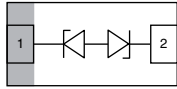


Single-Line Bidirectional ESD-Protection Diode in DFN1006-2B


MARKING (example only)


Bar = pin 1 marking

X = date code

YY = type code (see table below)

LINKS TO ADDITIONAL RESOURCES

FEATURES

- Compact DFN1006-2B package
- Low package height < 0.5 mm
- 1-line bidirectional ESD-protection
- AEC-Q101 qualified available
- Working range ± 26 V
- ESD immunity acc. IEC 61000-4-2 ± 30 kV contact and air discharge
- ESD immunity acc. ISO10605 (330 pF / 330 Ω) ± 30 kV contact discharge
- Lead plating: Sn (e3)
Tin plated exposed side wall of lead frame
- Soldering can be checked by standard vision inspection
- AOI = Automated Optical Inspection
- No X-ray necessary
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


Soldering Recommendations for DFN Packages:

 please see Application Note: www.vishay.com/doc?86198
APPLICATIONS

For automotive network such as LIN-BUS

ORDERING INFORMATION					
PART NUMBER (EXAMPLE)	AEC-Q101 QUALIFIED	ENVIRONMENTAL AND QUALITY CODE			ORDERING CODE (EXAMPLE)
		RoHS COMPLIANT + LEAD (Pb)-FREE TERMINATIONS	TIN PLATED	10K PER 7" REEL (8 mm TAPE)	
		GREEN		MOQ = 10K/BOX	
VLIN2626-DD1	-	G	3	-08	VLIN2626-DD1-G3-08
VLIN2626-DD1	H	G	3	-08	VLIN2626-DD1HG3-08

PACKAGE DATA						
DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VLIN2626-DD1	DFN1006-2B	25	0.83 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C



ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	Acc. IEC 61000-4-5, 8/20 μs/single shot ⁽¹⁾	I _{PPM}	3.9	A
Peak pulse power	Acc. IEC 61000-4-5, 8/20 μs/single shot ⁽¹⁾	P _{PP}	175	W
Peak pulse current	t _p = 10/1000 μs ⁽¹⁾	I _{PPM}	0.4	A
Peak pulse power	t _p = 10/1000 μs ⁽¹⁾	P _{PP}	17	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses ⁽¹⁾	V _{ESD}	30	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses ⁽¹⁾		30	kV
	Contact discharge acc. ISO10605 (330 pF / 330 Ω); 10 pulses ⁽¹⁾		30	kV
Operating temperature	Junction temperature	T _J	-55 to +150	°C
Storage temperature		T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (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}	-	-	1	lines
Reverse stand off voltage	Max. reverse working voltage	V _{RWM}	-	-	26	V
Reverse voltage	At I _R = 50 nA	V _R	26	-	-	V
Reverse current	At V _R = 26 V	I _R	-	< 1	0.05	μA
Reverse breakdown voltage	At I _R = 1 mA	V _{BR}	28	30	32	V
	At I _R = 1 mA; T _J = -40 °C to +150 °C ⁽¹⁾		26	-	36	V
Reverse clamping voltage	At I _{PP} = I _{PPM} = 3.9 A, t _p = 8/20 μs ⁽¹⁾	V _C	-	39	45	V
	At I _{PP} = I _{PPM} = 0.4 A, t _p = 10/1000 μs ⁽¹⁾		-	37	43	V
	t _p = 100 ns (TLP); I _{TLP} = 16 A ⁽¹⁾		V _{C_TLP}	-	37	-
Dynamic resistance	t _p = 100 ns; I _{TLP} = 20 A to 50 A ⁽¹⁾	r _{dyn}	-	0.36	-	Ω
Capacitance	At V _R = 0 V; f = 1 MHz	C _D	-	13.7	16	pF

Note

⁽¹⁾ Guaranteed by design; tested during device characterization

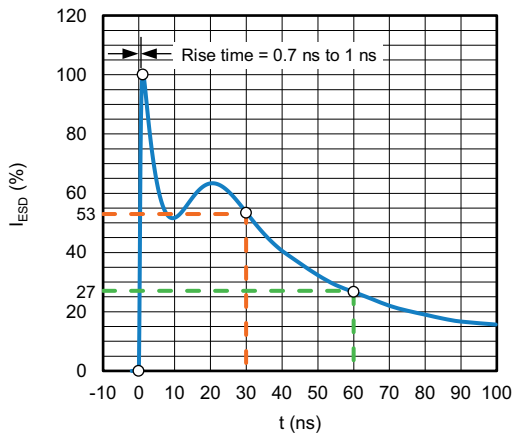


Fig. 1 - ESD Discharge Current Wave Form Acc. IEC 61000-4-2 (330 Ω / 150 pF)

