Product Change Notification / SYST-25HIIS840

Date:

26-May-2021

Product Category:

Ethernet PHYs

PCN Type:

Document Change

Notification Subject:

Data Sheet - KSZ9131RNX - Gigabit Ethernet Transceiver with RGMII Support Data Sheet Document Revision

Affected CPNs:

SYST-25HIIS840_Affected_CPN_05262021.pdf
SYST-25HIIS840_Affected_CPN_05262021.csv

Notification Text:

Notification Status: Final

Description of Change:
1) Cover sheet. Features: QFN -> VQFN
2) Section 2.1 "General Description". QFN -> VQFN
3) Figure 3-1, "Pin Assignments (TOP VIEW)". Eliminate "QFN" reference as KSZ9131RNX is VQFN.
4) Table 3-8, "Device Mode Selections" 1000BT Full Duplex need to change to 'no' for modes 1000 (8) and 1010 (10).
Replace one column "PME Pin Enable" with two columns: "Pin 17 Function" (PME_N1) and "Pin 38 Function" (PME_N2).
5) Section 4.9.3.2 "RGMII Pad Skew Registers" The word "absolute" in title of Table 4-5, "Delay for 5-Bit Pad Skew Setting",
Table 4-6, "Delay for 4-Bit Pad Skew Setting" and referencing text have been removed. The values in the table are relative to the default, not absolute.
6) Section 4.12.3.1.1 "LED Com[1]bine" Note added at end of the paragraph: LED Behavior Register, Bit 15 = 1 (Default is 0)
to set the LED Link/Activity to the desired value. This can be done in the same LED Behavior Register write to set the LED Combine Disables field.
7) Section 4.14 "LinkMD® Cable Diagnostic" 6th paragraph: Removed "With the Bit[9:0] Definition (VCT_SEL[1:0]) field set to 0,"
8) Section 5.1 "Register Map" "These registers are accessed through the SMI (MDIO/MDC) interface." added before the registers.
9) Section 5.2.16 "LinkMD Cable Diagnostic Register" Register bits [11:10]: Reserved. Register bits [9:8]: Sentences removed with "VCT_SEL". Register bits [7:0]: Sentence removed about "VCT_SEL!=00". "When VCT_SEL = 0," removed in the next sentence.

10) Section 5.3 "MDIO Manageable Device (MMD) Registers" "These registers are accessed through the SMI (MDIO/MDC) interface." added before the registers.

11) Table 6-3, "Power Consumption" Right column, 85°C max power: 780 changed to 672.2 mW. Right column, 105°C max power: 801.9 changed to 691.0 mW.

12) Section 6.4 "Power Consumption" Added new tables after Table 6-3, "Power Consumption": Table 6-4, Table 6-5, Table 6-6, Table 6-7

13) Table 6-11, "100BASE-TX Transceiver Characteristics" Last row: Typical Reference voltage of ISET changed from "0.61 V" to "1.20 V".

14) Figure 6-2, "Power Sequence Timing Internal Regulators" VDDIO to DVDDH changed in the graphic. 15) Section 6.7 "Clock Circuit" Second sentence changed to "If the single ended clock oscillator method is implemented, XO should be left unconnected and XI should be driven with either a nominal 0-2.5V or a nominal 0-3.3V clock signal, dependent on the supply level of AVDDH (2.5V and 3.3V, respectively)." 16) Section 7.0 "Package Outline" All packages updated.

17) Section "Product Identification System" Bond Wire removed in PIS overview. Change "QFN" to "VQFN" in the examples a, b, c, d. In addition these examples reference to 5.05 mm x 5.05 mm pad.

Impacts to Data Sheet: None

Reason for Change: To Improve Manufacturability

Change Implementation Status: Complete

Date Document Changes Effective: 26 May 2021

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:

KSZ9131RNX - Gigabit Ethernet Transceiver with RGMII Support

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Affected Catalog Part Numbers (CPN)

KSZ9131RNXC
KSZ9131RNXC-TR
KSZ9131RNXI
KSZ9131RNXI-TR
KSZ9131RNXU-TRVAO
KSZ9131RNXU-VAO
KSZ9131RNXV-TRVAO
KSZ9131RNXV-VAO