




Customer Name:	CONTROP	Report #:	87221	  
Mfr P/N:	EPCQ64ASI16N	Devices Received:	2	
Manufacturer:	INTEL- ALTERA	Lot/Date Code:	2032-2124	
Customer P/N:	N/A	Purchase Order:	24002141	

**Summary of Inspection / Analys Results Report #: 87221** **Devices received and First Save Date: 15-04-2024**




**Summary**  
 Devices were tested with compliance to AS6081 Level A and Level C per customer request without a Golden sample device for direct comparison, with respect to the observation of anomalies or evidence of counterfeiting.  
 No inconsistencies were found within the lot or test samples during the inspection.

Total 2 devices with date/lot code 2032-2124.

External Visual Inspection:  
 2 devices were visually inspected under 40x microscopy.  
 The devices were pulled out from a card.  
 Bent leads were observed on both devices.  
 Evidence of prior use, solder residuals on leads on both devices..  
 Evidence of residuals on pin one cavity on both devices.  
 Evidence of dirt, residue and/or foreign contamination on top side on both devices.  
 Devices failed external visual inspection!

Electrical Test:  
 2 DEVICES Tested for FUNCTIONAL TEST method with PROGRAMMER.  
 2 Devices fail test.




Test Process Operation	Observations	Quantity Inspected	Pass	Fail	Suspect	Performance Date
<b>1 Documentation and Packaging (SAE AS6081, 4.2.6.4.1) (Non-Destructive)</b>						
Condition Observed	Devices were received in acceptable condition. Total 2 devices.	2	2	0	0	16-04-2024
<b>2,1 Lifecycle and Counterfeit Risk (For information Only) (Non-Destructive)</b>						
Lifecycle and Counterfeit Risk	No high risk parts were found on ERAI.	0	0	0	0	16-04-2024
<b>2,2 External Visual Inspection (Non-Destructive)</b>						
Condition Observed	2 devices were visually inspected under 40x microscopy. The devices were pulled out from a card.  Device 1: Lot 2032. Device 2: Lot 2124.  Bent leads were observed on both devices. Evidence of prior use, solder residuals on leads on both devices.. Evidence of residuals on pin one cavity on both devices. Evidence of dirt, residue and/or foreign contamination on top side on both devices. Devices failed external visual inspection!	2	0	2	0	18-04-2024
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Test Process Operation	Observations	Quantity Inspected	Pass	Fail	Suspect	Performance Date
<b>2,3 Package Inspection (SAE AS6081) (Non-Destructive)</b>						
Dimensions	All Measurements in mm: Datasheet specification. LENGTH = D   WIDTH = E1   THICKNESS = A2 Min. 10.30  7.50   2.05 Max. 10.30   7.50   2.55 Dimensions match datasheet specification and Tolerances conform to ANSI Y14.5M-1994. SAMPLE D/C 2332: L = 10.54, W = 7.38, T = 2.32. SAMPLE D/C 2124: L = 10.29, W = 7.38, T = 2.35 Equipment Use: CALIPER ASSET #32, Next Cal: 03/2025.	2	2	0	0	18-04-2024
<b>3,4 Remarking and Resurfacing (SAE AS6081 4.2.6.4.3 A / 4.2.6.4.3 B) (Destructive)</b>						
Solvent Tests	Permanency test was performed on 1 device lot 2032 and 1 device lot 2124 using three parts mineral spirits (CAS No. 8052-41-3) with one part isopropyl alcohol (CAS No. 67-63-0). Devices were cotton swabbed Sample 1-2: No marking was removed during this process. Devices passed marking permanency testing!  HST (Heated Solvent Test) was performed on 1 device lot 2032 and 1 device lot 2124 ,using Dynasolve 750 solution. Sample 1-2: No marking was removed, no scratches, sanding marks or sign of remarking was observed.	2	2	0	0	02-05-2024
<b>5 X-Ray Analysis (SAE AS6081 4.2.6.4.4) (Non-Destructive)</b>						
Internal Construction	1 sample lot 2032 and 1 sample lot 2124 were X-rayed. Die construction and size are all the same No anomalies were found Showing 2 pictures in this report	2	2	0	0	21-04-2024
<b>6 XRF Analysis 3 Devices (SAE AS6081 4.2.6.4.5) (Non-Destructive)</b>						
RoHS / Non-RoHS Compliance	2 devices were XRF tested. Devices are ROHS compliant with Pb level less than 0.1%. Devices match datasheet specification. Devices pass XRF Analysis test.	2	2	0	0	22-04-2024
<b>7 Solderability Test (J-STD-002) (Destructive)</b>						
Solder Test	1 device lot 2032 and 1 device lot 2124 were tested using dip and look method. Devices were inspected under 20X magnification. Sample 1-2: All leads have over 95% solder coverage. No pinholes or voids are found. Devices passed Solder test!	2	2	0	0	02-05-2024
<b>8 Decapsulation Internal Analysis (AS6081 4.2.6.4.6) (Destructive)</b>						
Die Verification	Internal inspection was performed on 2 devices from two different lots: Lot 2032 and Lot 2124. Found 1 DIE in each device. Devices revealed WINBOND logo. Die lot 2032 Marking: AAG050 WINBOND C M. Die lot 2124 Marking: AAG050 WINBOND C M. Device confirmed to be WINBOND manufacturer. The two dies from different lot are found IDENTICAL. No history or golden sample for comparison.	2	2	0	0	05-05-2024
<b>9 Electrical Test (MIL-STD-883 and Manufacturer Specification) (Non-Destructive)</b>						
Electrical Test TA @ 21 +/- 3 Degree C	2 DEVICES Tested for FUNCTIONAL TEST method with PROGRAMMER. ALL Devices fail test.	2	0	2	0	25-04-2024

