

**UNIDIRECTIONAL
ESD PROTECTION DIODE**

STAND-OFF VOLTAGE - **5.0** Volts
POWER DISSIPATION - **260** WATTS

GENERAL DESCRIPTION

● Unidirectional ESD protection in a SOD 523 plastic designed to protect one transmission or data line from the damage caused by ESD and other transients.

FEATURES

- Unidirectional ESD protection of one line.
- Max. peak pulse power : Ppp = 260W at tp = 8/20 us
- Low clamping voltage : VCL = 17V at Ipp = 15A
- ESD protection >25KV per MIL-STD-883C, Method 3015-6: Class 3
- IEC 61000-4-2 (ESD), >+/-30KV (air); >+/-30KV (contact).
- IEC 61000-4-5 (surge); Ipp = 15A at tp = 8/20 us.
- Qualified to AEC-Q101 Rev_C

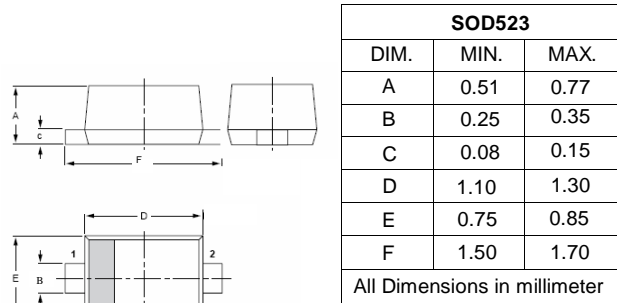
APPLICATION

- Computers and peripherals
- Communication system
- Audio and video equipment
- Data lines

MECHANICAL DATA

- Case Material: "Green" molding compound UL flammability classification 94V-0 (No Br,Sb, Cl)
- Terminals: Lead Free Plating (Matte Tin Finish)
- Component in accordance to RoHs 2011/65/EU

SOD523



PIN ASSIGNMENT	
1	Cathode
2	Anode

MAXIMUM RATINGS (Tj= 25°C unless otherwise noticed)

Rating	Symbol	Value	Unit
Peak pulse Power (8/20us Waveform)	PPPM	260	W
Peak Pulse Current (8/20us Waveform)	IPP	15.0	A
Operating Junction Temperature Range	TJ	-55 to + 150	°C
Storage Temperature Range	Tstg	-55 to + 150	°C
Soldering Temperature, t max = 10s	TL	260	°C

ELECTRICAL CHARACTERISTICS (Tj= 25°C unless otherwise noticed)

Parameter	Symbol	Conditions	Min	Max	Unit
Reverse standoff voltage	VDRM	---	---	5	V
Reverse leakage current	IRM	VDRM = 5 V	---	1	uA
Breakdown voltage	VBR	IR = 1 mA	6.4	7.2	V
Diode capacitance	CJ	VR = 0 V , f = 1MHz	---	140	pF
Clamping voltage	VCL	IPP = 1 A (8/20us) IPP = 15 A (8/20us)	---	9 17	V

