

1. Features

- 350W Peak Pulse Power ($t_P=8/20\mu s$)
- Low Capacitance: 1.0pF(typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): $\pm 20KV$
IEC 61000-4-2 (ESD Contact): $\pm 20KV$

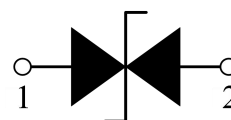
2. Pin Description



3. Applications

- Smart Phone and Tablet PC
- TV and Set Top Box
- PDA

4. Schematic Diagram



5. Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
SCSB12S1	SOD323	2.60x1.30x1.00	7" T&R	3,000

6. Limiting Values($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	± 20	kV
		IEC 61000-4-2; Air Discharge	-	± 20	kV
P_{PP}	Peak Pulse Power	$t_P = 8/20\text{ }\mu s$	-	350	W
I_{PPM}	Rated Peak Pulse Current	$t_P = 8/20\text{ }\mu s$	-	18	A
T_A	Ambient Temperature Range	-	-55	125	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-	-55	150	$^{\circ}\text{C}$

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

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	$T_A = 25\text{ }^{\circ}\text{C}$	-	-	5.0	V
V_{BR}	Breakdown Voltage	$I_R = 1\text{ mA}$; $T_A = 25\text{ }^{\circ}\text{C}$	6.0	-	-	V
I_R	Reverse Leakage Current	$V_{RWM} = 5\text{ V}$; $T_A = 25\text{ }^{\circ}\text{C}$	-	-	1	μA
V_C	Clamping Voltage	$I_{PP}=1\text{ A}$, $t_P=8/20\mu s$	-	-	9.8	V
		$I_{PP}=18\text{ A}$, $t_P=8/20\mu s$	-	-	20	V
C_J	Junction Capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$	-	1.0	-	pF

8. Typical Characteristics

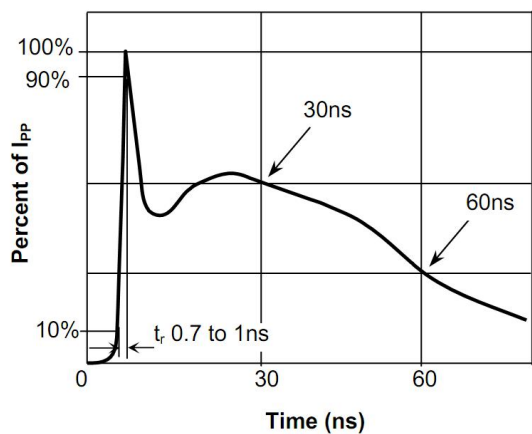


Fig.1 Pulse Waveform-ESD(IEC61000-4-2)

