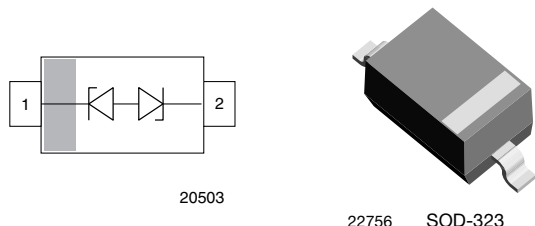


Low Capacitance, Single-Line ESD-Protection Diode in SOD-323


RoHS
COMPLIANT

FEATURES

- For LIN-Bus applications
- Small SOD-323 package
- Working range: -16 V; +26.5 V
- Low leakage current $I_R < 0.05 \mu A$
- Low load capacitance $C_D < 19 \text{ pF}$
- 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

MARKING (example only)



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

LINKS TO ADDITIONAL RESOURCES



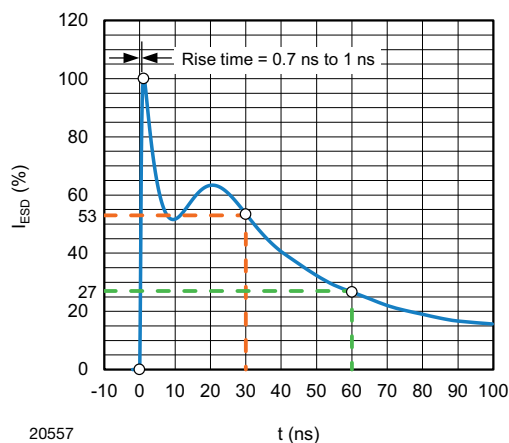
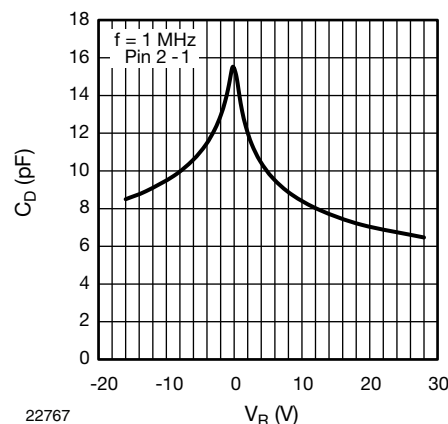
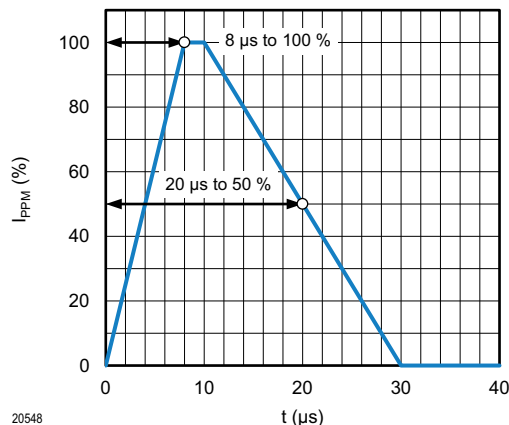
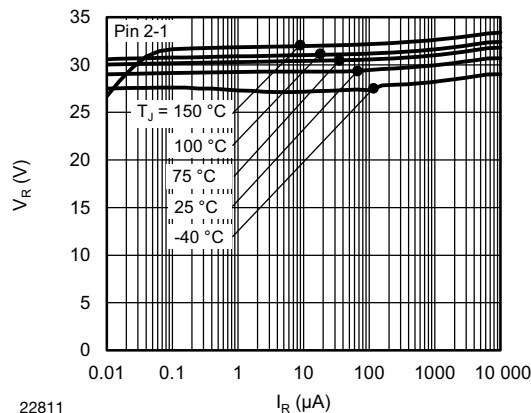
ORDERING INFORMATION							
PART NUMBER (EXAMPLE)	ENVIRONMENTAL AND QUALITY CODE			REVISION CODE	PACKAGING CODE		ORDERING CODE (EXAMPLE)
	AEC-Q101 QUALIFIED (H)	RoHS-COMPLIANT + LEAD (Pb)-FREE TERMINATIONS	TIN PLATED		3K PER 7" REEL (8 mm TAPE) 15K/BOX = MOQ	10K PER 13" REEL (8 mm TAPE) 10K/BOX = MOQ	
VLIN1626-02G	-	E	3	-	08		VLIN1626-02G-E3-08
VLIN1626-02G	H	E	3	A	08		VLIN1626-02GHE3A08
VLIN1626-02G	-	E	3	-		18	VLIN1626-02G-E3-18
VLIN1626-02G	H	E	3	A		18	VLIN1626-02GHE3A18

