| | PCN Number: 20190329000.1 | | | | | PCN D | ate: | Mar 29 2019 | |
|---|---|---|--|--------------|--|---|---------------------------------------|---------------------------------|--|
| Title: Qualific | Title: Qualification of TIPI as an additional Assembly and Test site for selected devices | | | | | | devices | | |
| | | | | | | | | | |
| | | | | | Quality Services Estimated Sample Date provided at | | | provided at | |
| Proposed 1 st Ship Date: Jun 29 | | | | | | ability: sample request | | • | |
| Change Type: | | | | | | | | | |
| Assembly Site | | | Design | | | Wafer Bump Site | | | |
| Assembly Process | | | Data S | | | | Wafer Bump Material | | |
| Assembly Materials | | | | mber change | | Wafer Bump Process | | | |
| Mechanical Specification | | | Test Si | | | | Wafer Fab Site Wafer Fab Materials | | |
| | Packing/Shipping/Labeling | | | ocess | | _ | | | |
| | | | DCN | Details | | | гарн | Process | |
| Description of C | 'hanger | | PCN | | | | | | |
| Additional Assembly and test site for the list of devices shown below. Current material differences are as follows. | | | | | | | | | |
| | | | JCET | | | TIPI | | | |
| Mold compound | | nd | S#120800005407 | | | 4222198 | | _ | |
| Test coverage, in test MQ. | sertions, c | onditions | will remai | n consistent | with cu | rrent test | ting an | d verified with | |
| Reason for Cha | nge: | | | | | | | | |
| Continuity of Sup | nly | | | | | | | | |
| Continuity of Sup | piy | | | | | | | | |
| , , | <u>· ·</u> | rm, Fit, I | Function, | Quality or I | Reliabi | lity (pos | itive | / negative): | |
| Anticipated imp | <u>· ·</u> | orm, Fit, I | Function, | Quality or I | Reliabi | lity (pos | itive , | / negative): | |
| Anticipated imp None Anticipated imp | act on Fo | aterial D | eclaratio | n | | | | | |
| Anticipated imp None | act on Fo | Aterial Do Material Do from proc | eclaratio erial Decla n producti duction re prts can b | n | oduct C vill be a product the site | ontent re ivailable ion relea e link bel | eports followi se the ow | are driven ng the revised | |

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (21L) | Assembly City |
|---------------|----------------------------|-----------------------------|---------------|
| JCET | JCE | CHN | Jiangyin |
| TIPI | PHI | PHL | Baguio City |

Sample product shipping label (not actual product label)





TI Information Selective Disclosure

Qualification Results

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

| Туре | Test Name / Condition | Duration | Qual Device: <u>TLV62568PDDCR</u> | Qual Device: <u>TLV62569PDDCR</u> | QBS Product Reference: <u>TLV62568DBV</u> | QBS Product Reference: <u>TLV62569DBV</u> |
|------|-------------------------------|--------------------------|--------------------------------------|--------------------------------------|---|---|
| AC | Autoclave 121C | 96 Hours | - | - | - | - |
| ED | Electrical Characterization | Per Datasheet Parameters | Pass | Pass | - | Pass |
| ELFR | Early Life Failure Rate, 125C | 48 Hours | - | - | 1/1000/0 | - |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | - | - | - |
| HBM | ESD - HBM | 2500 V | - | - | 1/3/0 | - |
| CDM | ESD - CDM | 1500 V | - | - | 1/3/0 | 1/3/0 |
| HTOL | Life Test, 150C | 300 Hours | - | - | 1/77/0 | 1/77/0 |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours | - | - | - | - |
| LU | Latch-up | (per JESD78) | - | - | 1/6/0 | 2/12/0 |
| SD | Surface Mount Solderability | Pb Free | - | - | - | - |
| SD | Surface Mount Solderability | Pb | - | - | - | - |
| TC | Temperature Cycle, -55/125C | 700 Cycles | - | - | - | - |
| TC | Temperature Cycle, -65/150C | 500 Cycles | 3/231/0 | 1/77/0 | - | 1/77/0 |

| Туре | Test Name / Condition | Duration | QBS Product Reference: <u>TLV62569PDDC</u> | QBS Package Reference: <u>TLV62568DRL</u> | QBS Package Reference: <u>TLV62569DRLR</u> |
|------|-------------------------------|--------------------------|--|---|--|
| AC | Autoclave 121C | 96 Hours | - | 3/231/0 | - |
| ED | Electrical Characterization | Per Datasheet Parameters | - | Pass | - |
| ELFR | Early Life Failure Rate, 125C | 48 Hours | - | - | - |
| HAST | Biased HAST, 130C/85%RH | 96 Hours | - | 3/231/0 | - |
| HBM | ESD - HBM | 2500 V | - | - | - |
| CDM | ESD - CDM | 1500 V | 1/3/0 | - | - |
| HTOL | Life Test, 150C | 300 Hours | - | 3/231/0 | - |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours | - | 3/231/0 | - |
| LU | Latch-up | (per JESD78) | 1/6/0 | - | - |
| SD | Surface Mount Solderability | Pb Free | - | 3/66/0 | - |
| SD | Surface Mount Solderability | Pb. | - | 3/66/0 | - |
| TC | Temperature Cycle, -55/125C | 700 Cycles | - | 3/231/0 | - |
| TC | Temperature Cycle, -65/150C | 500 Cycles | - | 3/231/0 | 1/77/0 |

- 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 : -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 |