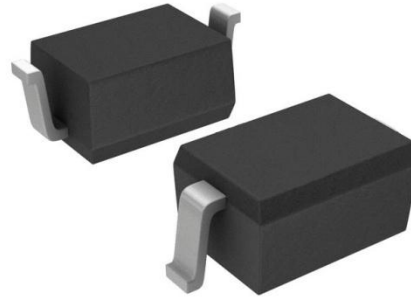


RLSD12A0251C

Transient Voltage Suppression Diode

Features

- 400Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 40A (8/20 μs)



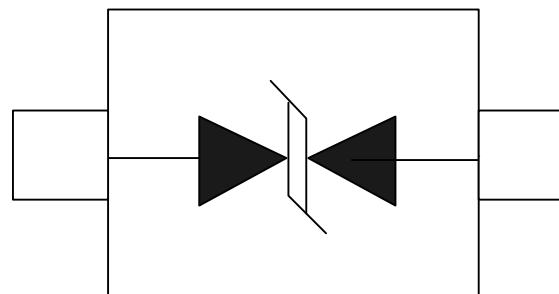
Applications

- Microprocessor based equipment
- RS232, RS485 Interfaces
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Power line protection
- Peripherals

Mechanical Data

- SOD123 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



SOD-123



Absolute Maximum Rating

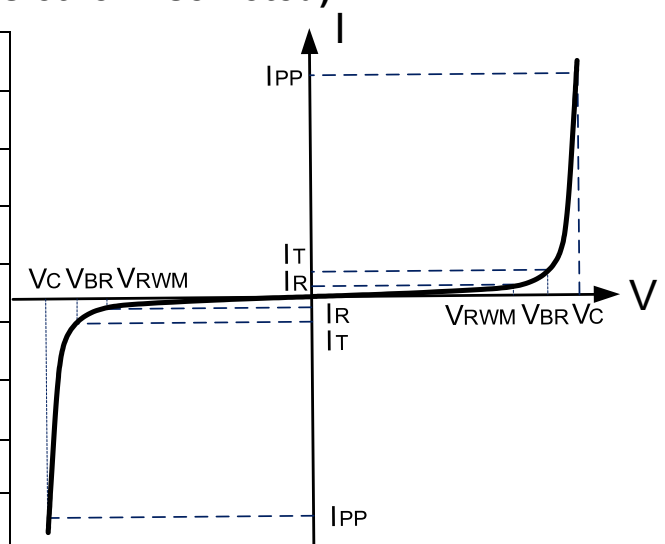
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	400	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	40	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 150	°C
Storage Temperature	T_{stg}	-55 to + 150	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				2.5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	3.3			V
Reverse Leakage Current	I_R	$V_{RWM} = 2.5V, T = 25^\circ C$			1	uA
Clamping Voltage	V_C	$I_{PP} = 40A, t_p = 8/20\mu s$		10		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		85		pF

Electrical Parameters (TA = 25°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



Note: 8/20µs pulse waveform.