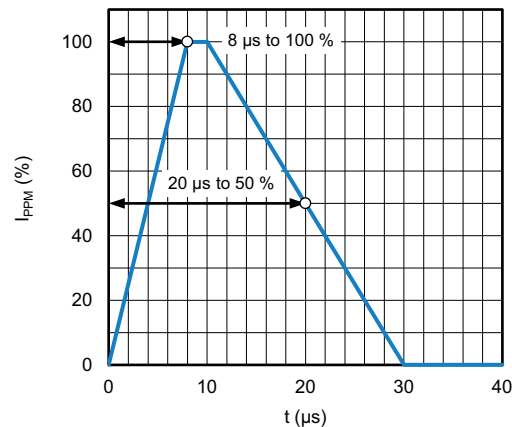


Fig. 2 - 8/20 μs Peak Pulse Current Wave Form Acc. IEC 61000-4-5

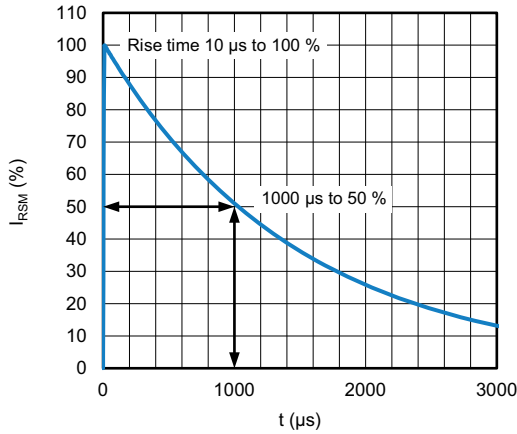


Fig. 3 - 10/1000 μs Peak Pulse Current Wave Form

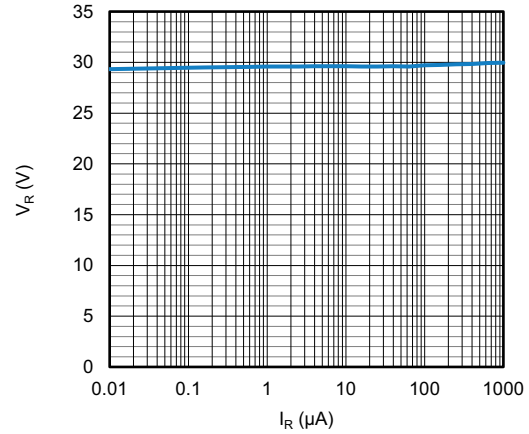


Fig. 6 - Typical Reverse Voltage vs. Reverse Current

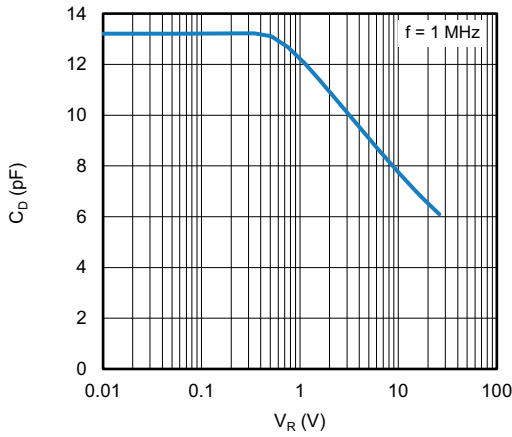


