PCN # 2054A DATE: October 22, 2020

EXPECTED PCN SHIP DATE: October 22, 2020



Quality Assurance 160 Rio Robles San Jose, CA 95134

www.maximintegrated.com

PROCESS CHANGE NOTICE X PRODUCT CHANGE NOTICE

MAXIM INTEGRATED HEREBY ISSUES NOTIFICATION OF CHANGE THAT MAY AFFECT THE FOLLOWING CATEGORIES:

| DESIGN WAFER FAB X ASSEMBL | .Y TEST ELEC/MECH SPECS | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| AFFECTED PRODUCT: | | | | | | | | |
| Ordering P/N: (See PN listing XLS in PCN ZIP file) | | | | | | | | |
| | | | | | | | | |
| CHANGE FROM: - | CHANGE TO: - | | | | | | | |
| Maxim commercial grade products in QFN package (package | Additional assembly source Amkor Technology China/Shanghai | | | | | | | |
| sizes 3x3, 5x5) built at current subcontractor | (ATC) | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| JUSTIFICATION: - | | | | | | | | |
| Additional assembler ATC is necessary to ensure supply flexibility and continuity | | | | | | | | |
| ATC qualification report is attached (ref. R29157FQ_R29355FQ) | | | | | | | | |
| There are no regulatory compliance changes to the material content of these devices | | | | | | | | |
| There are no changes to form/fit/function at new assembler for these devices | | | | | | | | |

TRACEABILITY: Maxim Integrated maintains full traceability by device marking, packaging labels and shipment documents.

Maxim Integrated's Change Notification System is designed to keep our customer base apprised of major product, manufacturing, or facility improvements.

or

Nasser Ali Chaouche

Nasser AliChaouche / PCN Coordinator

For further information, please contact either of the people listed below.

Contact your local Maxim Integrated Company Representative

Nasser AliChaouche, PCN Coordinator 408-601-5660 / pcn.coordinator@maximintegrated.com



1) PURPOSE

Qualify Amkor China (ATC) as alternate source for TQFN package, package code T1633+4 (16L), package size 3x3

2) QUALIFICATION REQUIREMENTS AND RESULTS

| Rel# | | R29157A | R29157B | R29157C | |
|--|-----------|-----------------------|-----------------------|-----------------------|--------|
| Lot# | | TAHF9A051EB | TAHF9A051EC | TAHF9A051ED | |
| Device: | | MAX20001ETE/V+ | MAX20001ETE/V+ | MAX20001ETE/V+ | |
| Die Type: | | AP42A-1A | AP42A-1A | AP42A-1A | |
| Die Size (mils) | | 61x61 | 61x61 | 61x61 | |
| Package Type (code): | | T1633+4 (16L TQFN) | T1633+4 (16L TDFN) | T1633+4 (16L TDFN) | |
| Date Code: | | 1723 | 1723 | 1723 | |
| Topmark: | | СС | СС | СС | |
| Stress Test | Duration | Sampling Plan | Result | Result | Result |
| Convection Reflow *2,3 260°C Peak | MSL1,3X | 0/320 | 0/320 | 0/320 | 0/320 |
| HAST *1,2,3 130°C / 85% R.H. | 96 hrs. | 0/77 | 0/77 | 0/77 | 0/77 |
| Unbiased HAST *1,3 130°C / 85% R.H. | 96 hrs. | 0/77 | 0/77 | 0/77 | 0/77 |
| Temperature Cycle *1, 2, 3 -65°C to 150°C | 1000 сус | 0/77 | 0/77 | 0/77 | 0/77 |
| HTS*1, 2, 3 150C | 1000 hrs | 0/77 | 0/77 | 0/77 | 0/77 |
| HTOL *2,3,4 135°C | 1000 hrs. | 0/77 | 0/77 | 0/77 | 0/77 |
| Wire Bond Pull Minimum 5 grams-force | Post TCT | 0/200 wires | 0/200 | 0/200 | 0/200 |
| CSAM*1 (for info only) | Post MSL | 0/22 | 0/22 | 0/22 | 0/22 |
| Solderability | T(0) | 0/15 | 0/15 | 0/15 | 0/15 |

Notes:

*1. Convection reflow is used as preconditioning for SMD packages.

*2. Electrical tests pre- and post-stress were performed at +85°C.

*3. Electrical tests pre- and post-stress were performed at +25°C.

*4. Electrical tests pre- and post-stress were performed at -40°C.

3) CONCLUSION

Qualification lots assembled in ATC into T1633+4 (16L TQFN) package have passed reliability qualification (Full Qualification Requirements/Acceptance Criteria). ATC has been fully approved to process TQFNs. This package, as tested (MSL1), is not moisture sensitive and does not require bake and dry pack.



1) PURPOSE

Qualify Amkor China (ATC) as alternate source for TQFN package, package code T1655+4 (16L), package size 5x5

2) QUALIFICATION REQUIREMENTS AND RESULTS

| Rel# | | R29355A | R29355B | R29355C | |
|--|-----------|--------------------|--------------------|--------------------|--------|
| Lot# | | TBCX6A302AA | TBCX6A302AB | TBCX6A302AC | |
| Device: | | MAX16907SATE/V+ | MAX16907SATE/V+ | MAX16907SATE/V+ | |
| Die Type: | | AP18Z-1Z | AP18Z-1Z | AP18Z-1Z | |
| Die Size (mils) | | 80x93 | 80x93 | 80x93 | |
| Package Type (code): | | T1655+4 (16L TQFN) | T1655+4 (16L TDFN) | T1655+4 (16L TDFN) | |
| Date Code: | | 1723 | 1723 | 1723 | |
| Topmark: | | СС | cc | cc | |
| Stress Test | Duration | Sampling Plan | Result | Result | Result |
| Convection Reflow *2,3 260°C Peak | MSL1,3X | 0/320 | 0/320 | 0/320 | 0/320 |
| HAST *1,2,3 130°C / 85% R.H. | 96 hrs. | 0/77 | 0/77 | 0/77 | 0/77 |
| Unbiased HAST *1,3 130°C / 85% R.H. | 96 hrs. | 0/77 | 0/77 | 0/77 | 0/77 |
| Temperature Cycle *1, 2, 3 -65°C to 150°C | 1000 сус | 0/77 | 0/77 | 0/77 | 0/77 |
| HTS*1, 2, 3 150C | 1000 hrs | 0/77 | 0/77 | 0/77 | 0/77 |
| HTOL *2,3,4 135°C | 1000 hrs. | 0/77 | 0/77 | 0/77 | 0/77 |
| Wire Bond Pull Minimum 5 grams-force | Post TCT | 0/200 wires | 0/200 | 0/200 | 0/200 |
| CSAM*1 (for info only) | Post MSL | 0/22 | 0/22 | 0/22 | 0/22 |
| Solderability | T(0) | 0/15 | 0/15 | 0/15 | 0/15 |

Notes:

*1. Convection reflow is used as preconditioning for SMD packages.

*2. Electrical tests pre- and post-stress were performed at +125°C.

*3. Electrical tests pre- and post-stress were performed at +25°C.

*4. Electrical tests pre- and post-stress were performed at -40°C.

3) CONCLUSION

Qualification lots assembled in ATC into T1655+4 (16L TQFN) package have passed reliability qualification (Full Qualification Requirements/Acceptance Criteria). ATC has been fully approved to process TQFNs. This package, as tested (MSL1), is not moisture sensitive and does not require bake and dry pack.

MAX3205EATE+ MAX4701ETE+ MAX4781ETE+ MAX4781ETE+T MAX7317ATE+T