

Wuxi CMC electronics Co., Ltd



Vision: Become a leader in the domestic IC testing industry

Mission: Scientific and technological innovation, integration and development,
pursuit of excellence

Values: Integrity, Quality, Endeavour and Win win

AEC Q100 CERTIFICATION REPORT

QR-RE-09-02-B

Device Name : FM33HT0X3A

Sample Model : FM33HT053A

Batch Number : C8B03J1G /C8B03J2G/C8B03J3G

Entrusting party : Shanghai Fudan Microelectronics Group Co.,Ltd

Certification Grade : Grade 1: -40°C~125°C

Humidity : MSL=3

Sensitivity Level : MSL=3

DECLARATION

The test(s) shown in the report were conducted according to the confirmed procedures. We take full responsibility for the accuracy and completeness of these tests, and provide qualification certification of all testing personnel.

Post	Name	Signature	Date
Testing Engineer	Zhijin Xu	徐智金	2025/08/26
Inspection Engineer	Shengbin Sun	孙圣斌	2025/08/26

Wuxi CMC Electronics CO.,Ltd



NOTES

1. The report is invalid without company seal or report seal.
2. The report is invalid without signatures of testing person、 auditors and approver.
3. The report is invalid with any scrawl.
4. Partial copy of the report is unallowed without approving.
5. If test devices come from customers' samples, our company only be responsible of the samples, the results only could explain the quality of samples.
6. If you have any objection to the test results, please appeal to our company within one month from the date of receipt of the report, and attach the original report, otherwise it will not be accepted.

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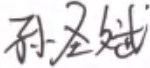

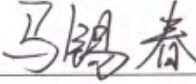
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Catalogue

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1. Test Report

Entrusting party	Shanghai Fudan Microelectronics Group Co.,Ltd	Device Name	FM33HT0X3A
Sample Model	FM33HT053A	Sample Batch Number	C8B03J1G/C8B03J2G/C8B03J3G
Package Type	QFN32	Quantity	306/286/286
Sample Source	Customer sample delivery	Test Category	AEC Q100 Reliability Test
Test Start Date	2025/05/15	Test End Date	2025/08/20
Inspection Standard	AEC Q100-Rev-J-2023 AEC Q006-Rev-A-2016 JEDEC MIL-STD-883		
Results and Conclusions	The samples have tested and certified according to the requirements of the client and the standard AEC Q100-Rev-J-2023, and the test progress is normal. The certification result is : PASS.		
Comment	/		
Sign	Editor: 	Examiner: 	Approver: 
	Date: 2025.8.26	Date: 2025.8.26	Date: 2025.8.26

2. Reliability test summary

2.1 Sample Information

Table 1: Sample Information

Lot#	Batch Number	Wafer Fabrication	Wafer Test facility	Assembly facility	Final Test facility
1	C8B03J1G	SAMSUNG	SINO	JCET	CMC
2	C8B03J2G				
3	C8B03J3G				

