TEXAS INSTRUMENTS 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

# PCN#20210628000.1

# Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, and additional BOM option for select devices

## Change Notification / Sample Request

**Date:** June 29, 2021
**To:** TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments (TI). The details of this change are on the following pages, and are in alignment with our standard product change notification (PCN) process.

TI requires acknowledgement of receipt of this notification within 30 days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If samples or additional data are required, requests must be received within 30 days of this notification, given that samples are not built ahead of the change.

The Proposed First Ship date in this PCN letter is the earliest possible date that customers could receive the changed material. It is our commitment that the changed device will not ship before that date. If samples are requested within the 30 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

This particular PCN is related to TI's previous announcement to close our two remaining factories with 150-millimeter production (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). As referenced in the "reason for change" below, these changes are part of our multiyear plan to transition these products to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the PCN Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

PCN Team
SC Business Services

## 20210628000.1
## Attachment: 1

### Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

| DEVICE | CUSTOMER PART NUMBER |
|---|---|
| SN74HC157NSR | null |
| SN74HC138NSR | null |
| SN74HC257NSR | null |
| SN74HC595NSR | null |
| SN74HC166NSR | null |
| SN74HC14N | null |
| SN74HC125N | null |
| SN74HC164N | null |
| SN74HC74N | null |
| SN74HC132N | null |
| SN74HC04N | null |
| SN74HC00N | null |
| SN74HC32N | null |
| SN74HC20N | null |
| SN74HC86N | null |
| SN74HC08N | null |
| SN74HC367NSR | null |
| SN74HC02N | null |
| CD74HC00E | null |
| SN74HC10N | null |
| SN74HC27N | null |
| SN74HC251NSR | null |
| SN74HC165NSR | null |
| SN74HC595ADBR | null |
| CD74HC04E | null |
| SN74HC365NSR | null |
| SN74HC14DBR | null |

Technical details of this Product Change follow on the next page(s).

| | | | |
|---|---|---|---|
| **PCN Number:** | 20210628000.1 | **PCN Date:** | June 29, 2021 |
| **Title:** | Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, and additional BOM option for select devices | | |
| **Customer Contact:** | PCN Manager | **Dept:** | Quality Services |
| **Proposed 1st Ship Date:** | Sept 29, 2021 | **Estimated Sample Availability:** | Date provided at sample request. |
| **Change Type:** | | | |

| | | | | | |
|---|---|---|---|---|---|
| ☐ | Assembly Site | ☐ | Assembly Process | ☒ | Assembly Materials |
| ☒ | Design | ☐ | Electrical Specification | ☐ | Mechanical Specification |
| ☐ | Test Site | ☐ | Packing/Shipping/Labeling | ☐ | Test Process |
| ☐ | Wafer Bump Site | ☐ | Wafer Bump Material | ☐ | Wafer Bump Process |
| ☒ | Wafer Fab Site | ☒ | Wafer Fab Materials | ☒ | Wafer Fab Process |
| | | ☐ | Part number change | | |

## PCN Details

### Description of Change:

Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC9) and BOM option for selected devices as listed below in the product affected section. Construction differences are noted below:

| **Current Fab Site** | | | **Additional Fab Site** | | |
|---|---|---|---|---|---|
| **Current Fab Site** | **Process** | **Wafer Diameter** | **Additional Fab Site** | **Process** | **Wafer Diameter** |
| SFAB | HCMOS | 150 mm | RFAB | LBC9 | 300 mm |

The die was also changed as a result of the process change.

Additionally, there will be a BOM option introduced for these devices:

| | **Current** | **Additional** |
|---|---|---|
| Bond wire diameter (Cu) | 0.96 mils | 0.8 mils |

### Reason for Change:

These changes are part of our multiyear plan to transition products from our 150-milimeter factories to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

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

None

### Anticipated impact on Material Declaration

| | | | |
|---|---|---|---|
| ☒ | No Impact to the Material Declaration | ☐ | Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website. |

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

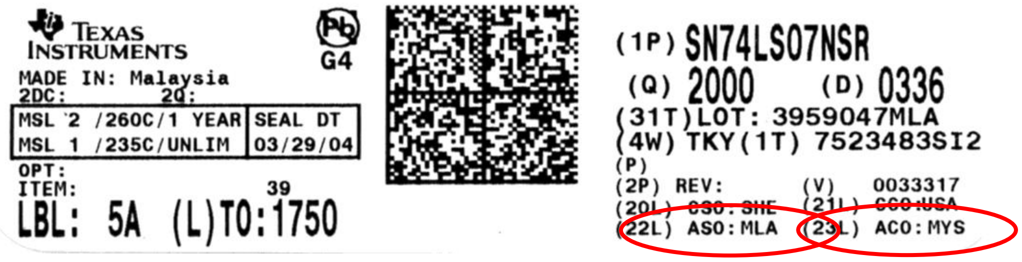
**Fab Site Information:**

| Chip Site | Chip Site Origin Code (20L) | Chip Site Country Code (21L) | Chip Site City |
|---|---|---|---|
| SH-BIP-1 | SHE | USA | Sherman |
| **RFAB** | **RFB** | **USA** | **Richardson** |

