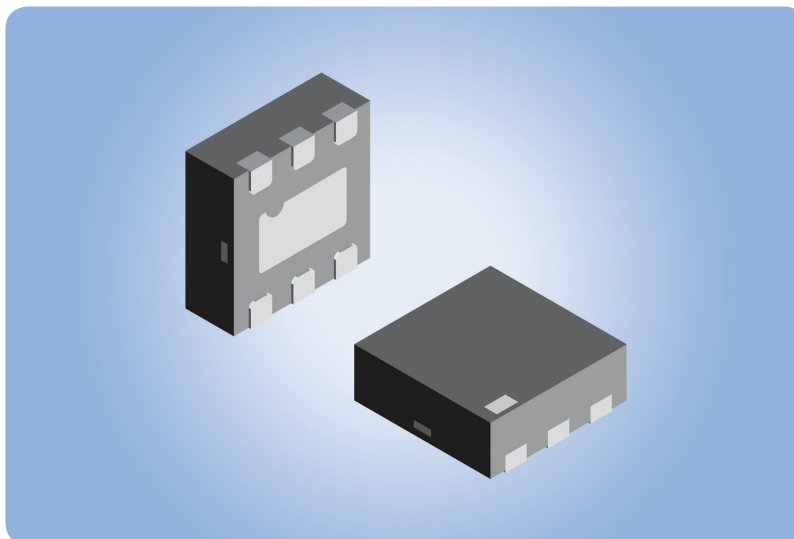




USB-OTG ESD Protection Bus Port Array Provides Low Typical Capacitance of 0.7 pF in Compact Leadless Package



KEY BENEFITS

- Low load capacitance: $C_D = 0.7$ pF
- 3-line USB ESD protection with 5 V working range
- V_{BUS} protection with 28 V working range
- Ultra compact LLP75-7L package with low package height < 0.6 mm
- RoHS-compliant

APPLICATIONS

- ESD protection in high speed data applications for OTG application during battery charging via USB port for portable gaming devices, and mobile phones

RESOURCES

- Datasheet: VBUS053CZ-HAF - www.vishay.com/ppg?85200
- For technical questions contact ESDProtection@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



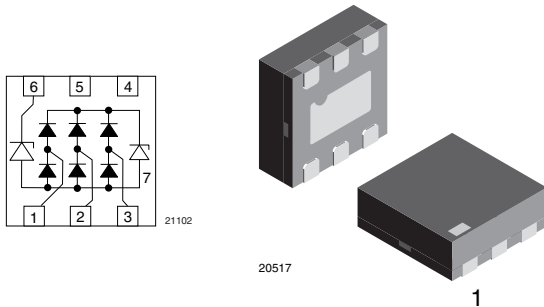
RoHS
COMPLIANT

HALOGEN
FREE

GREEN
(5-2008)

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USB-OTG ESD Protection Bus Port Array Provides Low Typical Capacitance of 0.7 pF in Compact Leadless Package



FEATURES

- Ultra compact LLP75-7L package
- Low package height < 0.6 mm
- 3-line USB ESD protection with max. working range = 5.5 V
- V_{BUS} -protection with 28 V working range
- Low leakage current
- Low load capacitance $C_D = 0.7$ pF
- ESD immunity to IEC 61000-4-2 ± 15 kV contact discharge ± 15 kV air discharge
- Surge current acc. IEC 61000-4-5 $I_{PP} > 3$ A
- e4 - precious metal (e.g. Ag, Au, NiPd, NiPdAu) (no Sn)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



MARKING (example only)



Dot = pin 1 marking

XX = date code

YY = type code (see table below)

DESIGN SUPPORT TOOLS

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ORDERING INFORMATION

DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL (8 mm TAPE on 7" REEL)	MINIMUM ORDER QUANTITY
VBUS053CZ-HAF	VBUS053CZ-HAF-G-08	3000	15 000

PACKAGE DATA

DEVICE NAME	PACKAGE NAME	TYPE CODE	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
VBUS053CZ-HAF	LLP75-7L	UA	4.2 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C

ABSOLUTE MAXIMUM RATINGS VBUS053CZ-HAF

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Data line D+, D-, ID: Pin 1, 2 and 3 to ground (pin 7)				
Peak pulse current	acc. IEC 61000-4-5; $t_p = 8/20$ μ s; single shot	I_{PPM}	3	A
Peak pulse power	acc. IEC 61000-4-5; $t_p = 8/20$ μ s; single shot	P_{PP}	54	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 15	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 15	kV
V_{BUS}: Pin 6 to ground (pin 7)				
Peak pulse current	acc. IEC 61000-4-5; $t_p = 8/20$ μ s; single shot	I_{PPM}	3	A
Peak pulse power	acc. IEC 61000-4-5; $t_p = 8/20$ μ s; single shot	P_{PP}	156	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 30	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 30	kV
Operating temperature	Junction temperature	T_J	-40 to +125	°C
Storage temperature		T_{STG}	-55 to +150	°C

Revision: 08-Jan-2019