

PCN Number:	20140417000	PCN Date:	04/24/2014
Title:	Datasheet update for TPS65131-Q1		
Customer Contact:	PCN Manager	Phone:	+1(214) 480-6037
Dept:	Quality Services		
Change Type:			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process

PCN Details

Description of Change:

The product datasheet(s) is being updated with several corrections. The following change history provides further details

[Please Note:](#)

This revision of the datasheet addresses the technical content only. A subsequent revision of the datasheet will be released to reformat the datasheet to the new TI datasheet format standard.

9 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Revision B (February 2013) to Revision C	Page
• Added "Electrical Characteristics tested over –40°C to 125°C Junction Temperature Range"	1
• Deleted T_A table row	2
• Changed I_{INN} to V_{INN} , added pin names VIN and INN	2
• Added pin name VPOS	2
• Added pin name VNEG	2
• Changed I_{NP} to V_{INP} , added pin name INP	2
• Changed "between pins OUTN to V_{INN} " to "between pins OUTN to INN"	2
• Added operating junction temperature	2
• Added "In applications where high power dissipation and/or poor package thermal resistance is present, the maximum ambient temperature may have to be derated. See Thermal Information for details."	2
• Deleted "virtual" from "Operating virtual junction temperature range"	2
• Changed "Over recommended free-air temperature range and over recommended input voltage range; typical values at an ambient temperature of 25°C (unless otherwise noted)" to "The specification applies over the full recommended input voltage range $V_{IN} = 2.7$ to 5.5V and over the temperature range $T_J = T_A = -40$ to 125°C unless otherwise noted. Typical values apply for $V_{IN} = 3.6V$ and $T_J = T_A = 25^\circ C$ "	3
• Changed $I_{LIM,min} = 1800mA$ to 1700mA	3
• Deleted $V_{POS} = 5 V (105^\circ C)$ row	3
• Changed $r_{DS(on)P,max} (V_{POS} = 5 V) = 300m\Omega$ to 390m Ω	3
• Changed $r_{DS(on)P,max} (V_{POS} = 10 V) = 200m\Omega$ to 230m Ω	3
• Changed $I_{LIMP,min} = 1800mA$ to 1700mA	3
• Changed $I_{LIMP,max} = 2200mA$ to 2250mA	3
• Changed $f_{S,min} = 1250kHz$ to 1150kHz	3
• Added $T_A = -40$ to 85°C	3
• Changed "The maximum recommended junction temperature (T_J) of the TPS65131-Q1 is 125°C." to "The recommended device junction temperature range, T_J , is -40°C to 125°C."	20
• Changed $R_{\theta JA} = 37.8^\circ C/W$ to $\theta_{JA} = 34.1^\circ C/W$	20
• Changed "Specified regulator operation is ensured to a maximum ambient temperature T_A of 105°C." to "It is recommended to operate the device within the ambient temperature range of $T_A = -40$ to 105°C."	20
• Changed "Therefore, the maximum power dissipation is about 1058 mW" to "Equation 13 can be used to calculate the maximum power dissipation, $P_{D,max}$, as a function of T_A . In this equation, use $T_J = 125^\circ C$ to operate the device within the recommended temperature range, use $T_J = T_{TS}$ to determine the absolute maximum threshold when the device might go into thermal shutdown."	20
• Changed Equation 13	20

The datasheet number will be changing.

Device Family	Change From:	Change To:
TPS65131-Q1	SLVSBB2B	SLVSBB2C

These changes may be reviewed at the datasheet links provided.

<http://www.ti.com/product/tps65131-q1>

Reason for Change:
To more accurately reflect device characteristics.
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):
Electrical specification performance changes as indicated above.
Changes to product identification resulting from this PCN:
None.
Product Affected:
TPS65131TRGERQ1

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
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