REV. 6, Sep-2016, KSIR01

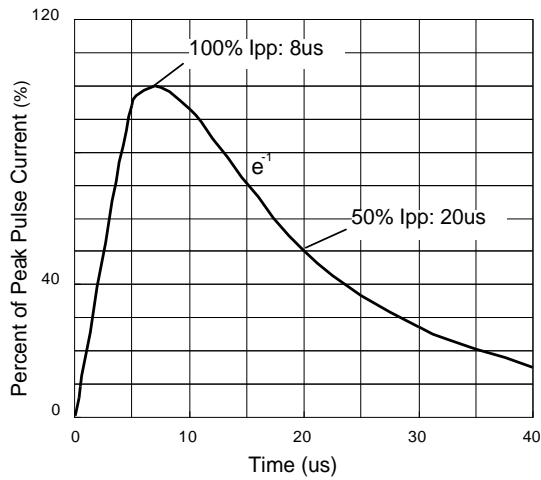


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

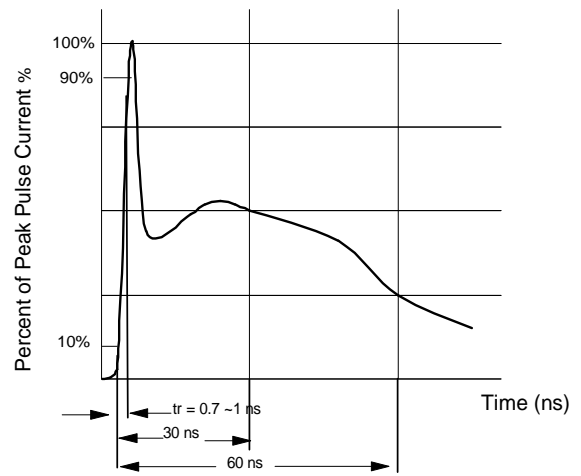


Figure 2. ESD pulse waveform according to IEC 61000-4-2

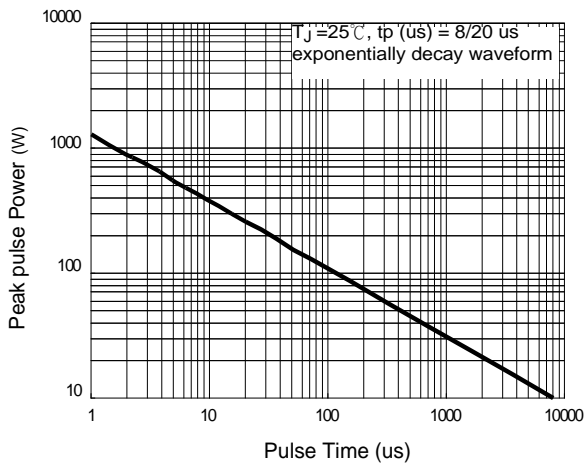


Figure 3. Power Dissipation versus Pulse Time

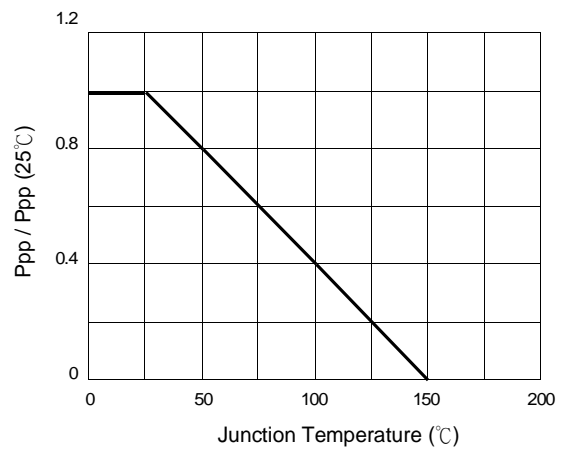


Figure 4. Peak pulse power versus TJ

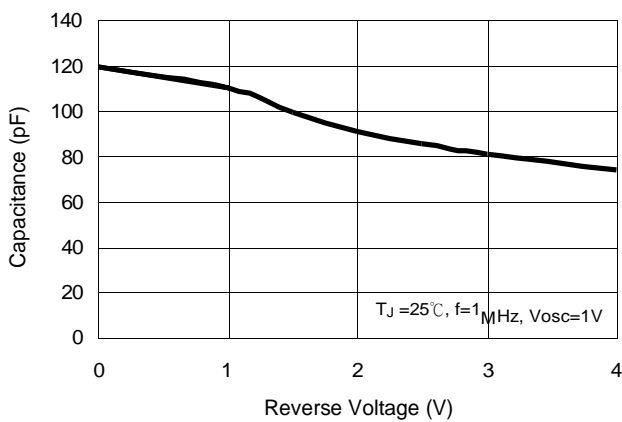


Figure 5. Typical Junction Capacitance

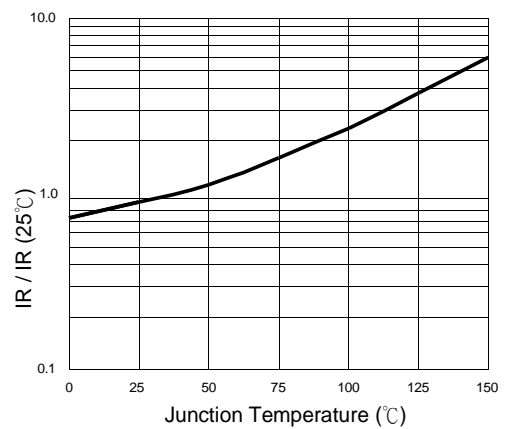


Figure 6. Reverse Leakage Current versus TJ

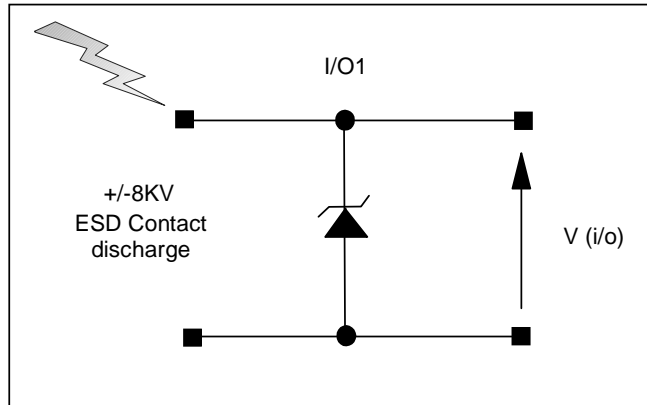


