12500 TI Boulevard, MS 8640, Dallas, Texas 75243

Notification Number:	20261007000.0	Notification Issued	October 07, 2026
Design Change for TPS7B86-Q1 devices			

Change Type(s)	Design Packing/Shipping/Labeling
ZVEI ID	SEM-DE-01, SEM-DE-02

Notification Details

Description of Change:

Texas Instruments Incorporated is announcing an information only notification regarding a die design revision to enhance device robustness.

Die Rev:

Current	New
Die Rev [2P]	**Die Rev [2P]**
A	**B**

Reason for Change:	To enhance device robustness and improve immunity against unintended transitions into TI's internal debug modes during operation in diverse customer environments.

Anticipated impact on Form, Fit, Function, Quality or Reliability:	• These devices include new die with schematic optimizations to increase immunity against accidental entry into internal diagnostic modes. There is no change to the device's functional specifications, electrical characteristics, or intended LDO application. • Request the Supporting Data Packet for more details on the change.
Changes to product identification resulting from this PCN:	Sample product shipping label (not actual product label): 

Products Affected:			
TPS7B8601BQDDARQ1	TPS7B8601DQDDARQ1	TPS7B8633BQDDARQ1	TPS7B8633DQDDARQ1
TPS7B8650BQDDARQ1	TPS7B8650DQDDARQ1		

Approve Date 30-March -2026

Product Attributes

Attributes	Qual Device: TPS7B8650DQDDARQ1	Qual Device: TPS7B8633BQDDARQ1	Qual Device: TPS7B8633DQDDARQ1	Qual Device: TPS7B8650BQDDARQ1	Qual Device: TPS7B8601BQDDARQ1	Qual Device: TPS7B8601DQDDARQ1	QBS Package, Process, Product Reference: TPS7B8650DQDDARQ1	QBS Process Reference: TPS7B8650QDDARQ1	QBS Process Reference: TLC6C5816QPWPRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Power Management	Power Management	Power Management	Power Management	Power Management	Power Management	Power Management	Power Management	Power Management
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB
Assembly Site	FMX	FMX	FMX	FMX	FMX	FMX	FMX	ASESHAT	TAI
Package Group	SOIC	SOIC	SOIC	SOIC	SOIC	SOIC	SOIC	SOIC	TSSOP
Package Designator	DDA	DDA	DDA	DDA	DDA	DDA	DDA	DDA	PWP
Pin Count	8	8	8	8	8	8	8	8	28

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device TPS7B8650DQDDARQ1 is qualified at MSL2 260C
- Qual Device TPS7B8633BQDDARQ1 is qualified at MSL2 260C
- Qual Device TPS7B8633DQDDARQ1 is qualified at MSL2 260C
- Qual Device TPS7B8650BQDDARQ1 is qualified at MSL2 260C
- Qual Device TPS7B8601BQDDARQ1 is qualified at MSL2 260C
- Qual Device TPS7B8601DQDDARQ1 is qualified at MSL2 260C

Qualification Results

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

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: TPS7B8650DQDDARQ1	Qual Device: TPS7B8633BQDDARQ1	Qual Device: TPS7B8633DQDDARQ1	Qual Device: TPS7B8650BQDDARQ1	Qual Device: TPS7B8601BQDDARQ1	Qual Device: TPS7B8601DQDDARQ1
Test Group A - Accelerated Environment Stress Tests													
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL2 260C	-	-	-	-	-	-	-

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: TPS7B8650DQDDARQ1	Qual Device: TPS7B8633BQDDARQ1	Qual Device: TPS7B8633DQDDARQ1	Qual Device: TPS7B8650BQDDARQ1	Qual Device: TPS7B8601BQDDARQ1	Qual Device: TPS7B8601DQDDARQ1
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	-	-	-	-	-
PTC	A5	JEDEC JESD22-A105	1	45	PTC	-40/125C	1000 Cycles	-	-	-	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-	-
Test Group B - Accelerated Lifetime Simulation Tests													
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	-	-	-	-	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	48 Hours	-	-	-	-	-	-
Test Group C - Package Assembly Integrity Tests													
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	-	-	-	-	-	-
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	-	-	-	-	-	-
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	-	-	-	-	-
SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	-	-	-	-	-	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	-	-	-	-	-	-
Test Group D - Die Fabrication Reliability Tests													
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDB	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: TPS7B8650DQDDARQ1	Qual Device: TPS7B8633BQDDARQ1	Qual Device: TPS7B8633DQDDARQ1	Qual Device: TPS7B8650BQDDARQ1	Qual Device: TPS7B8601BQDDARQ1	Qual Device: TPS7B8601DQDDARQ1
SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests													
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	1/3/0	-	-	-	-	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	1/3/0	-	-	-	-	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	Corner pins	750 Volts	1/3/0	-	-	-	-	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	1/3/0	-	-	-	-	1/3/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	-	-	-	-	1/30/0
Additional Tests													

- 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

Ambient Operating Temperature by Automotive Grade Level:

- Grade 0 (or E): -40C to +150C
- Grade 1 (or Q): -40C to +125C
- Grade 2 (or T): -40C to +105C
- Grade 3 (or I) : -40C to +85C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

- Room/Hot/Cold : HTOL, ED
- Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU
- Room : AC/uHAST

Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

TI Qualification ID: R-CHG-2512-047

In performing change qualifications, Texas Instruments follows integrated circuit industry standards in performing defect mechanism analysis and failure mechanism-based accelerated environmental testing to ensure wafer fab process, assembly process and product quality and reliability. As encouraged by these standards, TI uses both product-specific and generic (family) data in qualifying its changes. For devices to be categorized as a 'product qualification family' for generic data purposes, they must share similar product, wafer fab process and assembly process elements. The applicability of generic data (also known at TI as Qualification by Similarity (QBS)) is determined by the Reliability Engineering function following these industry standards. Generic data is shown in the qualification report in columns titled "QBS Process" (for wafer fab process), "QBS Package" (for assembly process) and "QBS Product" (for product family).

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

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for,

and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.