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

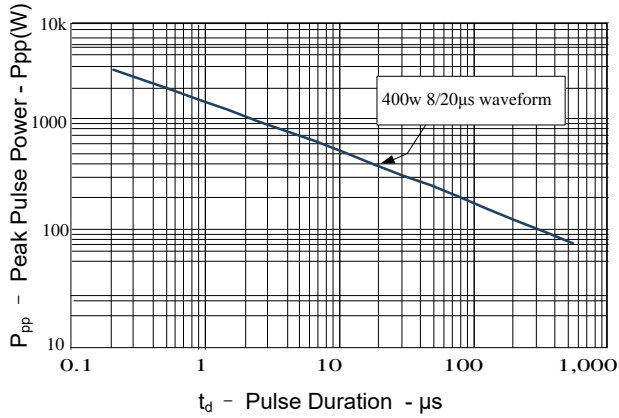


Figure 2: Power Derating Curve

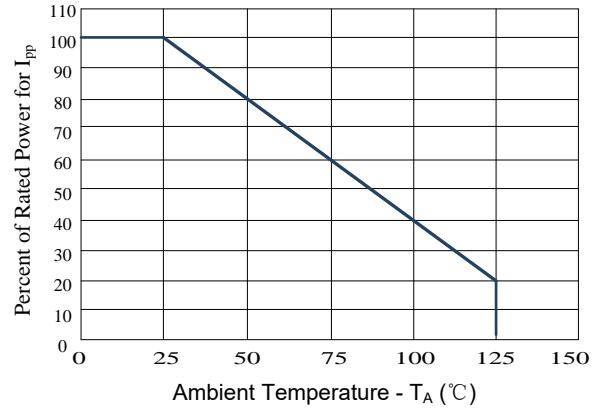


Figure3: Pulse Waveform

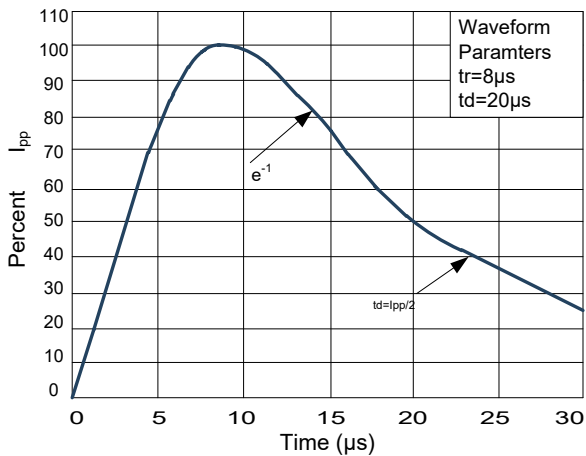
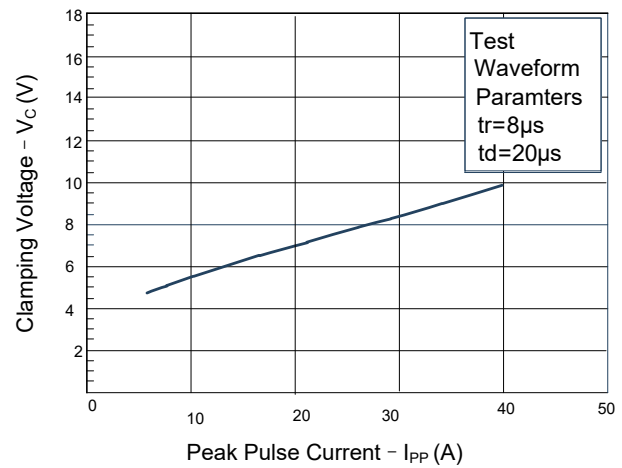
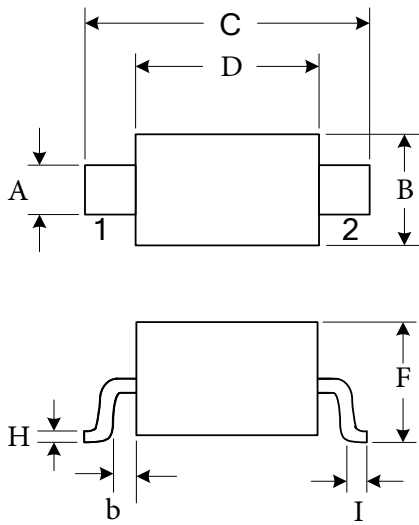


Figure 4: Clamping Voltage vs. I_pp

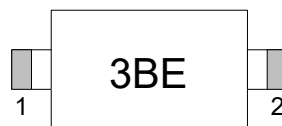


Outline Drawing – SOD123



DIMENSIONS			
SYMBOL	MILLIMETER		
	MIN	TYP	MAX
A	0.520	0.550	0.570
B	1.400	1.550	1.700
C	3.350	3.650	3.850
D	2.550	2.650	2.850
E	0.000	0.050	0.100
F	1.050	1.100	1.150
G	0.620	0.650	0.670
H	0.100	0.110	0.120
I	0.250	0.350	0.450

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
RLSD12A0251C	SOD123	3000	Tape and reel