**Die Rev:**

| **Current** | **New** |
|---|---|
| Die Rev [2P] | **Die Rev [2P]** |
| E, F, G, H, J, K | **A, B** |

Sample product shipping label (not actual product label)



TEXAS INSTRUMENTS
MADE IN: Malaysia
2DC:
2Q:

| MSL 2 /260C/1 YEAR | SEAL DT |
|---|---|
| MSL 1 /235C/UNLIM | 03/29/04 |

G4
OPT:
ITEM: 39
LBL: 5A (L)TO:1750

(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T)LOT: 3959047MLA
(4W) TKY(1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
~~(20L) CSO: SHE~~ ~~(21L) CCO:USA~~
(22L) ASO:MLA (23L) ACO:MYS

## Product Affected:

| | | | |
|---|---|---|---|
| CD74HC00E | SN74HC02N | SN74HC14DBR | SN74HC32NE4 |
| CD74HC00EE4 | SN74HC02NE4 | SN74HC14N | SN74HC365NSR |
| CD74HC02E | SN74HC04N | SN74HC14NE4 | SN74HC367NSR |
| CD74HC02EE4 | SN74HC04NE4 | SN74HC157NSR | SN74HC595ADBR |
| CD74HC04E | SN74HC08N | SN74HC164N | SN74HC595DBR |
| CD74HC132E | SN74HC08NE4 | SN74HC165DBR | SN74HC595DBRE4 |
| CD74HC132EE4 | SN74HC10N | SN74HC165NSR | SN74HC595DBRG4 |
| CD74HC14E | SN74HC10NE4 | SN74HC166NSR | SN74HC595NSR |
| CD74HC14EE4 | SN74HC125DBR | SN74HC20N | SN74HC7002N |
| CD74HC595SM96 | SN74HC125N | SN74HC251NSR | SN74HC7002NE4 |
| CD74HC74E | SN74HC125NE4 | SN74HC253NSR | SN74HC74N |
| CD74HC74EE4 | SN74HC132N | SN74HC257NSR | SN74HC74NE4 |
| SN74HC00N | SN74HC132NE4 | SN74HC27N | SN74HC86N |
| SN74HC00NE4 | SN74HC138NSR | SN74HC32N | SN74HC86NE4 |

TEXAS INSTRUMENTS

TI Information
Selective Disclosure

# Qualification Report

## Enterprise Gatorade BD1&BD2 DB Package Qualification Summary

## Approve Date 14-Jun-2021

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

| Type | Test Name / Condition | Duration | QBS Product Reference: SN74HCS04QDRQ1 | QBS Product Reference: SN74HCS125QDRQ1 | QBS Product Reference: SN74HCS125QPWRQ1 | QBS Process Reference: SN74HCS74QPWRQ1 | QBS Package Reference: ADS900E |
|---|---|---|---|---|---|---|---|
| PC | Preconditioning | Level 1-260C | - | - | - | Pass | Pass |
| ED | Electrical Distributions | Cpk>1.67 Room, hot, and cold test | 1/30/0 | 1/30/0 | 1/30/0 | 3/90/0 | - |
| HBM | ESD - HBM | 4000V | 1/3/0 | 1/3/0 | - | - | - |
| HBM | ESD - HBM | 7000V | - | - | 1/3/0 | 1/3/0 | - |
| CDM | ESD - CDM | 1500V | 1/3/0 | - | - | 1/3/0 | - |
| CDM | ESD - CDM | 2000V | - | 1/3/0 | 1/3/0 | - | - |
| LU | Latch-up | (Per AEC-Q100-004) | - | 1/6/0 | 1/6/0 | 1/6/0 | - |
| ELFR | Early Life Failure Rate, 125C | 48 Hours | - | - | - | 3/2400/0 | - |
| HTOL | Life Test, 150C | 300 Hours | - | - | - | 3/231/0 | - |
| AC | Autoclave 121C | 96 Hours | - | - | - | 3/231/0 | - |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | - | - | 3/231/0 | - |
| HTSL | High Temp Storage Bake 150C | 1000 Hours | - | - | - | 3/135/0 | - |
| TC | Temperature Cycle, -65/150C | 500 Cycles | - | - | - | 3/231/0 | 3/222/0 |

