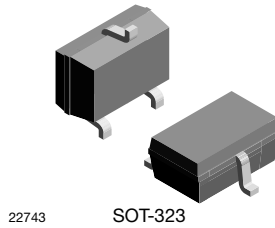
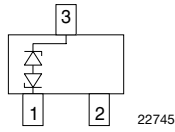


Bidirectional Symmetrical (BiSy) Low Capacitance, Single-Line ESD Protection Diode in SOT-323

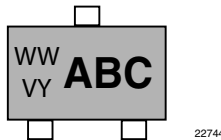


FEATURES

- For LIN-Bus applications
- Small SOT-323 package
- $T_J \text{ max.} = 175 \text{ }^\circ\text{C}$
- 1-line ESD protection
- Working range $\pm 26.5 \text{ V}$
- Low leakage current $I_R < 0.05 \text{ } \mu\text{A}$
- Low load capacitance $C_D < 15 \text{ pF}$
- ESD immunity 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


RoHS
COMPLIANT

MARKING (example only)



ABC = type code (see table below)
 WW = date code working week
 VY = date code year

LINKS TO ADDITIONAL RESOURCES

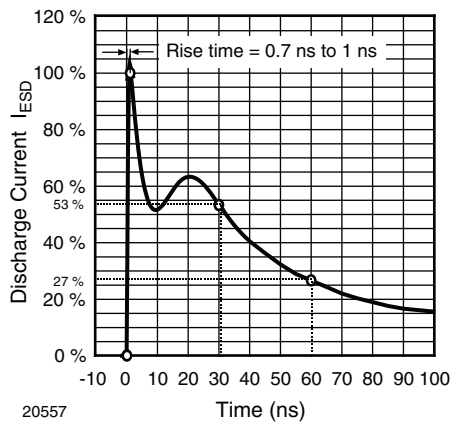
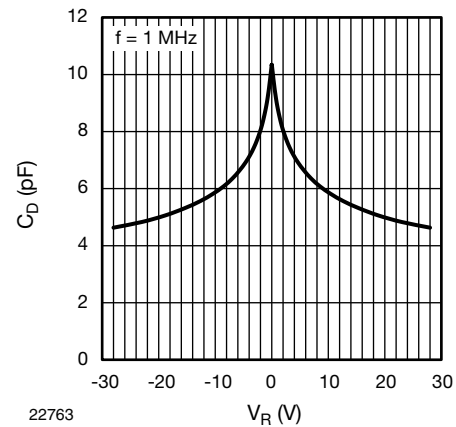
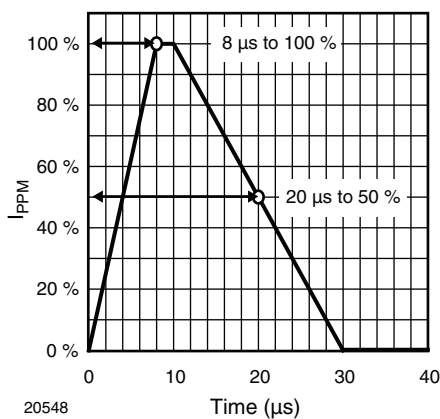
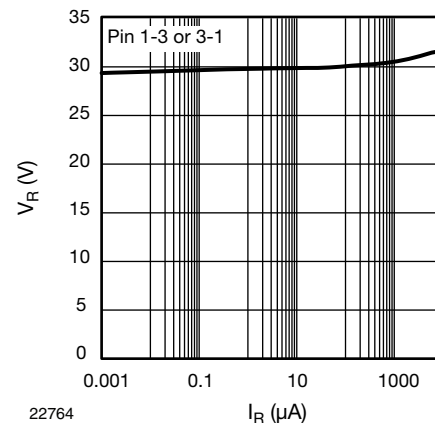


