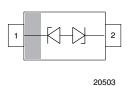


Vishay Semiconductors

Low Capacitance, Single-Line ESD-Protection Diode in SOD-323





22756 SOD-323

MARKING (example only)



XYZ = type code (see table below) bar = pin 1

LINKS TO ADDITIONAL RESOURCES





FEATURES

- For LIN-Bus applications
- Small SOD-323 package
- Working range: -16 V; +26.5 V
- Low leakage current I_R < 0.05 μA
- Low load capacitance C_D < 18 pF
- ESD-protection acc. IEC 61000-4-2
 - ± 30 kV contact discharge
 - ± 30 kV air discharge
- ESD capability according to AEC-Q101: human body model: class H3B: > 8 kV
- e3 pins plated with tin (Sn)
- 1-line ESD-protection
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

ORDERING INFORMATION								
PART NUMBER (EXAMPLE)	ENVIRONMENTAL AND QUALITY CODE				PACKAG	ING CODE		
	AEC-Q101 QUALIFIED	RoHS-COMPLIANT + LEAD (Pb)-FREE TERMINATIONS		TIN PLATED	3K PER 7" REEL (8 mm TAPE)	10K PER 13" REEL (8 mm TAPE)	ORDERING CODE (EXAMPLE)	
	QUALIFIED	STANDARD	GREEN	PLATED	15K/BOX = MOQ	10K/BOX = MOQ		
VLIN1626-02G	-	E	-	3	-08	-	VLIN1626-02G-E3-08	
VLIN1626-02G	Н	E	-	3	-08	-	VLIN1626-02GHE3-08	
VLIN1626-02G	-	E	-	3	-	-18	VLIN1626-02G-E3-18	
VLIN1626-02G	Н	Е	-	3	-	-18	VLIN1626-02GHE3-18	

PACKAGE DATA							
DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS	
VLIN1626-02G	SOD-323	6A1	4.30 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C	

ABSOLUTE MAXIMUM RATINGS							
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT			
Peak pulse current	Pin 1 to pin 2; $T_A = 25$ °C, acc. IEC 61000-4-5; $t_p = 8/20 \mu s$; single shot		6	Α			
	Pin 2 to pin 1; $T_A = 25$ °C, acc. IEC 61000-4-5; $t_p = 8/20 \mu s$; single shot	I _{PPM}	4				
Peak pulse power	T _A = 25 °C, acc. IEC 61000-4-5; t _p = 8/20 μs; single shot	P _{PP}	200	W			
FOD immedia	Contact discharge acc. IEC 61000-4-2; 10 pulses, T _A = 25 °C	V	± 30	kV			
ESD immunity	Air discharge acc. IEC 61000-4-2; 10 pulses, T _A = 25 °C	V_{ESD}	± 30				
Operating temperature	Junction temperature	TJ	-55 to +150	°C			
Storage temperature		T _{STG}	-55 to +150				



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)								
PARAMETER	TEST CONDITIONS / REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT		
Protection paths	Number of lines which can be protected	N _{channel}	-	-	1	lines		
De considerat effective	Pin 1 to pin 2; max. reverse working voltage	V	-	-	16	V		
Reverse stand-off voltage	Pin 2 to pin 1; max. reverse working voltage	V_{RWM}	-	-	26.5			
Devenue vellene	Pin 1 to pin 2; at I _R = 0.05 μA	V	16	-	-	V		
Reverse voltage	Pin 2 to pin 1; at I _R = 0.05 μA	V _R	26.5	-	-			
Davisias summent	Pin 1 to pin 2; at V _{RWM} = 16 V		-	-	0.05	μА		
Reverse current	Pin 2 to pin 1; at V _{RWM} = 26.5 V	l _R	-	-	0.05			
Deverse breekdeurs veltere	Pin 1 to pin 2; at I _R = 1 mA	V	17.1	18.7	20.3	V		
Reverse breakdown voltage	Pin 2 to pin 1; at I _R = 1 mA	V_{BR}	28	30	32			
	Pin 1 to pin 2; at $I_{PP} = 1$ A; $t_p = 8/20 \mu s$		-	22	25	V		
Deverse elemening valtage	Pin 1 to pin 2; at $I_{PP} = 6 \text{ A}$; $t_p = 8/20 \mu\text{s}$	\ \ \	-	29	33			
Reverse clamping voltage	Pin 2 to pin 1; at I _{PP} = 1 A; t _p = 8/20 μs	V _C	-	32	40			
	Pin 2 to pin 1; at I _{PP} = 4 A; t _p = 8/20 μs		-	39	50			
Capacitance	At $V_R = 0 V$, $f = 1 MHz$	C _D	-	15.5	18	pF		

