



Customer Information Notification

202104044I : FS8400 / FS8500 Data Sheet Update Rev 7.0 (New Dimple Wettable Flank Product Along With Technical Clarifications / Corrections)

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Issue Date: May 26, 2021 **Effective date:** May 27, 2021

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PCN Overview

Description

NXP Semiconductors announces the data sheet update to revision 7.0 for the FS8400 / FS8500 Family of Fail-Safe System Basis Chip devices associated with this notification. Changes include new HVQFN56 package dimple wettable flank products (KS suffix), which are added to the Ordering Information and are the recommended product ordering option / recommended for new designs. Current step-cut wettable flank package products (ES suffix) continue to be available.

The revision history included in the updated document provides a detailed description of the changes.

Changes are also captured below.

FS84_FS85C rev 7.0 data sheet:

1. Table 2: updated Part Number column to include new dimple wettable flank product option (KS suffix); added Note 2 to make clear step-cut wettable flank part numbers end in ES, and new dimple wettable flank part numbers end in KS; added new part numbers MC33FS8415GJ and MC33FS8415GY; replaced "HPQFN56" by "HVQFN56"
2. Table 3: updated pin type for PRE_SW (replaced A_OUT by A_IN)
3. Sections 4.1 and 4.2: added OTP configurations for MC33FS8415GJ and MC33FS8415GY
4. Table 9: corrected typo (replaced "VMON1_REG[2]" by "VMON1_REG[2:0]")

5. Table 31: replaced "VMON2_REG[1:0]" by "VMON2_REG[2:0]"
6. Table 64: Bit 9 changed to Bit 10 and Bit 8 changed to Bit 9
7. Table 83: updated description for VBUCK12, and updated VBUCK12_ACC output voltage accuracy from 2% to 1.5% for enhanced/tighter tolerance
8. Table 84: updated VBUCK12_ACC output voltage accuracy from 2% to 1.5% for enhanced/tighter tolerance
9. Section 23.5: updated Figure 28
10. Section 24.3: added values for VLDO12_DO_mode_150 and VLDO12_DO_mode_400, and updated description for VLDO12_DROP_150 and VLDO12_DROP_400
11. Section 28: replaced "The CRC polynomial used is $x^8+x^4+x^3+x^2+1$ (identified by 0x1D) with a SEED value of hexadecimal 0xFF" by "The CRC polynomial used is compatible with SAEJ 1850 CRC8 standard: $x^8+x^4+x^3+x^2+1$ (identified by 0x1D) with a SEED value of hexadecimal 0xFF"
12. Table 100: added values for SPI input capacitance parameter Cspi
13. Section 34: replaced "HPQFN56" by "HVQFN56", and added drawings for dimple wettable flank

New FS84_FS85C rev 7.0 data sheet can be obtained from:

https://www.nxp.com/webapp/sps/download/mod_download.jsp?colCode=FS84_FS85C&appType=moderatedWithoutFAE

Corresponding ZVEI Delta Qualification Matrix ID: SEM-DS-02 and SEM-DS-03

Reason

The data sheet has been updated to include new available HVQFN56 package dimple wettable flank product offerings, new part numbers/new OTP configurations, additional parameter information, and technical clarifications and corrections.

Identification of Affected Products

Product identification does not change, but new product offerings, including part numbers with KS suffix for new dimple wettable flank package option, have been added.

Anticipated Impact on Form, Fit, Function, Reliability or Quality

No impact on form, fit, function, reliability or quality, except new form associated with new dimple wettable flank product, as expected.

Data Sheet Revision

A new datasheet will be issued

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Changed Orderable Part#	12NC	Product Type	Product Description	Package Outline	Package Description	Product Status	Customer Specific Indicator	Product Line
MC33FS8400G0E5	935410413557	MC33FS8400G0E5	FS8400	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8400G0ESR2	935410413528	MC33FS8400G0ESR2	FS8400	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8400G5E5	935377649557	MC33FS8400G5E5	FS8400	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8400G5ESR2	935377649528	MC33FS8400G5ESR2	FS8400	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8405G0E5	935410415557	MC33FS8405G0E5	FS8405	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8405G0ESR2	935410415528	MC33FS8405G0ESR2	FS8405	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8410G0E5	935410417557	MC33FS8410G0E5	FS8410	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8410G0ESR2	935410417528	MC33FS8410G0ESR2	FS8410	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8410G3E5	935377647557	MC33FS8410G3E5	FS8410	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8410G3ESR2	935377647528	MC33FS8410G3ESR2	FS8410	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8410G6E5	935377652557	MC33FS8410G6E5	FS8410	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8410G6ESR2	935377652528	MC33FS8410G6ESR2	FS8410	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8415G0E5	935410419557	MC33FS8415G0E5	FS8415	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8415G0ESR2	935410419528	MC33FS8415G0ESR2	FS8415	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8415GJE5	935426532557	MC33FS8415GJE5	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8415GJESR2	935426532528	MC33FS8415GJESR2	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8415GYE5	935426937557	MC33FS8415GYE5	FS8400	H(V)QFN56WF	SOT684-23	ASM	No	BLC4
MC33FS8415GYESR2	935426937528	MC33FS8415GYESR2	FS8400	H(V)QFN56WF	SOT684-23	ASM	No	BLC4
MC33FS8420G0E5	935410422557	MC33FS8420G0E5	FS8420	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8420G0ESR2	935410422528	MC33FS8420G0ESR2	FS8420	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8425G0E5	935410704557	MC33FS8425G0E5	FS8425	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8425G0ESR2	935410704528	MC33FS8425G0ESR2	FS8425	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G0E5	935377488557	MC33FS8430G0E5	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G0ESR2	935377488528	MC33FS8430G0ESR2	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G1E5	935377643557	MC33FS8430G1E5	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G1ESR2	935377643528	MC33FS8430G1ESR2	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G2E5	935377645557	MC33FS8430G2E5	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G2ESR2	935377645528	MC33FS8430G2ESR2	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G4E5	935378137557	MC33FS8430G4E5	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8430G4ESR2	935378137528	MC33FS8430G4ESR2	FS8430	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8435G0E5	935410706557	MC33FS8435G0E5	FS8435	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8435G0ESR2	935410706528	MC33FS8435G0ESR2	FS8435	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8500A0E5	935403794557	MC33FS8500A0E5	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8500A0ESR2	935403794528	MC33FS8500A0ESR2	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8510A0E5	935403813557	MC33FS8510A0E5	FS8510	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8510A0ESR2	935403813528	MC33FS8510A0ESR2	FS8510	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8510A2E5	935377484557	MC33FS8510A2E5	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8510A2ESR2	935377484528	MC33FS8510A2ESR2	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8510D3E5	935397679557	MC33FS8510D3E5	FS8510	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8510D3ESR2	935397679528	MC33FS8510D3ESR2	FS8510	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
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MC33FS8520A0ESR2	935410578528	MC33FS8520A0ESR2	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8530A0E5	935358751557	MC33FS8530A0E5	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8530A0ESR2	935358751528	MC33FS8530A0ESR2	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8530A1E5	935377479557	MC33FS8530A1E5	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8530A1ESR2	935377479528	MC33FS8530A1ESR2	FS8500	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8530A4E5	935380403557	MC33FS8530A4E5	FS8530	H(V)QFN56WF	SOT684-23	RFS	No	BLC4
MC33FS8530A4ESR2	935380403528	MC33FS8530A4ESR2	FS8530	H(V)QFN56WF	SOT684-23	RFS	No	BLC4