

XTREME™ *Semiconductor*

CERTIFIED EOL™ PRODUCT SOLUTIONS

*When Obsolete is
Absolutely Unacceptable*



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COUNTERFEIT SEMICONDUCTORS....

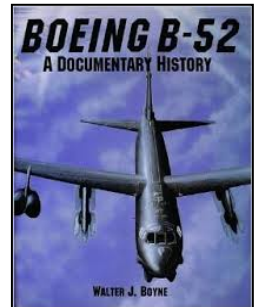
Counterfeit semiconductor products are entering the supply chain at an alarming rate. The risks are real, and the results can be catastrophic, should one of these counterfeit devices end up in a critical flight ready system.

The sources of counterfeit product entering the market are many. Cheap labor, vast inventories of E-Waste, ready access to gray market



product coming from thousands of contract manufacturing companies who migrated to Asia and China for cheap labor, have created the environment for hundreds, perhaps thousands, of unscrupulous businesses to thrive. Demand for

obsolete semiconductor product continues to grow as critical systems and technologies have out lived their component production life cycles Nowhere is this more evident than in US military weapon programs whose productive life cycles are continually extended keeping them in service years and sometimes decades beyond their planned life expectancy. Increasing demand, ready access to vast inventories of electronic component inventories, opportunities for high profit margins and an industry unprepared to deal with counterfeits components, has created the perfect storm for counterfeiters to thrive.



Our **CERTIFIED EOL™ PRODUCT** solution mitigates the risks associated with buying undocumented product. **XTREME**



Semiconductor's™ processes and procedures keep up with the latest industry standards incorporating requirements of AS6081 and IDEA1010 ensuring that only authentic OCM material is delivered to our customer.

CERTIFIED EOL™ PRODUCT SOLUTIONS....

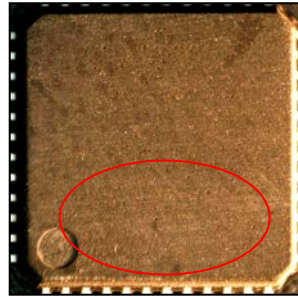
- **Comprehensive Incoming Inspection:**
 - Tailored to specific risk mitigation objectives
 - QTSL AS6081 Certified
- ***XTREME Semiconductor™ CERTIFIED EOL™ PRODUCT*** mitigate any risk of with buying undocumented product:
 - Validates Lot Number and Date Code
 - Visually Inspected for chips, cracks, bent leads and re-furbished material per IDEA-1010
 - Validates Die and Mask Identification
 - X-Ray Used to Validate Lot Consistency
 - Tested to Validate Original OCM Data Sheet Specification
 - Customized Inspection Process to meet Customer Specific or Unique Product Situation
- **Product Warranty:**
 - *XTREME Semiconductor™* offers a One-Year Warranty on all ***CERTIFIED EOL™ PRODUCT***



External Visual Inspection



Black topping used to re-mark product



Sanding marks under black topping

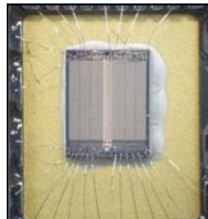
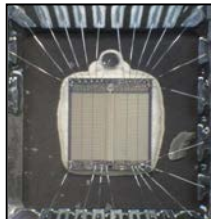


Atmel's Cage Code is 1FN41....

Notice the Cage Code of the Other Device, 2NF23

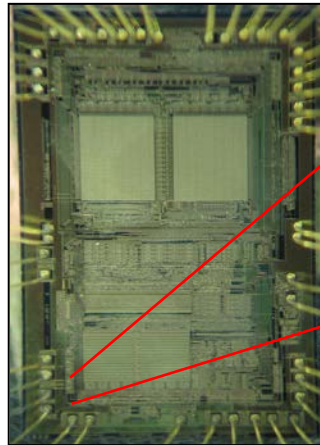


Topside marking is identical on these two devices; however, notice two different manufacture Cage Codes marked on each device. This product has been re-marked and upon further inspection confirmed to be Counterfeit.

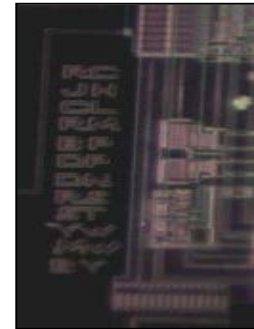
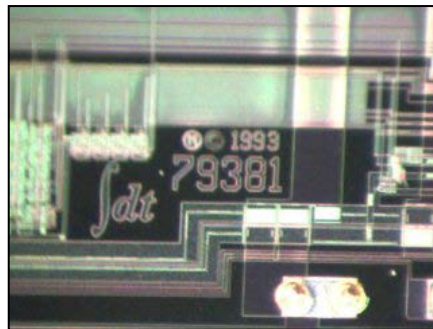


A visual inspection of this lot of material did not capture that fact that there are three different package variations and two different die revisions mixed into this single lot of material. This product has been remarked as a single D/C lot and is a common process used by Counterfeiters.

