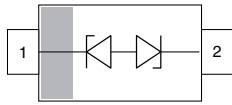
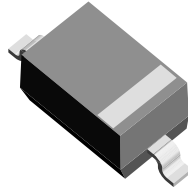


# Low Capacitance, Single-Line ESD-Protection Diode in SOD-323



20503



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
- 1-line ESD-protection
- Working range:  $\pm 26.5\text{ V}$
- Low leakage current  $I_R < 0.05\ \mu\text{A}$
- Low load capacitance  $C_D < 16\ \text{pF}$
- ESD-protection acc. IEC 61000-4-2  
 $\pm 30\ \text{kV}$  contact discharge  
 $\pm 30\ \text{kV}$  air discharge
- ESD capability according to AEC-Q101:  
human body model: class H3B:  $> 8\ \text{kV}$
- e3 - pins plated with tin (Sn)
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

**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	
VLIN2626-02G	-	E	-	3	-08	-	VLIN2626-02G-E3-08
VLIN2626-02G	H	E	-	3	-08	-	VLIN2626-02GHE3-08
VLIN2626-02G	-	E	-	3	-	-18	VLIN2626-02G-E3-18
VLIN2626-02G	H	E	-	3	-	-18	VLIN2626-02GHE3-18

**PACKAGE DATA**

DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VLIN2626-02G	SOD-323	262	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	$T_A = 25\ ^\circ\text{C}$ ; acc. IEC 61000-4-5; $t_p = 8/20\ \mu\text{s}$ ; single shot	$I_{PPM}$	4	A
Peak pulse power	$T_A = 25\ ^\circ\text{C}$ ; 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; $C = 150\ \text{pF}$ , $R = 330\ \Omega$ , $T_A = 25\ ^\circ\text{C}$	$V_{ESD}$	$\pm 30$	kV
	Air discharge acc. IEC 61000-4-2; $C = 150\ \text{pF}$ , $R = 330\ \Omega$ , $T_A = 25\ ^\circ\text{C}$		$\pm 30$	kV
ESD immunity	Contact discharge acc. ISO 10605; $C = 330\ \text{pF}$ , $R = 330\ \Omega$ , $T_A = 25\ ^\circ\text{C}$	$V_{ESD}$	$\pm 30$	kV
	Air discharge acc. ISO 10605; $C = 330\ \text{pF}$ , $R = 330\ \Omega$ , $T_A = 25\ ^\circ\text{C}$		$\pm 30$	kV
Operating temperature	Junction temperature	$T_J$	-55 to +150	°C
Storage temperature		$T_{STG}$	-55 to +150	°C



ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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	Max. reverse working voltage	$V_{RWM}$	-	-	26.5	V
Reverse voltage	At $I_R = 0.05\text{ }\mu\text{A}$	$V_R$	26.5	-	-	V
Reverse current	At $V_{RWM} = 26.5\text{ V}$	$I_R$	-	-	0.05	$\mu\text{A}$
Reverse breakdown voltage	At $I_R = 1\text{ mA}$	$V_{BR}$	28	30	32	V
Reverse clamping voltage	At $I_{PP} = 1\text{ A}$ ; $t_p = 8/20\text{ }\mu\text{s}$	$V_C$	-	32	40	V
	At $I_{PP} = I_{PPM} = 4\text{ A}$ ; $t_p = 8/20\text{ }\mu\text{s}$	$V_C$	-	39	50	V
Capacitance	At $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_D$	-	13.5	16	pF

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

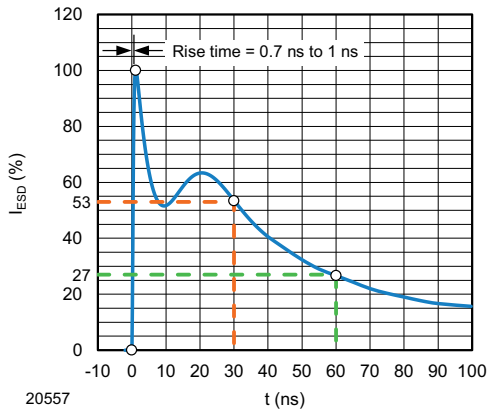


Fig. 1 - ESD Discharge Current Wave Form acc. IEC 61000-4-2 (330  $\Omega$  / 150 pF)

