

|   |   |  |                  |
|---|---|--|------------------|
| <b>PCN Number:</b>                        | 20230329004.1   | <b>PCN Date:</b>                       | March 30, 2023   |
| <b>Title:</b>                             | Qualification of LFAB as an additional Wafer Fab site option for select devices |  |                  |
| <b>Customer Contact:</b>                  | <a href="#">PCN Manager</a>   | <b>Dept:</b>                           | Quality Services |
| <b>Proposed 1<sup>st</sup> Ship Date:</b> | Jun 29, 2023  | <b>Sample Requests accepted until:</b> | Apr 29, 2023*    |

**\*Sample requests received after April 29, 2023 will not be supported.**

**Change Type:**

|                                     |                 |                          |                           |                          |                          |
|-------------------------------------|-----------------|--------------------------|---------------------------|--------------------------|--------------------------|
| <input type="checkbox"/>            | Assembly Site   | <input type="checkbox"/> | Assembly Process          | <input type="checkbox"/> | Assembly Materials       |
| <input type="checkbox"/>            | Design          | <input type="checkbox"/> | Electrical Specification  | <input type="checkbox"/> | Mechanical Specification |
| <input type="checkbox"/>            | Test Site       | <input type="checkbox"/> | Packing/Shipping/Labeling | <input type="checkbox"/> | Test Process             |
| <input type="checkbox"/>            | Wafer Bump Site | <input type="checkbox"/> | Wafer Bump Material       | <input type="checkbox"/> | Wafer Bump Process       |
| <input checked="" type="checkbox"/> | Wafer Fab Site  | <input type="checkbox"/> | Wafer Fab Materials       | <input type="checkbox"/> | Wafer Fab Process        |
|                                     |                 | <input type="checkbox"/> | Part number change        |                          |                          |

**PCN Details**

**Description of Change:**

Texas Instruments is pleased to announce the addition of LFAB as an additional Wafer Fab site option for the products listed in the "Product Affected" section of this document.

| Current Fab Site |         |                | Additional Fab Site |         |                |
|------------------|---------|----------------|---------------------|---------|----------------|
| Current Fab Site | Process | Wafer Diameter | New Fab Site        | Process | Wafer Diameter |
| UMC12i           | F65     | 300mm          | LFAB                | F65     | 300mm          |

Qual details are provided in the Qual Data Section.

**Reason for Change:**

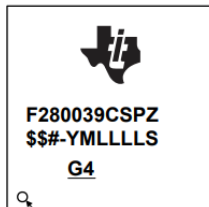
Continuity of supply

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

None

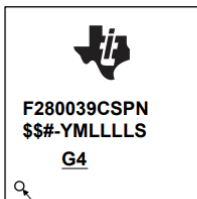
**Changes to product identification resulting from this PCN:**

**Device Symbol:**



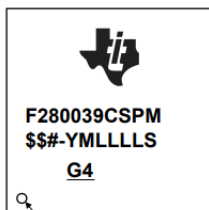
Pin 1

\$\$ = Wafer Fab Code (one or two characters)  
# = Silicon Revision Code  
YM = 2-digit Year/Month Code  
LLLL = Assembly Lot Code  
S = Assembly Site Code per QSS 005-120  
G4 = ECAT



Pin 1

\$\$ = Wafer Fab Code (one or two characters)  
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G4 = ECAT

980 PT  
F280037CS  
YMLLLLS  
\$\$# G4

Q  
Pin 1

980 = TI EIA Code  
YM = 2-digit Year/Month Code  
LLLL = Assembly Lot Code  
S = Assembly Site Code per QSS 005-120  
\$\$ = Wafer Fab Code (one or two characters)  
# = Silicon Revision Code

G4 = ECAT

**Original Fab Field:**

\$\$ = \$7 → UMC 12i

**Updated Fab Field:**

\$\$ = \$7 → UMC 12i

Or

\$\$ = 3L → LFAB

**Current Fab Site Information:**

| Chip Site | Chip Site Origin Code (20L) | Chip Site Country Code (21L) | Chip Site City |
|-----------|-----------------------------|------------------------------|----------------|
| UMC 12i   | UMI                         | SGP                          | Singapore      |

**Additional Fab Site Information:**

| New Chip Site | Chip Site Origin Code (20L) | Chip Site Country Code (21L) | Chip Site City |
|---------------|-----------------------------|------------------------------|----------------|
| LFAB          | LHI                         | USA                          | Lehi           |

Sample product shipping label (not actual product label)

(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:**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| F280034SPM  | F280037CSPT | F280037SPN  | F280039CSPN |
| F280037CSPM | F280037SPM  | F280037SPNR | F280039CSPZ |
| F280037CSPN | F280037SPMR | F280039CSPM |             |

**Change Qualification Report  
Approve Date 28-MARCH -2023**

**Qualification Results**

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

| Type  | #  | Test Name                     | Condition  | Duration   | Qualification Device:<br>F280039CSPZ | Wafer fab<br>QBS Reference:<br>TMS320F28379SPTPQ |
|-------|----|-------------------------------|------------|------------|--------------------------------------|--|
| HAST  | A2 | Biased HAST                   | 130C/85%RH | 96 Hours   | QBS                                  | 3/231/0  |
| UHAST | A3 | Unbiased HAST                 | 130C/85%RH | 96 Hours   | QBS                                  | 3/231/0  |
| TC    | A4 | Temperature Cycling           | -65C150C   | 500 cycles | QBS                                  | 3/231/0  |
| HTOL  | B1 | Life Test                     | 125C       | 1000 Hours | -                                    | 0/231/0  |
| HTOL  | B1 | Life Test                     | 125C       | 500 Hours  | 3/231/0                              | -  |
| HTSL  | B3 | High Temperature Storage Life | 150C       | 1000 hours | -                                    | 3/231/0  |
| HTSL  | B3 | High Temperature Storage Life | 150C       | 500 hours  | 3/231/0                              |  |
| ESD   | E2 | ESD CDM                       | -          | 500 Volts  | 1/3/0                                |  |
| ESD   | E2 | ESD HBM                       | -          | 2000 Volts | 1/3/0                                |  |
| LU    | E4 | Latch-Up                      | Per JESD78 | -          | 1/6/0                                |  |

- QBS: Qual By Similarity
- Qual Device F28003xxCSPZ is qualified at MSL3 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
- Flash memory was cycled with programming/erasing operations prior to HTOL and HTSL which serves as flash memory data retention tests

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 contact shown below or your local Field Sales Representative.

| Location                  | E-Mail   |
|---------------------------|--|
| WW Change Management Team | <a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a> |

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