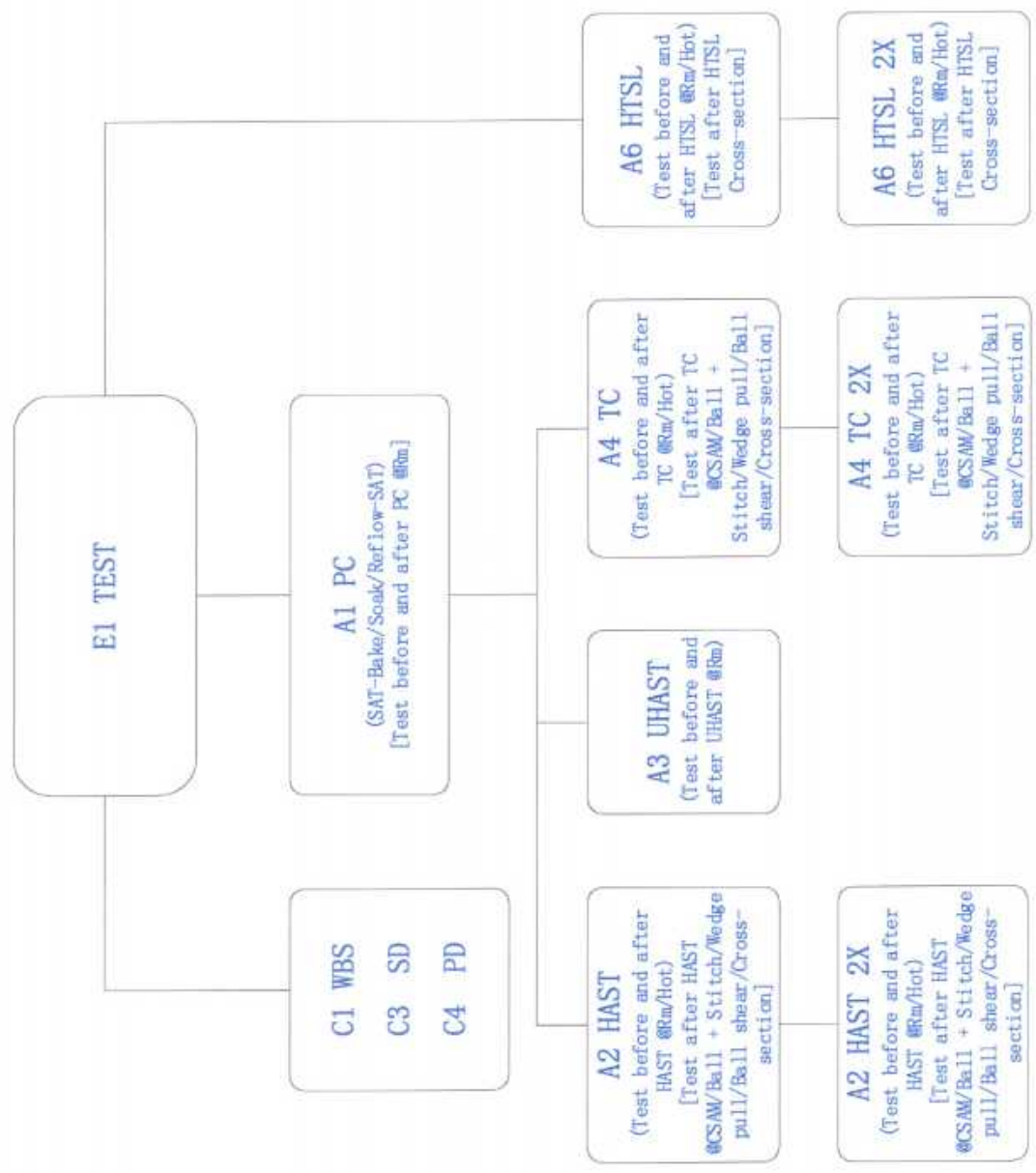
Item	Vendor	Material type
Lead Frame	MHT	A194 粗化
Molding Compound	Resonac	CEL-9240HF
Wire	NIPPON	AuPdCu/0.8mil/ EX1R 20um
Epoxy/DAF	Resonac	EN-4900GC
Wafer process	Samsung	Silicon

2.2 Description of Product

Table 2: Description of Product

Product Model	Package Type	Operating temperature range	Moisture sensitivity Level	Automotive Temperature Grade
FM33HT053A	QFN32	-40℃~125℃	MSL=3	Grade 1

