

### Features

- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30\text{kV}$
    - Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-5 (Lightning) 21A (8/20 $\mu\text{s}$ )
- RoHS Compliant

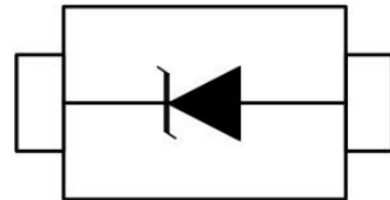
### Dimensions SOD-323



### Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

### Pin Configuration



### Mechanical Characteristics

- Package: SOD-323
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch

### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

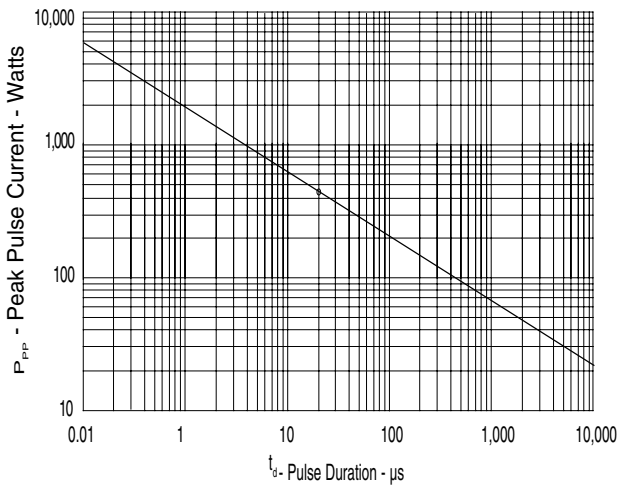
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	P <sub>pp</sub>	450	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 30$	Kv
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

**Electrical Characteristics**(TA=25°C unless otherwise specified)

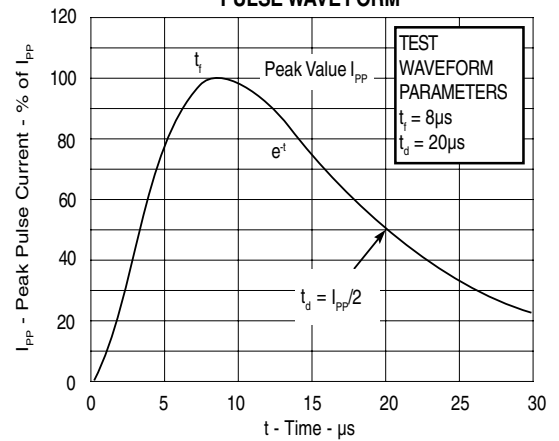
Part Number	Device Marking	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> @1A	V <sub>C</sub>		I <sub>R</sub> μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
SD12W	12A	12	13.3	1	15.6	21.6	21	1	155

**Characteristic Curves**

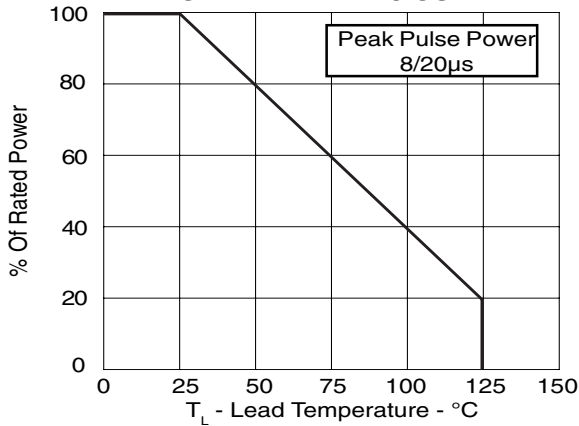
**FIGURE 1  
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2  
PULSE WAVE FORM**



**FIGURE 3  
POWER DERATING CURVE**

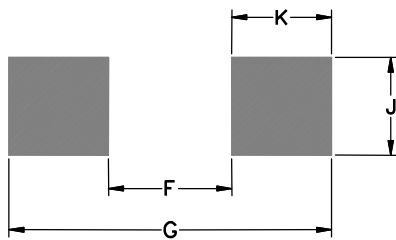


## SOD-323 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
<b>A</b>	0.80	0.90	1.15	0.031	0.035	0.045
<b>A1</b>	0.001	0.05	0.15	0.004	0.002	0.006
<b>A3</b>	0.15 REF			0.006 REF		
<b>b</b>	0.25	0.32	0.45	0.010	0.012	0.018
<b>C</b>	0.100	0.12	0.150	0.004	0.005	0.006
<b>D</b>	1.60	1.70	1.95	0.063	0.066	0.077
<b>E</b>	1.10	1.25	1.50	0.043	0.049	0.059
<b>L</b>	0.08			0.003		
<b>H<sub>E</sub></b>	2.65	2.85	3.10	0.104	0.112	0.122

### Soldering Footprint



Symbol	Millimeters	Inches
<b>F</b>	1.60	0.063
<b>G</b>	3.20	0.125
<b>J</b>	0.60	0.024
<b>K</b>	0.80	0.031