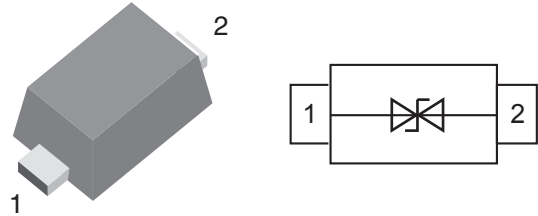


ESD Protection Diode in SOD-523

Features

- 100Watts peak pulse power ($T_p = 8/20\mu s$)
- SOD-523 package
- Bidirectional configurations
- Low clamping voltage
- Low leakage current
- Medium capacitance ($C_j = 13pF$ typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 10A (8/20 μs)



Mechanical Data

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

Applications

- Computers and peripherals
- Communication systems
- Notebook
- Cellular handsets and accessories
- Portable electronics
- Audio and video equipment

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

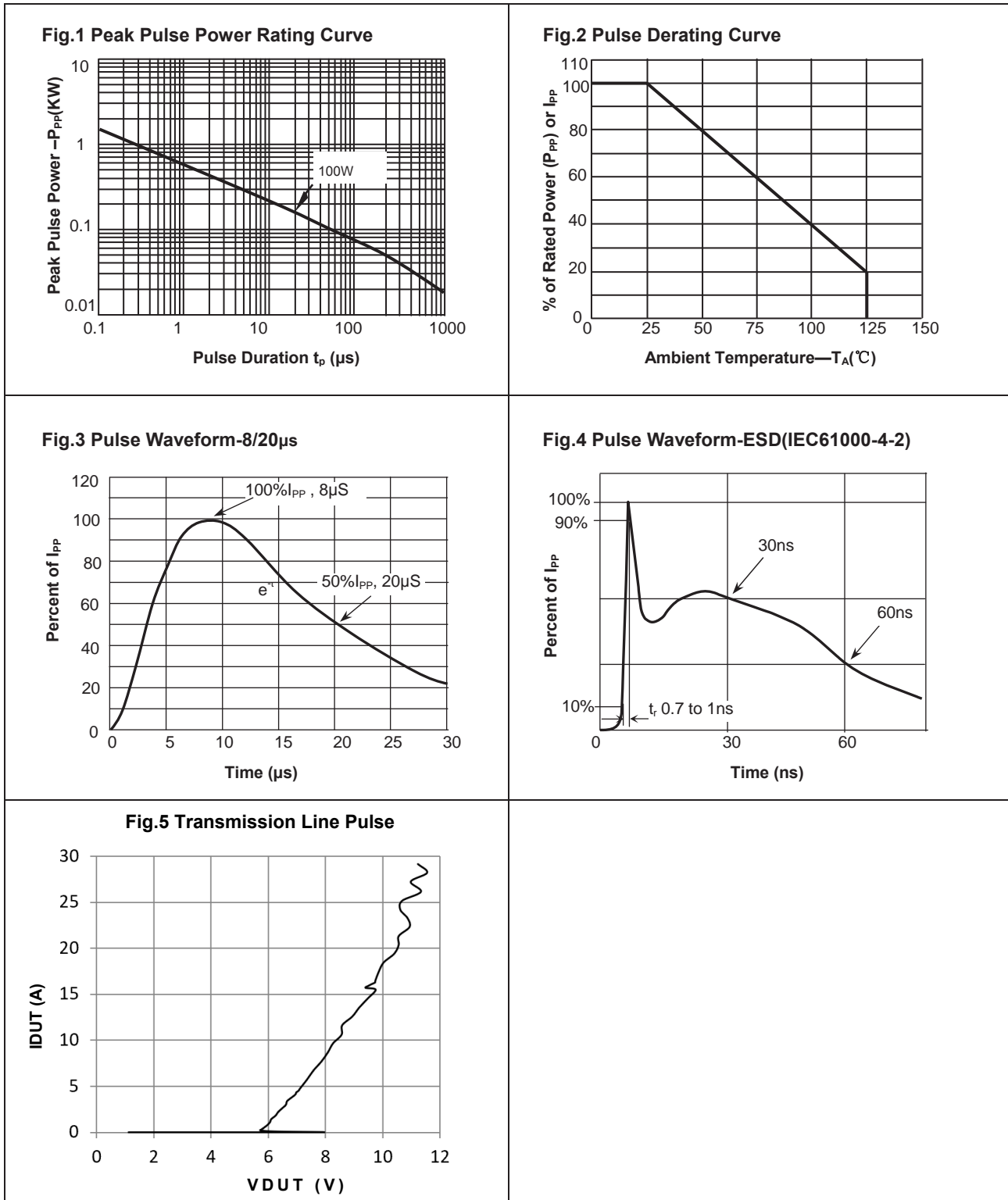
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p = 8/20\mu s$)	P_{PP}	100	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	30/30	kV
Peak Pulse Current ($T_p = 8/20\mu s$)	I_{PP}	10	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