2.3 Test Flow



2.4 Test Result Summary

Table 3: Test Result Summary

TEST GROUP A ACCELERATED ENVIRONMENT STRESS TESTS									
Group	Test Description	ABV	Test Method	Test Condition	#Lots	Total # Units	Result	Conclusion	Remark
A1	Pre-conditioning	PC	JESD22-A113 JEDEC J-STD-020	SAT-Bake/Soak/Reflow-SAT	3	3*231	0/693	Pass	/
	Biased HAST	HAST	JESD22-A110	Ta=130°C,85%RH, Vd= 5.5V,96hrs	3	3*77	0/231	Pass	/
	CSAM	/	AEC-Q006	Test to spec	3	3*22	0/66	Pass	/
A2	Ball + Stitch/Wedge pull	/	AEC-Q006	Wire AuPdCu 20µm	3	3*3	0/9	Pass	CPK: 4.48
	Ball shear	/	AEC-Q006	Bond 2.0mil	3	3*3	0/9	Pass	CPK: 8.90
	Cross-section	/	AEC-Q006	Test to spec	3	3*1	0/3	Pass	/
	Biased HAST Stress 2X	HAST	JESD22-A110	Ta=130°C,85%RH, Vd= 5.5V,96hrs	3	3*70	0/210	Pass	/
	CSAM	/	AEC-Q006	Test to spec	3	3*22	0/66	Pass	/
	Ball + Stitch/Wedge pull	/	AEC-Q006	Wire AuPdCu 20µm	3	3*3	0/9	Pass	CPK: 3.02
	Ball shear	/	AEC-Q006	Bond 2.0mil	3	3*3	0/9	Pass	CPK: 12.54
	Cross-section	/	AEC-Q006	Test to spec	3	3*1	0/3	Pass	/

TEST GROUP A ACCELERATED ENVIRONMENT STRESS TESTS									
Group	Test Description	ABV	Test Method	Test Condition	#Lots	Total # Units	Result	Conclusion	Remark
A3	Unbiased HAST	UHAST	JESD22-A118	Ta=130℃,85%RH,96hrs	3	3*77	0/231	Pass	/
	Temperature Cycling	TC	JESD22-A104	Ta=-65℃ to +150℃,500 cycles	3	3*77	0/231	Pass	/
	CSAM	/	AEC-Q006	Test to spec	3	3*22	0/66	Pass	/
A4	Ball + Stitch/Wedge pull	/	AEC-Q006	Wire AuPdCu 20μm	3	3*3	0/9	Pass	CPK: 2.43
	Ball shear	/	AEC-Q006	Bond 2.0mil	3	3*3	0/9	Pass	CPK: 9.46
	Cross-section	/	AEC-Q006	Test to spec	3	3*1	0/3	Pass	/
	Temperature Cycling Stress 2X	TC	JESD22-A104	Ta=-65℃ to +150℃,500 cycles	3	3*70	0/210	Pass	/
	CSAM	/	AEC-Q006	Test to spec	3	3*22	0/66	Pass	/
	Ball + Stitch/Wedge pull	/	AEC-Q006	Wire AuPdCu 20μm	3	3*3	0/9	Pass	CPK: 2.80
	Ball shear	/	AEC-Q006	Bond 2.0mil	3	3*3	0/9	Pass	CPK: 11.60
	Cross-section	/	AEC-Q006	Test to spec	3	3*1	0/3	Pass	/

TEST GROUP A ACCELERATED ENVIRONMENT STRESS TESTS									
Group	Test Description	ABV	Test Method	Test Condition	#Lots	Total # Units	Result	Conclusion	Remark
A6	High Temperature Storage Life	HTSL	JESD22-A103	Ta=150℃, 1000hrs	3	3*45	0/135	Pass	/
	Cross-section	/	AEC-Q006	Test to spec	3	3*1	0/3	Pass	/
	High Temperature Storage Life Stress 2X	HTSL	JESD22-A103	Ta=150℃, 1000hrs	3	3*44	0/132	Pass	/
	Cross-section	/	AEC-Q006	Test to spec	3	3*1	0/3	Pass	/

TEST GROUP C-PACKAGE ASSEMBLY INTEGRITY TESTS									
Group	Test Description	ABV	Test Method	Test Condition	#Lots	Total # Units	Result	Conclusion	Remark
C1	Wire Bond Shear	WBS	AEC-Q100-001	Bond 2.0mil	1	5	0/5	Pass	CPK: 8.34
C2	Wire Bond Pull	WBP	MIL-STD-883 Method 2011	Wire AuPdCu 20µm	1	5	0/5	Pass	CPK: 2.43
C3	Solderability	SD	JESD22-B102	8 hour water vapor aging prior to test Ta=245±5°C, Infiltration time 5±0.5s	1	15	0/15	Pass	>95% Lead coverage
C4	Physical Dimensions	PD	JESD22-B100 JESD22-B108	Test to spec	3	3*10	0/30	Pass	CPK _(min) : 1.70

