

1.Description

The AZ5123-01H is designed to protect voltage sensitive components from damage or latch-up due to ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD for board level. Because of its small size and bi-directional design, it is ideal for use in cellular phones, MP3 players, and portable applications that require audio line protection.

3.Applications

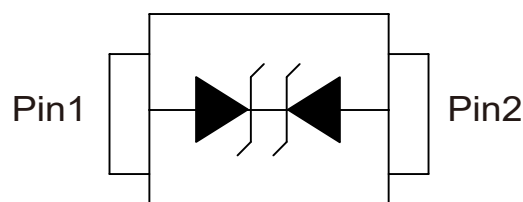
- Cellular handsets and accessories
- Portable digital assistants
- Notebooks & handhelds

2.Features

- IEC 61000-4-2 Level 4 ESD Protection
- - $\pm 25\text{kV}$ Contact Discharge
- - $\pm 25\text{kV}$ Air Discharge
- 50W Peak pulse Power (8/20us)
- Low clamping voltage
- Working voltage: 3.3V
- Low leakage current
- RoHS compliant
- Protecting one bi-directional lines
- Junction capacitance: 12pF Typ

- Digital cameras
- MP3 players
- Peripherals

4.Pinning information



SOD-523



5. Absolute Maximum Ratings

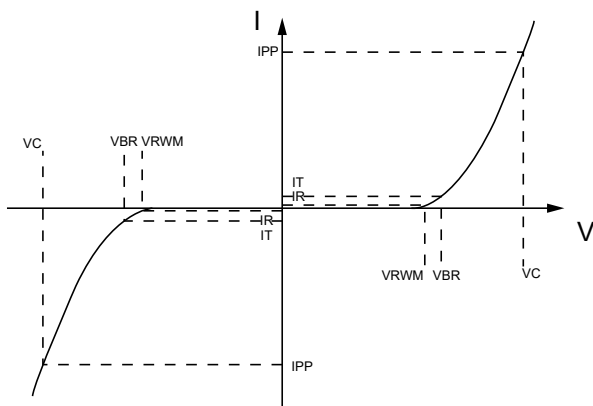
Parameter	Symbol	Min.	Max.	Units
Peak pulse power ($t_p=8/20\mu s$)@25°C	P_{PK}		50	W
Peak pulse current ($t_p=8/20\mu s$)@25°C	I_{PP}		8	A
ESD (IEC61000-4-2 air discharge) @25°C	V_{ESD}		±25	kV
ESD (IEC61000-4-2 contact discharge) @25°C			±25	kV
Junction temperature	T_J		150	°C
Operating temperature	T_{OP}	-40	125	°C
Storage temperature	T_{STG}	-55	150	°C
Lead temperature	T_L		260	°C



6. Electrical Characteristic ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	3.8			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$ (8 x 20 μs pulse)		6		V
Clamping Voltage	V_C	$I_{PP}=8\text{A}$ (8 x 20 μs pulse)		10		V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, I/O to GND		15		pF

