

AOZ8212BCI-05

Two-line Bi-directional TVS Diode

General Description

The AOZ8212BCI-05 is a two-line bi-directional transient voltage suppressor diode designed to protect voltage sensitive electronics from high transient conditions and ESD.

This device incorporates two TVS diodes in a small SOT-23 package. It may be used to meet the ESD immunity requirements of IEC 61000-4-2, Level 4 (± 15 kV air, ± 8 kV contact discharge).

The small SOT-23 package makes the AOZ8212BCI-05 ideal for applications where PCB space is a premium. The small size and high ESD protection is ideal for protecting voltage sensitive electronics from high transient conditions and ESD.

Features

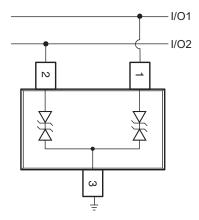
- ESD protection for high-speed data lines:
 - Exceeds: IEC 61000-4-2 (ESD) ± 30 kV (air),± 30 kV (contact)
 - Human Body Model (HBM) ± 30 kV
 - IEC 61000-4-5 (Lightning) 9 A (8/20 μs)
- Small package saves board space
- IEC 61000-4-4 (EFT) ± 40 A
- Low insertion loss
- Low clamping voltage
- Low operating voltages: 5 V

Applications

- Portable handheld devices
- Keypads, data lines, buttons
- Notebook computers
- Digital cameras
- Portable GPS

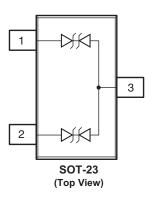


Typical Application



Bidirection Protection of Two Lines

Pin Configuration





Ordering Information

Part Number	Package	Environmental		
AOZ8212BCI-05	SOT-23	Green Product		



AOS Green Products use reduced levels of Halogens, and are also RoHS compliant.

Please visit www.aosmd.com/media/AOSGreenPolicy.pdf for additional information.

Absolute Maximum Ratings

Exceeding the Absolute Maximum ratings may damage the device.

Parameter	AOZ8212BCI-05
Peak Pulse Current, t _P = 8/20 μs	9 A
Peak Pulse Power, t _P = 8/20 μs	125 W
Storage Temperature (T _S)	-65°C to +150°C
ESD Rating per IEC61000-4-2, Contact ⁽¹⁾	± 30 kV
ESD Rating per IEC61000-4-2, Air ⁽¹⁾	± 30 kV
ESD Rating per Human Body Model ⁽²⁾	± 30 kV

Notes:

- 1. IEC 61000-4-2 discharge with C_Discharge = 150 pF, R_Discharge = 330 Ω .
- 2. Human Body Discharge per MIL-STD-883, Method 3015 $C_{Discharge}$ = 100 pF, $R_{Discharge}$ = 1.5 k Ω .

Maximum Operating Ratings

Parameter	Rating	
Junction Temperature (T _J)	-40°C to +150°C	

Electrical Characteristics

T_A = 25°C unless otherwise specified.

Symbol	Parameter		Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current		I _F	Forward Current
V _{CL}	Clamping Voltage @ I _{PP}		V _F	Forward Voltage
V_{RWM}	Working Peak Reverse Voltage		P _{pk}	Peak Power Dissipation
I _R	Maximum Reverse Leakage Current		СЈ	Max. Capacitance @ V _R = 0 and f = 1 MHz
V _{BR}	Breakdown Voltage			

Electrical Characteristics

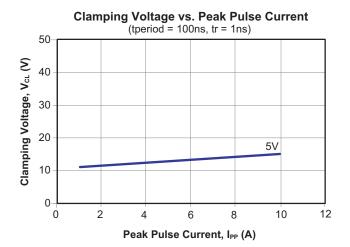
 $T_A = 25$ °C unless otherwise noted.

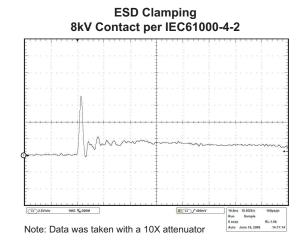
	Device	V _{RWM} (V)	V _{BR} (V)	I _R (μA)	V _{CL} Max.		C _J (pF)	C _{.l} (pF)
Device	Marking	Max.	Min @ 5mA	Max.	I _{PP} = 1 A	I _{PP} = 10 A	Typ.	Max.
AOZ8212BCI-05	CC5	5.0	7.0	1.0	11.0	15.0	3.5	5.0

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Typical Performance Characteristics





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