



Product Change Notification / SYST-02PWFL437

Date:

06-Jun-2022

Product Category:

USB Hubs

PCN Type:

Document Change

Notification Subject:

ERRATA - USB57xx/USX5044 Silicon Errata and Data Sheet Clarification

Affected CPNs:

[SYST-02PWFL437_Affected_CPN_06062022.pdf](#)

[SYST-02PWFL437_Affected_CPN_06062022.csv](#)

Notification Text:

SYST-02PWFL437

Microchip has released a new Errata for the USB57xx/USX5044 Silicon Errata and Data Sheet Clarification of devices. If you are using one of these devices please read the document located at [USB57xx/ USX5044 Silicon Errata and Data Sheet Clarification](#).

Notification Status: Final

Description of Change:

1) Errata document was made available for public release

Impacts to Data Sheet: None

Reason for Change: To Improve Productivity

Change Implementation Status: Complete

Date Document Changes Effective: 06 June 2022

NOTE: Please be advised that this is a change to the document only the product has not been changed.

Markings to Distinguish Revised from Unrevised Devices: N/A

Attachments:

[USB57xx/ USX5044 Silicon Errata and Data Sheet Clarification](#)

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Affected Catalog Part Numbers (CPN)

USB5742/2GX01
USB5742/2G
USB5742B/2GX01
USB5742B/2G
USB5744B/2GX01
USB5744/2G
USB5744/2GD01
USB5744/2GD02
USB5744/2GTA
USB5744/2GTB
USB5744/2GX01
USB5734/MR
USB5734/MRD01
USB5734/MRD02
USB5734/MRTB
USB5742-I/2GX01
USB5742-I/2G
USB5742B-I/2GX01
USB5742B-I/2G
USB5742-I/2GSEU
USB5744B-I/2GX01
USB5744-I/2G
USB5744-I/2GX01
USB5734-I/MR
USB5742T/2GX01
USB5742T/2G
USB5742T/2GC01
USB5742BT/2GX01
USB5742BT/2G
USB5742BT/2GC01
USB5744BT/2GX01
USB5744T/2G
USB5744T/2GD01
USB5744T/2GD02
USB5744T/2GTB
USB5744T/2GX01
USB5734T/MR
USB5734T/MRD01
USB5734T/MRD02
USB5742T-I/2G
USB5742BT-I/2G
USB5742T-I/2GSEU
USB5744BT-I/2GX01
USB5744T-I/2GSEU
USB5744T-I/2G
USB5744T-I/2GTA

USB5744T-I/2GTB
USB5744T-I/2GX01
USB5734T-I/MR
USX5044/2G
USX5044T/2G
USX5044T-I/2G

USB57xx/USX5044 Silicon Errata & Data Sheet Clarification

This document describes known silicon errata for the Microchip USB57xx/USX5044 family of devices. The silicon errata discussed in this document are for silicon revisions as listed in [Table 1](#). The silicon revision can be determined by the device's top marking. A summary of USB57xx/USX5044 silicon errata is provided in [Table 2](#).

TABLE 1: AFFECTED SILICON REVISIONS

Part Numbers	Silicon Revisions
USB5734, USB5742, USB5744, USX5044	A1, B1

TABLE 2: SILICON ISSUE SUMMARY

Item Number	Silicon Issue Summary	Affected SKUs	Affected Silicon Revisions
1.	Failure to exit USB3 Compliance Mode properly	ALL	A1, B1
2.	BC1.2 Charging Failure with USB3 capable mobile devices	ALL	A1, B1

Silicon Errata Issues

Module 1: Failure to exit USB3 Compliance Mode properly

DESCRIPTION

After the USB57xx/USX5044 is placed into Compliance Mode, it is possible to exit Compliance Mode of the hub through transmission of a Warm Reset signal from the upstream port Link. The USB57xx/USX5044 does not properly exit Compliance Mode unless it experiences a full chip reset. After Compliance Mode is exited, USB3 communication through the hub to downstream ports does not operate properly, resulting in packet corruption.

END USER IMPLICATIONS

Hosts should not place the USB57xx/USX5044 into Compliance Mode except when running USB compliance tests. If the USB57xx/USX5044 is connected to a USB host which places the hub into Compliance Mode but then forces the hub to exit Compliance Mode with a USB3 Link based Warm Reset, downstream communication with devices will fail.

Work Around

Systems impacted by this erratum can apply an OTP patch to correct the issue. The patch is included in the 'USB57xx OTP, FW and Default Configuration Package' linked on the USB57xx/USX5044 product web pages.

PLAN

This erratum will not be corrected in a future revision.

USB57xx/USX5044

Module 2: BC1.2 Charging Failure with USB3 capable mobile devices

DESCRIPTION

For USB57xx/USX5044 downstream ports with CDP capability enabled, mobile devices which perform CDP detection handshake but enumerate at USB3 speeds will not be able to charge at CDP charging levels (1.5A).

END USER IMPLICATIONS

The USB57xx/USX5044 BC1.2 Charging algorithm provides a function to work around an issue observed with some early BC1.2 devices which were not properly implementing CDP functionality. This function starts a timer after detecting a CDP handshake from a BC1.2 device. If the device does not enumerate after the timer expires, the port switches to SDP mode so that the device may enumerate. This function monitors for USB2 enumeration of the device only.

Devices which perform a CDP handshake but enumerate in USB3 mode will not be able to charge at CDP levels, as the BC1.2 algorithm will force the port into SDP mode. Instead, the device will only draw up to 900mA of current.

Work Around

Systems impacted by this erratum can apply an OTP patch to correct the issue. The patch is included in the 'USB57xx OTP, FW and Default Configuration Package' linked on the USB57xx/USX5044 product web pages.

PLAN

This erratum will not be corrected in a future revision.

APPENDIX A: DOCUMENT REVISION HISTORY

Revision Level & Date	Section/Figure/Entry	Correction
DS80001021B (05-23-22)	Public release	
DS80001021A (04-25-22)	All	Initial release

USB57xx/USX5044

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