



Device Service Certificate of Results

Customer Information

Customer Name:	Sample Customer Name
Customer Contact:	Customer Contact
Customer Address:	1234 Sampleville Road Sampleville, TX 12345

Device Information

Device:	AT49BV163D-70TU
Manufacturer:	Atmel
D/C:	0632
Received Quantity:	575
Test Quantity:	574
Test Facility Location:	Aus1
Sales Support:	Brian Steele

Results Summary

Incoming Visual RtS per MIL-STD-883G, Per Method 2015 (results based on 2 piece sampling)	Lot Visual Validation Complete visual analysis of lot.	Electrical Results Per Quoted Parameters
RtS Testing: Pass Markings: Pass Body: Pass Leads/Balls: Pass	Markings: Pass; All devices Body: Pass; All devices Leads/Balls: Fail; 13 of 574	Test Temps: 25c Qty Pass: 573 Qty Fail: 1
Decapsulation: One unit decapsulated; correct manufacturer markings seen on die; Partial direct part number seen.		
Solderability Testing MIL-STD-883G, Per Method 2003	X-Ray Testing MIL-STD-883G, Per Method 2010	
QTY Tested: 1 QTY Pass: 1 QTY Fail: 0	QTY Tested: 574 Notes: No abnormalities seen.	

Findings: Based on gross non-conformities found with the balls/leads, lot history and quality would be questionable. Lot not recommended for production use.

Processes Performed (Checked items listed below):

<input checked="" type="checkbox"/> QA Incoming Sample Visual	<input checked="" type="checkbox"/> Complete Lot Visual	<input checked="" type="checkbox"/> Decapsulation	<input type="checkbox"/> X-Ray	<input checked="" type="checkbox"/> Solderability Testing	<input type="checkbox"/> C-SAM
<input checked="" type="checkbox"/> Electrical Testing at Ambient	<input type="checkbox"/> Electrical Testing at Temperature	<input type="checkbox"/> Solder Dipping	<input type="checkbox"/> Bake and Dry Pack	<input checked="" type="checkbox"/> Tape and Reel	<input type="checkbox"/> Burn In
<input type="checkbox"/> Device Programming	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> QA Outgoing Validation



Incoming/ Receiving:

(Description and images of lot and units as received).

Date Received:	12/27/2011
Quantity Expected:	575
Quantity Received:	575
Reason for lot count deviation:	No lot deviations.
D/C Counts:	0632: 575 units
Received by:	LP
Package Type:	tsop
Product Transport Type:	Tape and Reel

Incoming Notes (packaging issues, damaged parts, etc.):

Sample Incoming Photos:





Incoming Visual Test Sample Validation

(Random inspection of 2 units or other quantity as outlined in quote/PO. Inspection includes: validation of body, markings, balls/leads, & RtS Testing).

Date of Process Step: 12/27/2011
Quantity for Test: 2

Complete Sample Validation:

Quantity Pass: 2
Quantity Fail: 0

Break down of visual failures found with sample:

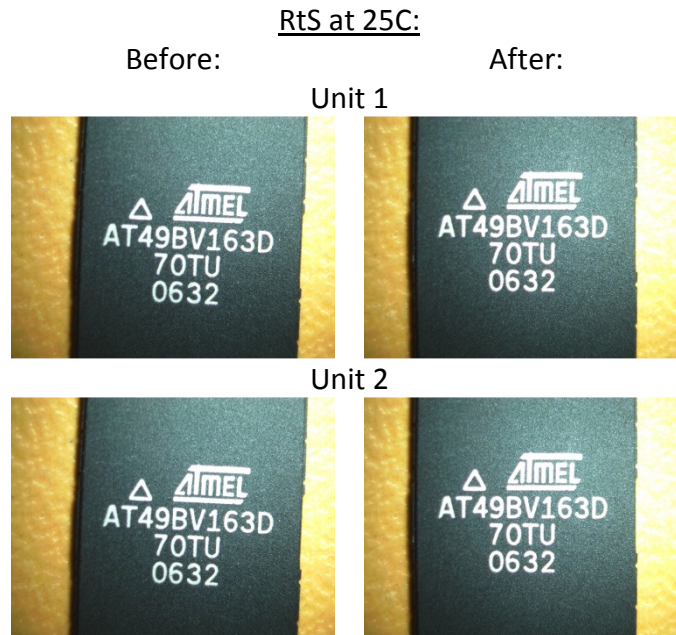
Device Markings (Verify part number, manufacturer, and Date Code; Per PO): Pass
Device Body (Examine for chips, scratches, and other defects): Pass
Device Leads/Balls (Examine for excessive bent leads and evidence of rework): Pass