Fig. 4 - Typical Capacitance vs. Reverse Voltage

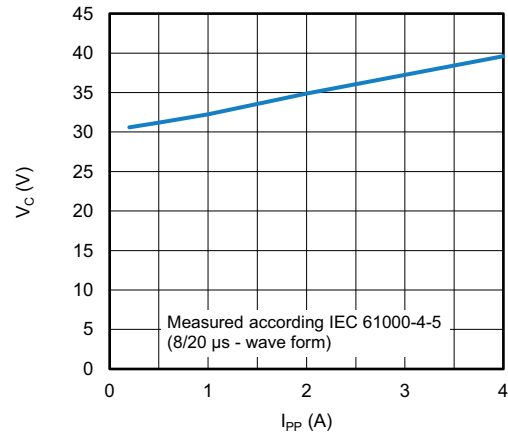


Fig. 7 - Typical Peak Clamping Voltage vs. Peak Pulse Current

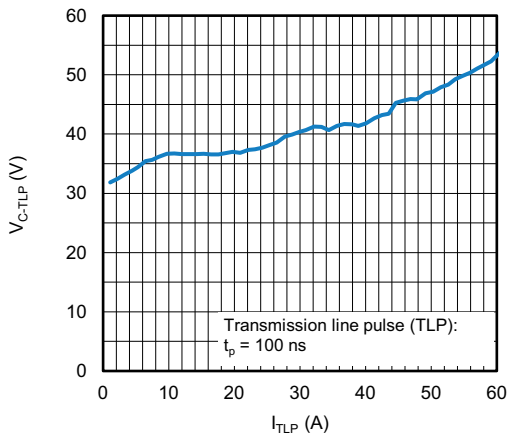


Fig. 5 - Typical Clamping Voltage vs. Peak Pulse Current

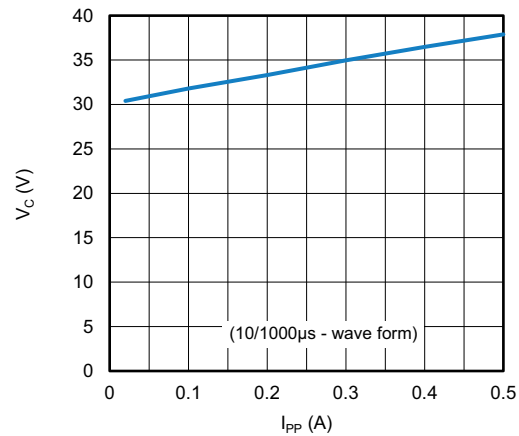
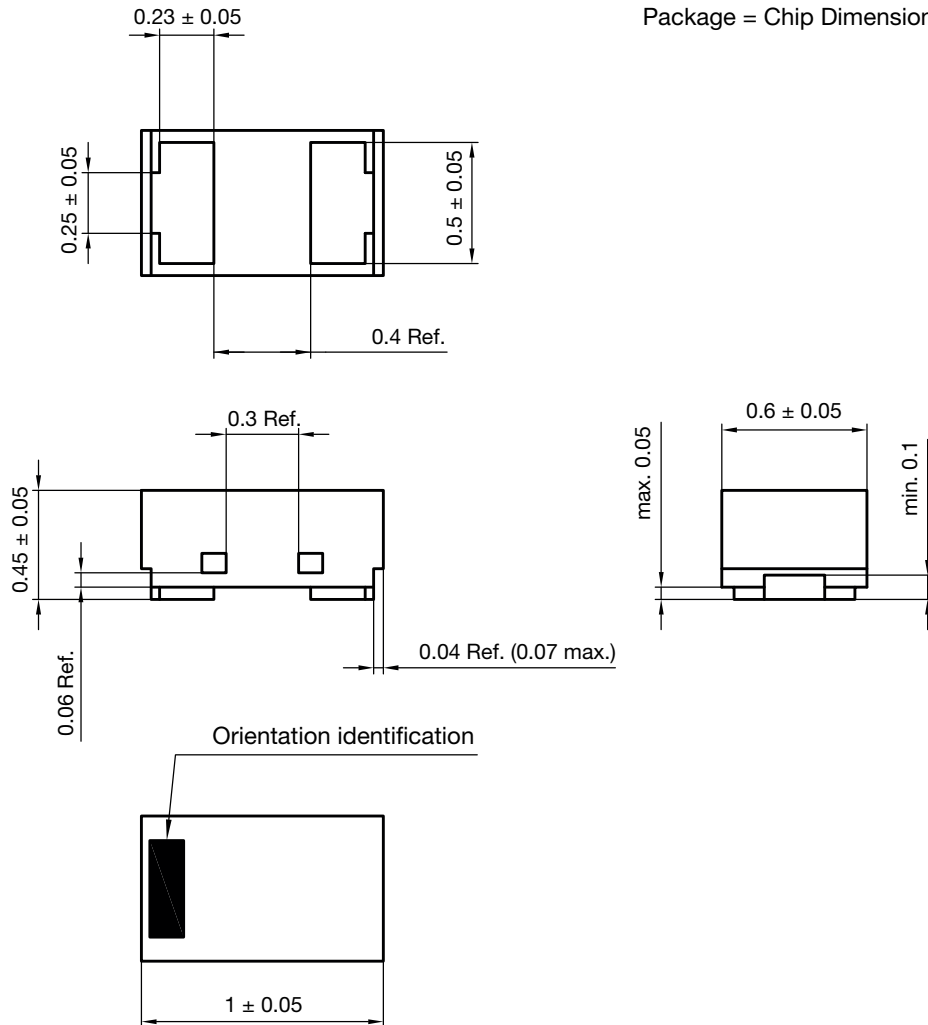


