

PCN Number:	20171031002		PCN Date:	Nov 9, 2017	
Title:	LP8861Q1, LP8862Q1, TPS61193Q1, TPS61194Q1 design change				
Customer Contact:	PCN Manager		Dept:	Quality Services	
Proposed 1st Ship Date:	May 9, 2018		Estimated Sample Availability:	Date provided at sample request	
Change Type:					
<input type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials
				<input type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
This notification is to inform of a metal only design change to add a feedback capacitor to the oscillator in the LP8861Q1, LP8862Q1, TPS61193Q1, TPS61194Q1 devices.					
Affected devices are listed in the Product Affected section of this document.					
Reason for Change:					
Enhance on-die oscillator performance to achieve more consistent operation across extreme use cases.					
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):					
None.					
Changes to product identification resulting from this PCN:					
None.					
Product Affected:					
LP8861QPWPRQ1	LP8862QPWPRQ1	TPS61193PWPRQ1	TPS61194PWPRQ1		

Automotive New Product Qualification Summary
LP8861Q Rev A2 Grade 1 AEC Q100 Qualification
Approved 08-Aug-2017

Product Attributes

Attributes	Qual Device: LP8861A2QPWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TPS55340QPWPRQ1	QBS Package Reference: TAS5421QPWPRQ1_1P4	QBS Package Reference: TPS65300QPWPRQ1
Operating Temp Range	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	Operating Temp Range
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Wafer Fab Supplier	RFAB	RFAB	RFAB	MIHO8	MIHO8	DMOS5
Die Revision	A	A	TB1	B	A	A
Assembly Site	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN
Package Type	HTSSOP	HTSSOP	TQFP	HTSSOP	HTSSOP	HTSSOP
Package Designator	PWP	PWP	PLP	PWP	PWP	PWP
Ball/Lead Count	20	20	128	14	16	24

QBS: Qual By Similarity

Qual Device LP8861A2QPWPRQ1 is qualified at LEVEL2-260C

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: LP8861A2QPWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TPS55340QPWPRQ1	QBS Package Reference: TA55421QPWPRQ1 _1P4	QBS Package Reference: TPS55300QPWPRQ1
Test Group A – Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 2-260C	-	1/231/0	-	3/693/0	-	-
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 3-260C	-	-	3/693/0	-	1/231/0	3/693/0
HAST	A2	JEDEC JESD22-A110	1	77	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
AC	A3	JEDEC JESD22-A102	1	77	Autoclave 121C	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	1	77	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp. Cycle Bond Pull	per MIL-STD 883 Method 2011	-	1/5/0	1/5/0	3/15/0	1/5/0	1/5/0
TC-WBS	C1	AEC Q100-001	1	5	Post Temp. Cycle Bond Shear	Wires	-	1/5/0	-	-	-	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	3/45/0	1/45/0	1/45/0	3/135/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	1/45/0	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 175C	500 Hours	-	1/45/0	3/45/0	-	-	3/135/0
Test Group B – Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	1	77	Life Test, 150C	408 Hours	-	1/77/0	-	-	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	-	3/231/0	3/231/0	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	3/2400/0	3/2400/0	-	3/2400/0
Test Group C – Package Assembly Integrity Tests												
WBS	C1	AEC Q100-001	1	30	Bond Shear (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb	-	-	-	-	1/15/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb Free	-	-	-	-	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	--	-	-	-	-	3/30/0	-
Test Group E – Electrical Verification Tests												
HBM	E2	AEC Q100-002	1	3	ESD - HBM	2000 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
HBM	E2	AEC Q100-002	1	3	ESD - HBM	4000 V	-	1/3/0	-	-	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	750 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1000 V	1/3/0	1/3/0	-	-	-	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0 (Note 1)	1/6/0 (Note 1)	1/6/0	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	(Cpk>1.67 Room, hot, and cold test)	3/90/0	3/90/0	3/90/0	3/90/0	1/30/0	1/30/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

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

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

LP8862Q Rev A2 Grade 1 AEC Q100 QUALIFICATION Approved 09-Aug-2017

Product Attributes

Attributes	Qual Device: LP8862PWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TPS55340QPWPRQ1	QBS Package Reference: TA55421QPWPRQ1 _1P4	QBS Package Reference: TPS55300QPWPRQ1
Operating Temp Range	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	Operating Temp Range
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Wafer Fab Supplier	RFAB	RFAB	RFAB	MIH08	MIH08	DMOS5
Die Revision	A	A	TB1	B	A	A
Assembly Site	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN
Package Type	HTSSOP	HTSSOP	TQFP	HTSSOP	HTSSOP	HTSSOP
Package Designator	PWP	PWP	PLP	PWP	PWP	PWP
Ball/Lead Count	20	20	128	14	16	24