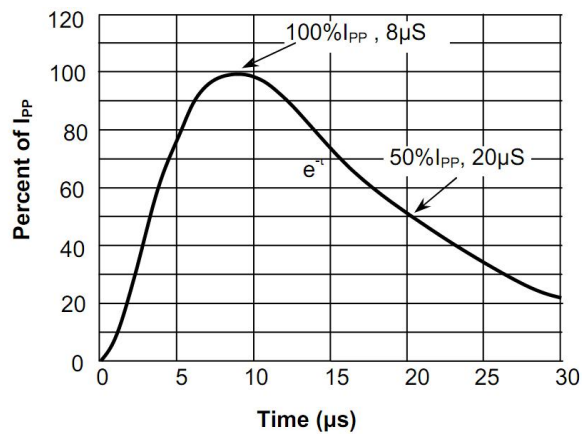


Fig.2 Pulse Waveform-8/20 μ s

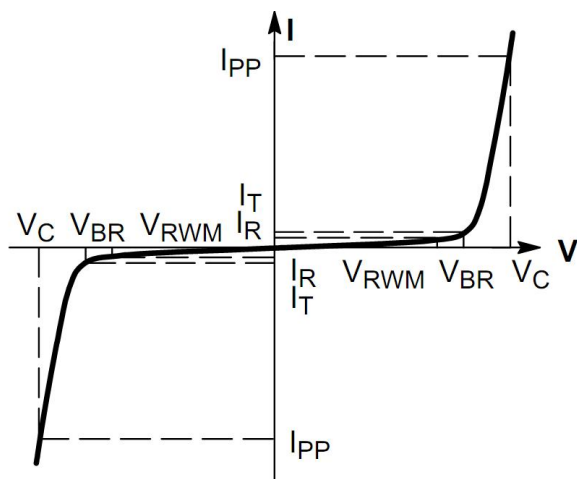


Fig.3 V-I Characteristics for Bidirectional Diode

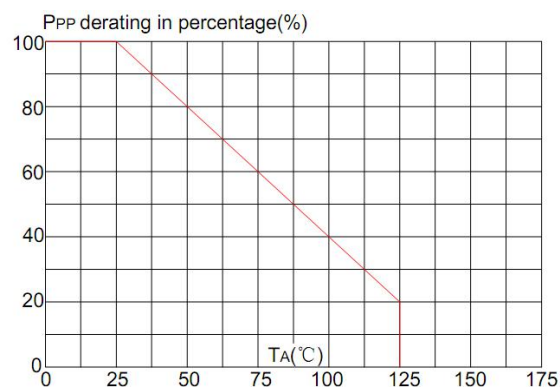
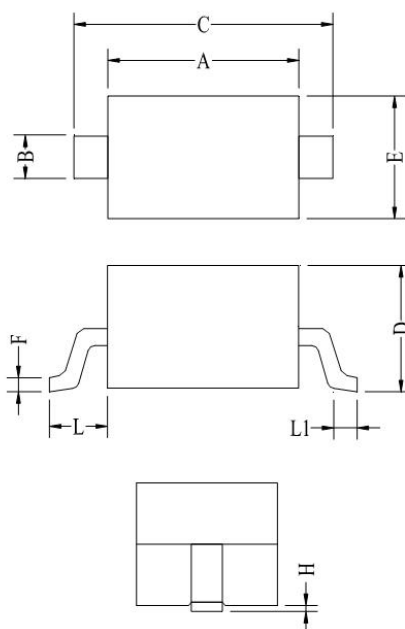


Fig.4 Power Derating Curve

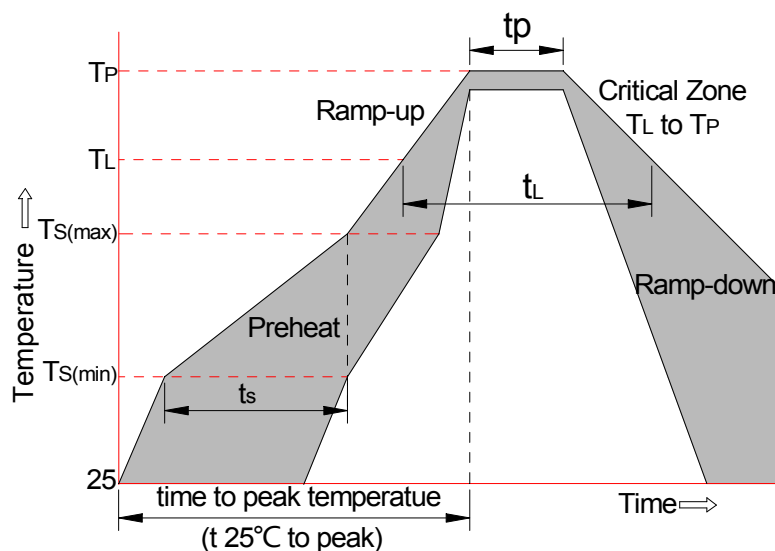
9. Package Outline Dimensions

SOD323 Package Outline



Symbol	Dimensions in millimeters	
	Min	Max
A	1.60	1.80
B	0.25	0.35
C	2.50	2.70
D	0.00	1.00
E	1.20	1.40
F	0.08	0.15
L	0.475REF	
L1	0.25	0.40
H	0.00	0.10

10. Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C