

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



FEATURES

- For CAN and FLEX-bus applications
- Small SOT-323 package
- T_J max. = 175 °C
- 2-line ESD protection
- Working range ± 26.5 V
- Low leakage current I_R < 0.05 μA
- Low load capacitance C_D < 15 pF
- ESD immunity 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)
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



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

MARKING (example only)

LINKS TO ADDITIONAL RESOURCES



VY = date code year



ORDERING INFORMATION								
	ENVIRONMENTAL AND QUALITY CODE				PACKAG			
PART NUMBER (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)	ORDERING CODE (EXAMPLE)	
	QUALIFIED	STANDARD	GREEN	PLATED	15K/BOX = MOQ	10K/BOX = MOQ		
VCAN26A2-03G	-	E		3	-08		VCAN26A2-03G-E3-08	
VCAN26A2-03G	Н	Е		3	-08		VCAN26A2-03GHE3-08	
VCAN26A2-03G	-	E		3		-18	VCAN26A2-03G-E3-18	
VCAN26A2-03G	Н	E		3		-18	VCAN26A2-03GHE3-18	

PACKAGE DATA								
DEVICE NAME	CE NAME 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 μs; single shot	I _{PPM}	3	Α		
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	± 30	kV		
	Air discharge acc. IEC 61000-4-2; 10 pulses, T _A = 25 °C	V_{ESD}	± 30	kV		
	Contact discharge acc. ISO10605 330 pF / 330 Ω ; 10 pulses, T _A = 25 °C		± 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 °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 μA	V_R	26.5	-	-	V	
Reverse current	At V _{RWM} = 26.5 V	I _R	-	-	0.05	μΑ	
Reverse breakdown voltage	At I _R = 1 mA	V_{BR}	28	30	32	V	
Reverse clamping voltage	At I _{PP} 1 A; t _p = 8/20 μs	V _C	-	33	40	V	
	At $I_{PP} = I_{PPM} = 3 \text{ A}$; $t_p = 8/20 \mu\text{s}$	V _C	-	40	50	V	
Capacitance	At $V_R = 0 V$, $f = 1 MHz$	C _D	-	10	15	pF	
	Diode capacitance matching at $V_R = 0 \text{ V}$, $C_{D13} \text{ vs. } C_{D23}$	C _D	-	-	1.5	pF	

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

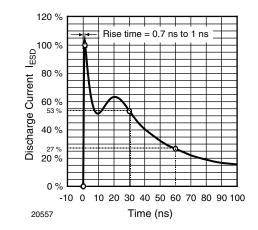


Fig. 1 - ESD Discharge Current Wave Form acc. IEC 61000-4-2 (330 Ω / 150 pF)

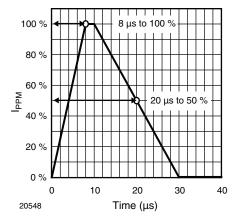


Fig. 2 - 8/20 µs Peak Pulse Current Wave Form acc. IEC 61000-4-5

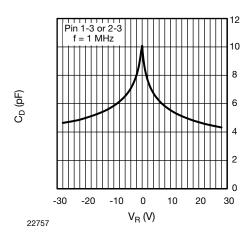


Fig. 3 - Typical Capacitance C_D vs. Reverse Voltage V_R

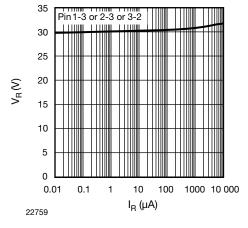


Fig. 4 - Typical Reverse Voltage V_R vs. Reverse Current I_R

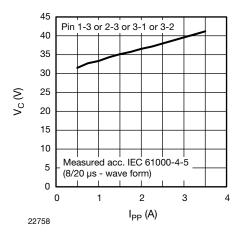


Fig. 5 - Typical Peak Clamping Voltage V_{C} vs. Peak Pulse Current I_{PP}

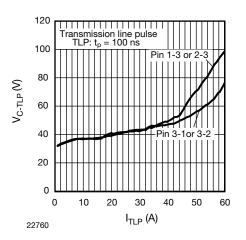
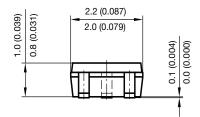
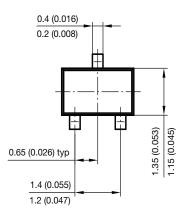


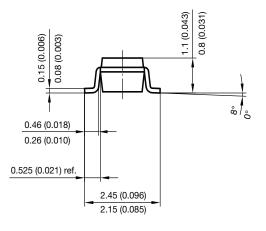
Fig. 6 - Typical Clamping Voltage V_{C-TLP} vs. Pulse Current I_{TLP}

PACKAGE DIMENSIONS in millimeters (inches) SOT-323

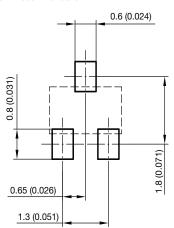




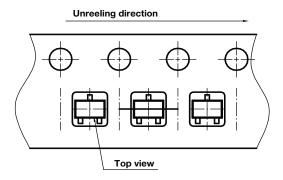
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foot print recommendation:



ORIENTATION IN CARRIER TAPE SOT-323

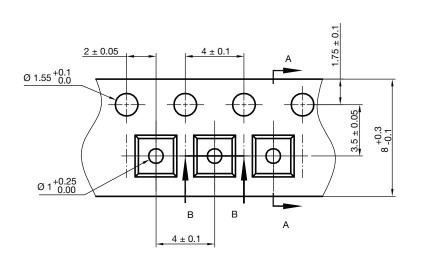


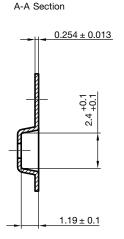
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Created - Date: 09. Feb. 2010

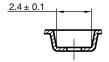
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CARRIER TAPE SOT-323





B-B Section



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