Resistance to Solvents Sample Validation:

Resistance to Solvents (RTS) per MIL-STD-883G, Per Method 2015(sample from lot): Pass
RtS at 25c: Pass
RtS at 65c: Pass

Visual Test Notes:

RtS Sample photos:



RtS at 65C:

Before

After

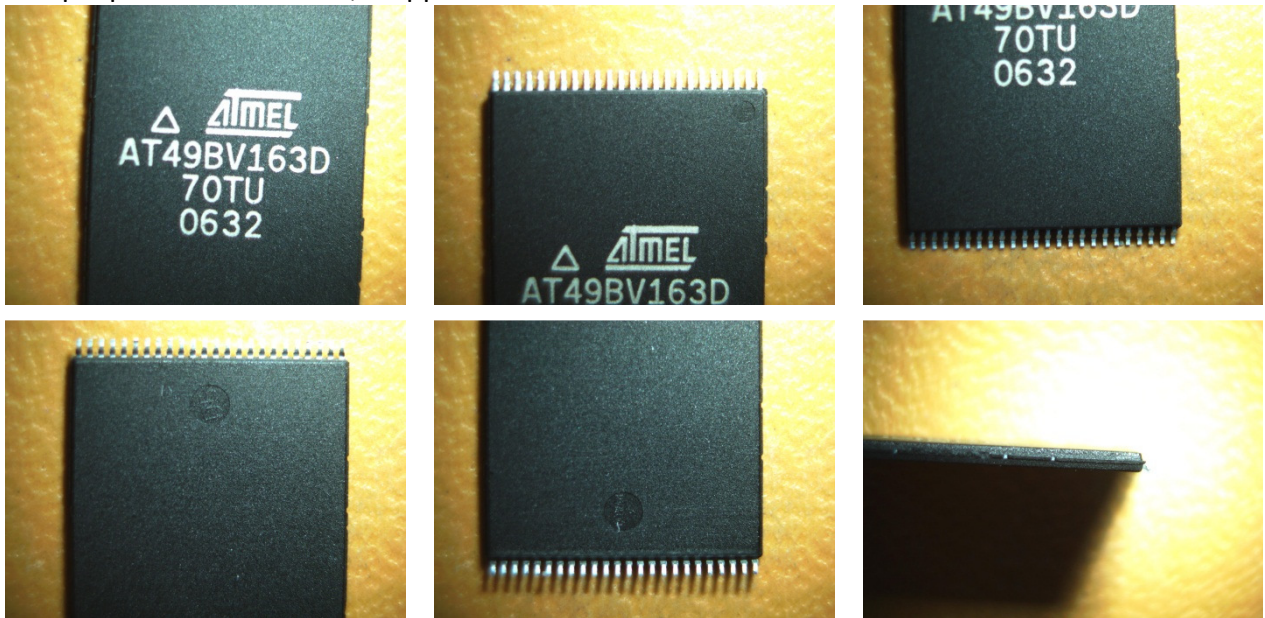
Unit 1



Unit 2



Sample photos from visual, if applicable:





Lot Visual Validation

(Visual inspection of each unit within the lot, including validation of bodies, markings, & balls/leads, evidence of prior use, damage, bent/broken ball/leads, & other gross physical non-conformities).

Date of Process Step: 12/27/2011
Quantity for Test: 574

Complete Lot Visual Validation:

