BiSy ESD Protection Diodes in Compact SOT-323 Package Offer Low Capacitance and Low Leakage Current

KEY BENEFITS

- Compact SOT-323 package
  - 2.3 mm by 2.1 mm footprint
  - Low profile of 0.95 mm
- Low load capacitance of 10 pF typical and 15 pF maximum
- Low maximum leakage current of < 0.05 µA
- Breakdown voltage of 30 V typical at 1 mA
- Provide transient protection for one (VLIN26A1) and two data lines (VCAN26A2) per IEC 61000-4-2 at ± 30 kV (air and contact discharge)
- AEC-Q101 qualified
- Lead (Pb)-free and RoHS-compliant

APPLICATIONS

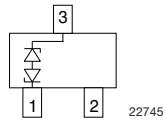
- LIN-Bus, CAN-Bus, and FLEX-Bus protection in automotive applications

RESOURCES

- Datasheet: VLIN26A1 - www.vishay.com/ppg?85895,
  VCAN26A2 - www.vishay.com/ppg?85894
- For technical questions contact ESDProtection@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

A WORLD OF SOLUTIONS™

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



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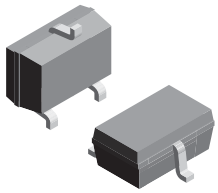

22743 SOT-323

FEATURES

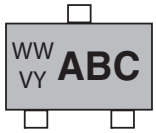
- For LIN-Bus applications
- Small SOT-323 package
- 1-line ESD protection
- Working range ± 26.5 V
- Low leakage current I_R < 0.05 µA
- Low load capacitance C_D < 15 pF
- ESD immunity acc. IEC 61000-4-2
  ± 30 kV contact discharge
  ± 30 kV air discharge
- ESD capability according to AEC-Q101:
  human 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

Pb-free

e3

RoHS COMPLIANT

MARKING (example only)



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

DESIGN SUPPORT TOOLS

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3D Models Available

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) 15K/BOX = MOQ	10K PER 13" REEL (8 mm TAPE) 10K/BOX = MOQ	
		STANDARD	GREEN				
VLIN26A1-03G	-	E		3	-08		VLIN26A1-03G-E3-08
VLIN26A1-03G	H	E		3	-08		VLIN26A1-03GHE3-08
VLIN26A1-03G	-	E		3		-18	VLIN26A1-03G-E3-18
VLIN26A1-03G	H	E		3		-18	VLIN26A1-03GHE3-18

PACKAGE DATA

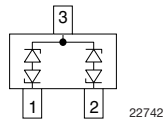
DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VLIN26A1-03G	SOT-323	6A1	5.65 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C

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	A
Peak pulse power	T_A = 25 °C; 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_{ESD}	± 30	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses; T_A = 25 °C		± 30	kV
Operating temperature	Junction temperature	T_J	-55 to +150	°C
Storage temperature		T_{STG}	-55 to +150	°C

Revision: 22-Feb-2018

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



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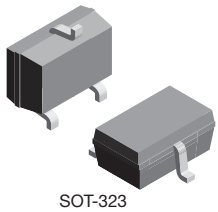

22743 SOT-323

FEATURES

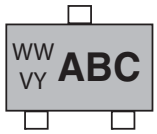
- For CAN and FLEX-bus applications
- Small SOT-323 package
- 2-line ESD protection
- Working range ± 26.5 V
- Low leakage current I_R < 0.05 µA
- Low load capacitance C_D < 15 pF
- ESD immunity acc. IEC 61000-4-2
  ± 30 kV contact discharge
  ± 30 kV air discharge
- ESD capability according to AEC-Q101: 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

Pb-free

e3

RoHS COMPLIANT

MARKING (example only)



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ABC = type code (see table below)
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DESIGN SUPPORT TOOLS

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3D Models Available

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) 15K/BOX = MOQ	10K PER 13" REEL (8 mm TAPE) 10K/BOX = MOQ	
		STANDARD	GREEN				
VCAN26A2-03	-	E		3	-08		VCAN26A2-03G-E3-08
VCAN26A2-03	H	E		3	-08		VCAN26A2-03GHE3-08
VCAN26A2-03	-	E		3		-18	VCAN26A2-03G-E3-18
VCAN26A2-03	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 µs; 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 µs; single shot	P_{PP}	150	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses, T_A = 25 °C	V_{ESD}	± 30	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses, T_A = 25 °C		± 30	kV
Operating temperature	Junction temperature	T_J	-55 to +150	°C
Storage temperature		T_{STG}	-55 to +150	°C

Revision: 18-Jul-2018