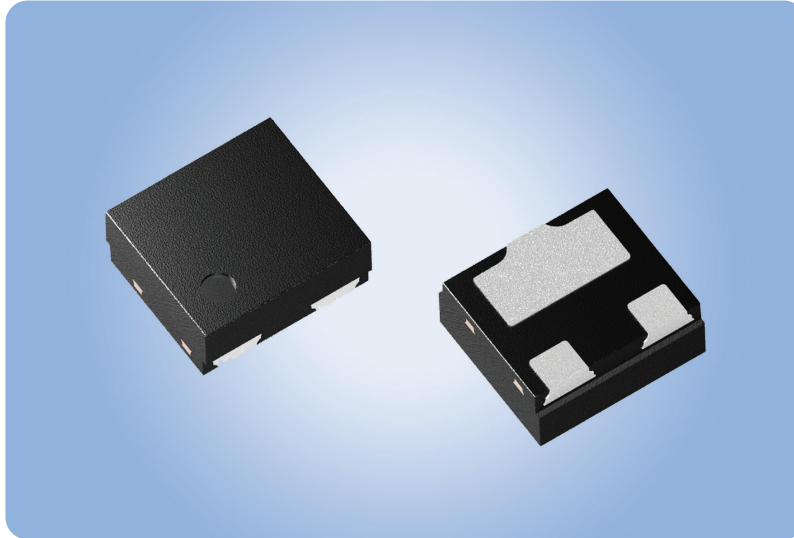




The DNA of tech.™

BiSy 2-Line, Ultra Low Capacitance ESD Protection Diode in Space-Saving DFN1110-3A Package



KEY BENEFITS

- Ultra low load capacitance down to 0.37 pF typical
- Compact DFN1110-3A package with wettable flanks
- Low maximum leakage current of $< 0.1 \mu\text{A}$ at the working voltage of $\pm 5.5 \text{ V}$
- Breakdown voltage of 8.5 V typical at 1 mA
- Maximum clamping voltage of 18 V at 3.4 A
- Supports automated optical inspection (AOI) for automotive systems
- Provides transient protection for data lines as per IEC 61000-4-2 at $\pm 20 \text{ kV}$ (air and contact discharge)
- AEC-Q101 qualified available
- RoHS-compliant, halogen-free, and [Vishay Green](#)

APPLICATIONS

- Interface protection including USB 2.0, USB 3.0, and HDMI in commercial and automotive applications

RESOURCES

- Datasheet: [VBUS05M2-HT5](#)
- For technical questions contact ESDProtection@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

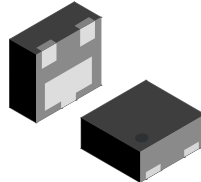
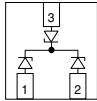
HALOGEN
FREE

GREEN
(5-2008)



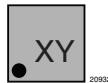
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DFN1110-3A

MARKING (example only)



Dot = pin marking

X = date code

Y = type code (see table below)

FEATURES

- Small DFN1110-3A
- 2-line ESD protection
- Working range ± 5.5 V
- Low leakage current $I_R < 0.05$ μ A
- Low load capacitance $C_D < 0.45$ pF
- ESD immunity acc. IEC 61000-4-2
 ± 20 kV contact discharge
 ± 20 kV air discharge
- ESD capability according to AEC-Q101:
human body model: class H3B: > 8 kV
- e3 - pins side wall plated with tin (Sn)
- AOI capable
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance
please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

LINKS TO ADDITIONAL RESOURCES



[3D Models](#)

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	10K PER 7" REEL (8 mm TAPE) 10K/BOX = MOQ	
		GREEN			
VBUS05M2-HT5	-	G	3	-08	VBUS05M2-HT5-G3-08
VBUS05M2-HT5	H	G	3	-08	VBUS05M2-HT5HG3-08

PACKAGE DATA

DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VBUS05M2-HT5	DFN1110-3A	M	1.43 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	Acc. IEC 61000-4-5; $t_p = 8/20$ μ s; single shot	I_{PPM}	3.4	A
Peak pulse power	Acc. IEC 61000-4-5; $t_p = 8/20$ μ s; single shot	P_{PP}	60	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 20	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 20	
Operating temperature	Junction temperature	T_J	-55 to +150	°C
Storage temperature		T_{STG}	-55 to +150	°C

Revision: 02-Sep-2020