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**EMI Filter for USB interface of STM32**

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Main components	
USBLC6-2	Very low capacitance ESD protection
STM32 32-bit Arm Cortex MCUs	All versions with integrated USB interface

**Description of Design Problem, Question**

We are using USBUF01W6 as EMI filter for STM32F207VCT6 in USB D+ and D- lines in Full speed mode and we have connected  $V_{BUS}$  (5V) at pin 3.3V pin of USBUF01W6.

Does this make sense to you?

**Design Tip**

As STM32 used already includes series resistors for USB D+ and D-, the right part to protect against ESD on D+ and D- is USBLC6-2SC6, instead of USBUF.

In addition, you should consider to protect 5V\_USB against ESD and EOS transients (8/20 $\mu$ s). We recommend to use ESDA7P60-1U1M or ESDA7P120-1U1M. In this case,  $V_{BUS}$  of USBLC6-2SC6 is connected to a 100nF capacitor or left open.

For best protection these parts should be placed as close as possible to the connector.

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## Support Material

All related documentation and support material are provided on [www.st.com](http://www.st.com):

Product folder URL
USBLC6-2: <a href="https://www.st.com/en/product/usblc6-2">https://www.st.com/en/product/usblc6-2</a>

## Customer Feedback

For any kind of feedback, suggestions, etc. please post your comments by email to [kb.feedback@st.com](mailto:kb.feedback@st.com). Thank you.

## Support Center

For further product support please refer to our **Support Center** ([https://www.st.com/content/st\\_com/en/support/support-home.html](https://www.st.com/content/st_com/en/support/support-home.html)) to select a suitable service from a variety of online support options.

## Revision History

Date	Version	Changes
5-Dec-2018	1	Initial release

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