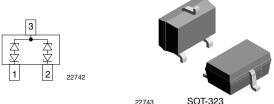


Bidirectional Symmetrical (BiSy) Low Capacitance, **Dual-Line ESD Protection Diode in SOT-323**



FEATURES

- For CAN and FLEX-bus applications
- Small SOT-323 package
- 2-line ESD protection
- Working range ± 36 V
- Low leakage current I_R < 0.05 μA
- Low load capacitance C_D < 10 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.vishav.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	ING CODE		
PART NUMBER (EXAMPLE)	AEC-Q101 QUALIFIED	Rohs-Compliant + Lead (Pb)-Free Terminations		TILL	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		
VCAN36A2-03G	-	E		3	-08		VCAN36A2-03G-E3-08	
VCAN36A2-03G	Н	Е		3	-08		VCAN36A2-03GHE3-08	
VCAN36A2-03G	-	Е		3		-18	VCAN36A2-03G-E3-18	
VCAN36A2-03G	Н	Е		3		-18	VCAN36A2-03GHE3-18	

PACKAGE DATA							
DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS	
VCAN36A2-03G	SOT-323	36A	5.65 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C	

ABSOLUTE MAXIMUM RATINGS							
PARAMETER	RAMETER TEST CONDITIONS		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}	2.4	Α			
Peak pulse power	$T_A = 25$ °C; pin 1 or 2 to pin 3; acc. IEC 61000-4-5; $t_p = 8/20$ µs; 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			
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}	-	-	36	V		
Reverse voltage	At I _R = 0.05 μA	V _R	36	-	-	V		
Reverse current	At V _{RWM} = 36 V	I _R	-	-	0.05	μA		
Reverse breakdown voltage	At I _R = 1 mA	V_{BR}	39	42	45	V		
Reverse clamping voltage	At I _{PP} 1 A; t _p = 8/20 μs	V _C	-	48	54	V		
	At $I_{PP} = I_{PPM} = 2.4 \text{ A}$; $t_p = 8/20 \mu\text{s}$	V _C	-	55	63	V		
Capacitance	Capacitance At V _R = 0 V, f = 1 MHz		-	8	10	pF		

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

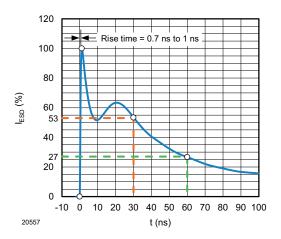


Fig. 1 - ESD Discharge Current Wave Form acc. IEC 61000-4-2 (330 Ω / 150 pF)

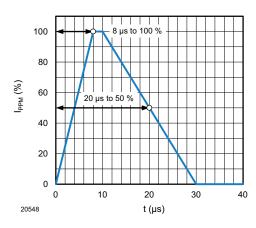


Fig. 2 - 8/20 µs Peak Pulse Current Wave Form acc. IEC 61000-4-5

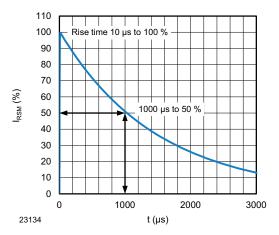


Fig. 3 - $10/1000 \, \mu s$ Peak Pulse Current Wave Form

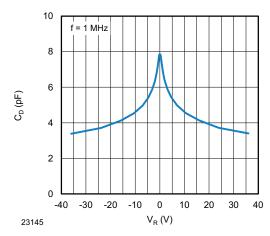


Fig. 4 - Typical Capacitance C_D vs. Reverse Voltage V_R



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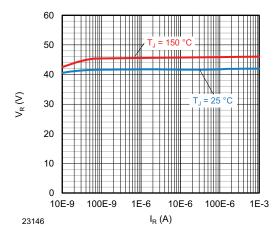


Fig. 5 - Typical Reverse Voltage V_R vs. Reverse Current I_R

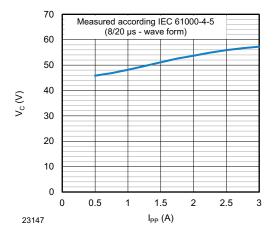


Fig. 6 - Typical Peak Clamping Voltage C_D vs. Peak Pulse Current I_{PP}

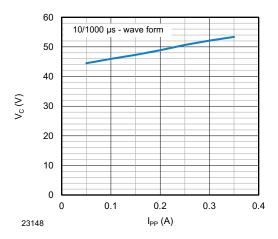


Fig. 7 - Typical Peak Clamping Voltage V_{C-TLP} vs. Peak Pulse Current I_{TLP}

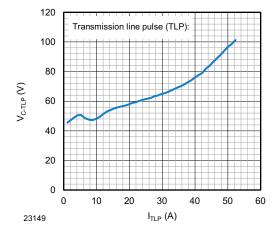
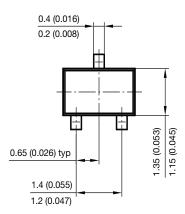


Fig. 8 - Typical Clamping Voltage $V_{C\text{-}TLP}$ vs. Peak Pulse Current I_{TLP}

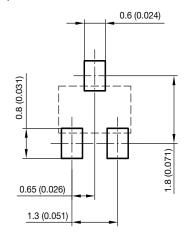
PACKAGE DIMENSIONS in millimeters (inches) SOT-323





0.46 (0.018) 0.26 (0.010) 0.525 (0.021) ref. 2.45 (0.096) 2.15 (0.085)

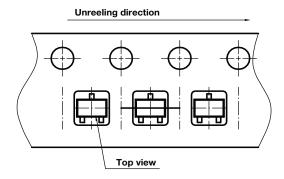
foot print recommendation:



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ORIENTATION IN CARRIER TAPE SOT-323

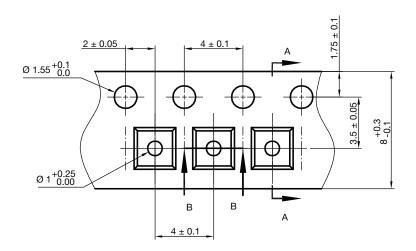


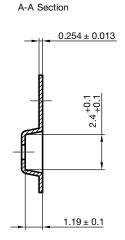
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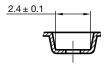


CARRIER TAPE SOT-323





B-B Section



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