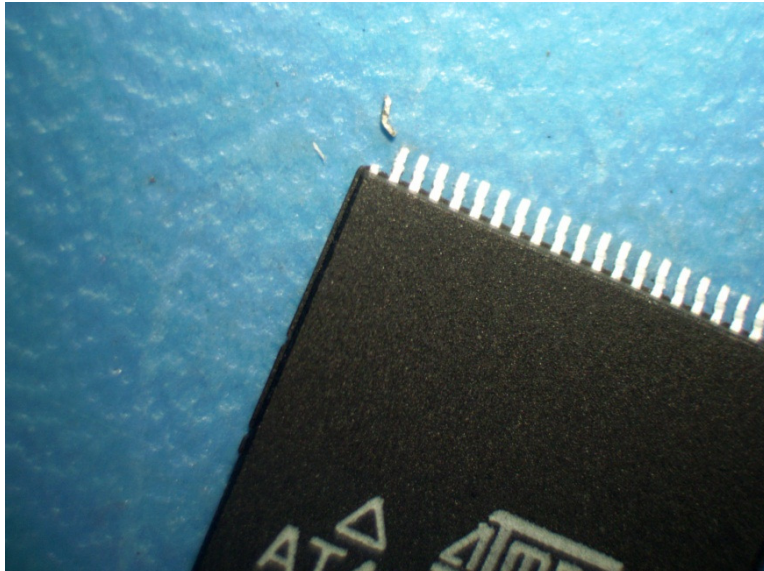
Quantity Pass: 561
Quantity Fail: 13

Break down of visual failures found:

Device Markings (Examine for fading, residue, or missing markings): Pass; All devices
Device Body (Examine for chips, scratches, and other defects): Pass; All devices
Device Leads/Balls (Examine for excessive bent leads and evidence of rework): Fail; 13 of 574

Visual Notes: 13 units failed visual inspection. 12 units noted to have residue on the leads. One unit had a broken lead causing it to fail electrical test.

Sample photos from Visual, if applicable:





Decapsulation Test Validation

(The Acidic or Mechanical removal of the device body to expose die markings. Images found on die notated).

Date of Process Step: 12/27/2011

Quantity for Test: 1

Quantity Lost: 0

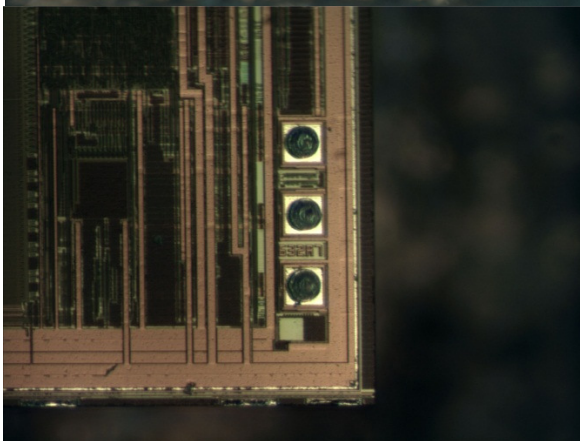
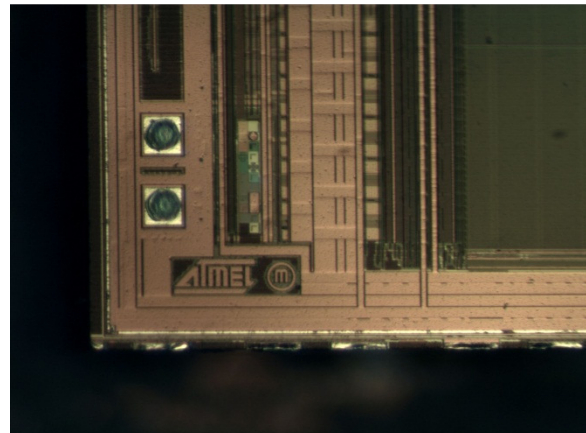
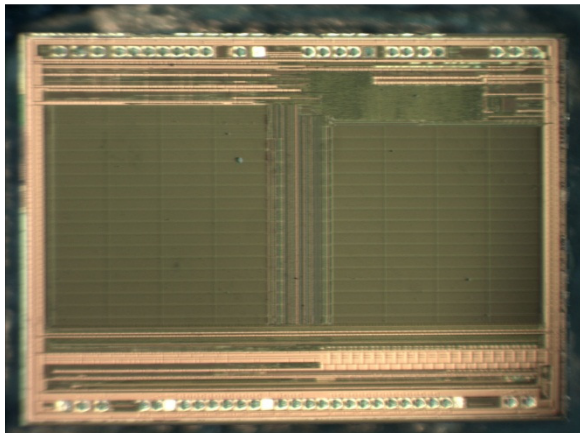
Direct Part Number: No

If No, Partial Part Number: Yes

Correct Manufacturer: Yes

Decapsulation Notes: One unit decapsulated; correct manufacturer markings seen on die;
Partial direct part number seen.

