

PCN Number:	20221216013.2C		PCN Date:	July 05, 2023	
Title:	Qualification of RFAB as an additional Fab site and additional wafer Probe site (CLARK-PR & CDAT-PR) options for select devices				
Customer Contact:	Change Management team		Dept:	Quality Services	
Proposed 1st Ship Date:	Jun 22, 2023		Sample requests accepted until:	Jan 22, 2023*	
*Sample requests received after January 22, 2023 will not be supported.					
Change Type:					
☐	Assembly Site	☐	Design	☐	Wafer Bump Material
☐	Assembly Process	☐	Data Sheet	☐	Wafer Bump Process
☐	Assembly Materials	☐	Part number change	☒	Wafer Fab Site
☐	Mechanical Specification	☒	Test Site	☒	Wafer Fab Materials
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Process
PCN Details					
Description of Change:					
Revision C is to inform customer that probe test for Group 4 devices will be eliminated. Thus DL-MOS-4 probe site option is no longer a valid option per rev B issued earlier.					
Texas Instruments is pleased to announce the qualification of its RFAB fabrication facility as an additional Wafer Fab source and CLARK-PR and CDAT-PR as an additional probe site options 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
MIHO	LBC7	200 mm	RFAB	LBC7	300 mm
Probe site changes are as follows:					
Group 2 Devices:					
Current Probe Site		New Probe Site			
DL-MOS-4		CLARK-PR			
Group 3 Devices:					
Current Probe Site		New Probe Site			
CLARK-PR		CDAT-PR			
DL-LIN					
Group 4 Devices:					
Current Probe Site		New Probe Site			
MH8		DL-MOS-4			
Test coverage, insertions, conditions will remain consistent with current testing.					
Reason for Change:					
Continuity of Supply					
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):					
None					
Changes to product identification resulting from this PCN:					

Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
MIHO8	MH8	JPN	Ibaraki
RFAB	RFB	USA	Richardson

Sample product shipping label (not actual product label)


TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 20:
 MSL 2 /260C/1 YEAR SEAL DT
 MSL 1 /235C/UNLIM 03/29/04
 OPT: 39
 ITEM:
LBL: 5A (L)T0:1750





(1P) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (V) 0033817
 (20L) CS0: SHE (21L) CC0:USA
 (22L) AS0: MLA (23L) AC0: MYS

Product Affected:

Group 1 device list - MIHO adding RFAB as an additional Fab site:

SN2002036QRTERQ1	TLC59116ITPWTQ1	TPS62260QDRVRMU	TPS62290IDRVRQ1
SN55340QRTERQ1	TPD3S716QDBQRQ1	TPS62260TDDCRQ1	TPS62290TDRVRQ1
SN55340QRTETQ1	TPS55340QRTERQ1	TPS62260TDRVRQ1	TPS62293TDRVRQ1
TAS6422QDKQQ1	TPS55340QRTERWB	TPS62261TDRVRQ1	TPS62590TDRVRQ1
TAS6422QDKQRQ1	TPS55340QRTETQ1	TPS62262TDRVRQ1	
TLC59116ITPWRQ1	TPS62260IDRVRQ1	TPS62263TDRVRQ1	

Group 2 device list - MIHO adding RFAB and CLARK-PR Probe site:

TPA3110D2QPWPRQ1	TPA3111D1QPWPRQ1	TPA3112D1QPWPRQ1	TPD3S716QDBQRQ1
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Group 3 device list - MIHO adding RFAB and CDAT-PR Probe site:

TPS54388CQRTERQ1	TPS54618CQRTERQ1	TPS57114CQRTERQ1
TPS54388QRLBRQ1	TPS57112CQRTERQ1	TPS57114QRLBRQ1
TPS54618AQRLBRQ1	TPS57112QRLBRQ1	TPS57114QRTERDN

Group 4 device list - MIHO adding RFAB and DMOS4 Probe site:

TLC59116ITPWRQ1	TLC59116ITPWTQ1
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**Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)**

Approved 17-Jun-2020

**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: TAS5441QPWPRQ1	QBS Process Reference: TPS2543QRTE
Test Group A – Accelerated Environment Stress Tests								
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Automotive Preconditioning, L2	Level 2-260C	-	3/765/0
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Automotive Preconditioning, L3	Level 3-260C	3/1258/0	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST 130C/85%RH	96 Hours	3/231/0	3/240/0
AC	A3	JEDEC JESD22-A102	3	77	Auto Autoclave 121C	96 Hours	3/231/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C, Grade-1	500 Cycles	3/231/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	30	Post Temp. Cycle Bond Pull	500 Cycles	1/30/0	1/30/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	1/45/0	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	500 Hours	3/135/0	3/135/0
Test Group B – Accelerated Lifetime Simulation Tests								
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	3/231/0	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 150C	408 Hours	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 150C	24 Hours	-	3/2400/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	-

