

ESD8V0D5B

Description

ESD8V0D5B is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

Features

- Package: SOD-523
- Ultra low leakage: nA level
- Operating voltage: 8V
- Low clamping voltage
- Response Time is Typically < 1 ns
- 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) 8A (8/20 μs)
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- Marking: 8C

Absolute Ratings

Tamb=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Maximum Reverse Peak Pulse Current(8/20 μs)	I _{PP}	8	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	KV
ESD per IEC 61000-4-2 (Contact)		± 30	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-40 to +125	°C
Lead Soldering Temperature	T _L	260 (10 sec)	°C

Electrical Characteristics

TA=25°C unless otherwise specified

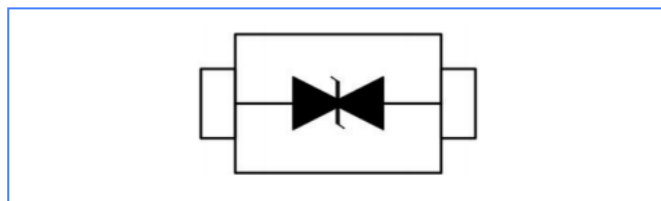
Symbol	Parameter	Conditions	Min	Typ	Max	Units
V _{RWM}	Reverse Working Peak Voltage	-			8.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	8.1		11	V
I _R	Reverse Current	V _{RWM} = 5V			0.5	μA
V _C	Clamping Voltage	I _{PP} =1A, t _P =8/20 μs			12	V
V _C	Clamping Voltage	I _{PP} =8A, t _P =8/20 μs			19	V
C _D	Diode Capacitance	V _R = 0V, f = 1MHz			30	pF



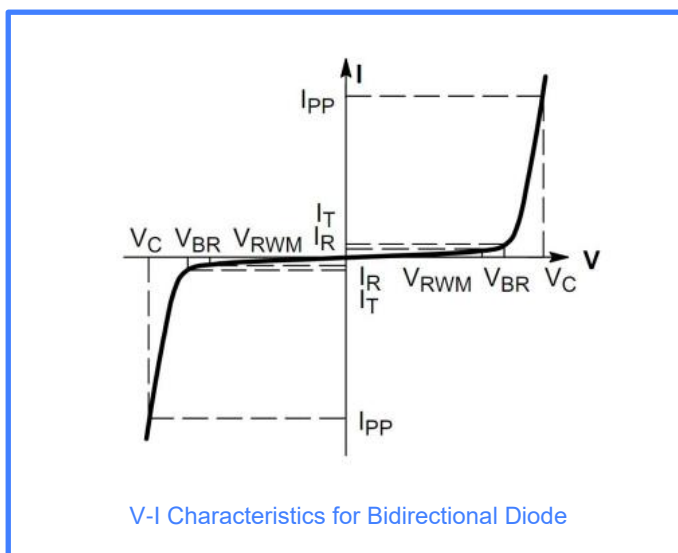
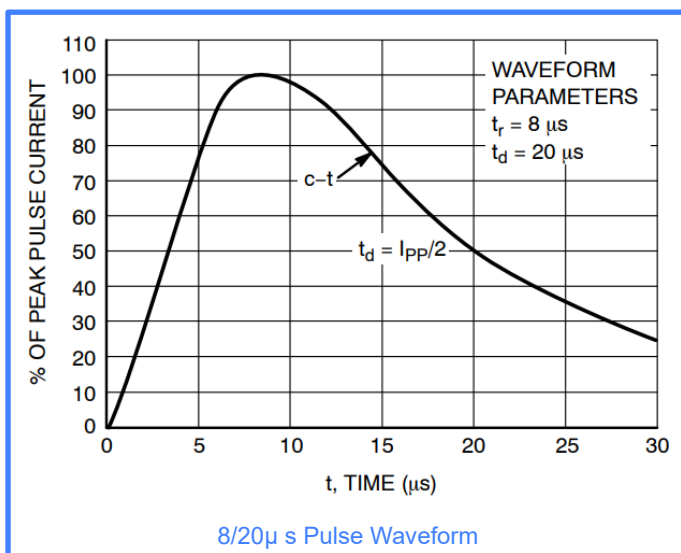
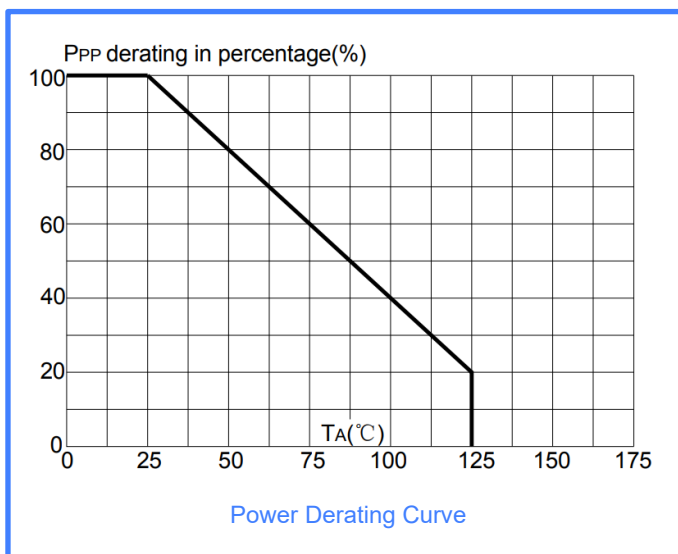
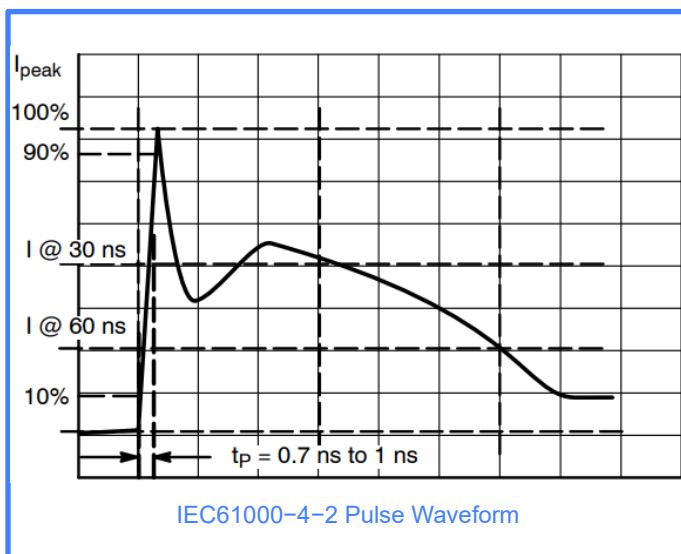
Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

