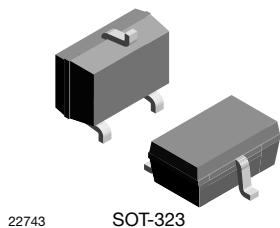
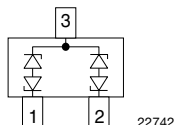
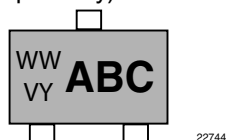


# Bidirectional Symmetrical (BiSy) Low Capacitance, Dual-Line ESD Protection Diode in SOT-323



## MARKING (example only)



ABC = type code (see table below)

WW = date code working week

VY = date code year

## LINKS TO ADDITIONAL RESOURCES



## FEATURES

- For CAN and FLEX-bus applications
- Small SOT-323 package
- $T_J$  max. = 175 °C
- 2-line ESD protection
- Working range  $\pm 26.5$  V
- Low leakage current  $I_R < 0.05$   $\mu$ A
- Low load capacitance  $C_D < 15$  pF
- ESD immunity acc. IEC 61000-4-2  
 $\pm 30$  kV contact discharge  
 $\pm 30$  kV air discharge
- ESD capability according to AEC-Q101: human body model: class H3B:  $> 8$  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	
VCAN26A2-03G	-	E		3	-08		VCAN26A2-03G-E3-08
VCAN26A2-03G	H	E		3	-08		VCAN26A2-03GHE3-08
VCAN26A2-03G	-	E		3		-18	VCAN26A2-03G-E3-18
VCAN26A2-03G	H	E		3		-18	VCAN26A2-03GHE3-18

## PACKAGE DATA

DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VCAN26A2-03G	SOT-323	6A2	5.65 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	$T_A = 25$ °C, acc. IEC 61000-4-5; $t_p = 8/20$ $\mu$ s; single shot	$I_{PPM}$	3	A
Peak pulse power	$T_A = 25$ °C; pin 1 or 2 to pin 3; acc. IEC 61000-4-5; $t_p = 8/20$ $\mu$ s; single shot	$P_{PP}$	150	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses, $T_A = 25$ °C	$V_{ESD}$	$\pm 30$	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses, $T_A = 25$ °C		$\pm 30$	kV
Operating temperature	Junction temperature	$T_J$	-55 to +175	°C
Storage temperature		$T_{STG}$	-55 to +175	°C

**ELECTRICAL CHARACTERISTICS** (pin 1 to 3, 3 to 1, 2 to 3, or 3 to 2)

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

PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	$N_{channel}$	-	-	2	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 $I_{PP} = 1\text{ A}$ ; $t_p = 8/20\text{ }\mu\text{s}$	$V_C$	-	33	40	V
	At $I_{PP} = I_{PPM} = 3\text{ A}$ ; $t_p = 8/20\text{ }\mu\text{s}$	$V_C$	-	40	50	V
	At $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_D$	-	10	15	pF
Capacitance	Diode capacitance matching at $V_R = 0\text{ V}$ , $C_{D13}$ vs. $C_{D23}$	$C_D$	-	-	1.5	pF

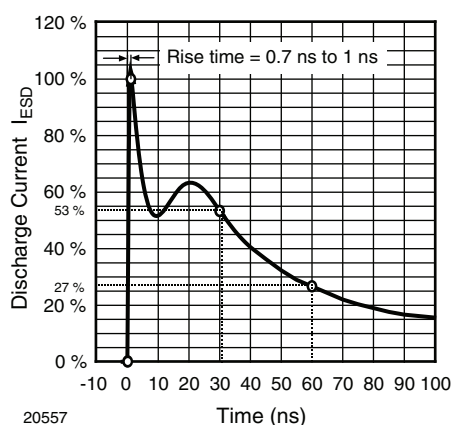
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


