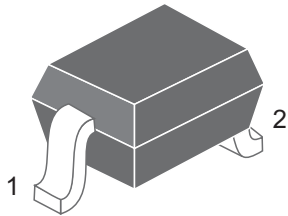
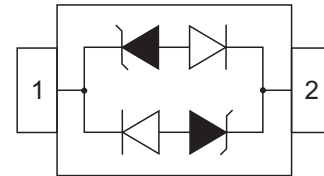


# Electro-Static Discharge TUSD03-24FB Low Capacitance TVS Diode

## SOD-323



## Pin Configuration



## Features

- 350 Watts Peak Pulse Power per Line ( $t_p=8/20\mu s$ )
- Protects one I/O or power line (bidirectional)
- Low clamping voltage
- Working voltages: 3.3V, 5V, 8V, 12V, 15V, 24V
- Low leakage current

## IEC Compatibility

- IEC61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)

## Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants(PDA's)
- Notebooks,Desktops,and Servers
- Portable Instrumentation
- Peripherals
- USB Interface

## 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 )

Parameter	Symbol	Value	Units
Peak Pulse Power( $t_p=8/20\mu\text{s}$ )	$P_{PP}$	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 )

**TUSD03FB(Marking:CC)**

Parameter	Symbol	Conditions	Min.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$			3.3	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	4		V
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$		7.5	V
		$I_{PP}=8\text{A}, t_p=8/20\mu\text{s}$		13.9	V
Reverse Leakage Current	$I_R$	@ $V_{RWM}$		20	$\mu\text{A}$
Junction Capacitance	$C_{I/O}$	0Vdc, f=1MHz Between I/O Pins and GND		1.5	pF

**TUSD05FB(Marking:AC)**

Parameter	Symbol	Conditions	Min.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$			5	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	6		V
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$		9.8	V
		$I_{PP}=8\text{A}, t_p=8/20\mu\text{s}$		18.5	V
Reverse Leakage Current	$I_R$	@ $V_{RWM}$		5	$\mu\text{A}$
Junction Capacitance	$C_{I/O}$	0Vdc, f=1MHz Between I/O Pins and GND		1.5	pF

**TUSD08FB(Marking:BC)**

Parameter	Symbol	Conditions	Min.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$			8	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	8.5		V
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$		13.4	V
		$I_{PP}=8\text{A}, t_p=8/20\mu\text{s}$		26	V
Reverse Leakage Current	$I_R$	@ $V_{RWM}$		2	$\mu\text{A}$
Junction Capacitance	$C_{I/O}$	0Vdc, f=1MHz Between I/O Pins and GND		1.5	pF

**Electrical Characteristics(T<sub>A</sub>=25 °C unless otherwise specified )**

<b>TUSD12FB(Marking:DC)</b>					
Parameter	Symbol	Conditions	Min.	Max.	Units
Reverse Stand-off Voltage	V <sub>RWM</sub>			12	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	13.3		V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, tp=8/20μs		19	V
		I <sub>PP</sub> =7A, tp=8/20μs		30	V
Reverse Leakage Current	I <sub>R</sub>	@V <sub>RWM</sub>		1	μA
Junction Capacitance	C <sub>I/O</sub>	0Vdc, f=1MHz Between I/O Pins and GND		1.5	pF

<b>TUSD15FB(Marking:EC)</b>					
Parameter	Symbol	Conditions	Min.	Max.	Units
Reverse Stand-off Voltage	V <sub>RWM</sub>			15	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	16.7		V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, tp=8/20μs		24	V
		I <sub>PP</sub> =6A, tp=8/20μs		35	V
Reverse Leakage Current	I <sub>R</sub>	@V <sub>RWM</sub>		1	μA
Junction Capacitance	C <sub>I/O</sub>	0Vdc, f=1MHz Between I/O Pins and GND		1.5	pF

