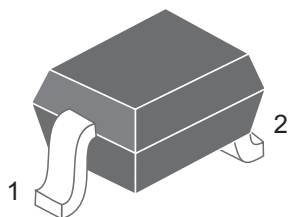
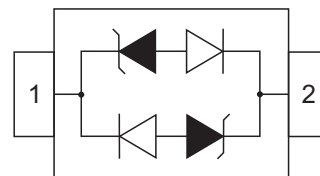


Electro-Static Discharge TUSD03FBX Low Capacitance TVS Diode

SOD-323



Pin Configuration



Features

- 350 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- Protects one bidirectional I/O line
- Low clamping voltage
- Working voltages: 3.3V
- Low leakage current

IEC Compatibility

- IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning) 8A(8/20 μs)

Applications

- Ethernet - 10/100/1000 Base T
- Cellular Phones
- I²C Bus Protection
- Parallel & Serial Port Protection
- Personal Digital Assistant (PDA)
- Microcontroller Input Protection
- ISDN S/T Interface
- WAN/LAN Equipment

Mechanical Characteristics

- JEDEC SOD-323 Package
- Molding Compound Flammability Rating:UL 94V-O
- Weight 5 Milligrams(Approximate)
- Quantity Per Reel:3000pcs
- Reel Size:7 inch
- Lead Finish:Lead Free

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

Maximum Ratings(@ 25°C Unless Otherwise Specified)			
Parameter	Symbol	Value	Units
Peak Pulse Power($t_p=8/20\mu\text{s}$ waveform)	P_{PP}	350	Watts
Lead Soldering Temperature	T_L	260(10 sec.)	$^{\circ}\text{C}$
Operating Temperature Range	T_J	-55~150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise specified)

TUSD03FBX(Marking:CA1)

Parameter	Symbol	Conditions	Min.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}	Pin 2-1 / Pin1-2		3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	4		V
Reverse Leakage Current	I_R	@ $V_{RWM}, T_A=25^{\circ}\text{C}$		0.5	μA
		@ $V_{RWM}, T_A=125^{\circ}\text{C}$		1	μA
Clamping Voltage	V_C	$I_{PP}=8\text{A}, t_p=8/20\mu\text{s}$		13.9	V
Junction Capacitance	$C_{I/O}$	Pin capacitance to GND, $V_{DC}=0\text{V}, f=1\text{MHz}$		1.5	pF

Ratings and Characteristic Curves

Fig.1 Peak Pulse Power vs. Pulse Time

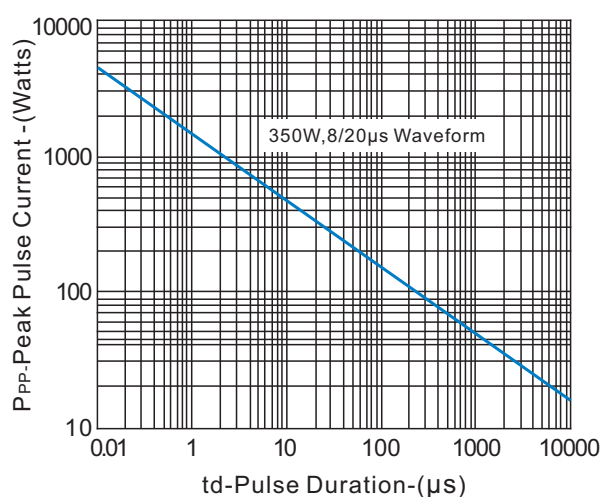
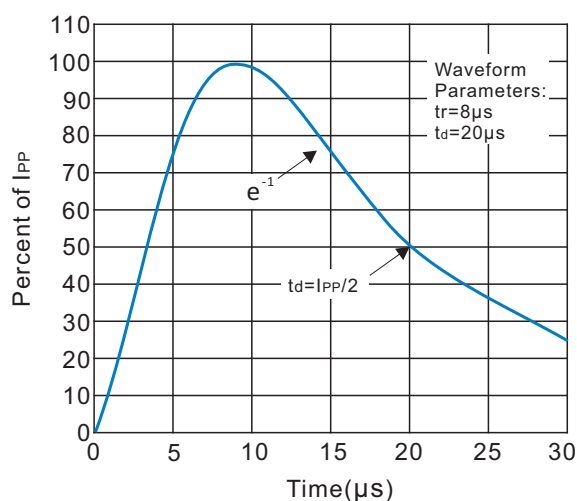
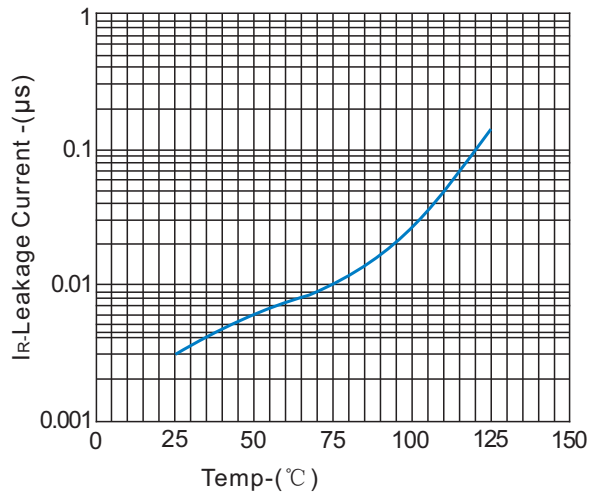


