

ESD3V3D8

Description

The ESD3V3D8 is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.

Feature

- Case : SOD882 package
- Stand-off Voltage: 3.3 V – 12 V
- Low clamping voltage
- Low Leakage current
- Response Time is Typically < 1.0 ns
- IEC61000-4-2 Level 4 ESD Protection
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- These are Pb-Free Devices

Applications

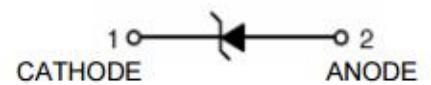
- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applications
- Mobile telephone

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
IEC61000-4-2 (Contact)	V_{ESD}	8	kV
IEC61000-4-2 (Air)	V_{ESD}	15	kV
Lead Soldering Temperature	T_L	260 (10 sec)	° C
Junction and Storage Temperature Range	T_{STG}	-55 to 150	° C
Maximum junction temperature	T_j	150	° C
Peak Pulse Power ($t_p = 8/20s$)	P_{pk}	102	W



Schematic & PIN Configuration



Electrical Characteristics (T = 25° C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_t = 1\text{mA}$	5			V
Reverse Leakage Current	I_R	$V_R = V_{RWM}$			2.5	μA
Clamping Voltage	V_C	$@I_{PP} \quad t_P = 8/20\mu\text{s}$			10.4	V
Peak pulse Current	I_{PP}	$t_P = 8/20\mu\text{s}$			9.8	A
Junction Capacitance	C_J	$V_R=0\text{V}, f = 1\text{MHz}$		80		pF