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Manufacturer:	INTEL- ALTERA	Lot/Date Code:	2032-2124	
Customer P/N:	N/A	Purchase Order:	24002141	

Test Process Operation	Observations	Quantity Inspected	Pass	Fail	Suspect	Performance Date
Outgoing Goods Inspection (Non-Destructive) / CDC for sequence moderate risk						
Outgoing Inspection	Devices are ready for shipping instruction. Decision rule: <b>Passed</b> - The measured values were observed in tolerance at the points tested. <b>Failed</b> - One or more measured values were observed out of tolerance at the points tested.	0	0	0	0	07-05-2024

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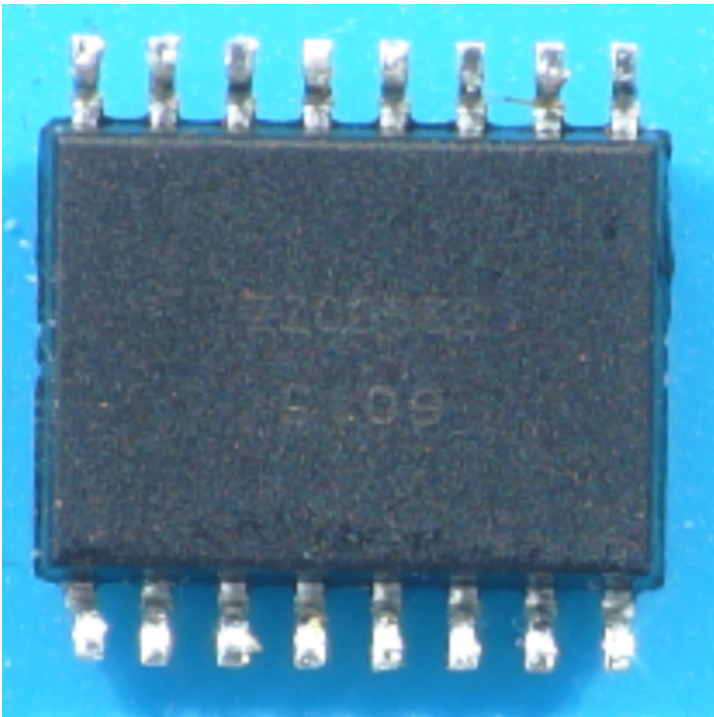
Customer Name:	CONTROP	Report #:	87221	  
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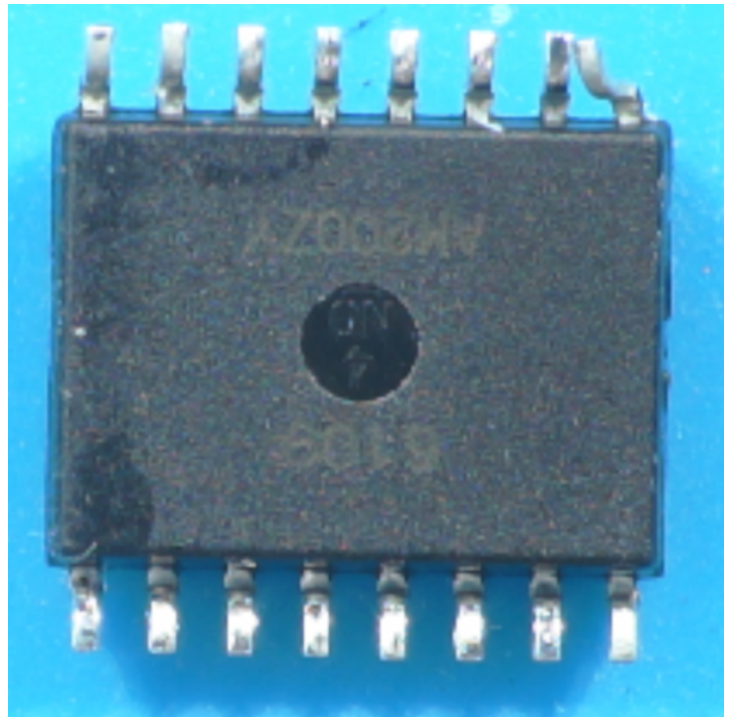
Picture #: 7. TOP-LOT 2032-EVIDENCE OF DIRT, RESIDUE AND/OR FOREIGN CONTAMINATION



Picture #: 8. TOP-LOT 2124--EVIDENCE OF DIRT, RESIDUE AND/OR FOREIGN CONTAMINATION






Picture #: 9. BOTTOM-LOT 2032



Picture #: 10. BOTTOM-LOT 2124

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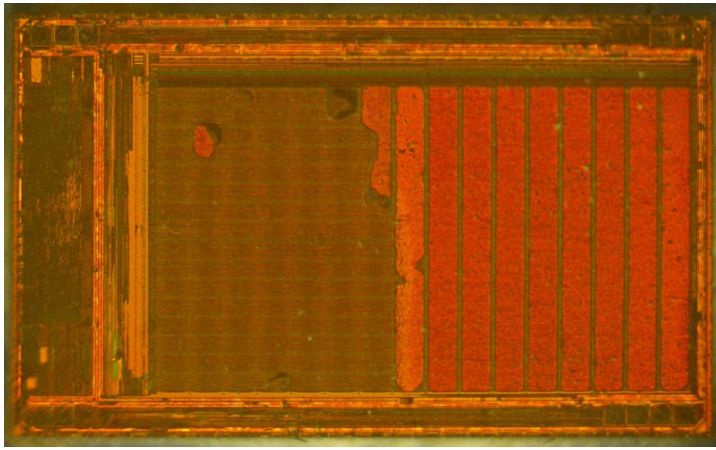
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**8 Decapsulation Internal Analysis (AS6081 4.2.6.4.6) (Destructive)**