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

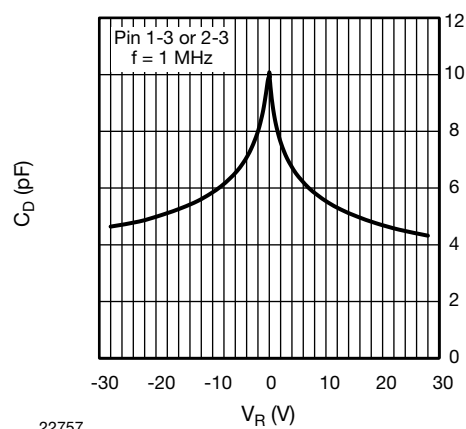


Fig. 3 - Typical Capacitance  $C_D$  vs. Reverse Voltage  $V_R$

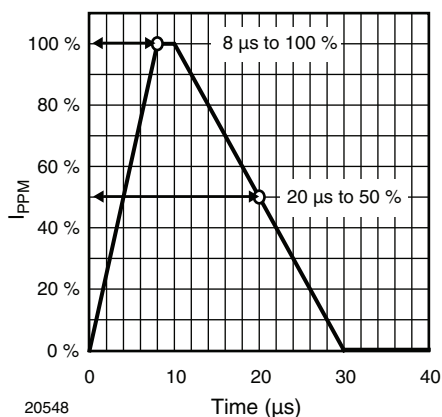


Fig. 2 - 8/20  $\mu\text{s}$  Peak Pulse Current Wave Form  
acc. IEC 61000-4-5

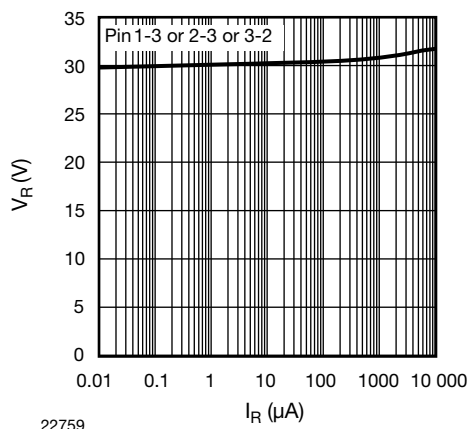


Fig. 4 - Typical Reverse Voltage  $V_R$  vs. Reverse Current  $I_R$

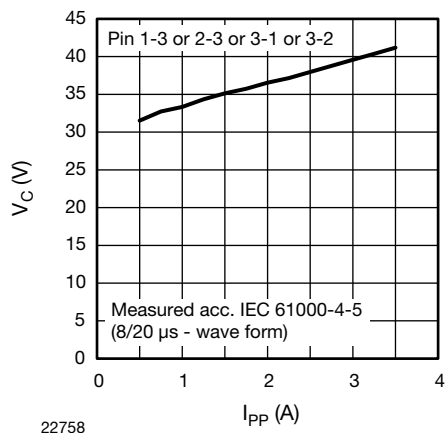


Fig. 5 - Typical Peak Clamping Voltage  $V_C$  vs. Peak Pulse Current  $I_{PP}$

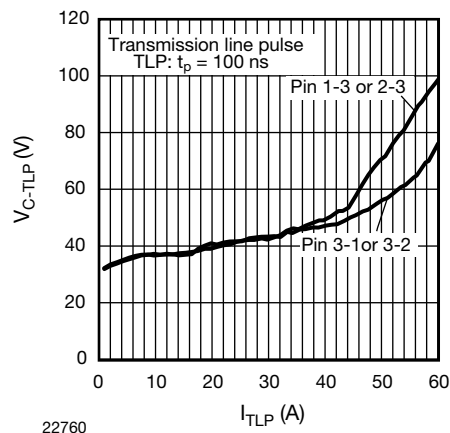
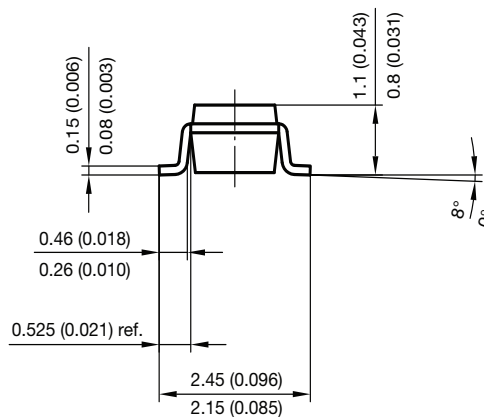
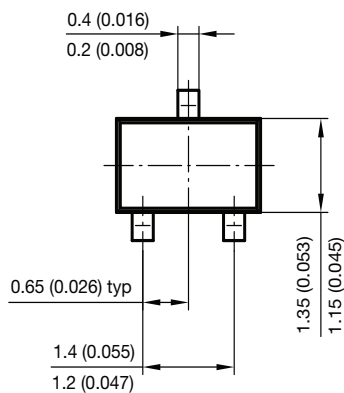
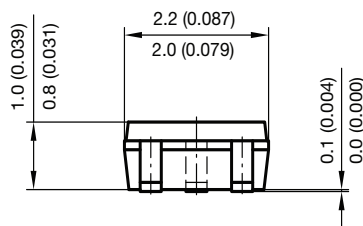
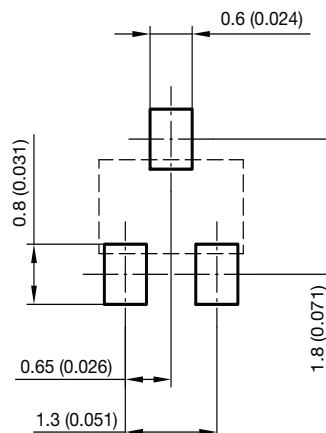


