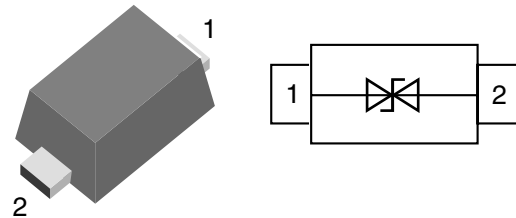


## Low Capacitance ESD Protection Diode in SOD-523

### Features

- 40Watts peak pulse power ( $t_p = 8/20\mu s$ )
- SOD-523 package
- Bidirectional configurations
- SCR technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 2.7pF$  typ.)
- Protection one data/power line to:
  - IEC 61000-4-2  $\pm 10kV$  contact  $\pm 15kV$  air
  - IEC 61000-4-4 (EFT) 40A (5/50ns)
  - IEC 61000-4-5 (Lightning) 3.5A (8/20 $\mu s$ )



### Mechanical Data

- **Case:** SOD-523 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- Audio Line, Speaker, Headset, Microphone Protection
- Human Interface Devices (Keyboard, Touchpad, Buttons)
- USB2.0 Protection

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

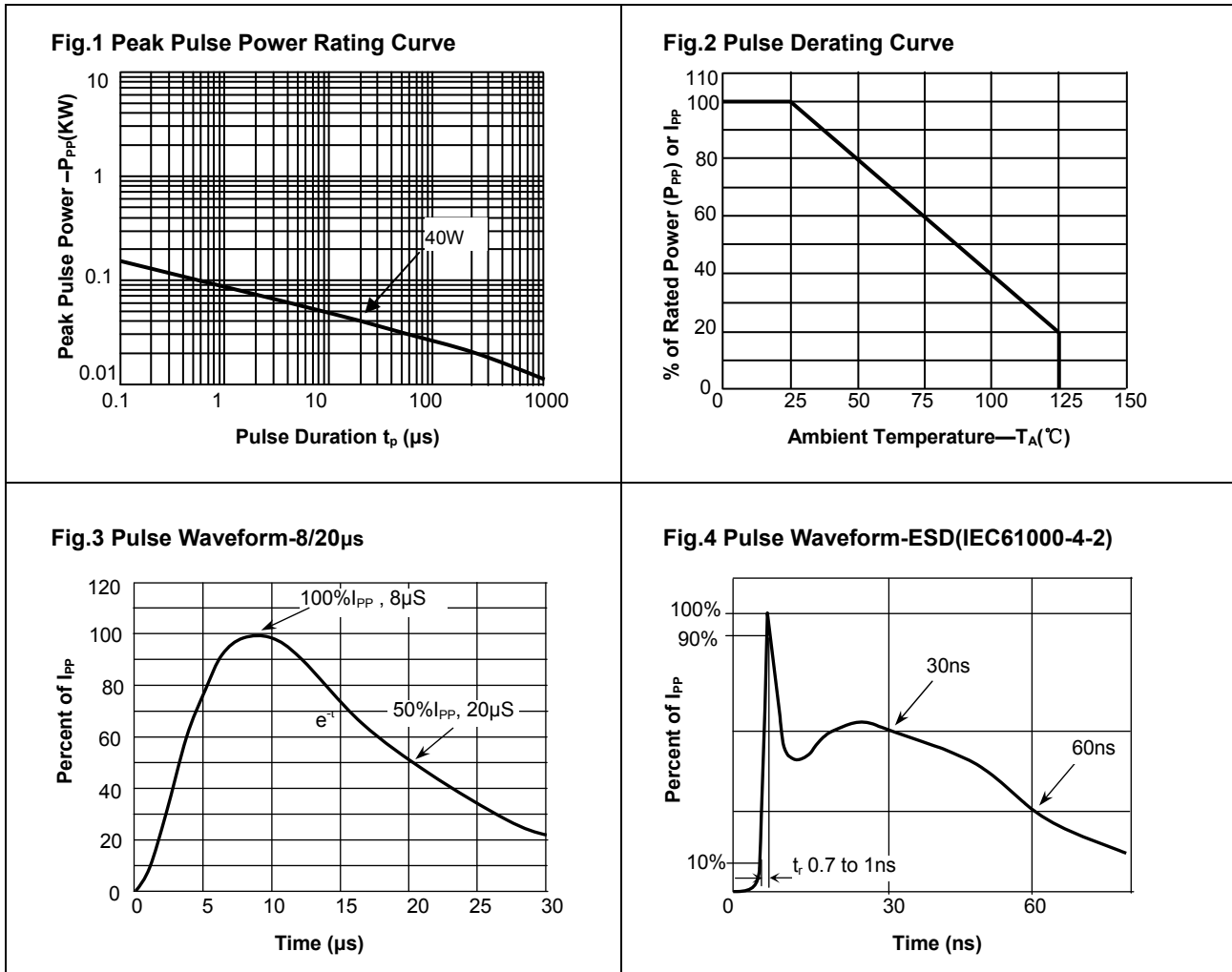
Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_p=8/20\mu s$ )	$P_{PP}$	40	W
ESD contact/air discharge (IEC-61000-4-2)	$V_{ESD}$	10/15	kV
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PP}$	3.5	A
Junction Temperature	$T_J$	-55 to +125	°C
Storage temperature	$T_{STG}$	-55 to +150	°C

