



Customer Information Notification

202010004I

Issue Date: 17-Nov-2020
Effective Date: 18-Nov-2020

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Change Category

- | | | | | |
|--|---|--|---|---|
| <input type="checkbox"/> Wafer Fab Process | <input type="checkbox"/> Assembly Process | <input type="checkbox"/> Product Marking | <input type="checkbox"/> Test Location | <input type="checkbox"/> Design |
| <input type="checkbox"/> Wafer Fab Materials | <input type="checkbox"/> Assembly Materials | <input type="checkbox"/> Mechanical Specification | <input type="checkbox"/> Test Process | <input type="checkbox"/> Errata |
| <input type="checkbox"/> Wafer Fab Location | <input type="checkbox"/> Assembly Location | <input type="checkbox"/> Packing/Shipping/Labeling | <input type="checkbox"/> Test Equipment | <input type="checkbox"/> Electrical spec./Test coverage |
| <input type="checkbox"/> Firmware | <input checked="" type="checkbox"/> Other - Data Sheet Update (Improvements and Clarifications) | | | |

PF8121 Data Sheet Update Rev 4.0 (Improvements and Clarifications)

Description

NXP Semiconductors announces the data sheet update to revision 4.0 for the PF8121 and derived part numbers associated with this notification.

The new data sheet revision provides updated specification information and clarifications. This includes tightening the output accuracy specification on all switching regulators, and additional information to complement the device functional description and overall system level implementation of the PF8121 devices.

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

PF8121 Revision 4.0 Data Sheet Change Summary:

1. Clarify the minimum specification on the SWxLX pins as the minimum DC voltage allowed in the pin. Additional note is added to clarify that the SWxLX pins are tolerant to negative transient spike during the dead band time with expectable fast transients as low as -3.0V.
2. Added new transitions to the State machine transition definition table in order to clarify missing conditions related to the XFAILB during power up and power down events.
3. Add a section to clarify how the peak current limit specification on all switching regulators should be used by the customer to calculate the DC current limitation.

4. Output accuracy of the Type1 Buck regulators (SW1 - SW6) is split into four operating ranges to allow tighter accuracy at higher output voltage configuration. Output voltages from 1.0V to 1.8V provide a spec improvement from +/-2.0% to +/-1.5% output accuracy.
5. Update VSWxACC values and conditions.
6. Add a note to clarify that the Switching regulators can be operated above the nominal currents as long as they do not reach the current limitation threshold.
7. Add a section on the Clock management to clarify the system level implementation to handle an external Clock out of range failure.

The PF8121 revision 4.0 data sheet is attached to this notice and is available at:
<https://www.nxp.com/docs/en/data-sheet/PF8121.pdf>

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

Reason

Switching regulator accuracy specification adds one more operating range to provide spec improvement on output voltages from 1.0 to 1.8V. Clarifications are provided to complement missing or unclear functional specifications.

Identification of Affected Products

Product identification does not change

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

No impact on form, fit, function, reliability or quality.

Data Sheet Revision

A new datasheet will be issued

Contact and Support

For all inquiries regarding the ePCN tool application or access issues, please contact NXP "Global Quality Support Team".

For all Quality Notification content inquiries, please contact your local NXP Sales Support team.

For specific questions on this notice or the products affected please contact our specialist directly:

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Changed Orderable Part#	Changed Part 12NC	Changed Part Number	Changed Part Description	Package Outline	Package Name	Status	Product Line
MC32PF8121A0EP	935383505557	MC32PF8121A0EP	PF8121	SOT684-21	HVQFN56	RFS	Safety & Power Mgmt
MC32PF8121F2EP	935385547557	MC32PF8121F2EP	PF8121	SOT684-21	HVQFN56	RFS	Safety & Power Mgmt