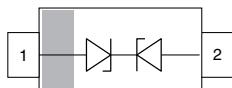


Low Capacitance, Single-Line ESD-Protection Diode in SOD-323



20503



22756 SOD-323


RoHS
COMPLIANT

MARKING (example only)



XYZ = type code (see table below)

bar = pin 1

FEATURES

- For LIN-Bus applications
- Small SOD-323 package
- AEC-Q101 qualified
- 1-line ESD-protection
- Working range: -16 V; +26.5 V
- Low leakage current $I_R < 0.05 \mu A$
- Low load capacitance $C_D < 18 \text{ pF}$
- ESD-protection acc. IEC 61000-4-2
 $\pm 30 \text{ kV}$ contact discharge
 $\pm 30 \text{ kV}$ air discharge
- e3 - pins plated with tin (Sn)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

ORDERING INFORMATION							
PART NUMBER (EXAMPLE)	ENVIRONMENTAL AND QUALITY CODE			PACKAGING CODE		ORDERING CODE (EXAMPLE)	
	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)	
		STANDARD	GREEN		15K/BOX = MOQ	10K/BOX = MOQ	
VLIN1626-02G	-	E	-	3	-08	-	VLIN1626-02G-E3-08
VLIN1626-02G	H	E	-	3	-08	-	VLIN1626-02GHE3-08
VLIN1626-02G	-	E	-	3	-	-18	VLIN1626-02G-E3-18
VLIN1626-02G	H	E	-	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; $T_A = 25 \text{ }^\circ\text{C}$, acc. IEC 61000-4-5; $t_p = 8/20 \mu\text{s}$; single			I_{PPM}	6	A
	Pin 2 to pin 1; $T_A = 25 \text{ }^\circ\text{C}$, acc. IEC 61000-4-5; $t_p = 8/20 \mu\text{s}$; single				4	
Peak pulse power	$T_A = 25 \text{ }^\circ\text{C}$, acc. IEC 61000-4-5; $t_p = 8/20 \mu\text{s}$; single shot			P_{PP}	200	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses, $T_A = 25 \text{ }^\circ\text{C}$			V_{ESD}	± 30	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses, $T_A = 25 \text{ }^\circ\text{C}$				± 30	
Operating temperature	Junction temperature			T_J	-55 to +150	°C
Storage temperature				T_{STG}	-55 to +150	

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^\circ C$, 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
Reverse stand-off voltage	Pin 1 to pin 2; max. reverse working voltage	V_{RWM}	-	-	16	V
	Pin 2 to pin 1; max. reverse working voltage		-	-	26.5	
Reverse voltage	Pin 1 to pin 2; at $I_R = 0.05 \mu A$	V_R	16	-	-	V
	Pin 2 to pin 1; at $I_R = 0.05 \mu A$		26.5	-	-	
Reverse current	Pin 1 to pin 2; at $V_{RWM} = 16 V$	I_R	-	-	0.05	μA
	Pin 2 to pin 1; at $V_{RWM} = 26.5 V$		-	-	0.05	
Reverse breakdown voltage	Pin 1 to pin 2; at $I_R = 1 mA$	V_{BR}	17.1	18.7	20.3	V
	Pin 2 to pin 1; at $I_R = 1 mA$		28	30	32	
Reverse clamping voltage	Pin 1 to pin 2; at $I_{PP} = 1 A$; $t_p = 8/20 \mu s$	V_C	-	22	25	V
	Pin 1 to pin 2; at $I_{PP} = 6 A$; $t_p = 8/20 \mu s$		-	29	33	
	Pin 2 to pin 1; at $I_{PP} = 1 A$; $t_p = 8/20 \mu s$		-	32	40	
	Pin 2 to pin 1; at $I_{PP} = 4 A$; $t_p = 8/20 \mu s$		-	39	50	
Capacitance	At $V_R = 0 V$, $f = 1 MHz$	C_D	-	15.5	18	pF

