| PCN Number: 20200908000.1 | | | | | | | PCN Date: | | Jan. 15, | 2021 | | |
|--|--|---------|--|--------------|------------|--------------------|----------------------|--|--|--------|-----------|-----|
| Titl | Title: Qualification of an additional Mold compound for select devices | | | | | | | | | | | |
| Cus | stomer Conta | ct: | PCN / | Manager | | Dept: | Quality Services | | | | | |
| Proposed 1 st Ship Date: Apr. 1 | | | | L5, | Estimated | | | Date provided at ability: sample request | | | | |
| Cha | ange Type: | | | ı | | | | | | | | |
| | ☐ Assembly Site ☐ Design ☐ Wafer Bump Site | | | | | | | | | | | |
| | Assembly Pro | | | | | Data S | | | Wafer Bump Material | | | |
| | Assembly Ma | | | | | Part number change | | | Wafer Bump Process | | | |
| | Mechanical S | • | | | | Test Site | | | Wafer Fab Site | | | |
| | Packing/Ship | ping/ | Labeli | ng | | Test Process | | | Wafer Fab Materials Wafer Fab Process | | | |
| | | | | | | PCN | l Details | | warer | rab i | Process | |
| Des | scription of C | hang | je: | | | | | | | | | |
| | cted section a | | | ddition | al m | nold com | npound qualification | for | | | · | ıct |
| | | | | | | 61 | Current D#R-01 or | | Additional | | | |
| | Mold C | omp | ouna | | | SID# | | SID#R-35 | | | | |
| Rea | son for Char | nge: | | | | | | | | | | |
| Con | tinuity of supp | oly | | | | | | | | | | |
| Ant | icipated imp | act o | n For | m, Fit, | Fu | nction, | Quality or Reliab | ility | (positi | ve / | negative) | : |
| Non | ie | | | | | | | | | | | |
| Ant | Anticipated impact on Material Declaration | | | | | | | | | | | |
| Material Declaration prod | | | derial Declarations or Product Content reports are driven from duction data and will be available following the production ease. Upon production release the revised reports can be ained from the TI ECO website. | | | | | | | | | |
| Cha | anges to proc | luct i | identi | ficatio | n r | esulting | from this PCN: | | | | | |
| Non | ie | | | | | | | | | | | |
| Pro | duct Affecte | d: | | | | | | | | | | |
| BQ | 2022ALPR | | LM4 | 040D82 | ILP | | TL431BCLP | | TLV43 | LILPR | | |
| BQ2022ALPR BQ2026LPR | | LM4 | LM4040D82ILPR | | | TL431BCLPR | | TLVH431ACLP | | Р | | |
| LM | 285LP-1-2 | | LM4 | 041C12 | ILP | | TL431BILP | | TLVH4 | 31ACLI | PR | |
| | | LM4 | M4041C12ILPR | | | TL431BILPR | TLVH43 | | 31AILP |) | | |
| | | 041CILP | | | TL431BQLP | | TLVH431AILPR | | PR | | | |
| LM285LPRE3-1-2 LM4041C | | 041CILP | CILPR | | TL431BQLPM | | TLVH4 | 31AQL | AQLP | | | |
| LM | LM317LCLP LM4041D12 | | ILP | | TL431BQLPR | | TLVH431AQLPR | | PR | | | |
| LM | LM317LCLPR LM4041D12 | | ILPF | <u> </u> | TL431CLP | | TLVH431BCLP | | | | | |
| | LM317LILP LM4041D | | | | | TL431CLP-Z | | TLVH431BCLPR | | | | |
| | | | 041DILF | | | TL431CLPE3-J | | TLVH431BILP | | | | |
| | 336BLP-2-5 | | | 50-30LP | | | TL431CLPM | | TLVH431BILPR | | |] |
| | 336BLPR-2-5 | | | LP2950-30LPR | | | TL431CLPME3-J | | TLVH431BQLP | | | |