Test Group C – Package Assembly Integrity Tests								
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear (Cpk>1.67)	Wires	3/90/0	-
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull (Cpk>1.67)	Wires	3/90/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free	1/15/0 (1)	2/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb	1/15/0 (1)	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Auto Physical Dimensions	Cpk>1.67	3/30/0	3/30/0
LI	C6	JEDEC JESD22-B105	1	50	Lead Pull to Destruction	Leads	1/48/0	-
Test Group D – Die Fabrication Reliability Tests								
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements	-
TDDb	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	-
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	-
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	-
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	-
Test Group E – Electrical Verification Tests								
HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	1500 V	1/3/0	-
HBM	E2	AEC Q100-002	1	3	ESD - HBM - Q100	4000 V	-	1/3/0
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1000 V	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM - Q100	1500 V	-	1/3/0
LU	E4	AEC Q100-004	1	6	Auto Latch-up	(Per AEC Q100-004)	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67	3/90/0	3/90/0
Additional Tests								
MSL			-	-	Automotive L3 Powerpad Moisture Sensitivity	Level 3-260C	3/35/0	-
MSL			-	-	Automotive L2 Powerpad Moisture Sensitivity	Level 2-260C	-	3/35/0

- QBS: Qual By Similarity

- Qual Device TAS5441QPWPRQ1 is qualified at LEVEL3-260C

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC 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): Solderability results are from Qual ID# 20090826-9343.

Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)

Approved 03/17/2015

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: TPS62090QRGTRQ1	Qual Device: TPS65263QRHBRQ1	Qual Device: TPS62065QDSGRQ1	QBS Process/Package: TPS2543QRTE
Test Group A - Accelerated Environment Stress Test										
HAST	A2	JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	1/77/0	1/77/0	1/77/0	3/231/0
AC	A3	JESD22-A102	3	77	Autoclave 121C	96 Hours	1/77/0	1/77/0	1/77/0	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	30	Post Temp. Cycle Bond Pull	Wires	1/30/0	1/30/0	1/30/0	1/30/0
TC	A4	JESD22-A104	3	77	Temperature Cycle, -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	3/231/0
PTC	A5	JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	1/45/0	1/45/0	1/45/0	1/45/0
HTSL	A6	JESD22-A103	1	45	High Temp. Storage Bake, 150C	1000 Hours	-	1/45/0	1/45/0	-
HTSL	A6	JESD22-A103	1	45	High Temp. Storage Bake, 175C	500 Hours	1/45/0	-	-	1/45/0
Test Group B - Accelerated Lifetime Simulation Test										
HTOL	B1	JESD22-A108	3	77	Life Test, 125C	1000 Hours	1/77/0	1/77/0	1/77/0	-
HTOL	B1	JESD22-A108	3	77	Life Test, 150C	408 Hours	-	-	-	3/231/0
ELFR	B2	AEC-Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	1/800/0	-	-	-
ELFR	B2	AEC-Q100-008	3	800	Early Life Failure Rate, 150C	24 Hours	-	-	-	3/2400/0
EDR	B3	AEC-Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	-	-	-
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	JESD22-B102	1	15	Surface Mount Solderability	Pb	1/15/0	-	-	-
SD	C3	JESD22-B102	1	15	Surface Mount Solderability	Pb Free	1/15/0	-	-	-
PD	C4	JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	--	3/30/0	-	-	-
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
Tddb	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	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 Injection Carrier	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	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										
HBM	E2	AEC-Q100-002	1	3	ESD - HBM	4000 V	-	1/3/0	1/3/0	1/3/0
CDM	E3	AEC-Q100-011	1	3	ESD - CDM	1500 V	-	1/3/0	1/3/0	1/3/0
LU	E4	AEC-Q100-004	1	6	Auto Latch-up	(Per AEC Q100-004)	-	1/6/0	1/6/0	1/6/0
ED	E5	AEC-Q100-009	3	30	Electrical Distributions	Cpk>1.67	-	3/90/0	3/90/0	3/90/0

