

DATA SHEET

**ELECTROSTATIC DISCHARGE
PROTECTION DEVICES**

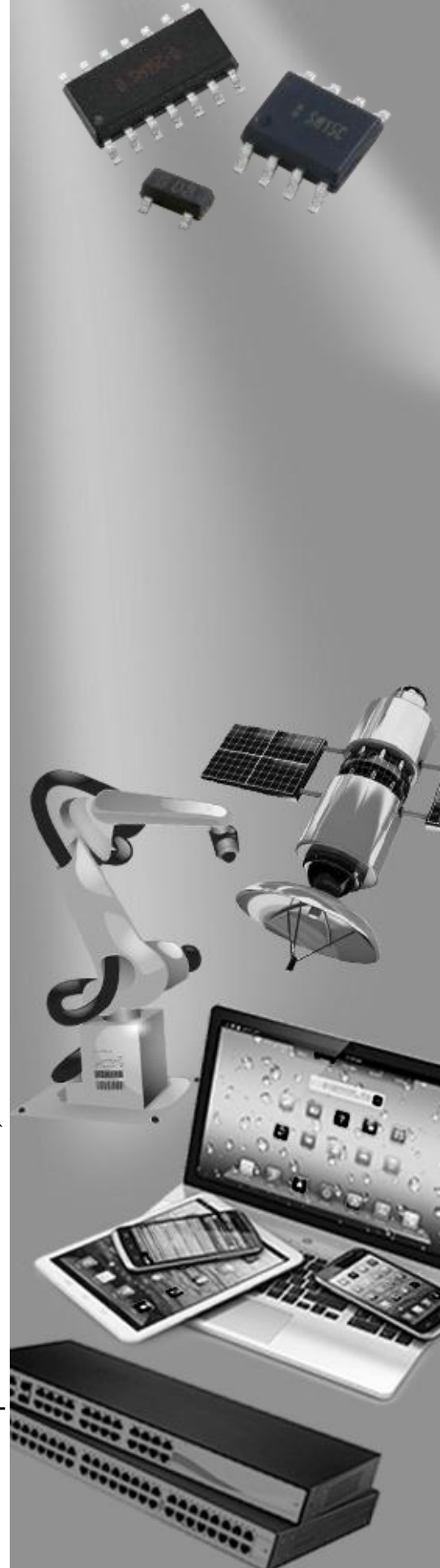
INDUSTRIAL / CONSUMER

SHD8CXXL01 series

RoHS compliant & Halogen free



Product specification— December 18, 2018 V.0



Electrostatic Discharged Protection Devices (ESD) Data Sheet

Description

The SHD8CXXL01 is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computer, and PDAs. It offer superior electrical characteristics such as lower clamping voltage and no device degradation when compared to MLVs. It is designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD), lightning, electrical fast transients (EFT), and cable discharge events (CDE).

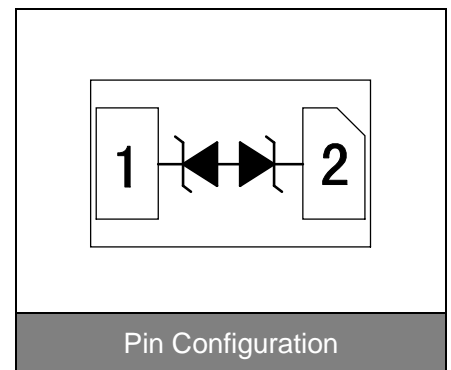


Contact: $\pm 30\text{kV}$
Air: $\pm 30\text{kV}$



Features

- IEC61000-4-2 ESD 30KV Air, 30KV contact compliance
- SOD882 surface mount package
- Working voltage: 4.5V
- Low leakage current
- Low operating and clamping voltages
- Solid-state silicon avalanche technology
- RoHS compliant
- Solder reflow temperature: Pure Tin-Sn, 260~270°C
- Flammability rating UL 94V-0
- Meets MSL level 1, per J-STD-020