• QBS: Qual By Similarity

• Qual Device LP8862PWPRQ1 is qualified at LEVEL2-260C

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: LP8862PWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TP555340QPWPRQ1	QBS Package Reference: TA55421QPWPRQ1 _1P4	QBS Package Reference: TP565300QPWPRQ1
Test Group A – Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 2-260C	-	1/231/0	-	3/693/0	-	-
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 3-260C	-	-	3/693/0	-	1/231/0	3/693/0
HAST	A2	JEDEC JESD22-A110	1	77	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
AC	A3	JEDEC JESD22-A102	1	77	Autoclave 121C	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	1	77	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp. Cycle Bond Pull	per MIL-STD 883 Method 2011	-	1/5/0	1/5/0	3/15/0	1/5/0	1/5/0
TC-WBS	C1	AEC Q100-001	1	5	Post Temp. Cycle Bond Shear	Wires	-	1/5/0	-	-	-	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	3/45/0	1/45/0	1/45/0	3/135/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	1/45/0	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 175C	500 Hours	-	1/45/0	3/45/0	-	-	3/135/0
Test Group B – Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	1	77	Life Test, 150C	408 Hours	-	1/77/0	-	-	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	-	3/231/0	3/231/0	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	3/2400/0	3/2400/0	-	3/2400/0
Test Group C – Package Assembly Integrity Tests												
WBS	C1	AEC Q100-001	1	30	Bond Shear (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb	-	-	-	-	1/15/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb Free	-	-	-	-	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	--	-	-	-	-	3/30/0	-
Test Group E – Electrical Verification Tests												
HBM	E2	AEC Q100-002	1	3	ESD - HBM	2000 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
HBM	E2	AEC Q100-002	1	3	ESD - HBM	4000 V	-	1/3/0	-	-	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	750 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1000 V	1/3/0	1/3/0	-	-	-	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0 (Note 1)	1/6/0 (Note 1)	1/6/0	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold test	3/90/0	3/90/0	3/90/0	3/90/0	1/30/0	1/30/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

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

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

Note:

1 – All pins were tested, except those connected to external passive components, in accordance with AEC Q100-004 & JESD78D.

TPS61193-Q1 Rev A2 Metal Spin QUALIFICATION Approved 09-Aug-2017

Product Attributes

Attributes	Qual Device: TPS61193PWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TPS55340QPWPRQ1	QBS Package Reference: TAS5421QPWPRQ1_1P4	QBS Package Reference: TPS65300QPWPRQ1
Operating Temp Range	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	Operating Temp Range
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Wafer Fab Supplier	RFAB	RFAB	RFAB	MIH08	MIH08	DMOS5
Die Revision	A	A	TB1	B	A	A
Assembly Site	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN
Package Type	HTSSOP	HTSSOP	YQFP	HTSSOP	HTSSOP	HTSSOP
Package Designator	PWP	PWP	PLP	PWP	PWP	PWP
Ball/Lead Count	20	20	128	14	16	24

QBS: Qual By Similarity
Qual Device TPS61193PWPRQ1 is qualified at LEVEL2-260C

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: TPS61193PWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TPS55340QPWPRQ1	QBS Package Reference: TAS5421QPWPRQ1_1P4	QBS Package Reference: TPS65300QPWPRQ1
Test Group A – Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 2-260C	-	1/231/0	-	3/693/0	-	-
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 3-260C	-	-	3/693/0	-	1/231/0	3/693/0
HAST	A2	JEDEC JESD22-A110	1	77	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
AC	A3	JEDEC JESD22-A102	1	77	Autoclave 121C	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	1	77	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp. Cycle Bond Pull	per MIL-STD 883 Method 2011	-	1/5/0	1/5/0	3/15/0	1/5/0	1/5/0
TC-WBS	C1	AEC Q100-001	1	5	Post Temp. Cycle Bond Shear	Wires	-	1/5/0	-	-	-	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	3/45/0	1/45/0	1/45/0	3/135/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	1/45/0	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 175C	500 Hours	-	1/45/0	3/45/0	-	-	3/135/0
Test Group B – Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	1	77	Life Test, 150C	408 Hours	-	1/77/0	-	-	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	-	3/231/0	3/231/0	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	3/2400/0	3/2400/0	-	3/2400/0
Test Group C – Package Assembly Integrity Tests												
WBS	C1	AEC Q100-001	1	30	Bond Shear (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb	-	-	-	-	1/15/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb Free	-	-	-	-	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	--	-	-	-	-	3/30/0	-
Test Group E – Electrical Verification Tests												
HBM	E2	AEC Q100-002	1	3	ESD - HBM	2000 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
HBM	E2	AEC Q100-002	1	3	ESD - HBM	4000 V	-	1/3/0	-	-	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	750 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1000 V	1/3/0	1/3/0	-	-	-	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0 (Note 1)	1/6/0 (Note 1)	1/6/0	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Room, hot, and cold test	3/90/0	3/90/0	3/90/0	3/90/0	1/30/0	1/30/0