Fig.2 Pulse Waveform



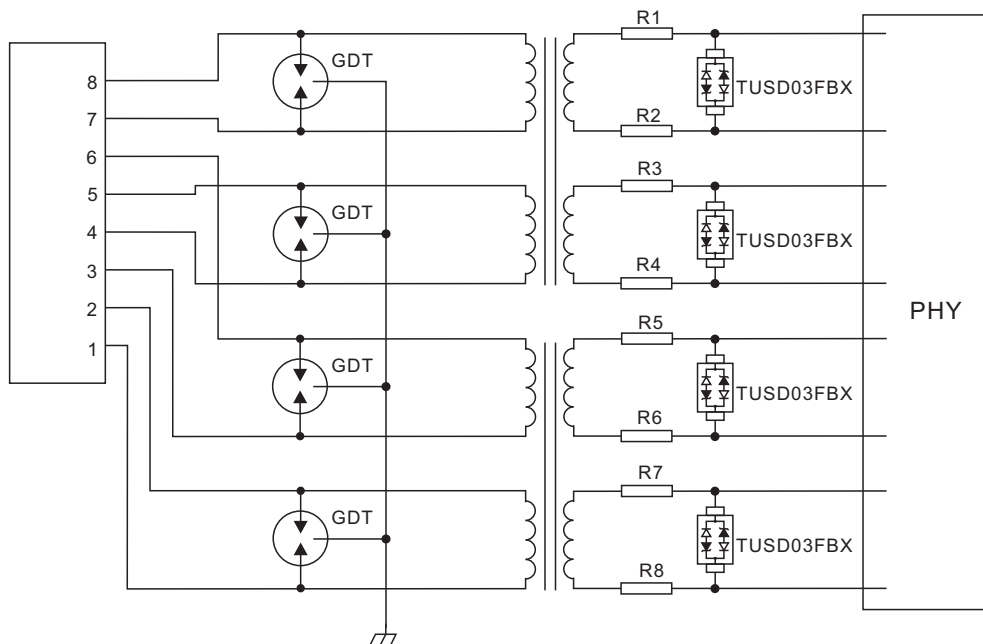
Ratings and Characteristic Curves

Fig.3 Hi Temperature vs. Leakage

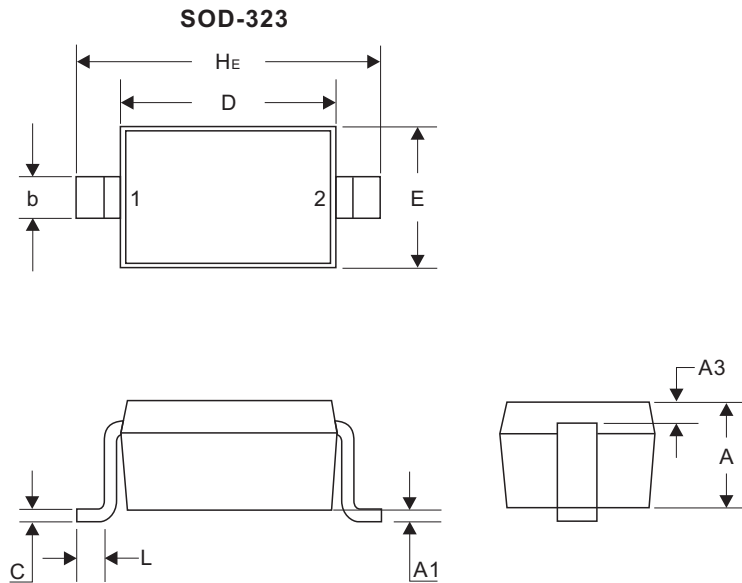


Application

RJ45 Protection

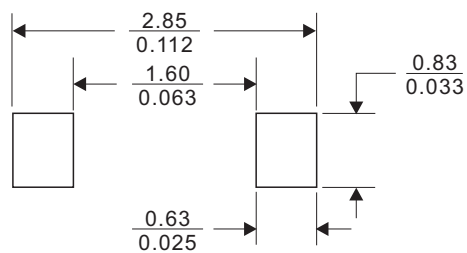


Dimensions(SOD-323)



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.00	0.031	0.040
A1	0.00	0.10	0.000	0.004
A3	0.15REF		0.006REF	
b	0.25	0.40	0.010	0.016
C	0.089	0.177	0.003	0.007
D	1.60	1.80	0.062	0.070
E	1.15	1.35	0.045	0.053
L	0.08		0.003	
H _E	2.30	2.70	0.090	0.105

Recommended Mounting Pad Layout



Dimensions in ($\frac{\text{millimeters}}{\text{inches}}$)