Product Advisory (PA)

Subject: Product Improvement – Design and Datasheet Change for the Listed Intersil ISL88738* Products

Publication Date: 8/23/2017
Effective Date: 8/23/2017

Revision Description:
Revision 0: Initial Release

Description of Change:
This notice is to advise our customers of a minor, design revision for the Intersil ISL88738HRTZ* products. The change doubles the programmable range of the phase comparator threshold offset in both the forward and reverse Buck and Buck-Boost modes. The LSB weight was doubled, thereby increasing both the step size and overall range.

Products impacted by the change are:
ISL88738HRTZ ISL88738HRTZ-T

Reason for Change:
The change improves the detectability of when the phase node crosses through 0V. This improves the light load efficiency of the part. The changes are detailed in the datasheet. For an updated data sheet, please contact your local sales representative or Starry Tsai (Product Line Marketing) @ starry.tsai.uw@renesas.com.

Product Identification:
There will be no change in the external marking of the packaged parts. Product affected by this change is identifiable via Intersil's internal traceability system and a register that can be used to identify revision of the product (see appendix A for details).

Impact on fit, form, function, quality & reliability:
The change will have no impact on the form, fit, function, quality, reliability and environmental compliance of the devices. Both the old and new versions have no impact to customer designs using the default setting (000 = 0mV).

Qualification status: Not applicable
Sample availability: 8/23/2017
Device material declaration: Available upon request

Questions or requests pertaining to this change notice, including additional data or samples, must be sent to Intersil within 30 days of the publication date.

For additional information regarding this notice, please contact your regional change coordinator (below)			
Americas: PCN-US@INTERSIL.COM	Europe: PCN-EU@INTERSIL.COM	Japan: PCN-JP@INTERSIL.COM	Asia Pac: PCN-APAC@INTERSIL.COM

Appendix A:
Added register to Table 1:

REGISTER NAMES	REGISTER ADDRESS	READ/ WRITE	NUMBER OF BITS	DESCRIPTION	DEFAULT
Revision ID	0x44	R	8	Revision ID register - Read only 0x01 - Rev1 0x02 - Rev2	N/A

Table 11 changes

From:

TABLE 11. CONTROL0 REGISTER 0x39H

BIT	BIT NAME	DESCRIPTION
<15:13>	Forward Buck and Buck-Boost Phase Comparator Threshold Offset	Bit<15:13> adjusts phase comparator threshold offset for forward buck and buck-boost. 000 = 0mV 001 = 1mV 010 = 2mV 011 = 3mV 100 = -4mV 101 = -3mV 110 = -2mV 111 = -1mV
<12:10>	Forward and Reverse Boost Phase Comparator Threshold Offset	Bit<12:10> adjusts phase comparator threshold offset for forward and reverse boost. 000 = 0mV 001 = 0.5mV 010 = 1mV 011 = 1.5mV 100 = -2mV 101 = -1.5mV 110 = -1mV 111 = -0.5mV
<9,8,0>	Reverse Buck and Buck-Boost Phase Comparator Threshold Offset	Bit<9,8,0> adjusts phase comparator threshold offset for reverse buck and buck-boost. 000 = 0mV 001 = 1mV 010 = 2mV 011 = 3mV 100 = -4mV 101 = -3mV 110 = -2mV 111 = -1mV

To:

TABLE 11. CONTROL0 REGISTER 0x39H

BIT	BIT NAME	DESCRIPTION
<15:13>	Forward Buck and Buck-Boost Phase Comparator Threshold Offset	Bit<15:13> adjusts phase comparator threshold offset for forward buck and buck-boost. REV1: 000 = 0mV; 001 = 0.5mV; 010 = 1mV; 011 = 1.5mV; 100 = -2mV; 101 = -1.5mV; 110 = -1mV; 111 = -0.5mV REV2: 000 = 0mV; 001 = 1mV; 010 = 2mV; 011 = 3mV; 100 = -4mV; 101 = -3mV; 110 = -2mV; 111 = -1mV
<12:10>	Forward and Reverse Boost Phase Comparator Threshold Offset	Bit<12:10> adjusts phase comparator threshold offset for forward and reverse boost. 000 = 0mV 001 = 0.5mV 010 = 1mV 011 = 1.5mV 100 = -2mV 101 = -1.5mV 110 = -1mV 111 = -0.5mV
<9:8>		Not used