| LM336LP-2-5 | LP2950-33LPE3 | TL431CLPR | TLVH431BQLPR |
|---------------|----------------|--------------|----------------|
| LM336LPR-2-5 | LP2950-33LPRE3 | TL431ILP | TLVH431CLP |
| LM385BLP-1-2 | LP2950-50LPRE3 | TL431ILPR | TLVH431CLPR |
| LM385BLP-2-5 | LT1009CLP | TL750L05CLP | TLVH431ILP |
| LM385BLPR-1-2 | LT1009CLPM | TL750L05CLPR | TLVH431ILPR |
| LM385BLPR-2-5 | LT1009CLPR | TL750L08CLP | TLVH431QLP |
| LM385LP-1-2 | LT1009ILP | TL750L10CLP | TLVH431QLPR |
| LM385LP-2-5 | LT1009ILPR | TL750L10CLPR | UA78L02ACLP |
| LM385LPR-1-2 | MC79L05ACLP | TL750L12CLP | UA78L05ACLP |
| LM385LPR-2-5 | MC79L05ACLPR | TL7757CLP | UA78L05ACLPM |
| LM4040C10ILP | MC79L12ACLP | TL7757CLPR | UA78L05ACLPR |
| LM4040C10ILPR | MC79L12ACLPR | TL7757ILP | UA78L05AILP |
| LM4040C20ILP | MC79L12CLP | TL7757ILPR | UA78L05AILPR |
| LM4040C20ILPR | MC79L15ACLP | TLE2425CLP | UA78L05CLP |
| LM4040C25ILP | MC79L15ACLPR | TLE2425ILP | UA78L05CLPR |
| LM4040C25ILPR | SN1102023LP | TLE2426CLP | UA78L06ACLP |
| LM4040C30ILP | SN1102023LPB | TLE2426CLPR | UA78L06ACLPR |
| LM4040C30ILPR | TL1431CLP | TLE2426ILP | UA78L08ACLP |
| LM4040C41ILP | TL1431CLPME3 | TLE2426ILPR | UA78L08ACLPE3 |
| LM4040C41ILPR | TL1431CLPR | TLV431ACLP | UA78L08ACLPR |
| LM4040C50ILP | TL317CLP | TLV431ACLPR | UA78L08ACLPRE3 |
| LM4040C50ILPR | TL317CLPR | TLV431AILP | UA78L09ACLP |
| LM4040C82ILP | TL317LP | TLV431AILPM | UA78L09ACLPE3 |
| LM4040C82ILPR | TL430CLP | TLV431AILPR | UA78L09ACLPR |
| LM4040D10ILP | TL431ACLP | TLV431BCLP | UA78L09ACLPRE3 |
| LM4040D20ILPR | TL431ACLP-Z | TLV431BCLPR | UA78L10ACLP |
| LM4040D25ILP | TL431ACLPM | TLV431BILP | UA78L10ACLPE3 |
| LM4040D25ILPR | TL431ACLPME3 | TLV431BILPR | UA78L10ACLPR |
| LM4040D30ILP | TL431ACLPR | TLV431BQLP | UA78L12ACLP |
| LM4040D30ILPR | TL431ACLPRE3 | TLV431BQLPR | UA78L12ACLPM |
| LM4040D41ILP | TL431AILP | TLV431CLP | UA78L12ACLPR |
| LM4040D41ILPR | TL431AILPM | TLV431CLPR | UA78L15ACLP |
| LM4040D50ILP | TL431AILPR | TLV431ILP | UA78L15ACLPR |
| LM4040D50ILPR | TL431AILPRE3-J | | |



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

| Туре | Test Name / Condition | Duration | Qual Device: SN1102023LP | Qual Device: TL1431CLP | Qual Device: TLE2426ILP |
|-------|-------------------------------------|-----------------------------|-----------------------------|---------------------------|----------------------------|
| BHAST | Biased HAST, 130C | 96 Hours | - | 3/231/0 | - |
| UHAST | Unbiased HAST, 130C | 96 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| TC | Temperature Cycle, -65C/150C | 500 Cycles | 3/231/0 | 3/231/0 | 3/231/0 |
| HTSL | High Temperature Storage Bake, 170C | 420 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| ED | Electrical Characterization | Per datasheet specification | - | 1/30/0 | - |
| MQ | Manufacturability (Assembly) | Per mfg. site specification | 3/PASS | 3/PASS | 3/PASS |
| PD | Physical Dimensions | Per mechanical drawing | - | - | 3/15/0 |
| PKG | Solder Heat, 260C | 10 Seconds | 3/66/0 | 3/66/0 | 3/66/0 |
| LI | Lead Pull | Leads | - | - | 3/84/0 |
| VM | Visual / Mechanical | Per mfg. site specification | - | - | 3/984/0 |
| XRAY | X-ray | (top side only) | 3/15/0 | 3/15/0 | 3/15/0 |
| FLAM | Flammability | Method A - UL94 V-0 | - | - | 3/PASS |
| YLD | FTY and Bin Summary | - | 3/PASS | 3/PASS | 3/PASS |

⁻ The following are equivalent HTSL options based on an activation energy of 0.7eV: 150C/1000 Hours, and 170C/420 Hours

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

Green/Pb-free Status:

Qualified Pb-Free (SMT) and Green

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⁻ The following are equivalent Temp Cycle options per JESD47: -55C/125C/700 Cycles and -65C/150C/500 Cycles

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