Figure 7. ESD Test Configuration

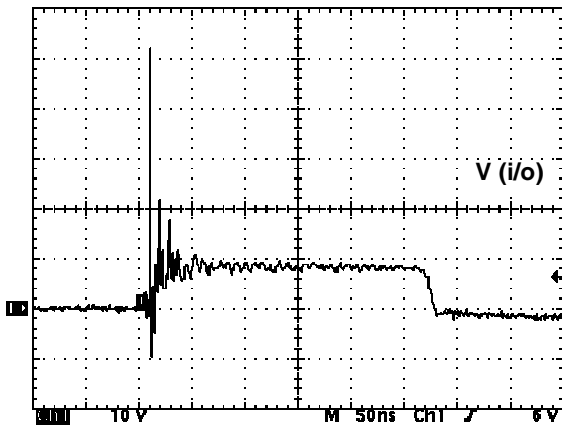


Figure 8. Clamped +8 kV ESD voltage waveform

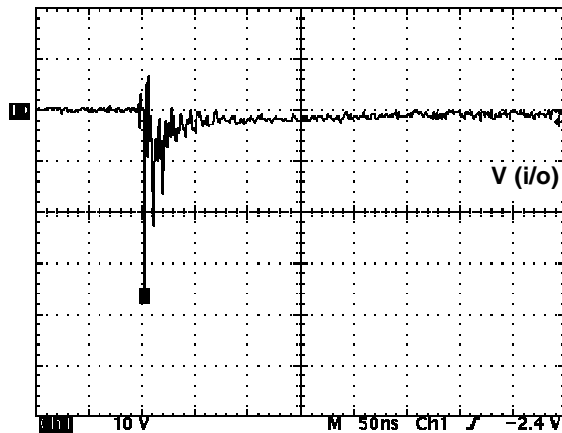
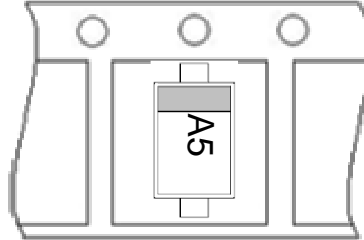


Figure 9. Clamped -8 kV ESD voltage waveform

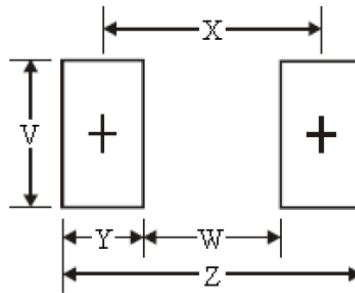
Marking & Orientation



Packaging Information

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L26ESD5V0A2	3000	7	45000	90K/180K

SOD-523 Soldering Pad Layout



Dim.	Millimeters	Inches
Z	2.30	0.090
X	1.50	0.059
W	0.70	0.027
Y	0.80	0.031
V	0.60	0.023

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