- QBS: Qual By Similarity
- Qual Device TPS62090QRGTRQ1 is qualified at LEVEL2-260C
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): -40C to +150C
Grade 1 (or Q): -40C to +125C
Grade 2 (or T): -40C to +105C
Grade 3 (or U): -40C to +85C

C1/C2 (WBS / WBP):

Wire Bond Shear & Wire Bond Pull data from eQDB 20140626-106021

C4 (Physical dimensions):

Physical Dimensions data from eQDB 20140626-106021

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

Automotive New Product Qualification Summary

(As per AEC-Q100 and JEDEC Guidelines)

Approved 24-Oct-2018

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: <u>TPS61088QRHLQ1</u>	QBS Process Reference: <u>TPS2543QRTE</u>
Test Group A – Accelerated Environment Stress Tests								
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Automotive Preconditioning	Level 2-260C	3/All/0	3/All/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	1/77/0	3/240/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	1/77/0	3/237/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -85/150C	500 Cycles	3/231/0	3/238/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp. Cycle Bond Pull	500 Cycles	1/5/0	1/5/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	1/45/0	1/50/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 150C	1000 Hours	1/45/0	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 175C	500 Hours	-	3/149/0
Test Group B – Accelerated Lifetime Simulation Tests								
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	1/77/0	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 150C	408 Hours	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 150C	24 Hours	-	3/2640/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	--	N/A	-

Test Group C – Package Assembly Integrity Tests								
WBS	C1	AEC Q100-001	1	30	Bond Shear (Cpk>1.67)	Wires	1/30/0	-
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	1/30/0	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free	1/15/0	2/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Solder	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Ppk>1.67)	--	3/90/0	3/90/0
SBS	C5	AEC Q100-010	3	50	Solder Ball Shear (Cpk>1.67)	Post HTSL/Bump	N/A	-
LI	C6	JEDEC JESD22-B105	1	50	Lead Integrity	Leads	N/A	-
Test Group D – Die Fabrication Reliability Tests								
EM	D1	JESD61	-	-	Electromigration	--	Completed Per Process Technology Requirements	-
TDDb	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	--	Completed Per Process Technology Requirements	-
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	--	Completed Per Process Technology Requirements	-
NBTI	D4	-	-	-	Negative Bias Temperature Instability	--	Completed Per Process Technology Requirements	-
SM	D5	-	-	-	Stress Migration	--	Completed Per Process Technology Requirements	-
Test Group E – Electrical Verification Tests								
HBM	E2	AEC Q100-002	1	3	ESD - HBM	2500 V	1/3/0	1/3/0
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1000 V	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	3/90/0	3/90/0

- QBS: Qual By Similarity

- Qual Device TPS61088QRHLQ1 is qualified at LEVEL2-260C

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC 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

Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)

Approve Date 10-July-2018

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: TLC6C5724QDAP RQ1	Qual Device: TLC6C5712QP WPRQ1	QBS Process Reference: TPS2543QRTE
Test Group A – Accelerated Environment Stress Tests									
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 2-260C	-	-	3/765/0
PC	A1	JEDEC J-STD-020 JESD22-A113	-	-	Automotive Preconditioning	Level 3-260C	3/738/0	3/738/0	-
HAST	A2	JEDEC JESD22-A110	1	77	Biased HAST, 130C/85%RH	96 Hours	3/231/0	3/231/0	3/231/0
AC	A3	JEDEC JESD22-A102	1	77	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	1	77	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	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
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle, -40/125C	1000 Cycles	1/45/0	-	1/45/0
HTSL	A6	JEDEC JESD22-A103	1	77	High Temp. Storage Bake, 150C	1000 Hours	1/77/0	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp. Storage Bake, 175C	500 Hours	-	1/45/0	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	3/231/0	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	-	-	3/231/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 150C	24 Hours	-	3/2400/0	3/2240/0
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	Bond Shear (Cpk>1.67)	Wires	3/90/0	-	-
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull (Cpk>1.67)	Wires	3/90/0	-	-
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	1/22/0	-	1/15/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions (Cpk>1.67)	-	3/30/0	-	3/30/0
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
Tddb	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
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
HBM	E2	AEC Q100-002	1	3	ESD - HBM	4000 V	-	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	500 V	1/3/0	-	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	750 V	1/3/0	1/3/0	-
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1000 V	-	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	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

- Qual Device TLC6C5724QDAPRQ1 is qualified at LEVEL3-260C

A1 (PC): Preconditioning:

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

Junction 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

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

Location	E-Mail
WW Change Management Team	PCN_ww_admin_team@list.ti.com

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