Applications

- Cellular Handsets & Accessories
- Notebooks & Handhelds
- Digital Cameras
- Personal Digital Assistants (PDAs)
- Portable Instrumentation
- MP3 Players

Maximum Ratings

Rating	Symbol	Value	Unit
ESD voltage (Contact discharge)	V_{ESD}	± 30	kV
ESD voltage (Air discharge)		± 30	
Lead soldering temperature	T_L	260	°C
Storage & operating temperature range	T_{STG}, T_J	-55~+150	°C

Electrical Characteristics (T_J=25°C)

SHD8C4.5L01 (Marking: E3)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V _{RWM}				4.5	V
Reverse breakdown voltage	V _{BR}	I _{BR} =1mA	4.6			V
Reverse leakage current	I _R	V _R =4.5V			1	μA
Clamping voltage (t _p =8/20μs)	V _C	I _{PP} =40A		20		V
Off state junction capacitance	C _J	0Vdc,f=1MHz		80		pF

Typical Characteristics Curves

Figure 1. Pulse Waveforms

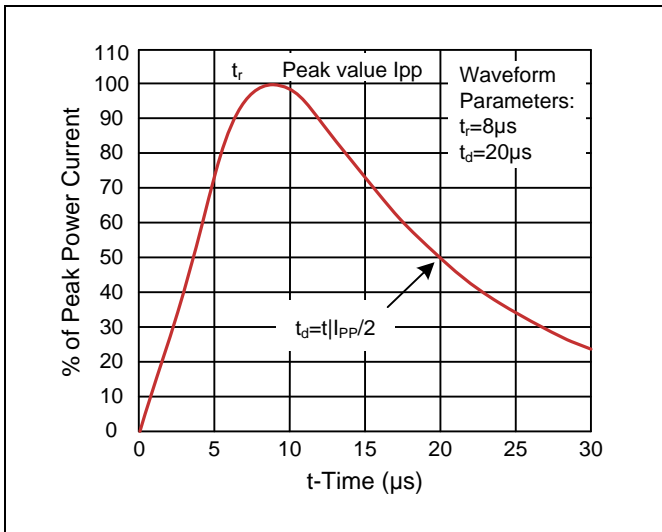


Figure 2. Clamping Voltage vs. Peak Pulse Current

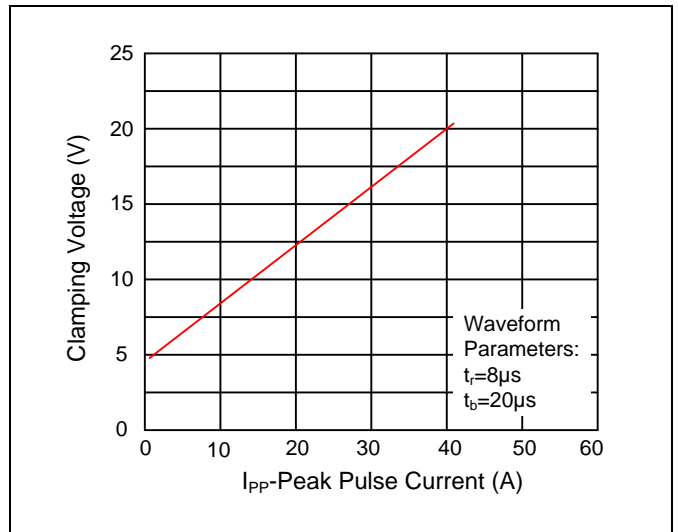


Figure 3. Capacitance vs. Reverse Voltage

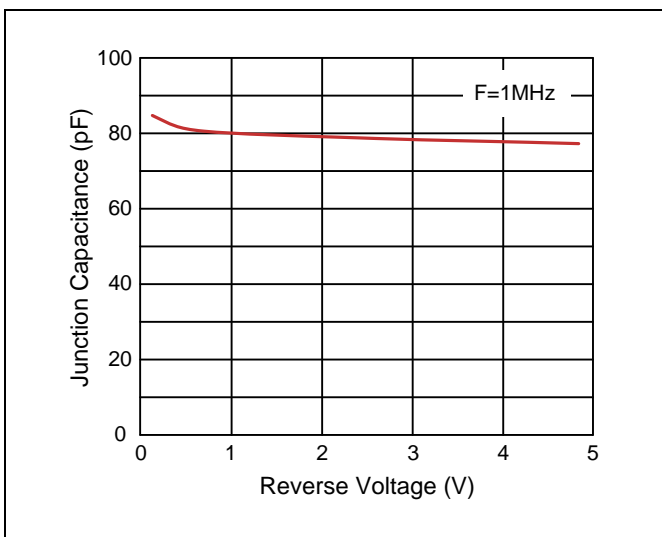
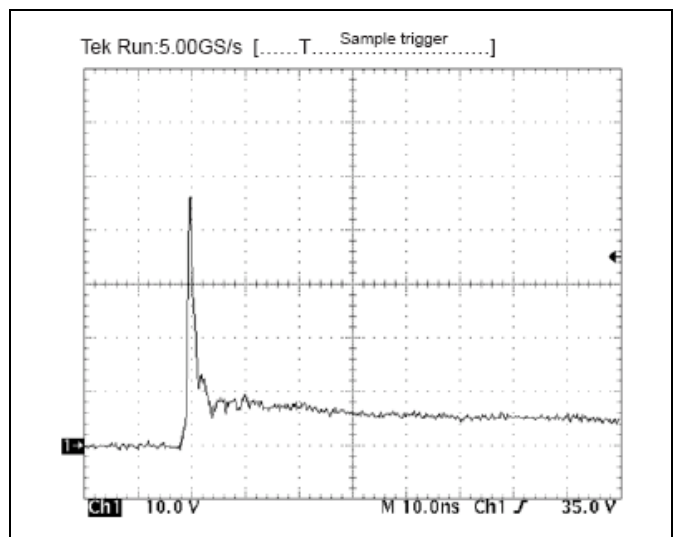
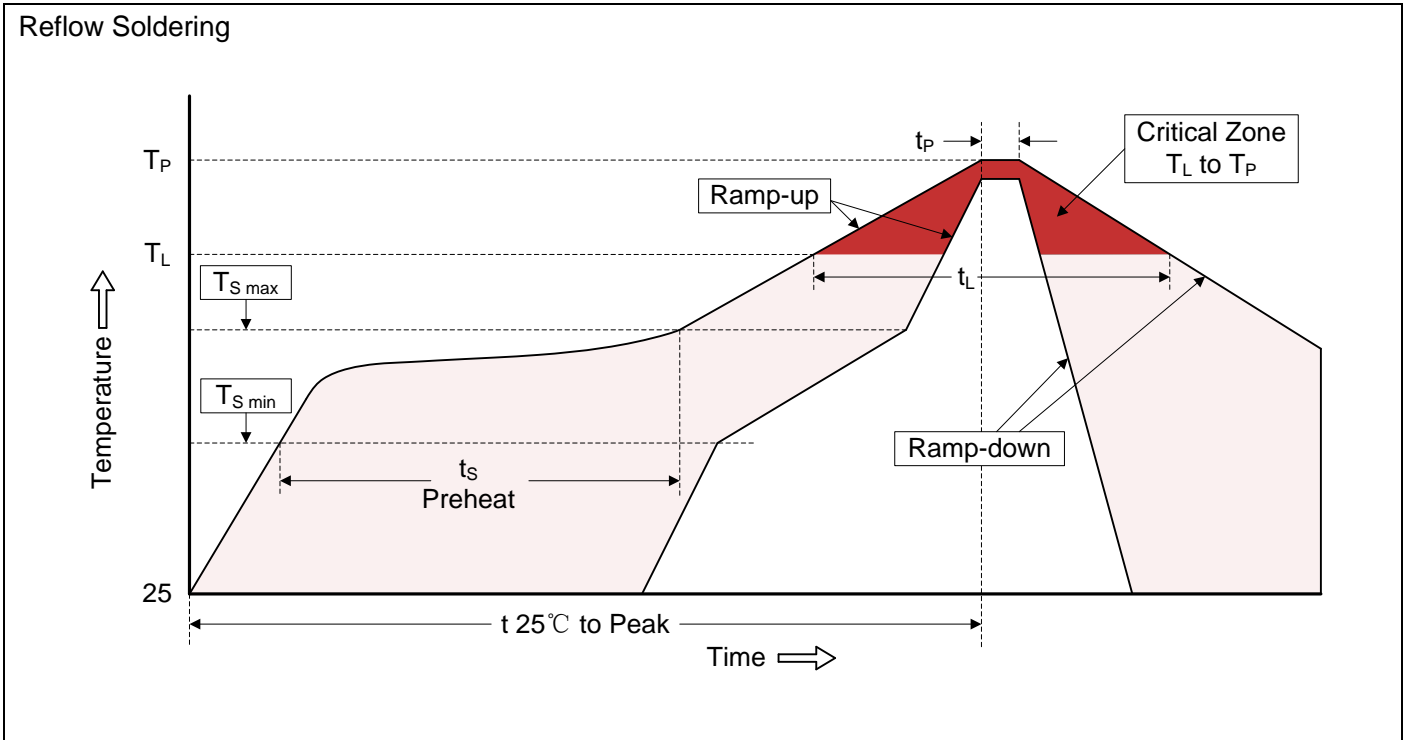