A1 (PC): Preconditioning:
Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.
Ambient Operating Temperature by Automotive Grade Level:
Grade 0 (or E): -40°C to +150°C
Grade 1 (or Q): -40°C to +125°C
Grade 2 (or T): -40°C to +105°C
Grade 3 (or I): -40°C to +85°C

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

Room/Hot/Cold : HTOL, ED

Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room : ACU/HAST

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

Note:

1 - All pins were tested, except those connected to external passive components, in accordance with AEC Q100-004 & JESD78D.

TPS61194-Q1 Rev A2 Metal Spin Qualification Approved 08-Aug-2017

Product Attributes

Attributes	Qual Device: TPS61194PWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TPS55340QPWPRQ1	QBS Package Reference: TAS5421QPWPRQ1_1P4	QBS Package Reference: TPS65300QPWPRQ1
Operating Temp Range	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C	Operating Temp Range
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Wafer Fab Supplier	RFAB	RFAB	RFAB	MIHO8	MIHO8	DMOS5
Die Revision	A	A	TB1	B	A	A
Assembly Site	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN	TI TAIWAN
Package Type	HTSSOP	HTSSOP	YQFP	HTSSOP	HTSSOP	HTSSOP
Package Designator	FWP	FWP	PLP	FWP	FWP	FWP
Ball/Lead Count	20	20	128	14	16	24

QBS: Qual By Similarity

Qual Device TPS61194PWPRQ1 is qualified at LEVEL2-260C

Qualification Results

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

Type	#	Test Spec	Min Lot Qty	\$/Lot	Test Name / Condition	Duration	Qual Device: TPS61194PWPRQ1	QBS Product Reference: LP8861PWPRQ1	QBS Process Reference: S0704038C0PLPR PCU09ESC8-TB1-60	QBS Package Reference: TPS55340QPWPRQ1	QBS Package Reference: TAS5421QPWPRQ1_1P4	QBS Package Reference: TPS65300QPWPRQ1
Test Group A – Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 2-260C	-	1/231/0	-	3/693/0	-	-
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 3-260C	-	-	3/693/0	-	1/231/0	3/693/0
HAST	A2	JEDEC JESD22-A110	1	77	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
AC	A3	JEDEC JESD22-A102	1	77	Autoclave 121C	96 Hours	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	1	77	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	3/231/0	3/231/0	1/77/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp. Cycle Bond Pull	per MIL-STD 883 Method 2011	-	1/5/0	1/5/0	3/15/0	1/5/0	1/5/0
TC-WBS	C1	AEC Q100-001	1	5	Post Temp. Cycle Bond Shear	Wires	-	1/5/0	-	-	-	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	3/45/0	1/45/0	1/45/0	3/135/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	1/45/0	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 175C	500 Hours	-	1/45/0	3/45/0	-	-	3/135/0
Test Group B – Accelerated Lifetime Simulation Tests												
HTOL	B1	JEDEC JESD22-A108	1	77	Life Test, 150C	408 Hours	-	1/77/0	-	-	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	-	3/231/0	3/231/0	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	3/2400/0	3/2400/0	-	3/2400/0
Test Group C – Package Assembly Integrity Tests												
WBS	C1	AEC Q100-001	1	30	Bond Shear (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	-	1/30/0	-	-	1/30/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb	-	-	-	-	1/15/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability >95% Lead Coverage	8 Hours Steam Age, Pb Free	-	-	-	-	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	--	-	-	-	-	3/30/0	-
Test Group E – Electrical Verification Tests												
HbM	E2	AEC Q100-002	1	3	ESD - HbM	2000 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
HbM	E2	AEC Q100-002	1	3	ESD - HbM	4000 V	-	1/3/0	-	-	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	750 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1000 V	1/3/0	1/3/0	-	-	-	1/3/0

	LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0 (Note 1)	1/6/0 (Note 1)	1/6/0	1/6/0	1/6/0	1/6/0
	ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold test	3/90/0	3/90/0	3/90/0	3/90/0	1/30/0	1/30/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

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

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

Note:

1 – All pins were tested, except those connected to external passive components, in accordance with AEC Q100-004 & JESD78D.

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
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com