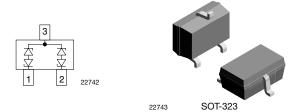


www.vishay.com

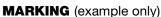
Vishay Semiconductors

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



FEATURES

- For CAN FD 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 $C_D < 4.6 \text{ pF}$ at $V_R = 5 \text{ V}$
- ESD immunity acc. IEC 61000-4-2
 ± 27 kV contact discharge
 - ± 27 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 VY = date code year

LINKS TO ADDITIONAL RESOURCES



ORDERING INFORMATION								
PART NUMBER (EXAMPLE)	ENVIRONMENTAL AND QUALITY CODE				PACKAG	ING CODE		
	AEC-Q101 QUALIFIED	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	ORDERING CODE (EXAMPLE)	
		STANDARD	GREEN		ISK/BOX = MOQ	IUK/BUX = MUQ		
VCAN36C2-03G	İ	E		3	-08		VCAN36C2-03G-E3-08	
VCAN36C2-03G	Н	E		3	-08		VCAN36C2-03GHE3-08	
VCAN36C2-03G	-	E		3		-18	VCAN36C2-03G-E3-18	
VCAN36C2-03G	Н	E		3		-18	VCAN36C2-03GHE3-18	

PACKAGE DATA							
DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS	
VCAN36C2-03G	SOT-323	36C	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 μ s; single shot	I _{PPM}	1.8	Α			
Peak pulse power	T_A = 25 °C; pin 1 or 2 to pin 3; acc. IEC 61000-4-5; t_p = 8/20 μ s; single shot	P _{PP}	120	W			
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses, T _A = 25 °C	W	± 27	kV			
	Air discharge acc. IEC 61000-4-2; 10 pulses, T _A = 25 °C	V_{ESD}	± 27	kV			
Operating temperature	Junction temperature	T_J	-55 to +175	°C			
Storage temperature		T _{STG}	-55 to +175	°C			



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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 $I_R = 0.05 \mu A$	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; $t_p = 8/20 \ \mu s$	V _C	-	48	55	V		
	At $I_{PP} = I_{PPM} = 1.8 \text{ A}$; $t_p = 8/20 \mu\text{s}$	V _C	-	54	66	V		
Capacitance	At $V_R = 0 V$, $f = 1 MHz$	C _D	-	5.5	7.5	pF		
	At $V_R = 5 V$, $f = 1 MHz$	C _D	-	3.8	4.6	pF		
	Diode capacitance matching at V_R = 5 V, C_{D13} vs. C_{D23}	dC _D	-	_	2	%		

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

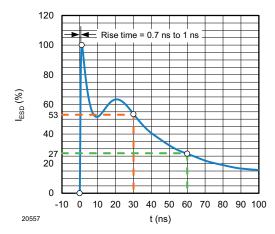


Fig. 1 - ESD Discharge Current Wave Form acc. IEC 61000-4-2 (330 Ω / 150 pF)

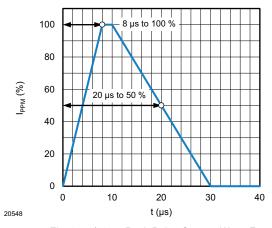


Fig. 2 - 8/20 µs Peak Pulse Current Wave Form acc. IEC 61000-4-5

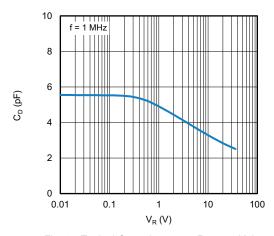


Fig. 3 - Typical Capacitance vs. Reverse Voltage

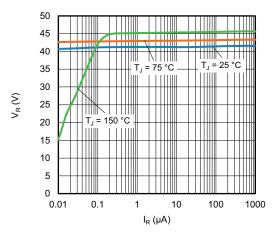


Fig. 4 - Typical Reverse Voltage vs. Reverse Current



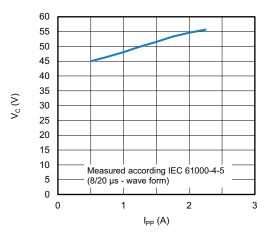


Fig. 5 - Typical Peak Clamping Voltage vs. Peak Pulse Current

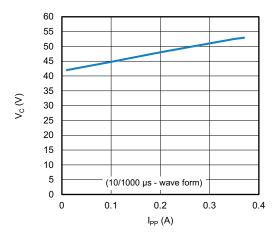


Fig. 6 - Typical Peak Clamping Voltage vs. Peak Pulse Current

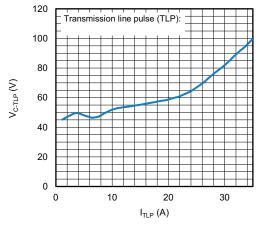
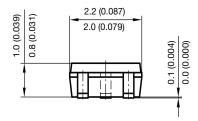
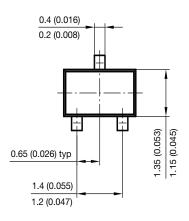


Fig. 7 - Typical Clamping Voltage vs. Peak Pulse Current

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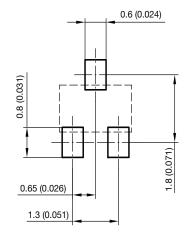
PACKAGE DIMENSIONS in millimeters (inches) SOT-323





0.46 (0.018) 0.26 (0.010) 2.45 (0.096) 2.15 (0.085)

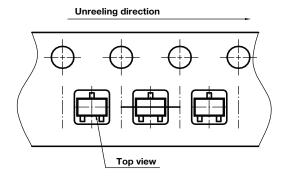
foot print recommendation:



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ORIENTATION IN CARRIER TAPE SOT-323

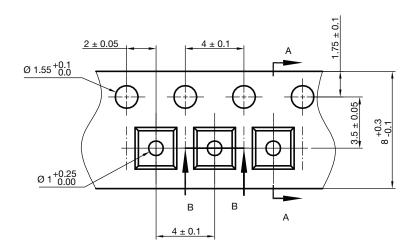


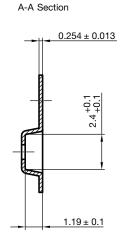
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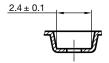
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CARRIER TAPE SOT-323





B-B Section



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