



General Description

The AOZ8212ACI-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 (\pm 15kV air, \pm 15kV contact discharge).

The AOZ8212ACI-05 comes in a SOT-23 package and is rated over a -40°C to +85°C ambient temperature range.

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

Features

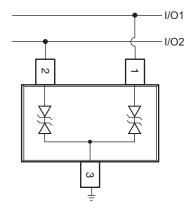
- ESD protection for high-speed data lines:
 - Exceeds: IEC 61000-4-2 (ESD) ±15kV (air), ±15kV (contact)
 - Human Body Model (HBM) ±30kV
 - IEC 61000-4-5 (Lightning) 6A (8/20µs)
- IEC 61000-4-4 (EFT) ±40A
- Low clamping voltage
- Low operating voltages: 5.0V

Applications

- Portable handheld devices
- Keypads, data lines, buttons
- Notebook computers
- Digital Cameras
- Portable GPS
- MP3 players

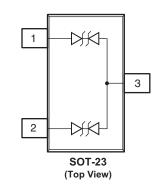


Typical Application



Bidirection Protection of Two Lines

Pin Configuration





Ordering Information

Part Number	Ambient Temperature Range	Package	Environmental	
AOZ8212ACI-05	-40°C to +85°C	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	Rating		
Peak Pulse Current (I _{PP}), t _P = 8/20µs	6A		
Peak Power Dissipation (TBD @ 25°C)	110W		
Storage Temperature (T _S)	-65°C to +150°C		
IEC 61000-4-4 (EFT)	±40A		
ESD Rating per IEC61000-4-2, Contact ⁽¹⁾	±15kV		
ESD Rating per IEC61000-4-2, Air ⁽¹⁾	±15kV		
ESD Rating per Human Body Model ⁽²⁾	±30kV		

Notes:

1. IEC 61000-4-2 discharge with C_{Discharge} = 150pF, R_Discharge = 330 Ω .

2. Human Body Discharge per MIL-STD-883, Method 3015 $C_{\text{Discharge}}$ = 100pF, $R_{\text{Discharge}}$ = 1.5k Ω .

Maximum Operating Ratings

Parameter	Rating
Junction Temperature (T _J)	-40°C to +125°C

Electrical Characteristics

 T_A = 25°C unless otherwise specified.

Symbol	Parameter	Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current	١ _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	CJ	Max. Capacitance @ V_R = 0 and f = 1MHz
V _{BR}	Breakdown Voltage		

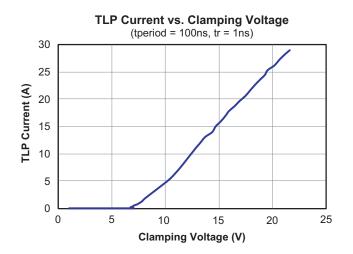
Electrical Characteristics

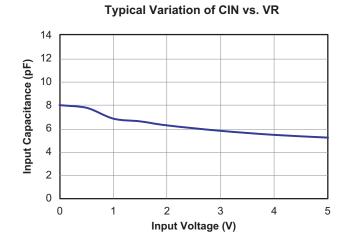
 $T_A = 25^{\circ}C$ unless otherwise noted.

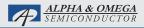
	Device	V _{RWM} (V)	V _{BR} (V)	I _R (μΑ)	V _{CL} Max.		C _J (pF)	C _J (pF)
Device	Marking	Max.	Min @ 1mA	Max.	I _{PP} = 1A	I _{PP} = 10A	Typ.	Max.
AOZ8212ACI-05	BX	5.0	5.5	0.1	10.0	16.0	11.0	14.0

Typical Performance Characteristics

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