Decapsulation Photos:





Solderability Test Validation

(The process of evaluating the solderability of terminations, i.e. leads/balls, per MIL-STD-883, Method 2003).

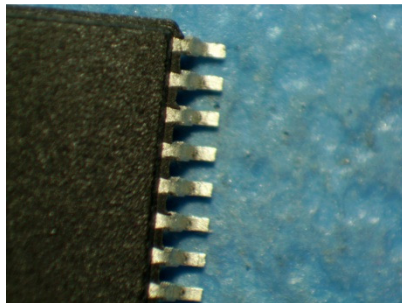
Date of Process Step:	12/27/2011
Quantity Received:	575
Quantity for Test:	1
Quantity Pass:	1
Quantity Fail:	0
Quantity Lost:	0

Test Notes: Device passed based on solder adhering to at least 95% of lead/ball surface.

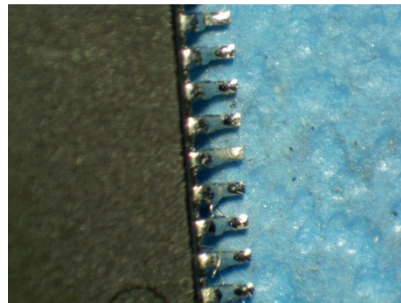
Solder Sample Photos:

Unit 1

Before:



After:





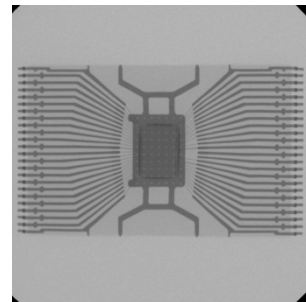
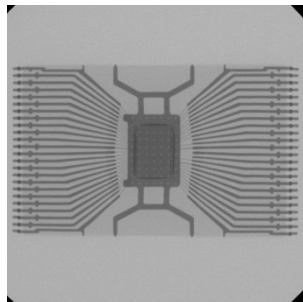
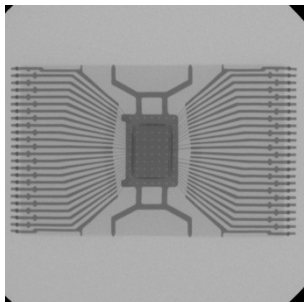
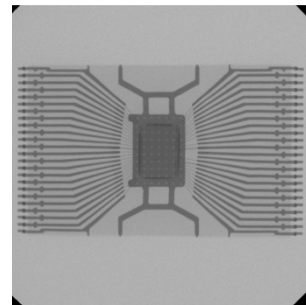
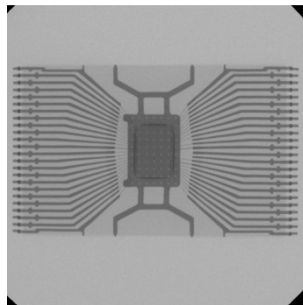
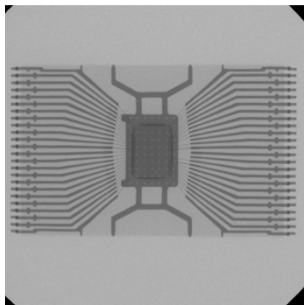
X-Ray Test Validation

*(Top side x-ray per MIL-STD-1580B, unless otherwise requested by customer, of devices. Images seen during process notated.
Gross non-conformities of device cavity observed during process notated).*

Date of Process Step:	12/27/2011
Quantity Received:	575
Quantity for Test:	574
Quantity Pass:	574
Quantity Fail:	0
Quantity Lost:	0
Quantity Damaged:	0

Test Notes: No abnormalities seen.

X-Ray Sample Photos:





Electrical Test Validation

(Functional Electrical testing to quoted test parameters).

Date of Process Step:	12/30/2011
Quantity for Test:	574
Quantity Pass:	573
Quantity Fail:	1
Quantity Lost:	0
Quantity Damaged:	0
Test Temperatures:	25c
Test Equipment Utilized:	ETS LSi5
Test Parameters:	Blank Check Supply Current Erase Device Read/Write
Test Parameters/Limits:	Blank Check: P/F Supply Current: P/F Erase Device: P/F Read/Writes: Low Limit- 0000 High Limit- 0000 Low Limit- 1111 High Limit- 1111 Low Limit- 1010 High Limit- 1010 Low Limit- 0101 High Limit- 0101