

PCN Number:	20211011003.1	PCN Date:	November 22, 2021
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Title: LM5036 Design Change and Datasheet Update

Customer Contact: [PCN Manager](#) **Dept:** Quality Services

Proposed 1st Ship Date: Feb 22, 2022 **Estimated Sample Availability:** Date provided at sample request.

Change Type:			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process
<input checked="" type="checkbox"/>	Design	<input checked="" type="checkbox"/>	Electrical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Part number change
<input type="checkbox"/>		<input type="checkbox"/>	Assembly Materials
<input type="checkbox"/>		<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>		<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process

PCN Details

Description of Change:

This notification is to inform of a design change to the LM5036 devices. Affected devices are listed in the Product Affected section of this document.

Design changes were made to improve device performance in the areas of: (a) slope compensation current [I_{slope}], (b) gate drive peak source current [I_{so_pri}], and (c) BST_AUX undervoltage threshold [V_{bst_aux}].

Datasheet changes were made accordingly to match. See datasheet revision history for details.

	Current	New
Product Family	Datasheet Number	Datasheet Number
LM5036	SNVSB14B	SNVSB14C

The product datasheet(s) is being updated as seen in the change revision history below:



LM5036
SNVSB14C – APRIL 2018 – REVISED OCTOBER 2021

4 Revision History

Changes from Revision B (April 2019) to Revision C (October 2021)	Page
• Updated the numbering format for tables, figures, and cross-references throughout the document.....	1
• Updated footnote to standard language.....	7
• Deleted minimum and maximum peak value of current source for slope compensation (I _{SLOPE}) specifications. Updated typical from 54 μA to 36 μA. Removed table note (1) from this parameter.....	7
• Changed typical peak current (I _{SO_PRI}) specification from 1.5 A to 1 A	7
• Changed minimum BST_AUX undervoltage threshold (V _{BST_AUX(UVLO)}) specification from 2.1 V to 3.5 V	7
• Changed typical BST_AUX undervoltage threshold (V _{BST_AUX(UVLO)}) specification from 2.8 V to 5.0 V	7
• Changed maximum BST_AUX undervoltage threshold (V _{BST_AUX(UVLO)}) specification from 3.6 V to 6.5 V	7
• Changed typical peak current source value references from "1.5 A" to "1 A" in Section 7.3.6	17

These changes may be reviewed at the datasheet links provided:
<http://www.ti.com/product/lm5036>

Reason for Change:

Improved product functionality, and confirmed the correctness of the specifications.

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None	
Product Affected: Design Change and datasheet updates	
LM5036RJBR	LM5036RJBT

Qualification Report

Approve Date 30-Aug-2021

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	Test Name / Condition	Duration	Qual Device: <u>LM5036RJB</u>	Qual Device: <u>LM5036RJB</u>	QBS Process Reference: <u>LM3492AHCOMX</u>	QBS Package Reference: <u>AMC7834IRTOR</u>	QBS Package Reference: <u>LMX2582RHA-REV 1.0</u>	QBS Package Reference: <u>SH6966ADU0RGCRG4</u>	QBS Package Reference: <u>UCD3138RJA</u>
AC	Autoclave 121C	96 Hours	-	3/231/0	3/231/0	-	1/77/0	3/231/0	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	-	Pass	-	Pass	Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	3/231/0	1/77/0	3/231/0	-
HBM	ESD - HBM	2000 V	1/3/0	1/3/0	-	-	-	-	1/3/0
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	-	-	-	1/3/0	1/3/0
HTOL	Life Test, 125C	1000 Hours	-	1/77/0	1/77/0	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-	1/77/0	3/231/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	3/135/0	-	-	-
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	-	1/6/0	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0	1/77/0	3/231/0	3/231/0
UHASt	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0	-	-	-

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles
Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

Green/Pb-free Status:
Qualified Pb-Free(SMT) and Green

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