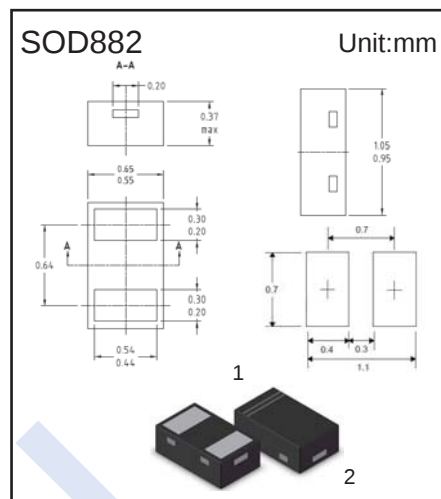


TVS Diodes

ESD8D3.3 ~ ESD8D12

■ Features

- Stand-off Voltage: 3.3 V – 12 V
- Low leakage
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
ESD Per IEC61000-4-2 (Air)	V_{PP}	± 15	KV
ESD Per IEC61000-4-2 (Contact)		± 8	
ESD Voltage- Per Human Body Model	ESD	16	
Total Power Dissipation on FR-5 Board	P_D	150	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Maximum Lead Temperature for Soldering During 10s	T_L	260	
Storage Temperature range	T_{stg}	-55 to 155	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Device	V_{RWM} (V)	I_R (μA) @ V_{RWM}	V_{BR} (V) @ I_T (Note 1)	I_T mA	I_{PP} (A) (Note 2)	V_C (V) @ Max I_{PP} (Note 2)	P_{PK} (W) (8*20 us)	C (pF)
	Max	Max	Min		Max	Max	Typ	Typ
ESD8D3.3	3.3	2.5	5.0	1.0	9.8	10.4	102	80
ESD8D5.0	5.0	1.0	6.2	1.0	8.7	12.3	107	65
ESD8D12	12	1.0	13.3	1.0	5.9	23.7	140	30

Other voltage available upon request.

Note.1 . V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C

Note.2 Surge current waveform per Figure 3.

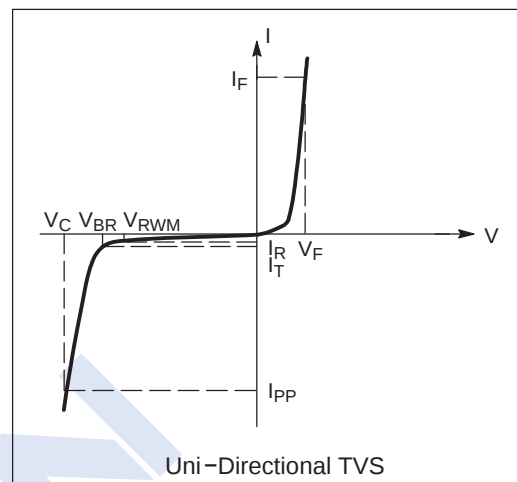
TVS Diodes

ESD8D3.3 ~ ESD8D12

■ ELECTRICAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Max. Capacitance @ $V_R = 0$ and $f = 1\text{ MHz}$