- QBS: Qual By Similarity
- Devices are is qualified at LEVEL1-260C

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

| Type | Test Name / Condition | Duration | QBS Package Reference:<br>SN74HCS74QDRQ1 | QBS Package Reference:<br>TLC320AD77CDBR |
|---|---|---|---|---|
| PC | Preconditioning | Level 1-260C | Pass | Pass |
| ED | Electrical Distributions | Cpk>1.67 Room, hot, and cold test | 3/90/0 | - |
| CDM | ESD - CDM | 2000V | 1/3/0 | - |
| HBM | ESD - HBM | 8000V | 1/3/0 | - |
| LU | Latch-up | (Per AEC-Q100-004) | 1/6/0 | - |
| HTOL | Life Test, 150C | 300 Hours | 1/77/0 | - |
| AC | Autoclave 121C | 96 Hours | 3/231/0 | 3/231/0 |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | 3/231/0 | - |
| HTSL | High Temp Storage Bake 150C | 1000 Hours | 3/135/0 | - |
| HTSL | High Temp Storage Bake 170C | 420 Hours | - | 3/231/0 |
| TC | Temperature Cycle, -65/150C | 500 Cycles | 3/231/0 | 3/231/0 |

- Devices are is qualified at LEVEL1-260C

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

| Type: | | ED | CDM | HBM | LU |
|---|---|---|---|---|---|
| Test Name / Condition: | | Electrical Characterization | ESD - CDM | ESD - HBM | Latch-up |
| Duration: | | (Per Datasheet Parameters) | 1000V | 2000V | (Per AEC Q100-004) |
| **Qual Device:** | SN74HC125DBR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC14DBR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC595DBR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC595ADBR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | CD74HC595SM96 | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC165DBR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |

- QBS: Qual By Similarity
- Qual Devices are qualified at LEVEL1-260CG
- 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

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

# Qualification Report

## Enterprise Gatorade BD1&BD2 N Package Qualification Summary

## Approve Date 14-Jun-2021

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

| Type | Test Name / Condition | Duration | QBS Product Reference: SN74HCS86QPWRQ1 | QBS Process Reference: SN74HCS74QPWRQ1 | QBS Package Reference: SN74HC00N: | QBS Package Reference: SN74HC04N: | QBS Package Reference: SN74HC164N: | QBS Package Reference: NE5532P | QBS Package Reference: THVD2410DR | QBS Package Reference: TLC339IN | QBS Package Reference: TLV9052IDR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ED | Electrical Distributions | Cpk>1.67 Room, hot, and cold test | 1/30/0 | 3/90/0 | 1/30/0 | 1/30/0 | 1/30/0 | - | - | - | - |
| CDM | ESD - CDM | 1000V | - | - | 1/3/0 | 1/3/0 | 1/3/0 | - | - | - | - |
| CDM | ESD - CDM | 1500V | 1/3/0 | 1/3/0 | - | - | - | - | - | - | - |
| HBM | ESD - HBM | 2000V | - | - | - | - | - | - | - | - | - |
| HBM | ESD - HBM | 4000V | 1/3/0 | - | - | - | - | - | - | - | - |
| HBM | ESD - HBM | 7000V | - | 1/3/0 | - | - | - | - | - | - | - |
| LU | Latch-up | (Per AEC Q100-004) | 1/6/0 | 1/6/0 | 1/6/0 | 1/6/0 | 1/6/0 | - | - | - | - |
| ELFR | Early Life Failure Rate, 125C | 48 Hours | - | 3/2400/0 | - | - | - | - | - | - | - |
| HTOL | Life Test, 150C | 300 Hours | - | 3/231/0 | - | - | - | 3/231/0 | - | - | - |
| AC | Autoclave 121C | 96 Hours | - | 3/231/0 | - | - | - | - | 3/231/0 | 3/231/0 | 3/231/0 |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | 3/231/0 | 1/77/0 | 1/77/0 | 1/77/0 | 3/231/0 | - | - | - |
| HTSL | High Temp Storage Bake 150C | 1000 Hours | - | 3/135/0 | - | - | - | - | - | - | - |
| HTSL | High Temp Storage Bake 170C | 420 Hours | - | - | - | - | - | - | - | 3/231/0 | - |

| Type | Test Name / Condition | Duration | QBS Product Reference: SN74HCS86QPWRQ1 | QBS Process Reference: SN74HCS74QPWRQ1 | QBS Package Reference: SN74HC00N: | QBS Package Reference: SN74HC04N: | QBS Package Reference: SN74HC164N: | QBS Package Reference: NE5532P | QBS Package Reference: THVD2410DR | QBS Package Reference: TLC339IN | QBS Package Reference: TLV9052IDR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TC | Temperature Cycle, -65/150C | 500 Cycles | - | 3/231/0 | 1/77/0 | - | - | - | 3/231/0 | 3/231/0 | 3/231/0 |