<b>TUSD24FB(Marking:HC)</b>					
Parameter	Symbol	Conditions	Min.	Max.	Units
Reverse Stand-off Voltage	V <sub>RWM</sub>			24	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	26.7		V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, tp=8/20μs		43	V
		I <sub>PP</sub> =3A, tp=8/20μs		56	V
Reverse Leakage Current	I <sub>R</sub>	@V <sub>RWM</sub>		1	μA
Junction Capacitance	C <sub>I/O</sub>	0Vdc, f=1MHz Between I/O Pins and GND		1.5	pF

## Ratings and Characteristic Curves

Fig.1 Pulse Waveform

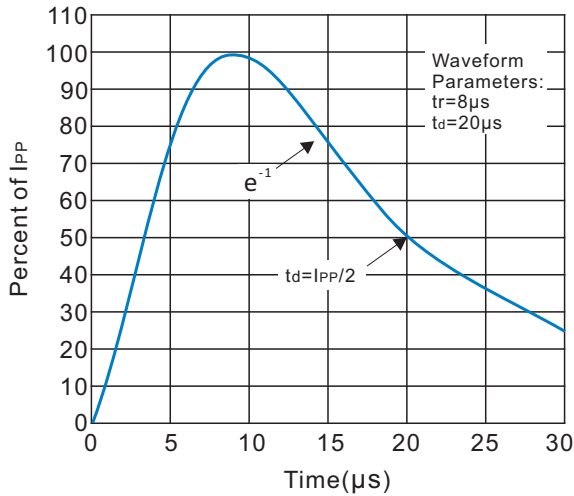
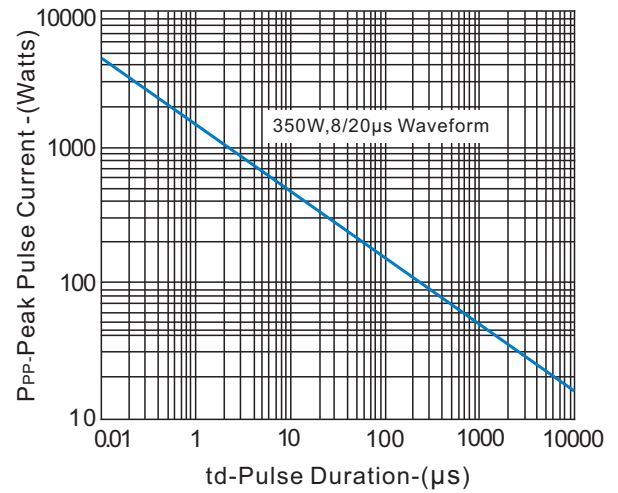
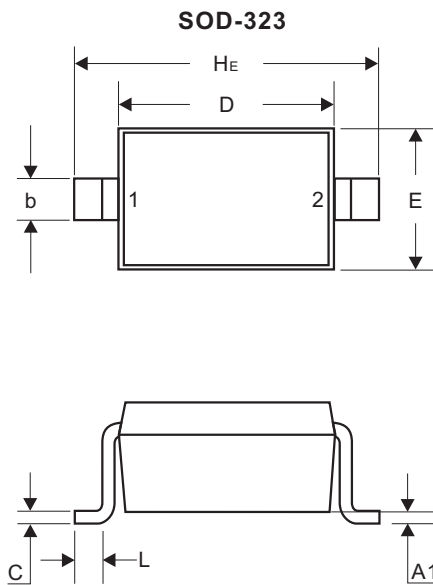


Fig.2 Peak Pulse Power vs. Pulse Time

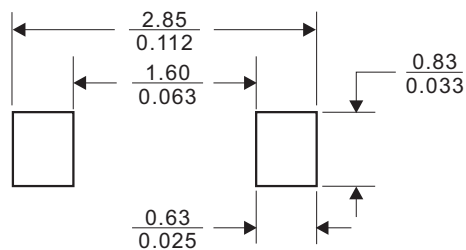


## Dimensions(SOD-323)



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	
He	2.30	2.70	0.090	0.105

### Recommended Mounting Pad Layout



单击下面可查看定价，库存，交付和生命周期等信息

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