### Electrical Characteristics

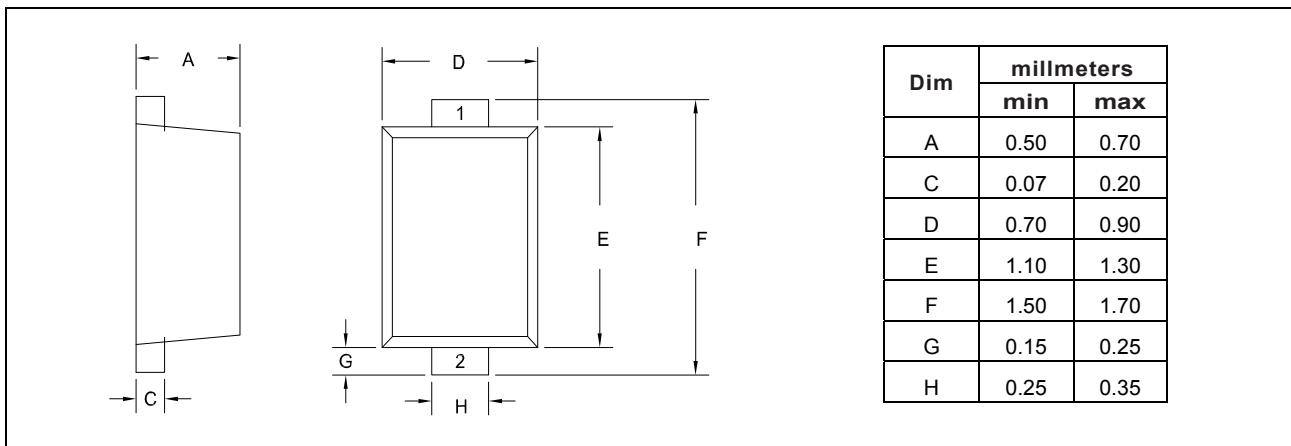
( $T_A = 25$  °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	5.5	6.5		V
Reverse Leakage Current	$I_R$	$V_R=5.0V$		5	100	nA
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=3.5A$			11.5	V
Trigger Voltage (IEC 61000-4-2)	$V_T$	$V_{ESD}=8kV$		50		V
Clamping Voltage (IEC 61000-4-2)	$V_C$	$V_{ESD}=8kV$		10		V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		2.7	3.5	pF

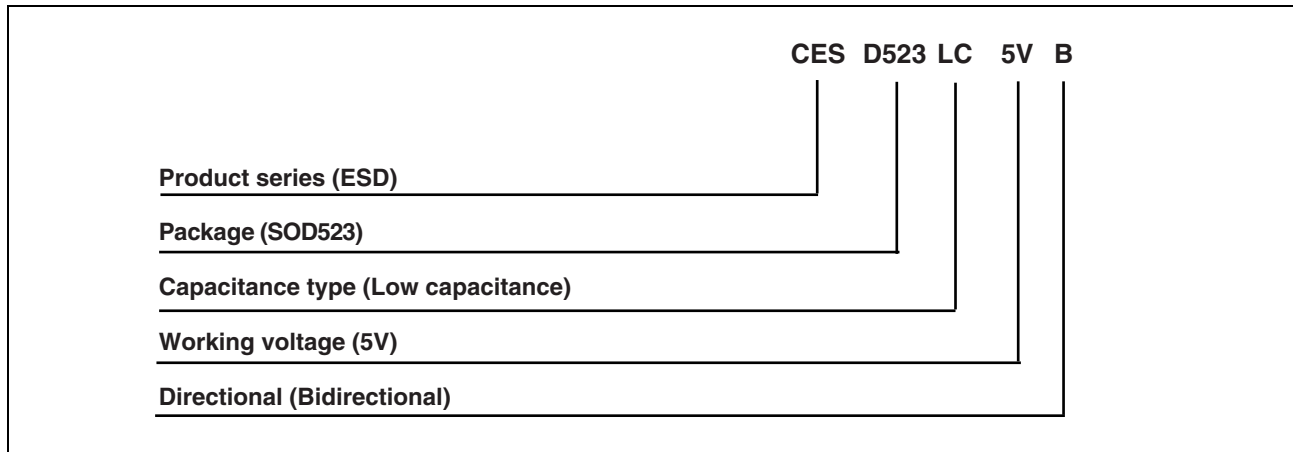
**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)



**Package Dimensions**



## Part number system



## Marking



## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CESD523LC5VB	SOD-523	Tape and reel	3000pcs / reel	EIA STD RS-481

## Revision history

Date	Revision	Changes
23-May-2012	1.0	Initial release

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