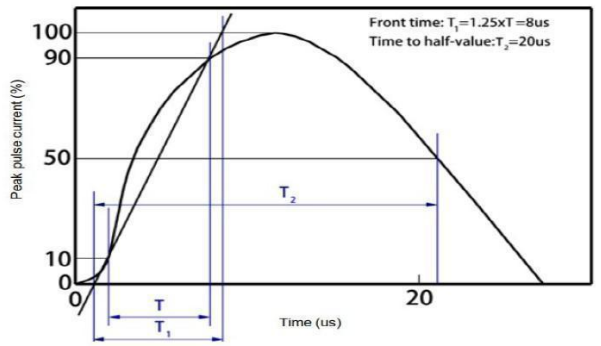


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

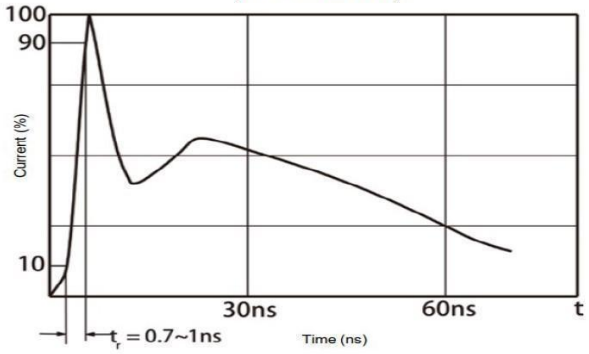


Fig 3 Voltage vs Capacitance

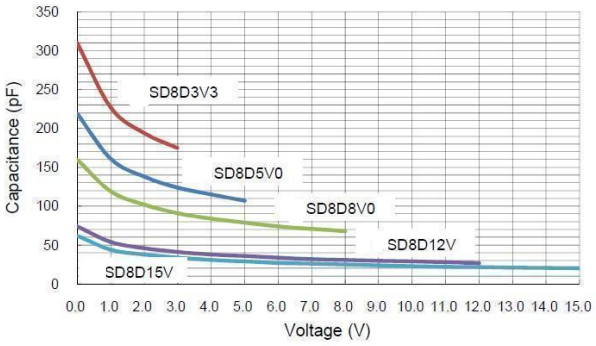


Fig 4 Voltage vs Capacitance

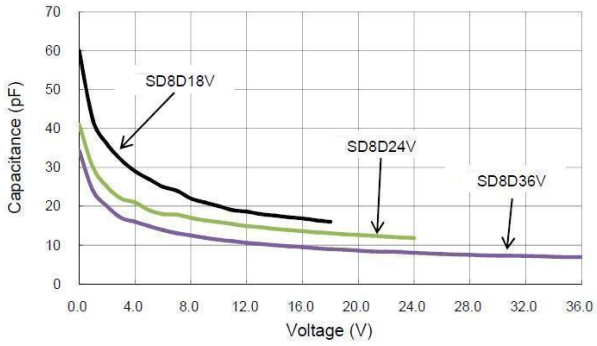


Fig 5 Clamping Voltage vs Peak Pulse Current

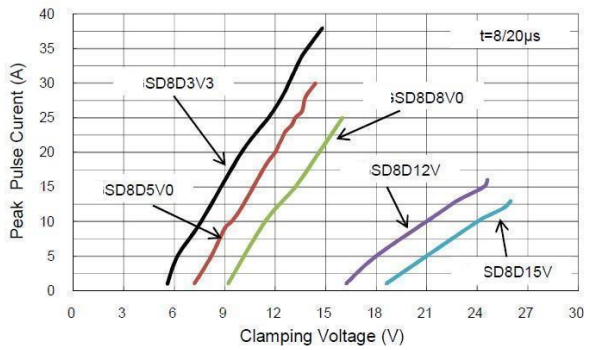
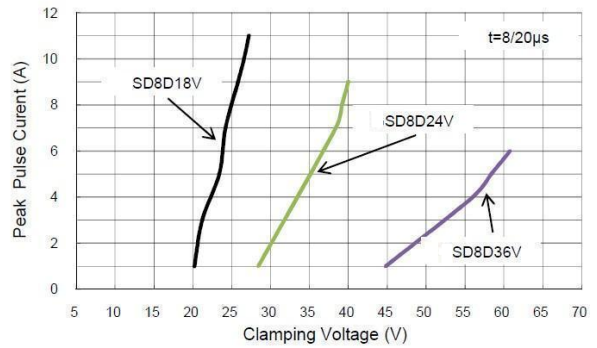
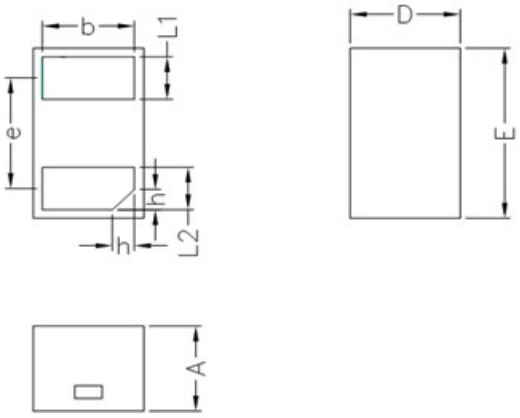


Fig 6 Clamping Voltage vs Peak Pulse Current

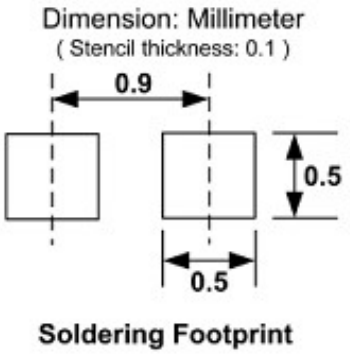


DFN1006 PACKAGE OUTLINE DIMENSIONS



Unit: mm

	MIN	NOM	MAX
D	0.55	0.60	0.65
E	0.95	1.00	1.05
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
b	0.45	0.50	0.55
e	0.65BSC		
A	0.45	0.50	0.55
h	0.07	0.12	0.17



Soldering Footprint