Microsemi Corporation: 1718

October 25, 2018

Product/Process Change Notification No: 1718

Change Classification: Major; Transition; Design; Datasheet

Subject

VSC8530XMW-04, VSC8531XMW-01, VSC8531XMW-04, VSC8540XMV-04, VSC8541XMV-01, VSC8541XMV-04 Design Update

Description of Change

A silicon design change has been implemented for the products listed in this notification. The silicon design has changed from revision B to C. As a result of this transition, the following changes apply:

- The revision B devices will be discontinued with a last order date of April 25, 2019 and a last shipment date of October 25, 2019.
- All orders placed after April 25, 2019, must be booked as non-cancelable, non-returnable (NCNR). Acceptance of last-time-buy orders is subject to product availability and done at the discretion of Microsemi Corporation. Every effort will be made to fulfill these orders. Pricing and minimum order quantities (MOQ) for these devices may change at Microsemi's discretion.
- The complete transition to the revision C devices will occur once the inventory of revision B devices has been depleted.

The ordering part numbers for revision C devices are listed in the following table.

Current Revision (B)	Current Revision (C)
VSC8530XMW-04	VSC8530XMW-05
VSC8531XMW-01	VSC8531XMW-02
VSC8531XMW-04	VSC8531XMW-05
VSC8540XMV-04	VSC8540XMV-05
VSC8541XMV-01	VSC8541XMV-02
VSC8541XMV-04	VSC8541XMV-05

The datasheets for the revision B devices listed have been updated from revision 4.0 to revision 4.1, as described in this notification.

- Details of LED blink or pulse-stretch behavior were corrected.
- Fast Link Failure 2™ (FLF2™) Indication is no longer supported for VSC8531 and VSC8530.
- Information about fast link failure indication was updated.
- Forced Mode link-up times were updated.
- Clause 45 Registers list was updated.
- 802.3bf register names were corrected.
- Conditions were added for the input high voltage parameters of VDDMAC and VDDMDIO DC specifications (1.5 V and 1.8 V).
- Extended Mode Control register bits were designated as "sticky" where applicable.
- Bit 15 of the RGMII Control register was updated to Reserved for VSC8531 and VSC8530 only.
- Table 59, page 46Bits 4 and 0 of the WoL and MAC Interface Control register were designated as "sticky."
- REF_CLK was clarified as RMII_CLKIN in the RMII AC characteristics parameters.
- The SMI voltage reference description in Pin Descriptions was corrected.

- Typical Current Consumption tables were updated to reflect actual device performance.
- Maximum Current Consumption table was simplified into a Worst-Case Power Consumption value.
- Additional design considerations were added.

Reason for Change

Microsemi has implemented improvements to the revision B design to support a wider market segment through inter-operation with other vendor solutions.

Revision C contains additional design changes to eliminate revision B design considerations as follows:

- Removed design considerations for 10BASE-T half-duplex after power-on reset, RGMII preamble nibble count at 10 Mbps speed, and long-link up times in 100 Mbps speed.
- For VSC8530-04 and VSC8540-04 devices only, removed the design consideration for default LED0 mode selection bit.

Other changes in revision C include:

- Changed default LED0/LED1 mode selection bits.
- Added start-of-frame indication to VSC8540-05.

In addition, revision B device datasheets were updated to reflect the actual performance of the revision B devices.

Application Impact

Customers should review the updated datasheets to evaluate the impact on their application. Existing software packages for these devices are backwards compatible, but please contact a local Microsemi sales office if custom software was developed, in order to assess if a software upgrade is required.

Products Affected by this Change

VSC8530XMW-04, VSC8531XMW-01, VSC8531XMW-04, VSC8540XMV-04, VSC8541XMV-01, VSC8541XMV-04

Production Shipment Schedule

Revision C is qualified for production shipments.

Qualification Data

Revision C datasheets, material composition declarations, and qualification reports, and updated revision B datasheets are available now on the Microsemi website at www.microsemi.com.

Samples Availability

Samples of revision C devices are available now.

Contact Information

If you have further questions related to this topic, contact your local Sales representative.

Regards,

Microsemi Corporation

Any projected dates in this PCN are based on the most current product information at the time this PCN is being issued, but they may change due to unforeseen circumstances. For the latest schedule and any other information, please contact your local Microsemi Sales Office, the factory contact shown above, or your local distributor.

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