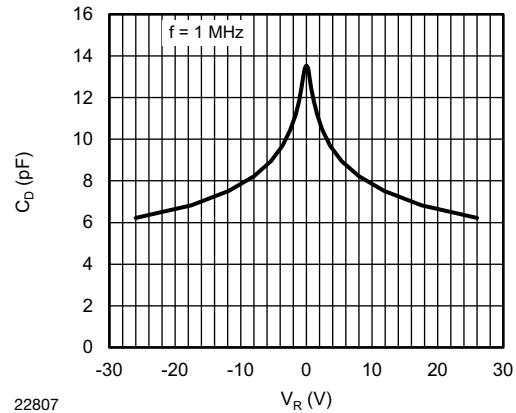


Fig. 3 - Typical Capacitance  $C_D$  vs. Reverse Voltage  $V_R$

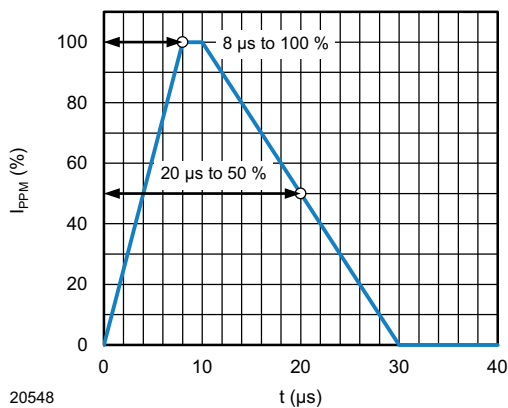


Fig. 2 - 8/20  $\mu\text{s}$  Peak Pulse Current Wave Form acc. IEC 61000-4-5

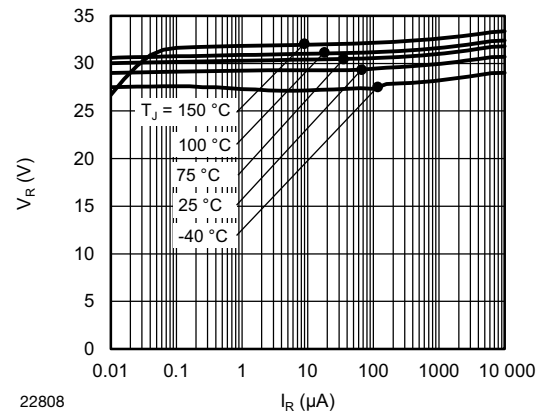


Fig. 4 - Typical Reverse Voltage  $V_R$  vs. Reverse Current  $I_R$

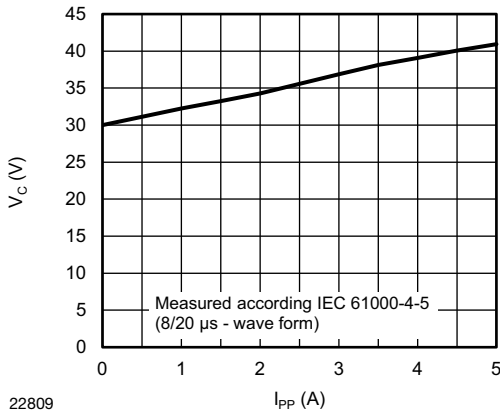


Fig. 5 - Typical Peak Clamping Voltage  $V_C$  vs. Peak Pulse Current  $I_{PP}$

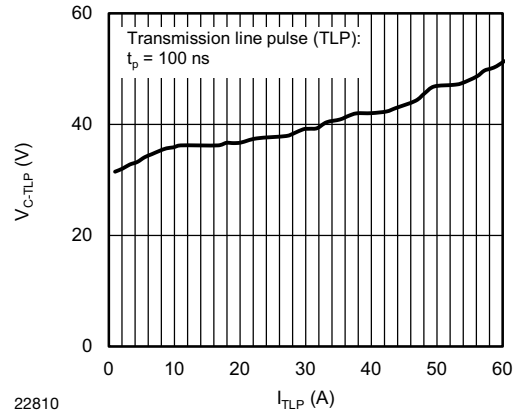
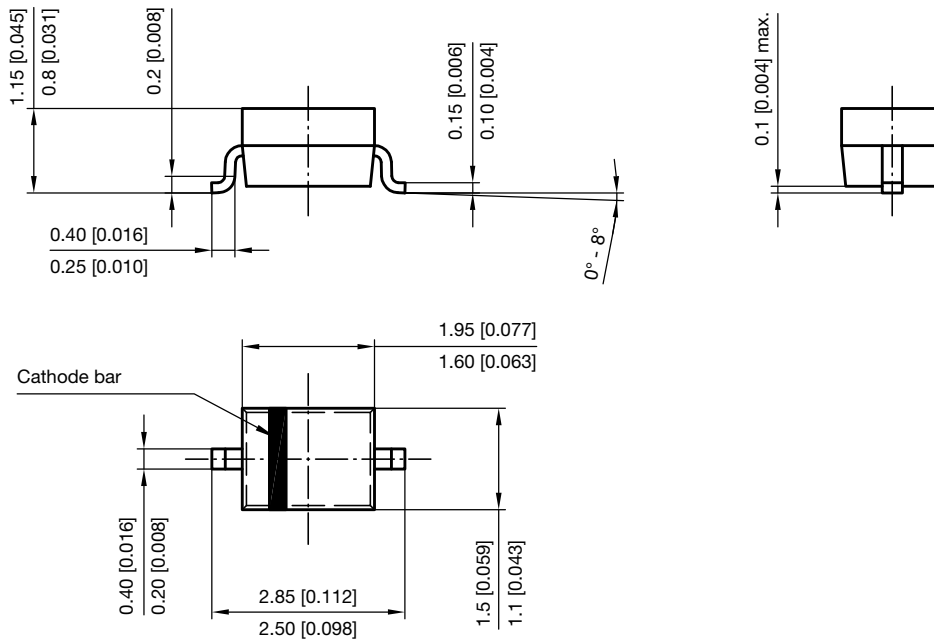
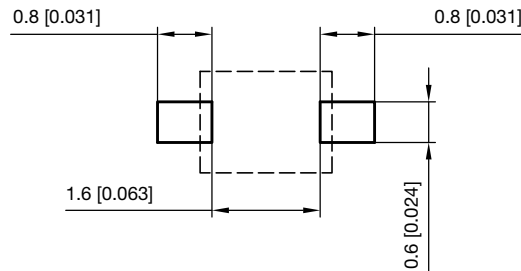


Fig. 6 - Typical Clamping Voltage  $V_{C-TLP}$  vs. Pulse Current  $I_{TLP}$