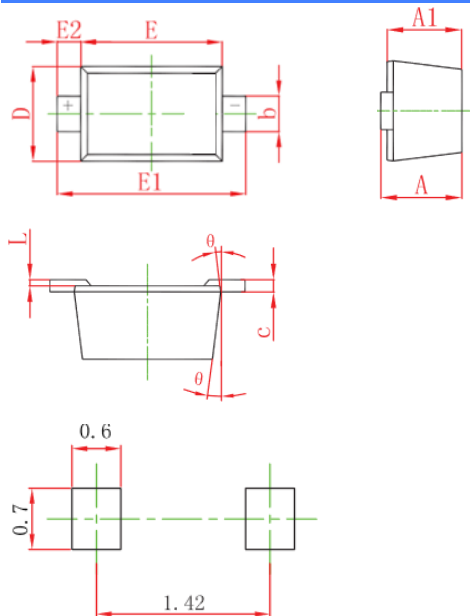
Circuit Diagram



Characteristic Curves



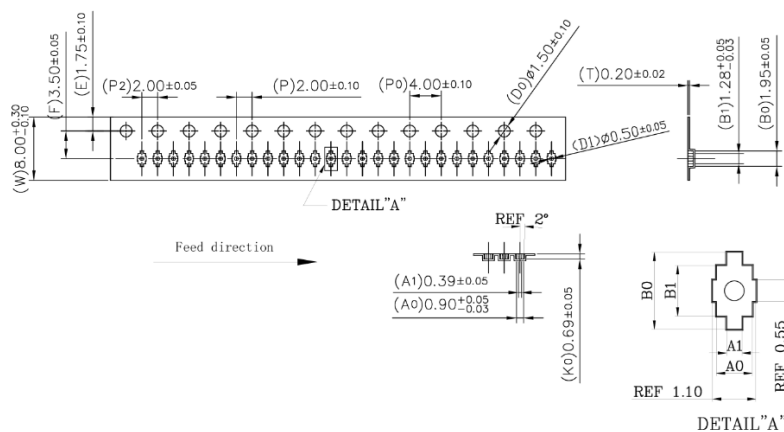
SOD523 Package Outline & Dimensions



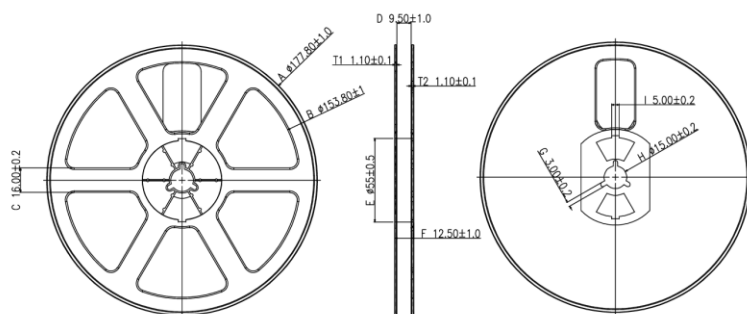
Symbol	Dimensions in mm	
	min	max
A	0.530	0.730
A1	0.500	0.700
b	0.280	0.380
c	0.080	0.150
D	0.750	0.850
E	1.100	1.300
E1	1.500	1.700
E2	0.200REF	
L	0.010	0.070
θ	7° REF	

Packaging

Tape



Reel (Quantity: 3000Pcs)



Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.