

SN65LVPE502CP Errata

The SN65LVPE502CP redriver is a dual channel, single lane USB 3.0 redriver and signal conditioner supporting data rates of 5.0Gbps. This report provides information on the errata found on the SN65LVPE502CP device. The errata includes a false detect with VBUS powered devices and termination remaining enabled in certain situations.

Problem: False Detect

Some VBUS powered devices create noise on plug-in and cause the SN65LVPE502CP to falsely detect the device and enable termination early. After termination is enabled, the host begins polling before the device is ready. Polling will timeout and the host will enter compliance mode.

Solution: This issue is fixed on the SN65LVPE502A device. Figure 1 shows a successful connection after a glitch is observed when the VBUS powered device is attached.

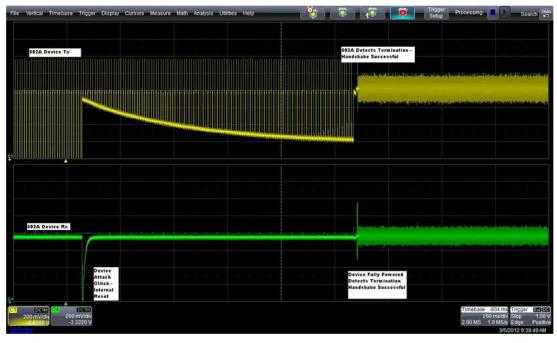


Figure 1. Connection of VBUS Powered Device



Problem: Termination Remains Enabled

In certain conditions the termination remains enabled after a device is disconnected from the SN65LVPE502CP. This issue is host software driver dependant. If host issues a warm reset within ~300 ms of device disconnect the termination will remain enabled. No functional issues are observed, but the power consumption is increased while no devices are connected.

Solution:

This issue is no longer driver dependant and is fixed in the SN65LVPE502A. A successful disconnect may be observed in Figure 2.



Figure 2. SN65LVPE502A Successful Disconnect

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