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

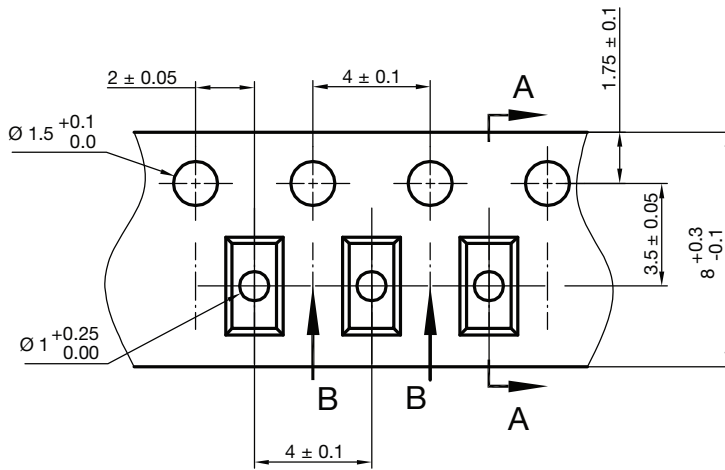


Footprint recommendation:

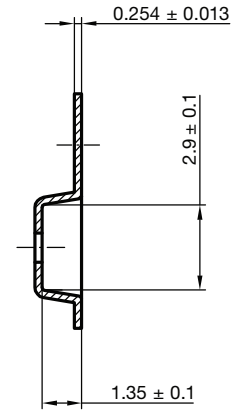


Document no.: S8-V-3910.02-001 (4)  
 Created - Date: 24.August.2004  
 Rev. 6 - Date: 23.Sept.2016  
 22771

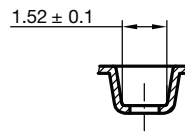
**CARRIER TAPE SOD-323**



A-A Section

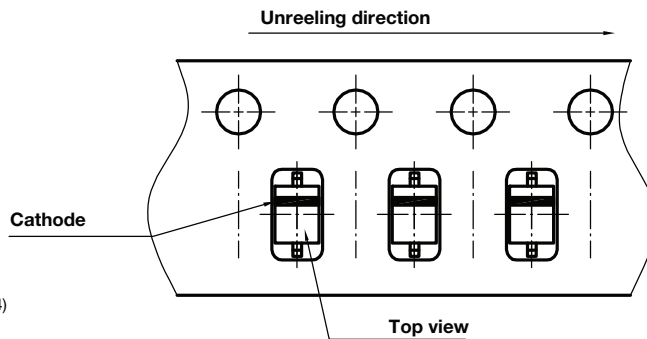


B-B Section



Document no.: S8-V-3717.07-002 (4)  
 Created - Date: 09. Feb. 2010  
 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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