
USB2517/17i Family Silicon Errata

The USB2517/17i family devices that you have received conform functionally to the current Device Data Sheet (Revision 2.8), except for the anomalies described in this document.

The silicon issues discussed in the following pages are for silicon revisions with the Device and Revision IDs listed in [Table 1](#). The silicon issues are summarized in [Table 2](#).

Note: This document summarizes all silicon errata issues of silicon revision in [Table 2](#) apply to the current silicon revision (**A2**).

The Engineering Device ID values for USB2517/17i silicon revision A2 is shown in [Table 1](#).

TABLE 1: SILICON DEVREV VALUES

Part Number	Engineer Device ID of A2
USB2517-JZX	A2P04
USB2517i-JZX	A2P04

TABLE 2: SILICON ISSUE SUMMARY

Item Number	Issue Summary	Affected Revisions
		A2
1.	DS port fails to go into SUSPEND if hos request comes early in the microframe zero (uf0)	X
2.	Internal POR circuit does not function	X
3.	HS termination has dual value and is below specification	X
4.	Hub does not detect speed of down-stream device when port reset is issued early in the frame	X

Silicon Errata Issues

Module 1: DS port fails to go into SUSPEND if host request comes early in the microframe zero (uf0)

Description of Issue:

Operating system (Windows 8) intended to set the port in Selective Suspend by sending SET_FEATURE (PORT_SUSPEND) command to corresponding port of the hub. If the command is scheduled right after the SOF microframe zero, the hub will wait to execute the command. The port would continue to generate Keep-Alive EOPs.

End of User Impacts:

Port might fail to go into SUSPEND.

Solution:

This will not be addressed in a future version of the device.

Module 2: Internal POR circuit does not function

Description of Issue:

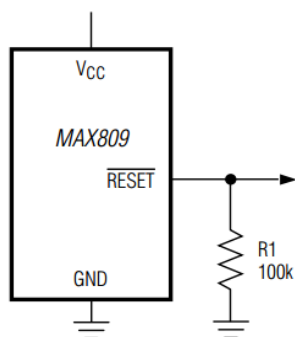
The internal POR does not generate reset when power drops below the threshold. For a supply that has non-monotonous ramp reset may be lost.

End of User Impacts:

Device might not enumerate.

Solution:

Use external power on reset circuit (for example, reset circuit with MAX809S(V2.9V) voltage supervisor).



Module 3: HS termination has dual value and is below specification

Description of Issue:

The calibration circuit in the phy is enabled when the global_suspend and port_suspend are negated when clock-usable is asserted. If port_suspend is asserted while clock-usable is asserted, the coarse calibration does not occur. Instead, the default high-setting for HS-term is set. The continuous fine calibration does operate.

End of User Impacts:

No end user functional impact.

The low Zterm centered at 41 Ω with $\pm 0.3 \Omega$ tolerance. Though the value is within the USB specifications, which is range from 40.5 Ω to 49.5 Ω ; yet, with the low marginal value of Zterm can cause the TDR test to fail.

Solution:

This will not be addressed in a future version of the device.

Module 4: Hub does not detect speed of downstream device when port reset is issued early in the frame

Description of Issue:

Whenever the hub is in high speed mode, and a full speed device is connected to the downstream port. It is possible that the hub will detect the device as a low speed device after a USB reset. This wrong speed detection will happens, if the USB reset (set port feature command) is sent at very early in the frame.

End of User Impacts:

This might cause the Interoperability to fail. The failure is prone to happen more frequent in some MAC OS drivers. frame.

Solution:

This will not be addressed in a future version of the device.

APPENDIX A: DOCUMENT REVISION HISTORY

Revision Level & Date	Section/Figure/Entry	Correction
DS80000628A, 10/28/2014		Initial release.

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