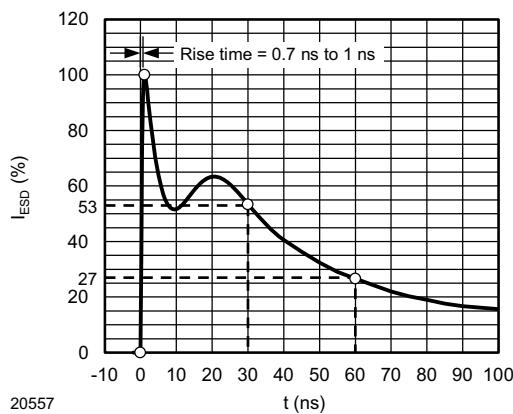
TYPICAL CHARACTERISTICS ($T_{amb} = 25^\circ C$, unless otherwise specified)


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

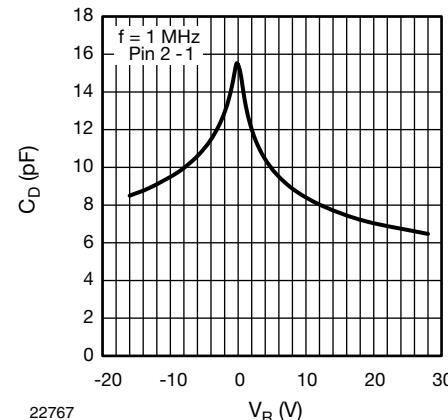


Fig. 3 - Typical Capacitance C_D vs. Reverse Voltage V_R

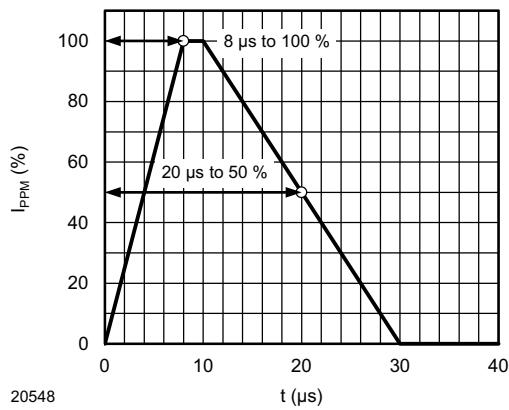


Fig. 2 - 8/20 μs Peak Pulse Current Wave Form
acc. IEC 61000-4-5

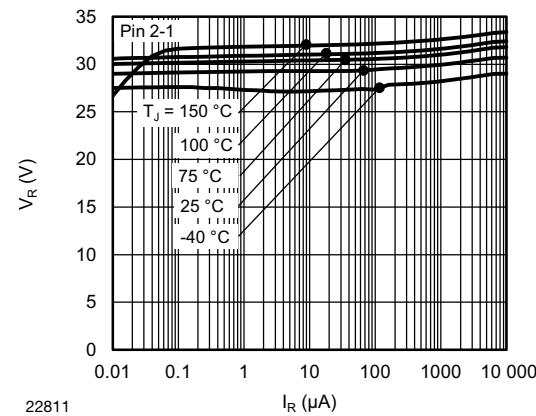


Fig. 4 - Typical Reverse Voltage V_R vs. Reverse Current I_R

