

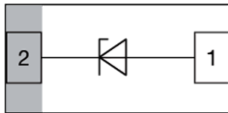
# New ESD Protection Diodes in Ultra Compact DFN1006 Package for Automotive Applications

Offered in the ultra-compact DFN1006 two-pin package with wettable flanks, Vishay’s new VMMBZ16C1 and VMMBZC1 ESD protection diodes are single-line unidirectional / bidirectional devices for supply and interface lines with high signal levels.

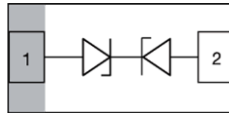
Connected between the signal or data line and the ground, the VMMBZ16C1 and VMMBZ33C1 offer high isolation within the specified working range. Due to the short leads and small package size of the DFN1006 package, the devices’ line inductance is very low, allowing fast transients like an ESD strike to be clamped with minimal over- or undershoots.

Both devices are also available in automotive AEC-Q101 qualified versions.

## Unidirectional Device



## Bidirectional Device



DFN1006



Automotive

## Device Specification Table

No.	Device Name	Package	Type	V <sub>RWM</sub>	Capacitance V <sub>R</sub> = 0 V (Typ.)	ESD-Immunity (Contact Discharge)
<b>Unidirectional Devices</b>						
1	<a href="#">VMMBZ16C1HD1-G3</a>	DFN1006-2A	Commercial	14 V	29 pF	30 kV
2	<a href="#">VMMBZ16C1HD1HG3</a>		AEC-Q101			
3	<a href="#">VMMBZ33C1HD1-G3</a>		Commercial	28 V	16.1 pF	15 kV
4	<a href="#">VMMBZ33C1HD1HG3</a>		AEC-Q101			
<b>Bidirectional Devices</b>						
5	<a href="#">VMMBZ16C1DD1-G3</a>	DFN1006-2B	Commercial	± 14 V	14.5 pF	30 kV
6	<a href="#">VMMBZ16C1DD1HG3</a>		AEC-Q101			
7	<a href="#">VMMBZ33C1DD1-G3</a>		Commercial	± 28 V	8 pF	15 kV
8	<a href="#">VMMBZ33C1DD1HG3</a>		AEC-Q101			



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## Features

- Ultra compact DFN1006-2A/B package
- Low package height of < 0.5 mm
- 1-line ESD protection
- Working range of  $\pm 14$  V or  $\pm 28$  V
- ESD immunity in accordance with IEC 61000-4-2
  - $\pm 15$  kV to  $\pm 30$  kV contact discharge
  - $\pm 15$  kV to  $\pm 30$  kV air discharge
- e3 - Sn, tin-plated exposed side wall of lead frame
- AEC-Q101 qualified versions available
- AOI capable (AOI = automated optical inspection)

## Applications

- General ESD protection for supply and interface lines with high signal levels

## Samples

Available at Vishay Sample Service Center (VSSC)

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