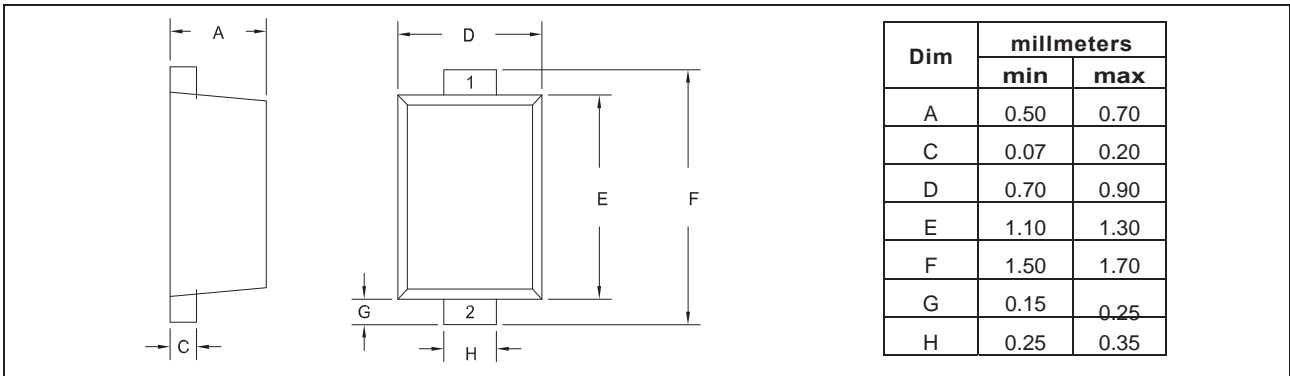
($T_A = 25$ °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	5.6			V
Reverse Leakage Current	I_R	$V_R = 5.0V$			1	μA
Clamping Voltage	V_C	$I_{PP} = 10A, T_p = 8/20\mu s$		10		V
Clamping Voltage (TLP)	V_C	$I_{PP} = 16A, T_p = 100ns$		9.5		V
Dynamic Resistance	R_{dyn}	$T_p = 100ns$			0.22	Ω
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		13		pF

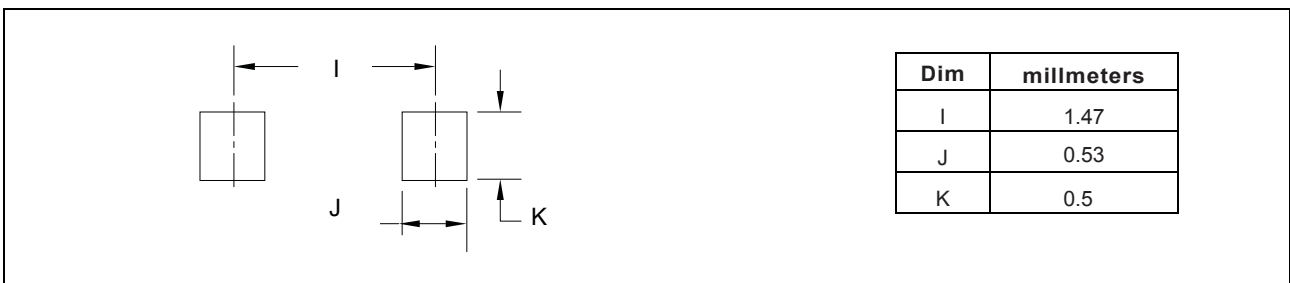
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



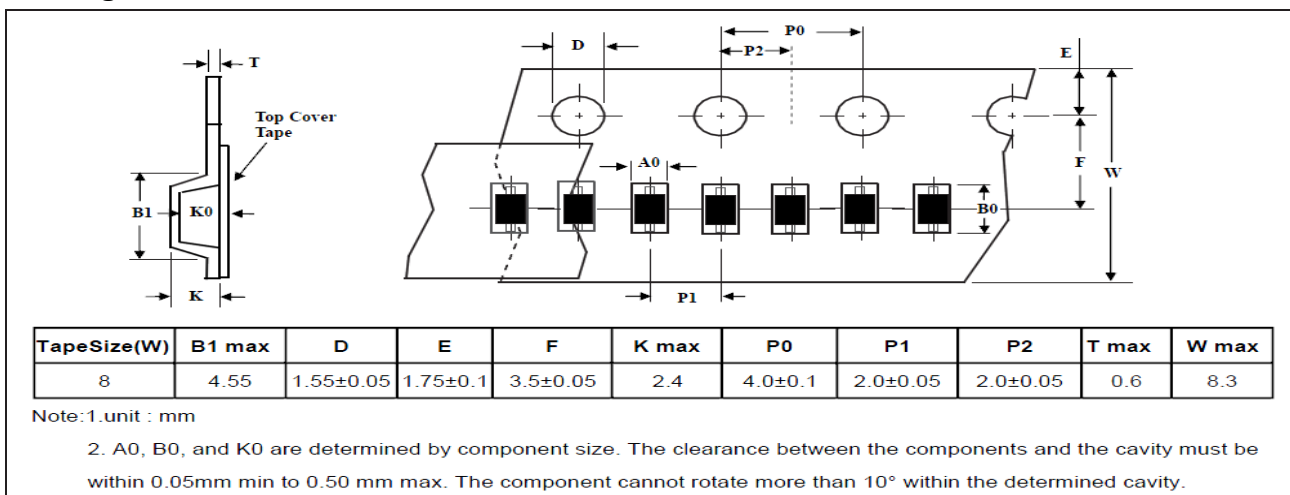
Package Dimensions



PAD Dimensions



Package Information



Ordering information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
CESD523NC5VB	5C	SOD-523	Tape and reel	5000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
5-Jul.-2021	4.0	Update

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