TEST GROUPE ELECTRICAL CHARACTERISTIC VERIFICATION TESTS									
Group	Test Description	ABV	Test Method	Test Condition	#Lots	Total # Units	Result	Conclusion	Remark
E1	Pre and post stress electrical test	Test	Test program to supplier data sheet or user specification	Test to spec	3	All	0/all	Pass	/

3. Test Equipment


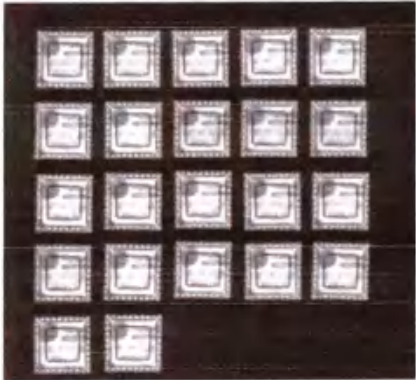

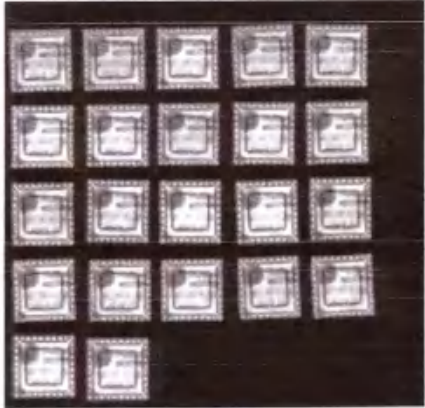

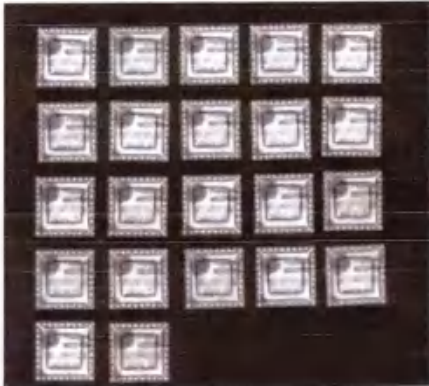
Table 4: Test Equipment Information

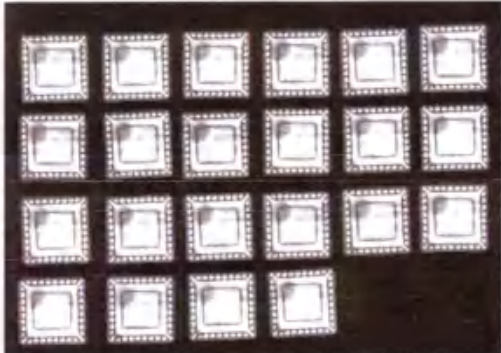

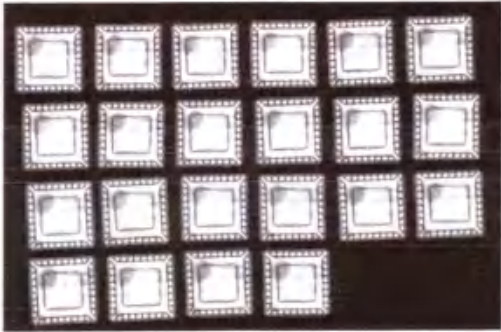
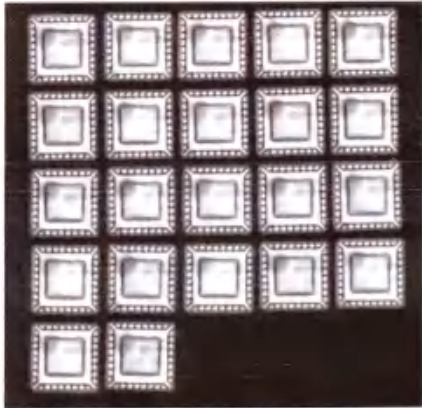