ORDERING INFORMATION							
PART NUMBER (EXAMPLE)	ENVIRONMENTAL AND QUALITY CODE			REVISION CODE	PACKAGING CODE		ORDERING CODE (EXAMPLE)
	AEC-Q101 QUALIFIED (H)	RoHS-COMPLIANT T + LEAD (Pb)-FREE TERMINATIONS	TIN PLATED		3K PER 7" REEL (8 mm TAPE) 15K/BOX = MOQ	10K PER 13" REEL (8 mm TAPE) 10K/BOX = MOQ	
VLIN26A1-03G	-	E	3	-	08		VLIN26A1-03G-E3-08
VLIN26A1-03G	H	E	3	A	08		VLIN26A1-03GHE3A08
VLIN26A1-03G	-	E	3	-		18	VLIN26A1-03G-E3-18
VLIN26A1-03G	H	E	3	A		18	VLIN26A1-03GHE3A18

PACKAGE DATA						
DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VLIN26A1-03G	SOT-323	6A1	5.2 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	$T_A = 25 \text{ }^\circ\text{C}$; acc. IEC 61000-4-5; $t_p = 8/20 \text{ } \mu\text{s}$; single shot		I_{PPM}	3	A
Peak pulse power	$T_A = 25 \text{ }^\circ\text{C}$; acc. IEC 61000-4-5; $t_p = 8/20 \text{ } \mu\text{s}$; single shot		P_{PP}	150	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	kV
Operating temperature	Junction temperature		T_J	-55 to +175	$^\circ\text{C}$
Storage temperature			T_{STG}	-55 to +175	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (pin 1 to 3, 3 to 1) ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	μA
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 $I_{PP} = I_{PPM} = 3\text{ A}$; $t_p = 8/20\text{ }\mu\text{s}$	V_C	-	38	50	V
Capacitance	At $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_D	-	10	15	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 61000-4-5

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

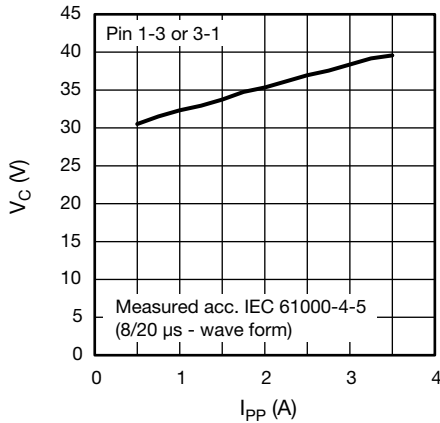


Fig. 5 - Typical Peak Clamping Voltage V_C vs. Peak Pulse Current I_{PP}

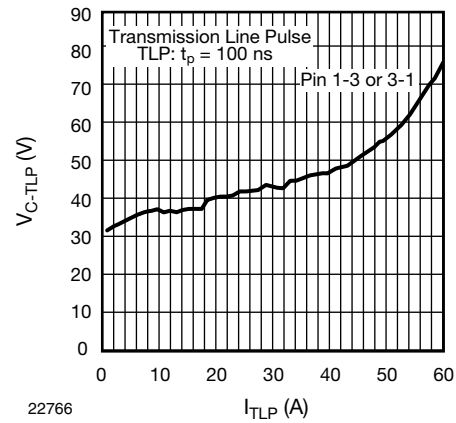
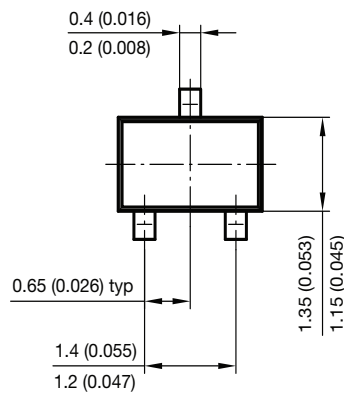
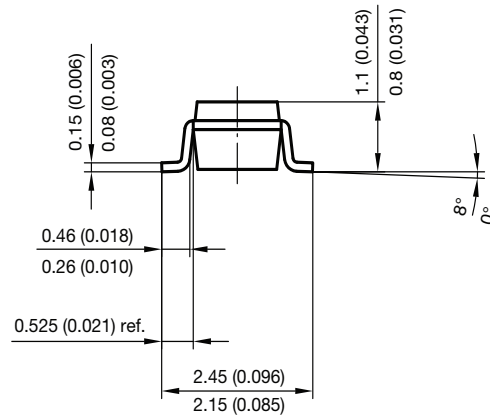
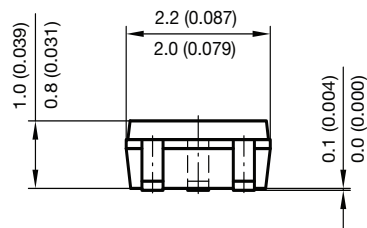
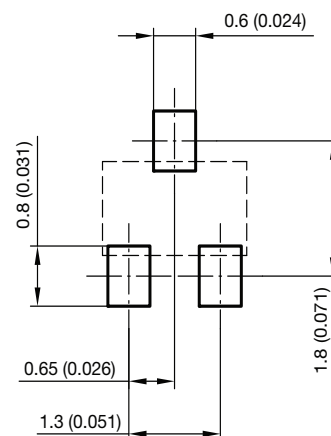


