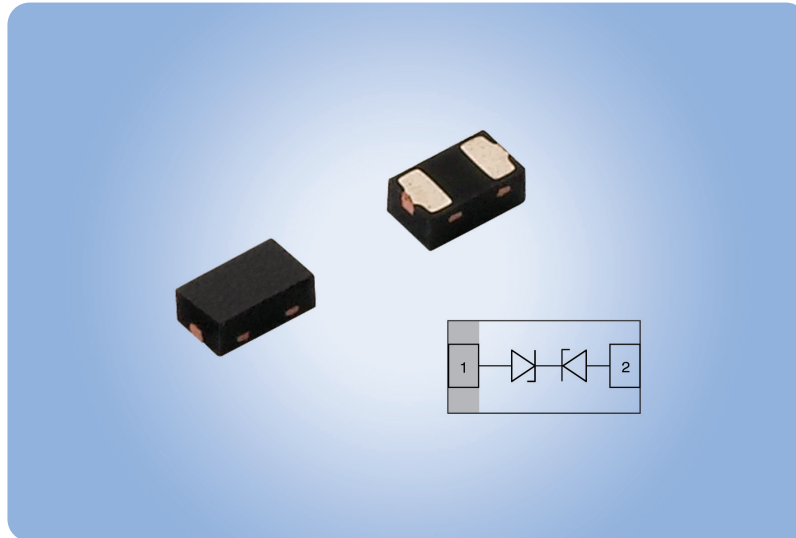




## Bidirectional and Symmetrical (BiSy) Single-Line ESD Protection Diode With Low Capacitance of 14 pF



### KEY BENEFITS

- Ultra compact LLP1006-2L package
  - Small footprint: 1.0 mm by 0.6 mm
  - Extremely low profile of < 0.4 mm
- Low capacitance: 14 pF
- Low leakage current of < 0.1  $\mu\text{A}$  at the working voltage of  $\pm 7\text{ V}$
- Reverse breakdown voltage of 7.3 V minimum at 1 mA
- Maximum clamping voltage of 15 V at 4 A
- High surge protection in accordance with IEC 61000-4-5 at 4 A
- Environmentally friendly “green” specifications, lead (Pb)-free devices

### APPLICATIONS

- ESD protection in portable electronics, including notebook computers and smartphones

### RESOURCES

- Datasheet: VCUT07B1-HD1 - [www.vishay.com/ppg?84137](http://www.vishay.com/ppg?84137)
- For technical questions contact [ESDProtection@vishay.com](mailto:ESDProtection@vishay.com)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



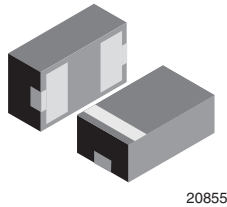
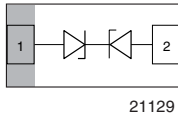
RoHS  
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HALOGEN  
FREE

GREEN  
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## Bidirectional and Symmetrical (BiSy) Single-Line ESD Protection Diode With Low Capacitance of 14 pF


**MARKING** (example only)


Bar = pin 1 marking  
 X = date code  
 Y = type code (see table below)

**DESIGN SUPPORT TOOLS**

[click logo to get started](#)

**3D**  
 Models  
 Available

**FEATURES**

- Ultra compact LLP1006-2L package
- Low package profile < 0.4 mm
- 1-line ESD protection
- Working range  $\pm 7$  V
- Low leakage current  $I_R < 0.1 \mu\text{A}$
- Low load capacitance  $C_D = 14$  pF
- ESD immunity acc. IEC 61000-4-2  $\pm 30$  kV contact discharge  $\pm 30$  kV air discharge
- Soldering can be checked by standard vision inspection; no X-ray necessary
- Pin plating NiPdAu (e4) no whisker growth
- e4 - precious metal (e.g. Ag, Au, NiPd, NiPdAu) (no Sn)
- PATENT(S): [www.vishay.com/patents](http://www.vishay.com/patents)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
 COMPLIANT  
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**FREE**  
**GREEN**  
 [5-2008]

**ORDERING INFORMATION**

DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL (8 mm TAPE ON 7" REEL)	MINIMUM ORDER QUANTITY
VCUT07B1-HD1	VCUT07B1-HD1-G4-08	8000	8000

**PACKAGE DATA**

DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VCUT07B1-HD1	LLP1006-2L	U	0.72 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C

**ABSOLUTE MAXIMUM RATINGS VCUT07B1-HD1**

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	Acc. IEC 61000-4-5; $t_p = 8/20 \mu\text{s}$ ; single shot	$I_{PPM}$	4	A
Peak pulse power	Pin 1 to pin 2 acc. IEC 61000-4-5; $t_p = 8/20 \mu\text{s}$ ; single shot	$P_{PP}$	60	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	$V_{ESD}$	$\pm 30$	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		$\pm 30$	kV
Operating temperature	Junction temperature	$T_J$	-40 to +125	°C
Storage temperature		$T_{stg}$	-55 to +150	°C

Revision: 04-Jan-2019

**PATENT(S):** [www.vishay.com/patents](http://www.vishay.com/patents)

This Vishay product is protected by one or more United States and international patents.