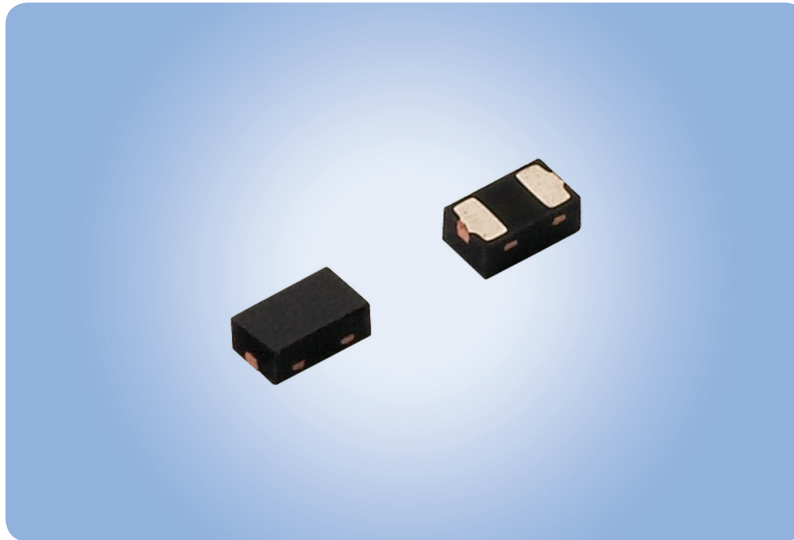




## BiAs Single-Line ESD Protection Diode With Reverse Breakdown Voltage Above 15.5 V



### KEY BENEFITS

- Ultra compact LLP1006-2L package
  - 1.0 mm by 0.6 mm footprint
  - Extremely low profile of < 0.4 mm
- Minimum 15.5 V reverse breakdown voltage
- Low leakage current of < 0.1  $\mu$ A
- Low load capacitance of 45 pF
- RoHS-compliant and halogen-free

### APPLICATIONS

- ESD protection in portable electronics, including gaming systems, smartphones, and tablets

### RESOURCES

- Datasheet: VESD15A1-HD1 - [www.vishay.com/ppg?82724](http://www.vishay.com/ppg?82724)
- 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)



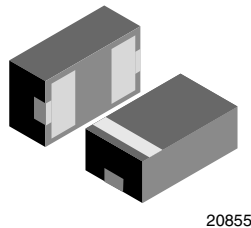
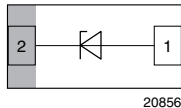
RoHS  
COMPLIANT

HALOGEN  
FREE

GREEN  
(5-2008)

A WORLD OF  
SOLUTIONS™

## BiAs Single-Line ESD Protection Diode With Reverse Breakdown Voltage Above 15.5 V


**MARKING** (example only)


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

**DESIGN SUPPORT TOOLS** click logo to get started

**FEATURES**

- Ultra compact LLP1006-2L package
- Low package height < 0.4 mm
- 1-line ESD protection
- Low leakage current < 0.01  $\mu$ A
- Low load capacitance  $C_D = 45$  pF ( $V_R = 0$  V;  $f = 1$  MHz)
- ESD immunity acc. IEC 61000-4-2  
 $\pm 30$  kV contact discharge  
 $\pm 30$  kV air discharge
- High surge current acc. IEC 61000-4-5  $I_{PP} > 6$  A
- 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)


**ORDERING INFORMATION**

DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL (8 mm TAPE on 7" REEL)	MINIMUM ORDER QUANTITY
VESD15A1-HD1	VESD15A1-HD1-G4-08	8000	8000

**PACKAGE DATA**

DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VESD15A1-HD1	LLP1006-2L	W	0.72 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C

**ABSOLUTE MAXIMUM RATINGS RATINGS VESD15A1-HD1**

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	Acc. IEC 61000-4-5; $t_p = 8/20$ $\mu$ s; single shot	$I_{PPM}$	6	A
Peak pulse power	Acc. IEC 61000-4-5; $t_p = 8/20$ $\mu$ s; single shot	$P_{PP}$	150	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

 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.