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

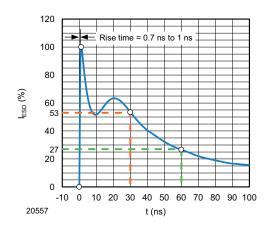


Fig. 1 - ESD Discharge Current Wave Form acc. IEC 61000-4-2 (330 Ω / 150 pF)

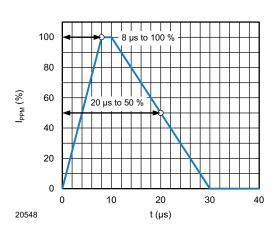


Fig. 2 - 8/20 µs Peak Pulse Current Wave Form acc. IEC 61000-4-5

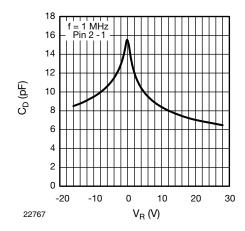


Fig. 3 - Typical Capacitance C_D vs. Reverse Voltage V_R

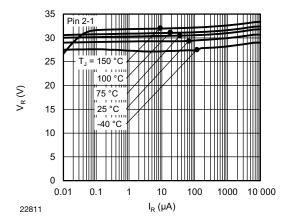


Fig. 4 - Typical Reverse Voltage V_{R} vs. Reverse Current I_{R}



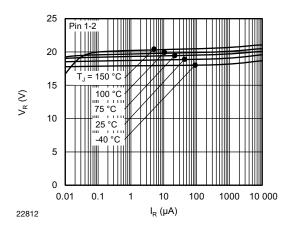


Fig. 5 - Typical Reverse Voltage V_R vs. Reverse Current I_R

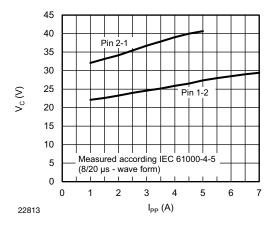


Fig. 6 - Typical Peak Clamping Voltage $V_{\rm C}$ vs. Peak Pulse Current $I_{\rm PP}$

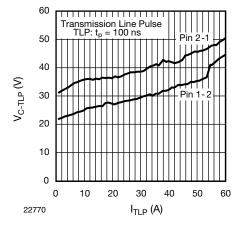


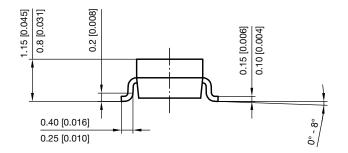
Fig. 7 - Typical Clamping Voltage V_{C-TLP} vs. Pulse Current I_{TLP}

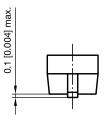


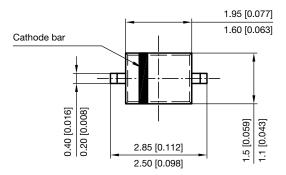
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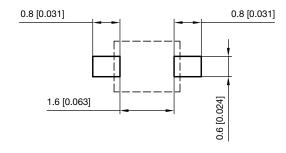
PACKAGE DIMENSIONS in millimeters (inches) SOD-323







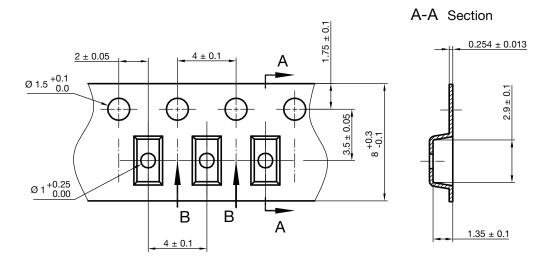
Footprint recommendation:



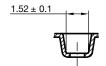
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CARRIER TAPE SOD-323



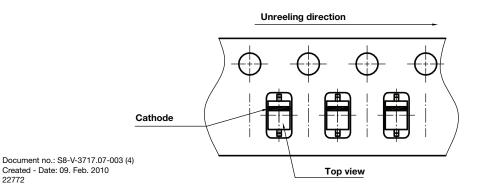
B-B Section



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ORIENTATION IN CARRIER TAPE SOD-323





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