ERRATA TO THE TSB21LV03A DATA SHEET FOR SN104903PM DEVICE
(TEXAS INSTRUMENTS LITERATURE NO. SLLS278, NOVEMBER 1997)

This document contains corrections and additions to information in the TSB21LV03A data sheet (TI Literature Number SLLS278, November 1997) and is applicable to the SN104903PM device (symbolized TSB21LV03A1).

Application notes:

a. If a network of 5 or more SN104903PMs is connected, upon bus reset the SN104903PM network may not initially issue the correct number of self–ID packets. If this occurs, the SN104903PMs that did not issue a self–ID packet will cause another bus reset. This bus reset process will continue until the correct number of self–ID packets are issued, unless the process is interrupted by receipt of a non-self–ID packet. With 4 or fewer nodes the problem does not occur. The occurrences are greater at higher operating voltages. The average frequency of occurrence (number of resets before multiple self–ID packages occur) at room temperature with a supply voltage of 3.3 V is shown below:

5 nodes	84 resets
6 nodes	20 resets
7 nodes	16 resets
8 nodes	11 resets
9 nodes	3 resets
10 nodes	0 resets

With 10 or more nodes, every initiation of a reset will typically generate at least 1 more reset.

These numbers are representative — actual results may vary.

Workaround:

To allow the bus reset sequence described above to complete, it must not be interrupted by cycle start packets, PHY configuration packets, or asynchronous packets. It is recommended that upon bus reset, the isochronous resource manager node (and/or the bus manager node) should wait for 450 microseconds after the start of the initial bus reset and then check to see if another bus reset indication has been sent to the link. If another bus reset has been indicated, repeat the wait. If another bus reset has not been indicated, then resume cycle start packets and asynchronous packets. The bus manager should use the final package of self–IDs received.

Note that if multiple bus resets occur, all nodes will have their gap counts reset to 3F hex (2 bus resets in a row set all gap counts to the default 3F hex). If operating in a larger network (5 or more SN104903PM PHYs in a branching configuration, or more than 7 in a daisy chain configuration), setting the gap counts to any value other than 3F may require multiple attempts and is not recommended. With more than 9 nodes, setting the gap count to any value other than 3F typically will not work.

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