Figure 4. ESD Clamping(8kV Contact IEC61000-4-2)



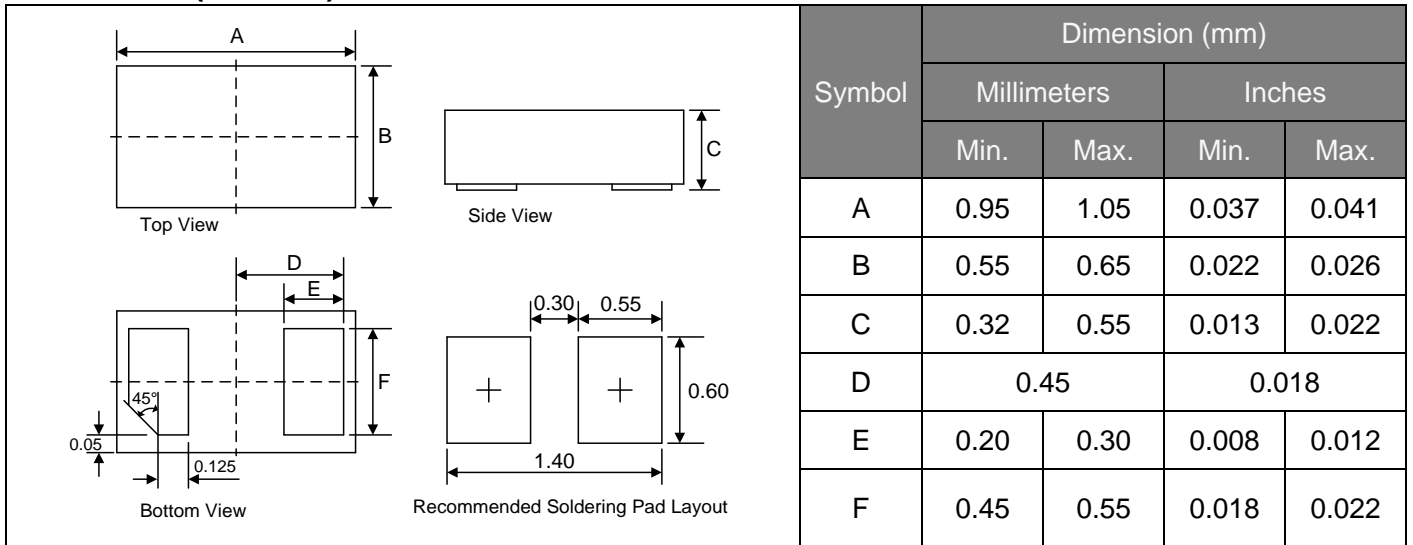
Recommended Soldering Conditions



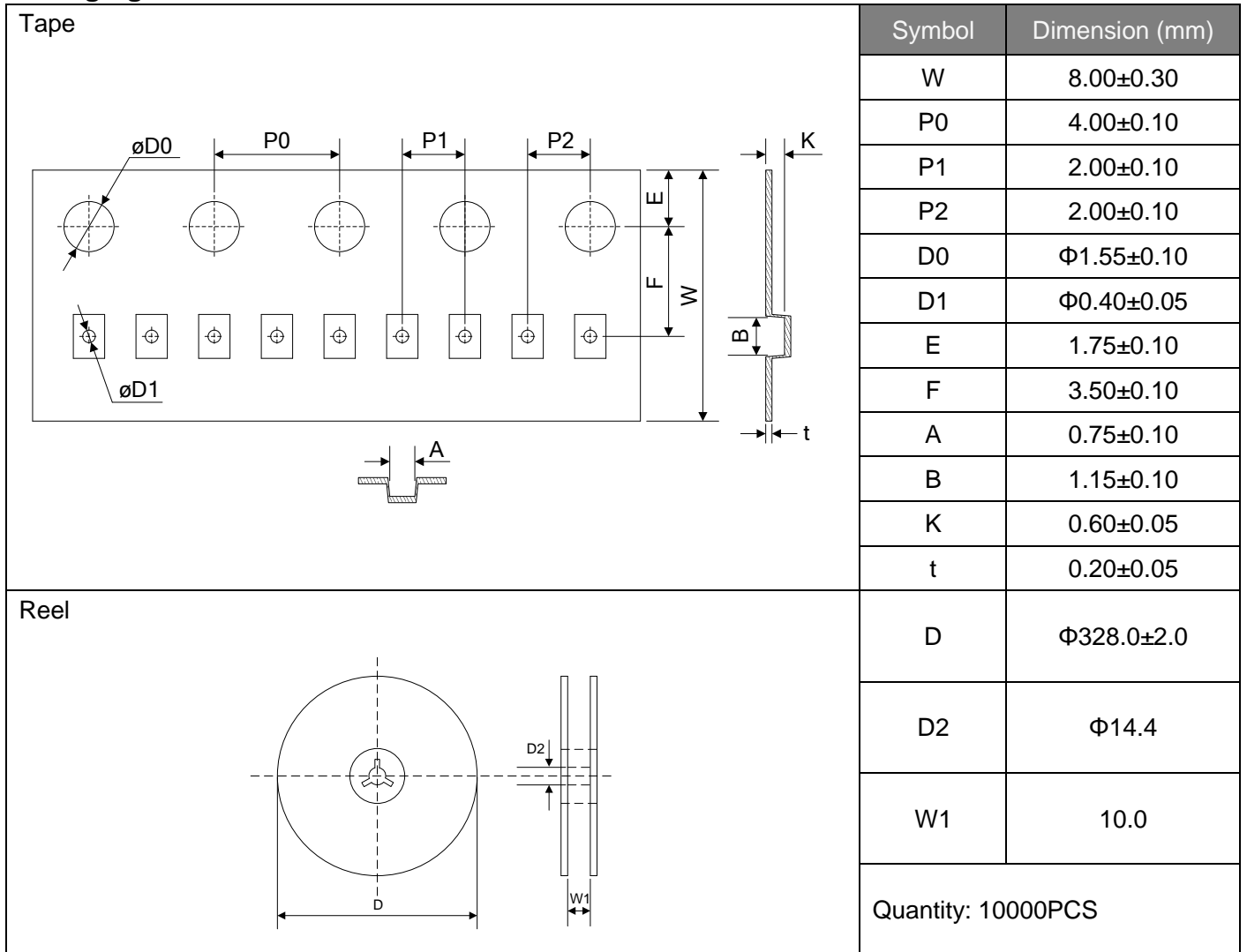
Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Dimensions (SOD882)



Packaging



单击下面可查看定价，库存，交付和生命周期等信息

[>>Brightking\(君耀电子\)](#)