

<b>PCN Number:</b>	20171115001	<b>PCN Date:</b>	Nov 22, 2017
<b>Title:</b>	Qualification of RFAB as an additional Fab site option and Datasheet updates		
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Feb 22, 2018	<b>Estimated Sample Availability:</b>	Date provided at sample request.
<b>Change Type:</b>			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process
<input 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 checked="" type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials
		<input type="checkbox"/>	Part number change

### PCN Details

#### Description of Change:

Texas Instruments is pleased to announce the qualification of its RFAB fabrication facility as an additional Wafer Fab source for the selected devices listed in the "Product Affected" section.

Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
FFAB	LBC7	200 mm	RFAB	LBC7	300 mm

In addition, the datasheet number will be changing.

Device Family	Change From:	Change To:
BQ24193	<b>SLUSBG7</b>	<b>SLUSBG7A</b>

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



bq24193

SLUSBG7A – DECEMBER 2014 – REVISED NOVEMBER 2017

## bq24193 I<sup>2</sup>C Controlled 4.5-A Single Cell USB/Adapter Charger with Narrow VDC Power Path Management and USB OTG

### 4 Revision History

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

Changes from Original (December 2014) to Revision A	Page
• Changed V <sub>SLEEPZ</sub> MAX from 300 to 350 mV.....	6
• Changed V <sub>BAT_DPL_HY</sub> MAX from 230 mV to 260 mV.....	7
• Changed I <sub>CHG_20pct</sub> MAX from 125 to 135 mA.....	7
• Added I <sub>CHG_20pct</sub> at room temperature.....	7
• Changed V <sub>SHORT</sub> TYP from 1.8 to 2.0 V.....	7
• Changed I <sub>ADPT_DPM</sub> MIN from 1.4 to 1.35 A.....	8
• Changed I <sub>ADPT_DPM</sub> MAX from 1.6 to 1.65 A.....	8
• Changed K <sub>LIM</sub> MIN from 440 to 435 A x Ω.....	8
• Changed V <sub>BTST_REFRESH</sub> , V <sub>BUS</sub> > 6 V TYP from 4.2 V to 4.5 V.....	8
• Changed V <sub>REGN</sub> , V <sub>BUS</sub> = 5 V, I <sub>REGN</sub> = 20 mA MAX.....	9
• Changed value from: 4.85 V to: 5 V.....	9

These changes may be viewed at: <http://www.ti.com/lit/ds/symlink/bq24193.pdf>

**Reason for Change:**

Continuity of Supply and improved product performance

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

None

**Changes to product identification resulting from this PCN:**

**Current:**

Current Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
FR-BIP-1	TID	DEU	Freising

**New Fab Site:**

New Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
RFAB	RFB	USA	Richardson

Sample product shipping label (not actual product label)

**Product Affected:**

BQ24193RGER	BQ24193RGET	HPA02163RGER
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**Qualification Report**

Qualification of BQ24190RGE BQ24192 BQ24192i bq24193 bq24192s bq24196 bq24195 bq24195L EEPROM family in RFAB/LBC7, assembled in Clark  
Approve Date 27-Mar-2013

Product Attributes								
Attributes	Qual Device: BQ24190RGE	QBS Product Reference: BQ24190RGE	QBS Process Reference: TPS2543QRTE	QBS Package Reference: BQ24196BRGE	QBS Package Reference: TP562402DRCR_AU_WIRE	QBS Package Reference: TP562402DRCR_CU_WIRE	QBS Package Reference: TP5650240RHBR_AU_WIRE	QBS Package Reference: TP5650240RHBR_CU_WIRE
Assembly Site	TI-CLARK	TI-CLARK	CLARK-KAT	TI-CLARK	CLARK-KAT	CLARK-KAT	CLARK-KAT	CLARK-KAT
Package Family	QFN	QFN	TQFN	QFN	SON	SON	QFN	QFN
Wafer Fab Supplier	RFAB	FFAB	RFAB	FFAB	FFAB	FFAB	FFAB	FFAB
Wafer Process	LBC7+1UM VIATOP+6DU SEAL	LBC7+1UM VIATOP+6DU SEAL	LBC7	LBC7+1UM VIATOP+6DU SEAL	3370A12X3	3370A12X3	3370A12X3	3370A12X3

- QBS: Qual By Similarity  
- Qual Device BQ24190RGE is qualified at LEVEL2-260C

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

Type	Test Name / Condition	Duration	Qual Device: BQ24190RGE	QBS Product Reference: BQ24190RGE	QBS Process Reference: TPS2543QRTE	QBS Package Reference: BQ24196BRGE	QBS Package Reference: TP562402DRCR_AU_WIRE	QBS Package Reference: TP562402DRCR_CU_WIRE	QBS Package Reference: TP5650240RHBR_AU_WIRE	QBS Package Reference: TP5650240RHBR_CU_WIRE
AC	Autoclave 121C	96 Hours	-	-	3/231/0	1/77/0	1/77/0	1/77/0	1/77/0	1/77/0
ED	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	-	-	3/90/0	-	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	-	Pass	-	-	-	-
ELFR	Early Life Failure Rate, 150C	24 Hours	-	-	3/2640/0	-	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	-	-	-	-	-
HBM	ESD -HBM	3000 V	1/3/0	1/3/0	1/3/0	-	-	-	-	-
CDM	ESD -CDM	1500 V	1/3/0	1/3/0	1/3/0	-	-	-	-	-
HTOL	Life Test, 150C	408 Hours	-	-	3/231/0	-	-	-	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	-	1/77/0	1/77/0	1/77/0	1/77/0
HTSL	High Temp. Storage Bake, 175C	500 Hours	-	-	3/149/0	-	-	-	-	-
LU	Latch-up	(per JESD78)	-	1/6/0	1/6/0	1/6/0	-	-	-	-
PD	Physical Dimensions	-	-	-	3/90/0	-	1/5/0	1/5/0	1/5/0	1/5/0
SD	Surface Mount Solderability	Pb Free	-	-	2/30/0	-	-	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	-	3/231/0	1/77/0	1/77/0	1/77/0	1/77/0	1/77/0
TS	Thermal Shock, -65/150C	500 Cycles	-	-	-	-	1/77/0	1/77/0	1/77/0	1/77/0
WBP	Bond Pull	Wires	-	-	-	-	1/76/0	1/76/0	1/76/0	1/76/0
WBS	Bond Shear	Wires	-	-	-	-	1/76/0	1/76/0	1/76/0	1/76/0

- 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: -65C/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

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

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