PACKAGE DATA						
DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VLIN1626-02G	SOD-323	6A1	4 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; $T_A = 25 \text{ °C}$, acc. IEC 61000-4-5; $t_p = 8/20 \mu s$; single shot	I_{PPM}	6	A
	Pin 2 to pin 1; $T_A = 25 \text{ °C}$, acc. IEC 61000-4-5; $t_p = 8/20 \mu s$; single shot		4	
Peak pulse power	$T_A = 25 \text{ °C}$, acc. IEC 61000-4-5; $t_p = 8/20 \mu s$; single shot	P_{PP}	200	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses, $T_A = 25 \text{ °C}$	V_{ESD}	± 30	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses, $T_A = 25 \text{ °C}$		± 30	
Operating temperature	Junction temperature	T_J	-55 to +150	°C
Storage temperature		T_{STG}	-55 to +150	

**ELECTRICAL CHARACTERISTICS** ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	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 $I_R = 0.05\text{ }\mu\text{A}$	V_R	16	-	-	V
	Pin 2 to pin 1; at $I_R = 0.05\text{ }\mu\text{A}$		26.5	-	-	
Reverse current	Pin 1 to pin 2; at $V_{RWM} = 16\text{ V}$	I_R	-	-	0.05	μA
	Pin 2 to pin 1; at $V_{RWM} = 26.5\text{ V}$		-	-	0.05	
Reverse breakdown voltage	Pin 1 to pin 2; at $I_R = 1\text{ mA}$	V_{BR}	17.1	18.7	20.3	V
	Pin 2 to pin 1; at $I_R = 1\text{ mA}$		28	30	32	
Reverse clamping voltage	Pin 1 to pin 2; at $I_{PP} = 1\text{ A}$; $t_p = 8/20\text{ }\mu\text{s}$	V_C	-	22	25	V
	Pin 1 to pin 2; at $I_{PP} = 6\text{ A}$; $t_p = 8/20\text{ }\mu\text{s}$		-	29	33	
	Pin 2 to pin 1; at $I_{PP} = 1\text{ A}$; $t_p = 8/20\text{ }\mu\text{s}$		-	32	40	
	Pin 2 to pin 1; at $I_{PP} = 4\text{ A}$; $t_p = 8/20\text{ }\mu\text{s}$		-	39	50	
Capacitance	At $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_D	-	15.5	19	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 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 61000-4-5Fig. 4 - Typical Reverse Voltage V_R vs. Reverse Current I_R

