

PCN CN-202205009F

Transfer ALVC(H) and CBT products from ATBK to ATXSZ

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Qualification Report

Document Information

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1. Subject

This report provides details of the qualification of ALVC(H) and CBT products assembled and tested at mature production location ATX Semiconductors Suzhou China (ATXSZ)

Tests are according to the Nexperia General Quality Specification and in compliance with AEC-Q100 grade-1 and support PCN CN-202205009F

2. Assy factory details

2.1 ATXSZ (former ASEN)

ATXSZ Semiconductors with location Suzhou (near Shanghai) China is the world's largest semiconductor assembly and test company. ATXSZ was established as the Joint Venture of ASE(N) and NXP in 2007, located in the Suzhou Industrial Park (SIP), Southern China.

ATXSZ (former ASEN) is owned by ATX Semiconductors since December 2021. Located in the Suzhou Industrial Park, Southern China, ATXSZ is strategically placed to serve the rapidly growing global semiconductor assembly and test market. Quality Systems; IATF-16949 certified and VDA 6.3 A-rating

2.2 Wafer fab location and process

No change in wafer fab location and process technology. No change in die (same die)

2.3 Bond wire material / BOM

See details of the current production BOM in ATBK versus ATXSZ BOM in the embedded file



BOM details ATBK
versus ATXSZ PCN CI

3. Reliability test program

In line with the Nexperia General Quality Specification and in compliance with AEC-Q100 grade-1, an extensive qualification program was performed to qualify the ALVC(H) and CBT products assembled and tested at ATX Semiconductors Suzhou China (ATXSZ)

3.1 Qualification strategy

Qualification strategy was defined to demonstrate that form, fit, function, quality and reliability is unchanged. The reliability testing results are summarized in paragraph 4. The qualification was performed and included extended read-points to show robustness

4. Qualification Results

The qualification as reported in the embedded file below (compliant to AEC-Q100 rev. H) was carried out to release all product types mentioned in PCN CN-202205009F. The supporting document (see chapter 5) contains the Electrical Characterization Data with Comparison Report



Qualification
Results PCN CN-2022

5. Electrical performance

Same dies used, therefore electrical parameters remain unchanged and within the same distributions including the ESD performance.



Nexperia Electrical
distribution ATBK A1

6. Comparison of visual appearance

There will be no change of visual appearance. As a result of the MSL improvement the new TSSOP56 package in ATXSZ will not require dry pack

7. Traceability

The traceability is given by the assembly location indicator suffix which is indicated on the product topside marking and on the reel and box label:

“X” = ATXSZ (ATX Semiconductors Suzhou, China)

“n” = ATBK (NXP Semiconductors Assembly & Test Plant Bangkok, Thailand)

8. Conclusion

Based on the reliability qualification results, the ALVC(H) and CBT products can be released in ATXSZ for mass production. The results comply with the requirements for product release to AEC-Q100. Nexperia does not anticipate on any impact on fit, form, function, and reliability. As a result of the MSL improvement the new TSSOP56 package in ATXSZ will not require dry pack. All criteria and qualification requirements have been met to achieve moisture sensitivity MSL “1”

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