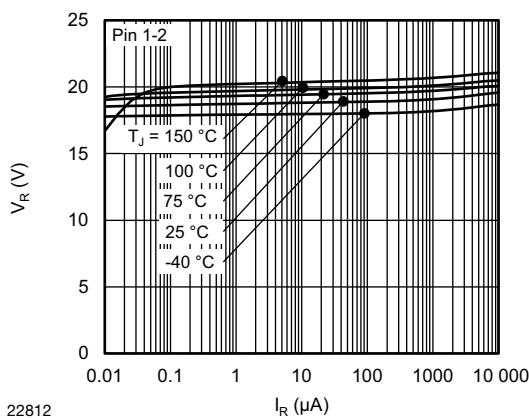


Fig. 5 - Typical Reverse Voltage V_R vs. Reverse Current I_R

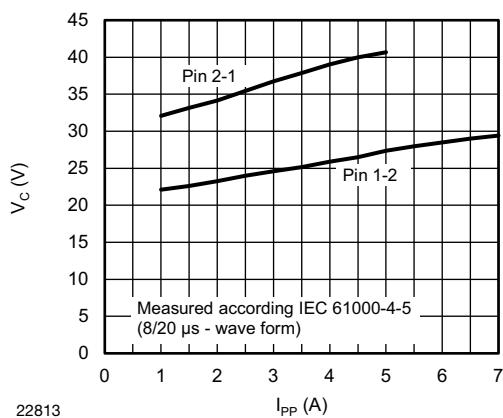


Fig. 6 - Typical Peak Clamping Voltage V_C vs. Peak Pulse Current I_{PP}

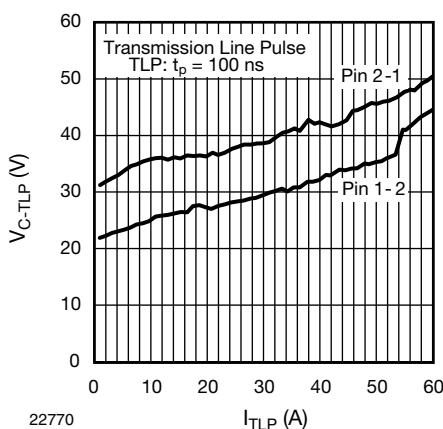
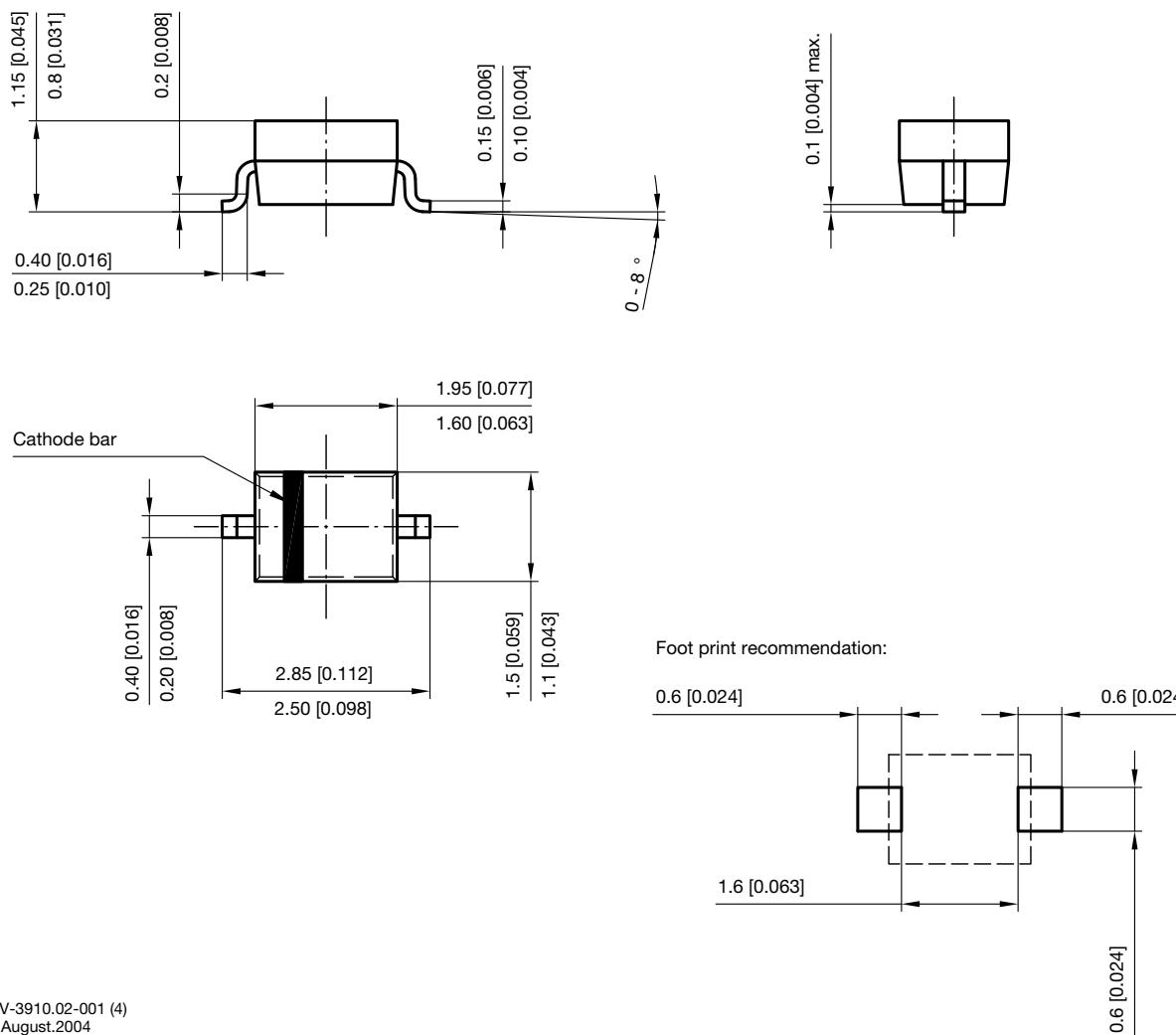
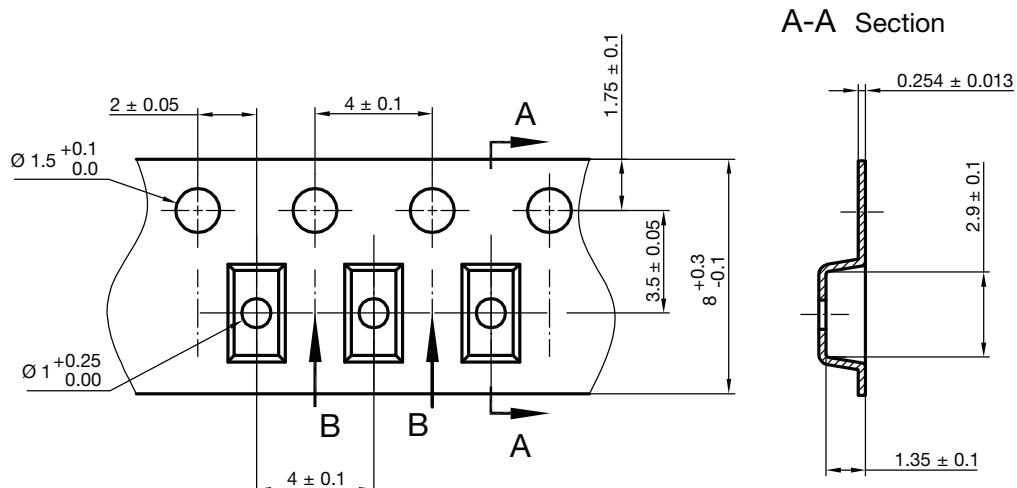
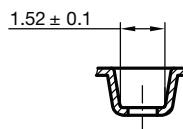


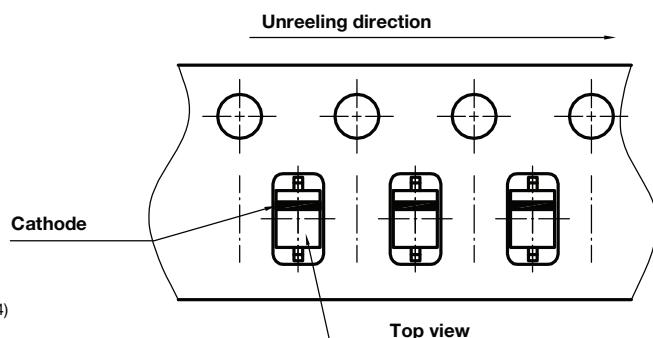
Fig. 7 - Typical Clamping Voltage V_{C-TLP} vs. Pulse Current I_{TLP}

PACKAGE DIMENSIONS in millimeters (inches) **SOD-323**


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Rev. 5 - Date: 23.Sept.2009
22771

CARRIER TAPE SOD-323

B-B Section


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22824

ORIENTATION IN CARRIER TAPE SOD-323


Document no.: S8-V-3717.07-003 (4)
Created - Date: 09. Feb. 2010
22772

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