- QBS: Qual By Similarity

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

| | Type: | ED | CDM | HBM | LU |
|---|---|---|---|---|---|
| | Test Name / Condition: | Electrical Characterization | ESD - CDM | ESD - HBM | Latch-up |
| | Duration: | (Per Datasheet Parameters) | 1000V | 2000V | (Per AEC Q100-004) |
| **Qual Device:** | SN74HC14N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | CD74HC14E | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC00N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | CD74HC00E | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC132N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | CD74HC132E | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC164N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC02N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | CD74HC02E | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC125N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC04N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | CD74HC04E | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC74N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | CD74HC74E | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC20N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC10N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC86N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC32N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC08N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC7002N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC27N | Pass | 1/3/0 | 1/3/0 | 1/6/0 |

- QBS: Qual By Similarity
- Qual Devices are qualified at LEVEL1-260CG
- 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

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

# Qualification Report for
# Enterprise Gatorade BD1&BD2 NS Package Qualification Summary

## Approve Date 14-Jun-2021

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

| Type | Test Name / Condition | Duration | QBS Product Reference: SN74HC253QDRG4Q1 | QBS Product Reference: SN74HC257PWR | QBS Process Reference: SN74HCS74QPWRQ1 | QBS Package Reference: 1P8T245NSR | QBS Package Reference: TL494IDR |
|---|---|---|---|---|---|---|---|
| PC | Preconditioning | Level 1-260C | - | - | Pass | Pass | Pass |
| AC | Autoclave 121C | 96 Hours | - | - | 3/231/0 | 3/231/0 | - |
| CDM | ESD - CDM | 2000V | 1/3/0 | 1/3/0 | - | - | - |
| CDM | ESD - CDM | 1500V | - | - | 1/3/0 | - | - |
| HBM | ESD - HBM | 7000V | 1/3/0 | 1/3/0 | 1/3/0 | - | - |
| LU | Latch-up | (Per JESD78) | 1/6/0 | 1/6/0 | 1/6/0 | - | - |
| ED | Electrical Characterization | Per Datasheet Parameters | Pass | Pass | Pass | - | - |
| ELFR | Early Life Failure Rate, 125C | 48 Hours | - | - | 3/2400/0 | - | - |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | - | 3/231/0 | - | 3/231/0 |
| HTOL | Life Test, 150C | 300 Hours | - | - | 3/231/0 | - | - |
| HTOL | Life Test, 150C | 600 Hours | - | - | 3/231/0 | - | - |
| HTSL | High Temp Storage Bake 150C | 1000 Hours | - | - | 3/135/0 | - | - |
| HTSL | High Temp Storage Bake 170C | 420 Hours | - | - | - | 3/231/0 | - |
| TC | Temperature Cycle, -65/150C | 500 Cycles | - | - | 3/231/0 | 3/231/0 | - |

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

| Type | Test Name / Condition | Duration | QBS Package Reference: ULQ2003AQDRQ1_RLF |
|---|---|---|---|
| PC | Preconditioning | Level 1-260C | 3/735/0 |
| AC | Autoclave 121C | 96 Hours | 3/231/0 |
| ED | Electrical Distributions | Cpk>1.67 Room, hot, and cold test | Pass |
| HTSL | High Temp Storage Bake 150C | 1000 Hours | 1/45/0 |
| TC | Temperature Cycle, -65/150C | 500 Cycles | 3/231/0 |

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

| | Type: | ED | CDM | HBM | LU |
|---|---|---|---|---|---|
| | Test Name / Condition: | Electrical Characterization | ESD - CDM | ESD - HBM | Latch-up |
| | Duration: | (Per Datasheet Parameters) | 1000V | 2000V | (Per AEC Q100-004) |
| **Qual Device:** | SN74HC166NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC367NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC251NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC253NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC257NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC165NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC138NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC365NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC157NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |
| **Qual Device:** | SN74HC595NSR | Pass | 1/3/0 | 1/3/0 | 1/6/0 |

- QBS: Qual By Similarity
- Qual Devices are qualified at LEVEL1-260C
- 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

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 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 |
| WW PCN Team | PCN_ww_admin_team@list.ti.com |

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