Fig. 8 - Typical Peak Clamping Voltage vs. Peak Pulse Current

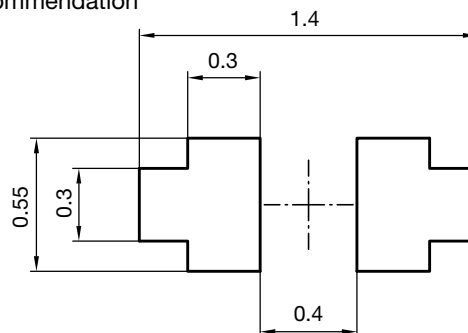


PACKAGE DIMENSIONS in millimeters (inches): **DFN1006-2B**

Package = Chip Dimension in mm



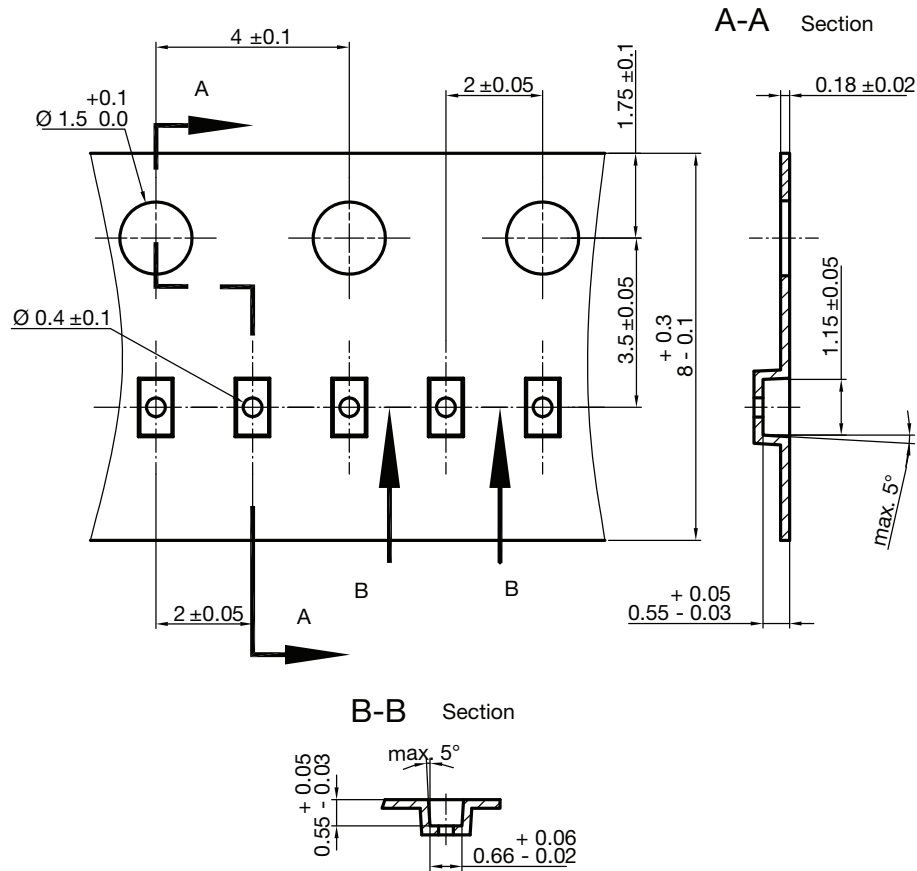
Footprint recommendation



Document no.: S8-V-3906.04-059 (4)
Created - Date: 11-Jul-2018
Rev.5 - Date: 17-Sep-2021

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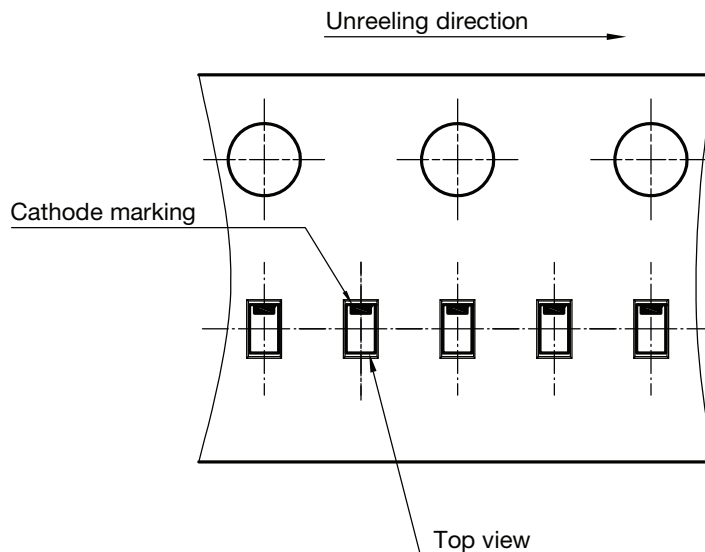
CARRIER TAPE DFN1006-2B



surface resistance: $10^5 - 10^{11} \frac{\text{OHMS}}{\text{SQ}}$
 Cumulative tolerances of 10 sprocket holes is $\pm 0.2 \text{ mm}$

S8-V-3906.04-063 (4)
 created 28.10.2019

ORIENTATION IN CARRIER TAPE DFN1006-2B



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