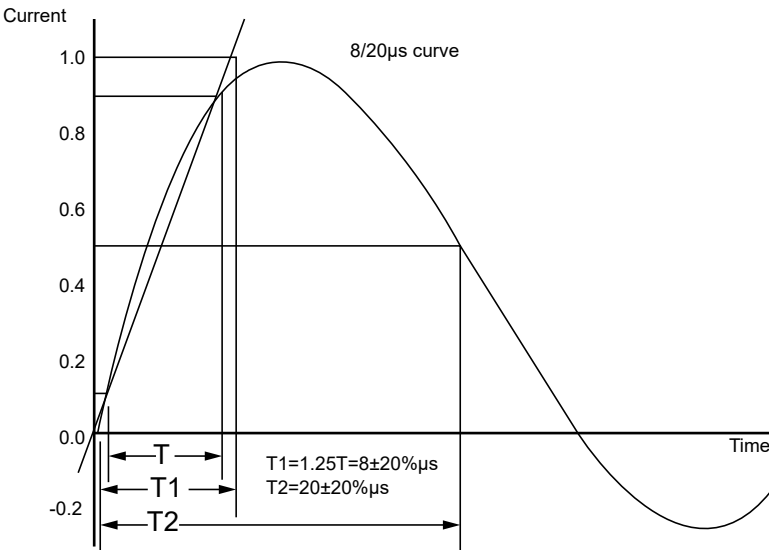
7. Portion Electronics Parameter



Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}

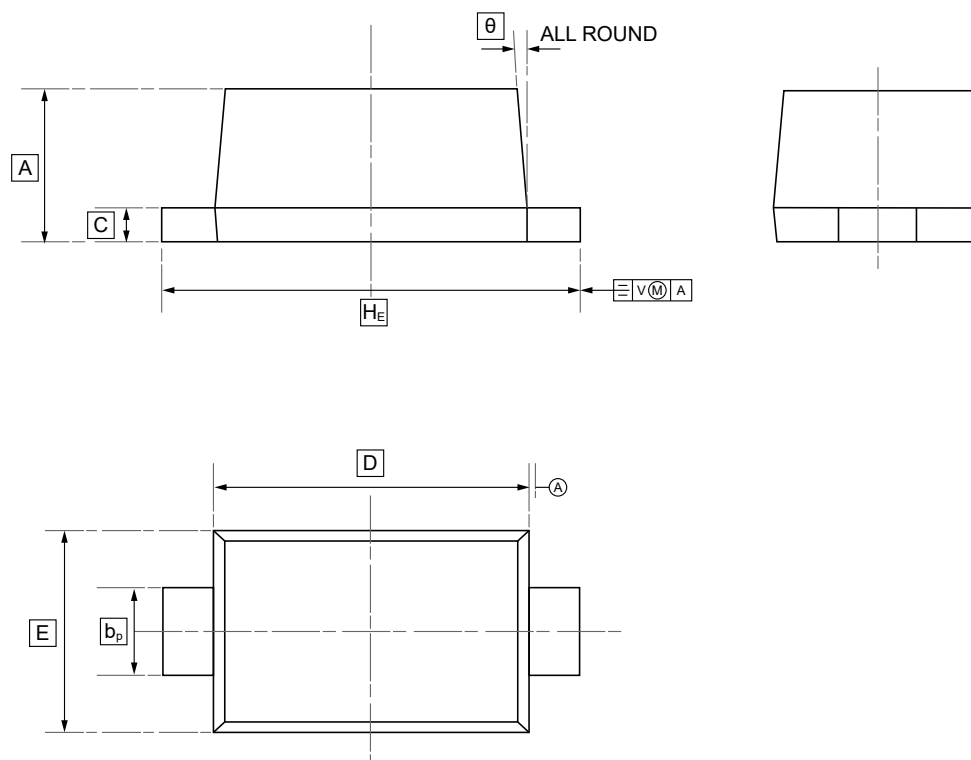


8. Typical characteristic





9.SOD-523 Package Outline Dimensions

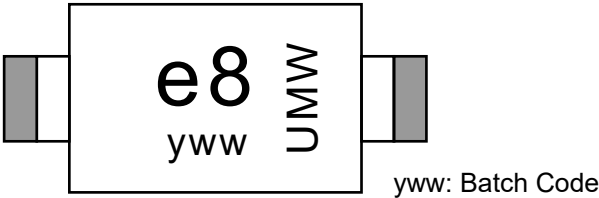


DIMENSIONS (mm are the original dimensions)

Symbol	A	b _p	C	D	E	H _E	θ
Min	0.58	0.3	0.100	1.15	0.75	1.5	5°
Max	0.68	0.4	0.135	1.25	0.85	1.7	



10.Ordering information



Order Code	Package	Base QTY	Delivery Mode
UMW AZ5123-01H	SOD-523	3000	Tape and reel



11.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

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