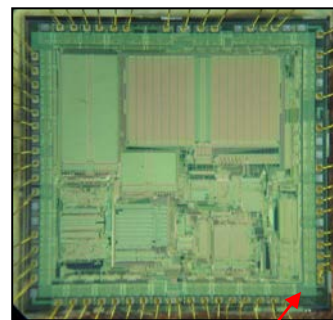
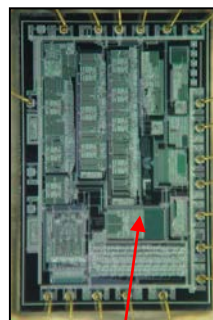
Die and Mask Validation Process



Die, Mask ID and Intel IP validated with Atmel

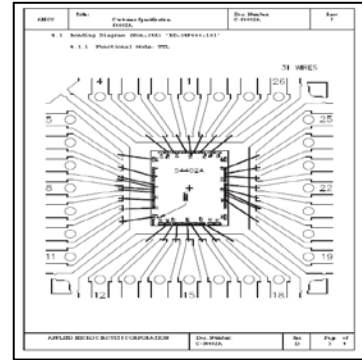
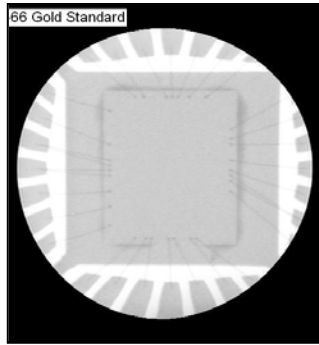


Die Marking and Mask ID validated with IDT

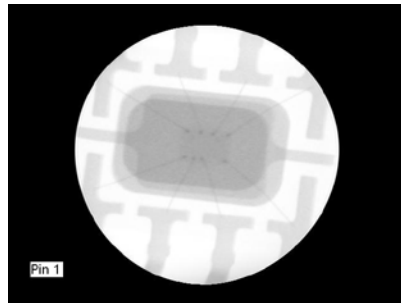
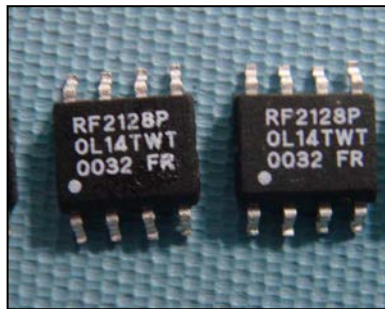


Die and Mask ID validated with Conexant/Rockwell

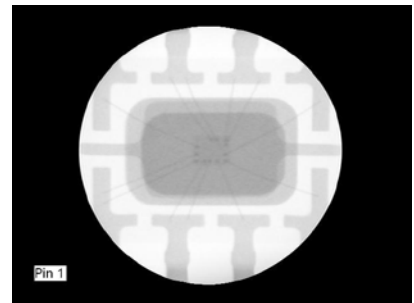
Use of X-Ray in Lot Validation



Use OEM bonding diagram to validate die bonding

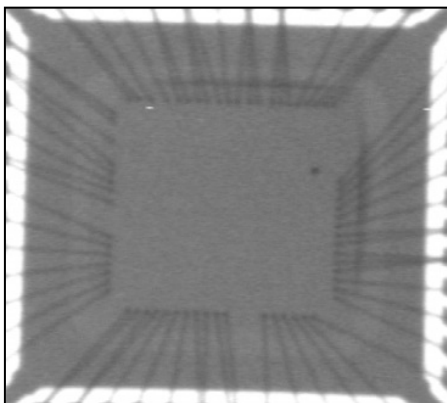


Authentic Product

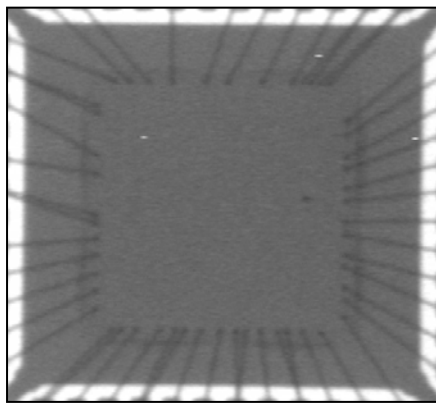


Counterfeit Product

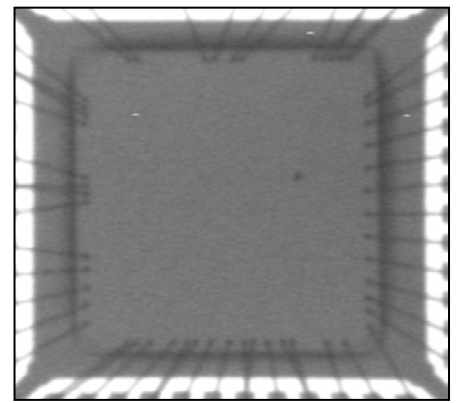
Two devices with identical marking, X-Ray reveals two different die inside of each device



Counterfeit



Counterfeit



Original OCM Die

X-Ray is capable of identifying different die revisions and lead frames within this lot VIA Tech VT1616-G product



CERTIFIED EOL™ PRODUCT SOLUTIONS

What you can Expect:

- **Authentic OCM Material, no Counterfeits**
 - **Certificate of Compliance**
 - **Summary of all Inspections Performed:**
- **Visual, Die Photos, X-Ray Report, and Electrical Test**
 - **One-Year Product Warranty**
 - **100% Satisfaction**
 - ***Eliminates the Risk!***

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