Rating & Characteristic Curves

Figure 1 - Electrical Parameter

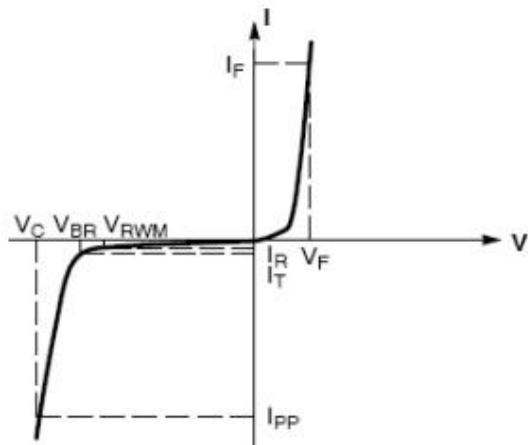


Figure 2- Pulse Waveform

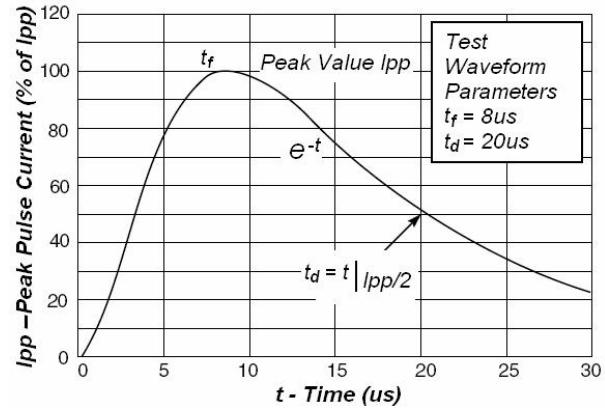


Figure 3-Typical Breakdown Voltage versus Temperature

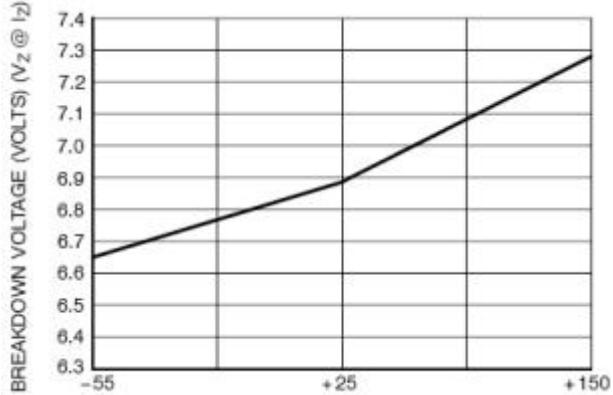


Figure 4-Typical Leakage Current versus Temperature

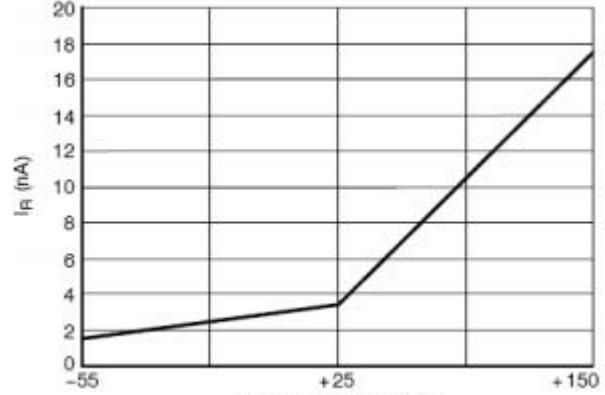


Figure 5- Positive 8kV contact per IEC 61000-4-2

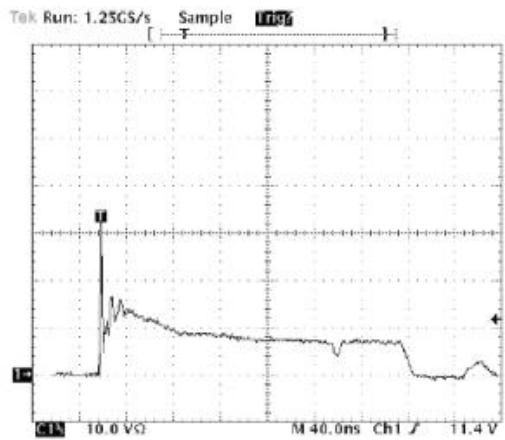
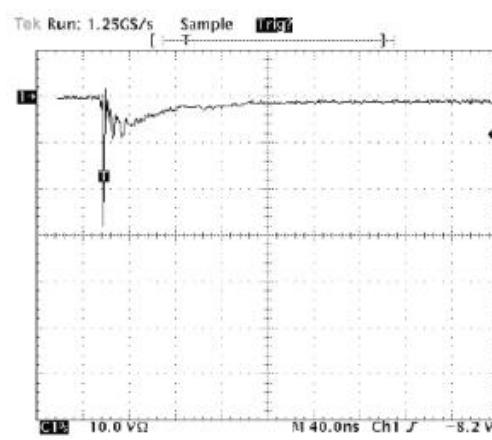
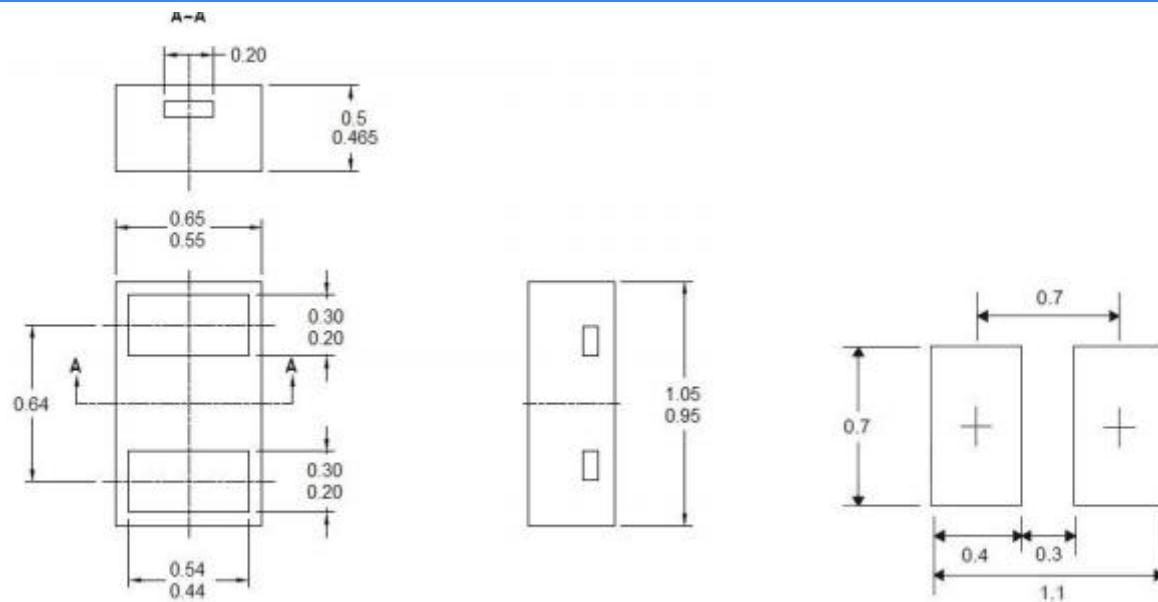


Figure 6-Negative 8kV contact per IEC 61000-4-2



PACKAGE OUTLINE DIMENSIONS in millimeters :**SOD882**



Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.