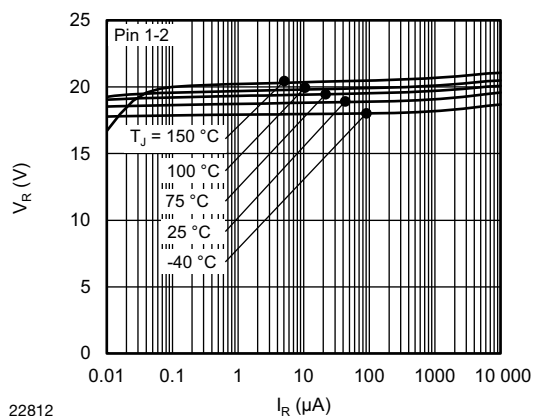


Fig. 5 - Typical Reverse Voltage V_R vs. Reverse Current I_R

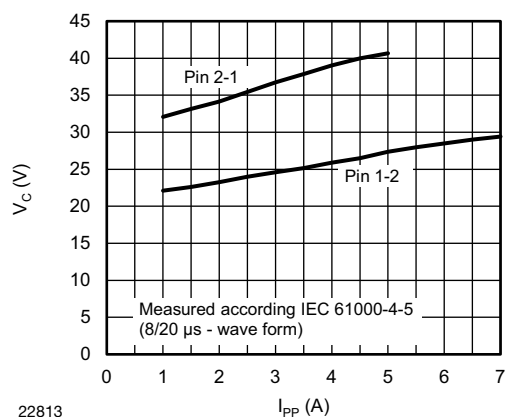


Fig. 6 - Typical Peak Clamping Voltage V_C vs. Peak Pulse Current I_{PP}

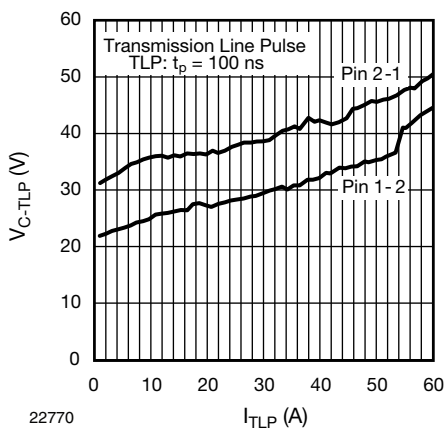
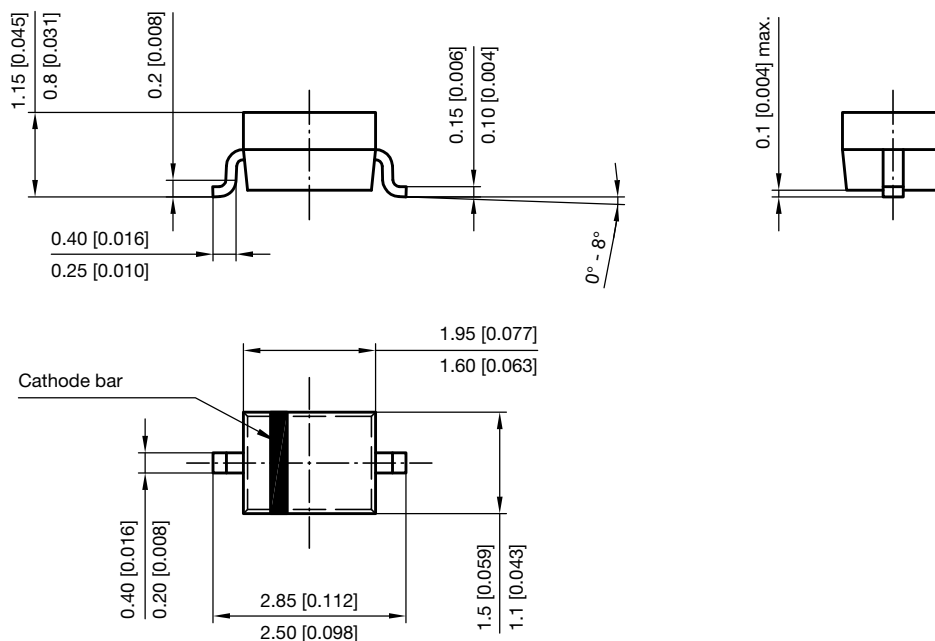
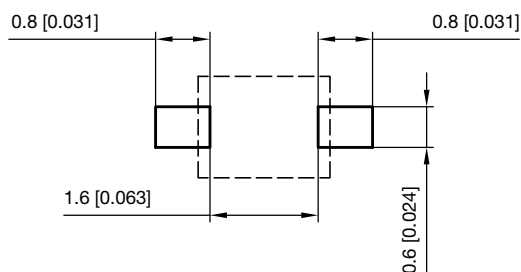


Fig. 7 - Typical Clamping Voltage V_{C-TLP} vs. Pulse Current I_{TLP}

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

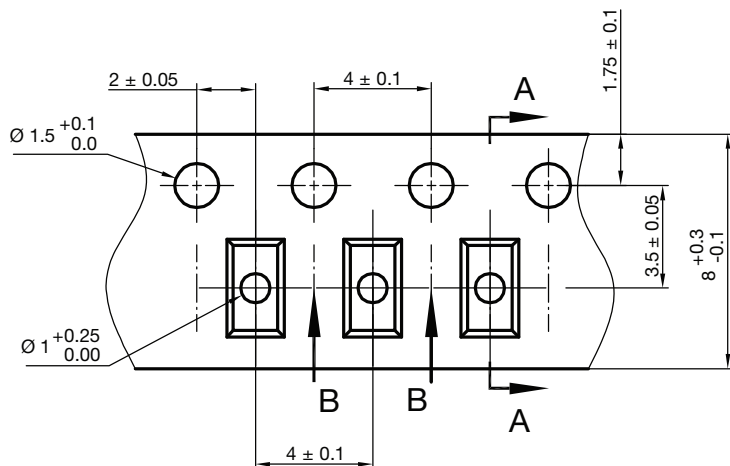
Footprint recommendation:



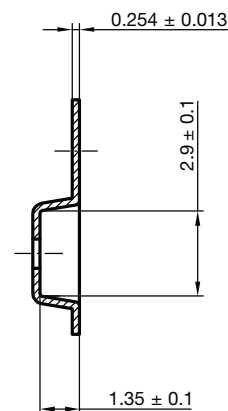
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Rev. 6 - Date: 23.Sept.2016
22771



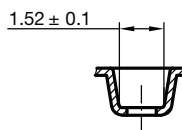
CARRIER TAPE SOD-323



A-A Section

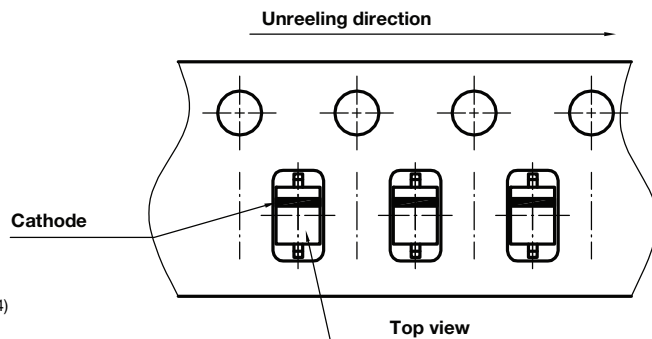


B-B Section



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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