Fig. 6 - Typical Clamping Voltage  $V_{C-TLP}$  vs. Pulse Current  $I_{TLP}$

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



foot print recommendation:

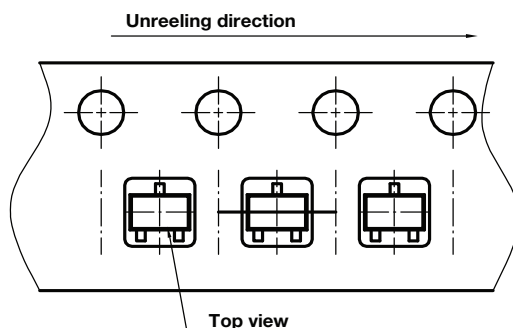


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Rev. 1 - Date: 06. April 2010

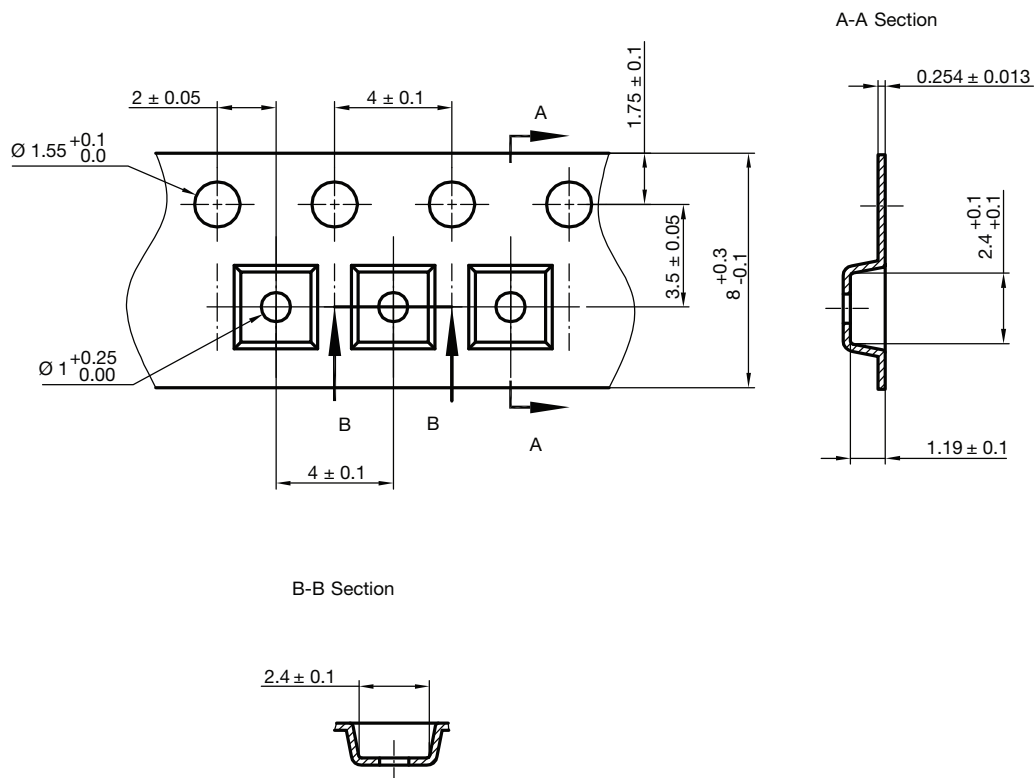
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# **ORIENTATION IN CARRIER TAPE SOT-323**



Document no.: S8-V-3717.08-002 (4)  
 Created - Date: 09. Feb. 2010  
 22761

# **CARRIER TAPE SOT-323**



Document no.: S8-V-3717.08-002 (4)  
 Created - Date: 09. Feb. 2010  
 22762



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