■ Typical Characteristics

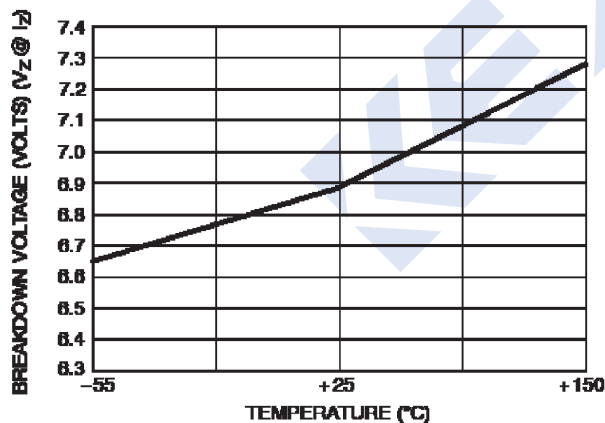


Figure 1. Typical Breakdown Voltage versus Temperature

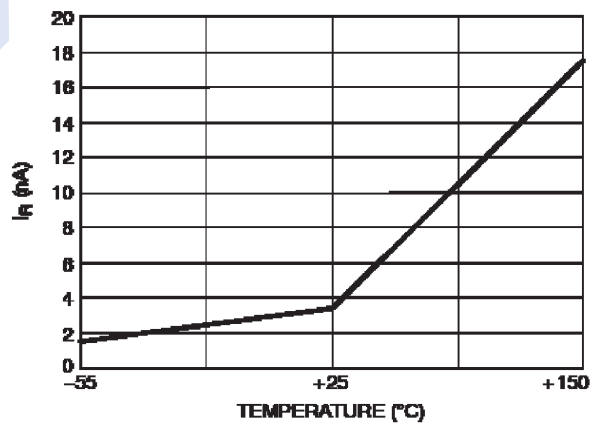


Fig 2. Typical Leakage Current versus Temperature

TVS Diodes

ESD8D3.3 ~ ESD8D12

■ Typical Characteristics

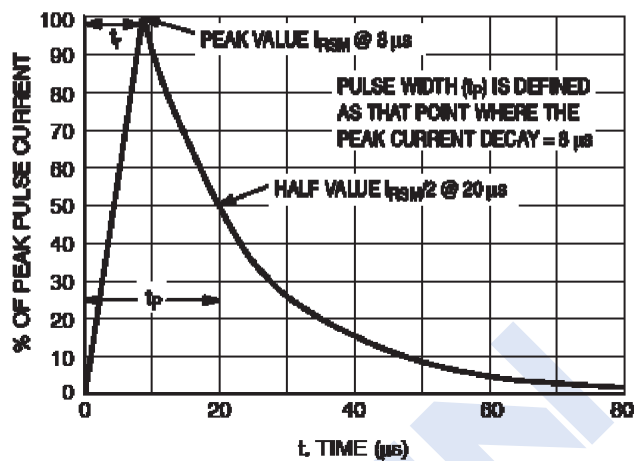


Figure 3. 8*20 μs Pulse Waveform

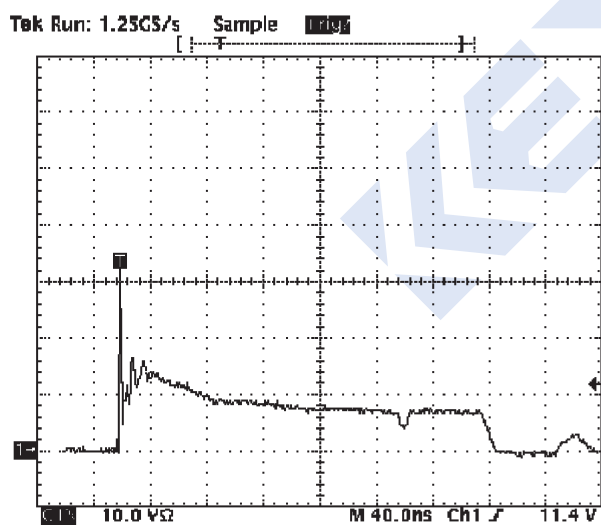


Figure 4. Positive 8kV contact per IEC 61000-4-2-LESD8D3.3T5G

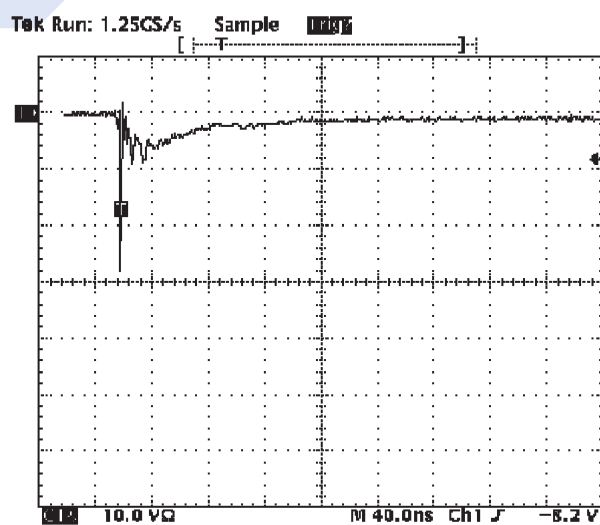


Fig 5. Negative 8kV contact per IEC 61000-4-2-LESD8D3.3T5G