



Si834x Errata

This document contains information on the errata for the following:

Product: Si834x Isolated Smart Switch

OPNs Affected: All

Overview: The product does not report an Overvoltage Constraint diagnostic as documented in the Si834x Data Sheet Revision 0.5.

Detailed Description: The current revision of the product does not report an Overvoltage Constraint diagnostic as documented in the data sheet. The product will exhibit a normal overvoltage protection behavior as documented under Section 3.4 Switch Protection. Specifically, the device forces the smart output clamp for all channels to remain at Demagnetization Clamp Low Voltage (V_{CLMPL}), slowing the demagnetization of inductors, while the switch supply voltage (VDD2) remains above the VDD2 Overvoltage Threshold ($VDD2_{OV32}$.) However, during this condition, the Overvoltage Constraint diagnostic is not reported in the Master Diagnostic register (MASTER_DIAG) bit 5 (VDD2_OS), nor is it reported by the FLT\ indicator output as documented in the Si834x Data Sheet Revision 0.5.

ERRATA DEFINITIONS

Impact Definition: Each erratum is marked with an impact, as defined below:

- Minor—Workaround(s) exists.
- Major—Errata that do not conform to the data sheet or standard.
- Information—The device behavior is not ideal but acceptable. Typically, the data sheet may be changed to match or address the device behavior.

1. Errata Status Summary

Table 1.1. Specific Data Sheet Error(s)

Erratum	Title/Problem	Impact	Resolution
1	Throughout the data sheet, the product is stated as having 8 diagnostic reports. Only 7 are actually reported in the current product revision.	Major	The product will be revised to match the published Si834x Data Sheet Revision 0.5.
2	Section 3.1 Truth Tables <ul style="list-style-type: none"> The FLT\ column value should be OFF for all table rows where: <ul style="list-style-type: none"> VDD1_Q and VDD2_Q = powered (P), Fault_Q = detected (D), and the <u>specific fault</u> condition detected is an Overvoltage Constraint 	Major	
3	Section 3.4.4 Power Supply Protection <ul style="list-style-type: none"> Figure 3.9: Plot VDD2_OS is incorrect. The plot stays false at all times. The description is incorrect in this section when describing the behavior of the VDD2_OS bit field. The bit field remains false at all times. 	Major	
4	Section 3.5.1 Power Supply Diagnostics <ul style="list-style-type: none"> Table 3.7 Switch Power Supply Diagnostics: Table row VDD2 Overvoltage Constraint diagnostic is incorrect. The FLT\ cell value should be OFF, and VDD2_OS cell value should be 0. The description in this section is incorrect. Only three power supply states can be discerned. 	Major	

2. Revision History

Revision 0.1

August, 2019

- Initial release.



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Silicon Laboratories Inc.
400 West Cesar Chavez
Austin, TX 78701
USA

<http://www.silabs.com>