Fig. 6 - Typical Clamping Voltage V_{C-TLP} vs. Pulse Current I_{TLP}

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



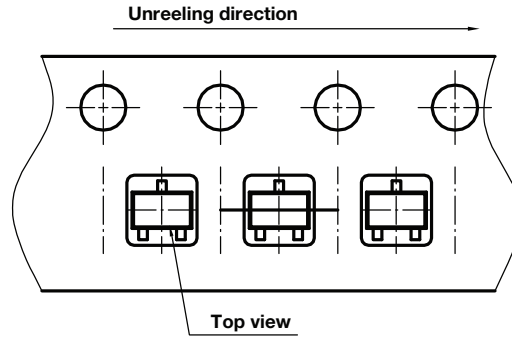
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Rev. 1 - Date: 06. April 2010
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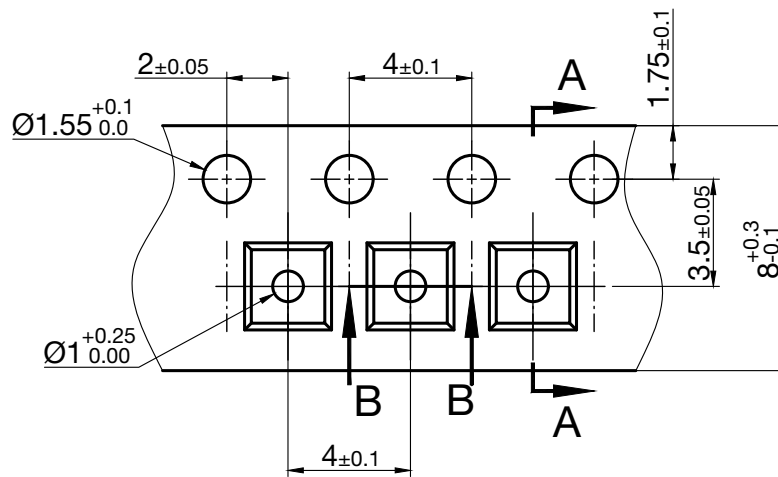


ORIENTATION IN CARRIER TAPE SOT-323

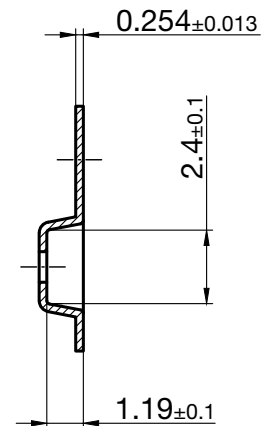


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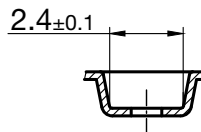
CARRIER TAPE SOT-323



A-A Section



B-B Section



Document No. S8-V-3717.08-002 (4)
Rev. 20.01.2025
23260



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