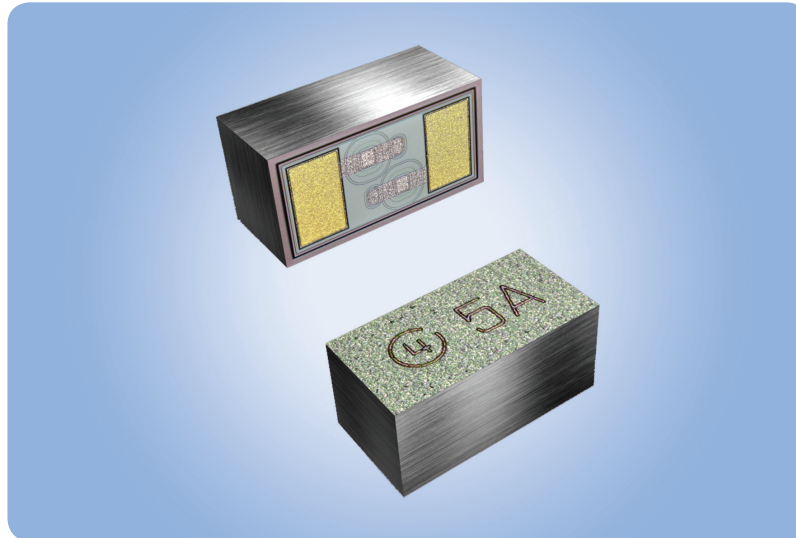


BiSy Single-Line ESD Protection Diode With Typical Low Capacitance Down to 0.29 pF



KEY BENEFITS

- Ultra compact CLP0603 package
 - 0.6 mm by 0.3 mm footprint
 - Extremely low profile of 0.27 mm
- Very low load capacitance down to 0.29 pF typical
- Low maximum leakage current of < 0.05 μ A at the working voltage of 5.5 V
- Breakdown voltage of 8.5 V typical at 1 mA
- Maximum clamping voltage of 18 V at 2.5 A

APPLICATIONS

- ESD protection of high speed signal or data points like HDMI, USB 3.0, and Thunderbolt in portable electronics, including smartphones, mobile phones, digital cameras, and portable gaming systems

RESOURCES

- Datasheet: VBUS05B1-SD0 - www.vishay.com/ppg?85899
- For technical questions contact ESDProtection@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



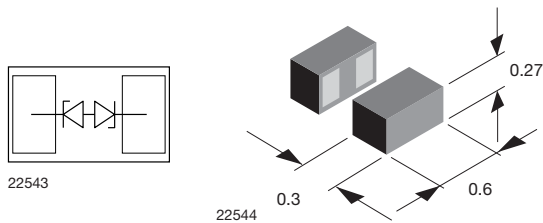
RoHS
COMPLIANT

HALOGEN
FREE

GREEN
(5-2008)

A **WORLD OF**
SOLUTIONS™

BiSy Single-Line ESD Protection Diode With Typical Low Capacitance Down to 0.29 pF


MARKING (example only)


1 = year code
Open circle = month code and pin 1
XY = type code

FEATURES

- Ultra compact CLP0603 package
- Low package height < 0.3 mm
- 1-line ESD protection
- Working range ± 5.5 V
- Low leakage current < 0.05 μ A
- Ultra low load capacitance $C_D = 0.29$ pF typ.
- ESD immunity acc. IEC 61000-4-2
 ± 16 kV contact discharge
 ± 16 kV air discharge
- Lead plating: Au (e4)
- Lead material: Ni
- Backside coating
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
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HALOGEN
FREE
GREEN
(5-2008)

DESIGN SUPPORT TOOLS AVAILABLE


3D Models

ORDERING INFORMATION

PART NUMBER (EXAMPLE)	ENVIRONMENTAL AND QUALITY CODE		PACKAGING CODE	ORDERING CODE (EXAMPLE)
	RoHS-COMPLIANT + LEAD (Pb)-FREE TERMINATIONS		GOLD PLATED	
	GREEN			
VBUS05B1-SD0-	G		4 -08	VBUS05B1-SD0-G4-08

PACKAGE DATA

DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	SOLDERING CONDITIONS
VBUS05B1-SD0	CLP0603-2L	5A	0.12 mg	Peak temperature max. 260 °C Reflow soldering according JEDEC® STD-020

ABSOLUTE MAXIMUM RATINGS

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	acc. IEC 61000-4-5, 8/20 μ s/single shot	I_{PPM}	2.5	A
Peak pulse power	Pin 1 to pin 2 acc. IEC 61000-4-5; $t_p = 8/20$ μ s; single shot	P_{PP}	45	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 16	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 16	
Operating temperature	Junction temperature	T_J	-55 to +150	°C
Storage temperature		T_{stg}	-55 to +150	°C

Revision: 17-May-2019

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[P6KE8.2A](#) [SA110CA](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#) [SMBJ8.0A](#) [SMLJ30CA-TP](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#)
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[CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [D1213A-02WL-7](#) [ESDLIN1524BJ-HQ](#) [5KP100A](#)