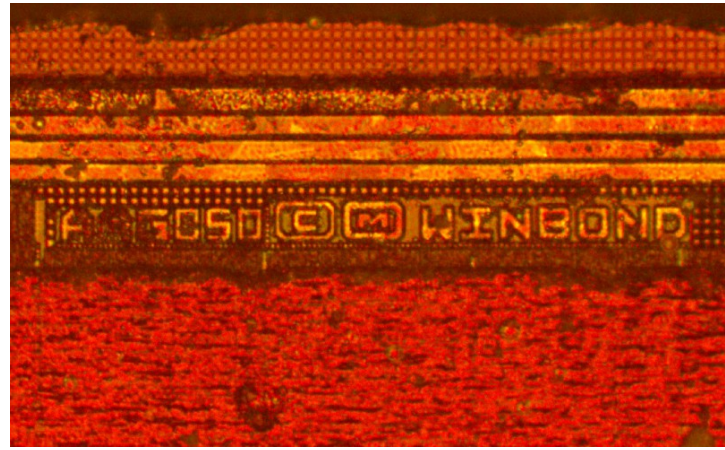
**Results:**  
Internal inspection was performed on 2 devices from two different lots:  
Lot 2032 and Lot 2124.  
Found 1 DIE in each device.  
Devices revealed WINBOND logo.  
Die lot 2032 Marking: AAG050 WINBOND C M.  
Die lot 2124 Marking: AAG050 WINBOND C M.  
Device confirmed to be WINBOND manufacturer.  
The two dies from different lot are found IDENTICAL.  
No history or golden sample for comparison.

Criteria	Observations	Acceptable	Not Acceptable	Suspect	N/A
Die Verification					
Die Topography	/	X			
Die Markings	Die lot 2032 Marking: AAG050 WINBOND C M. Die lot 2124 Marking: AAG050 WINBOND C M.	X			

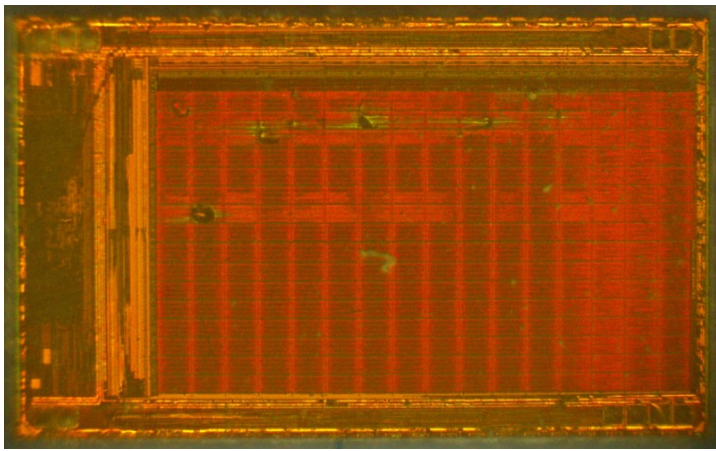
Images for 8 Decapsulation Internal Analysis (AS6081 4.2.6.4.6) (Destructive)



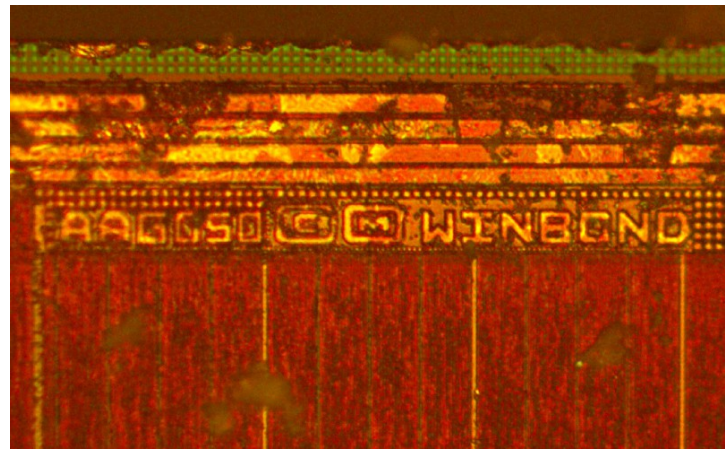
Picture #: 52. DIE LOT 2032 TOPOGRAPHY.



Picture #: 53. DIE LOT 2032 MARKING.



Picture #: 54. DIE LOT 2124 TOPOGRAPHY.



Picture #: 55. DIE LOT 2124 MARKING.

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