No.	Equipment Nr.	Equipment Name	Model Nr.	Effective period of measurement
1	JS24CM023	Ultrasonic microscope	UTSCAN 400	/
2	58226220300010	Temperature shock chamber	ShockEvent T/120/V2	2024.06.14 - 2025.06.13 2025.06.04 - 2026.06.03
3	58566244680020	Temperature shock chamber	VT ³ 7012S2	2024.10.15 - 2025.10.14
4	58566260120010	Temperature shock chamber	ShockEvent T/120/V2	2024.10.15 - 2025.10.14
5	18102103	High temperature test chamber	PH201	2025.03.31 - 2026.03.30
6	8112210004	High and low temperature humid heat test chamber	SETH-A-100L	2024.10.15 - 2025.10.14
7	7824	Reflow soldering machine	TNV25-308EN-P	2024.09.24 - 2025.09.23
8	1807768445	Strong acceleration humidity box	PC-422R8D	2024.07.29 - 2025.07.28 2025.07.14 - 2026.07.13
9	2006770978	Strong acceleration humidity box	PC-422R8D	2024.07.29 - 2025.07.28 2025.07.14 - 2026.07.13
10	802123072737520012	DC power supply	IT6333A	2024.09.23 - 2025.09.22
11	802123072737520007	DC power supply	IT6333A	2024.09.23 - 2025.09.22
12	0030-003157	High temperature test chamber	GPV-H21	2024.08.26 - 2025.08.25
13	1040210022	Small high temperature test chamber	STH-120	2025.03.31 - 2026.03.30
14	1040210030	Small high temperature test chamber	STH-120	2024.08.26 - 2025.08.25
15	MT50000000008	High precision three-dimensional measurement and analysis system	MT-500	2024.05.13 - 2025.05.12 2025.05.06 - 2026.05.05

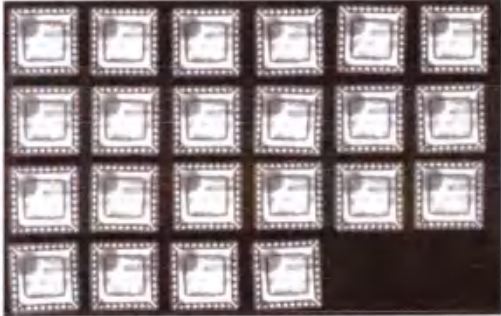


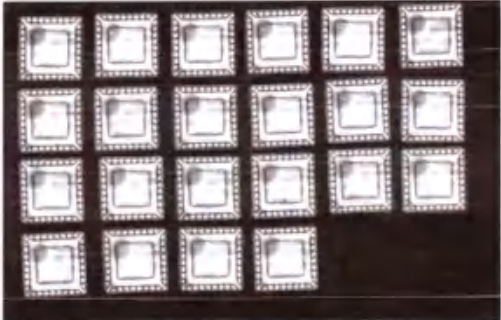

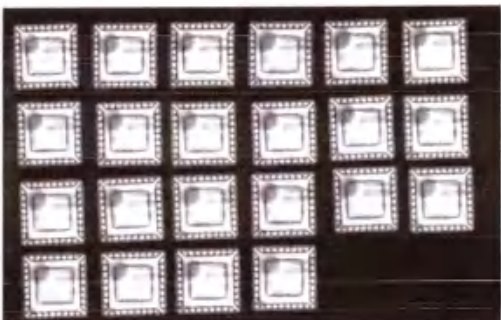
No.	Equipment Nr.	Equipment Name	Model Nr.	Effective period of measurement
16	MF1200-02030022-L	Tensile shear force tester	MF1200	2024.08.29 - 2025.08.28
17	EC30SM-221118	Grinder	EcoMet 30	/
18	199	Ion polisher	Fischione/1061	/
19	8602-04	Electron microscope	SU8600	2024.11.01 - 2025.10.31
20	140218/2079	Weldability testing machine	ST88	2025.02.24 - 2026.02.23

4. Test process photos

Table 5: Test process photos

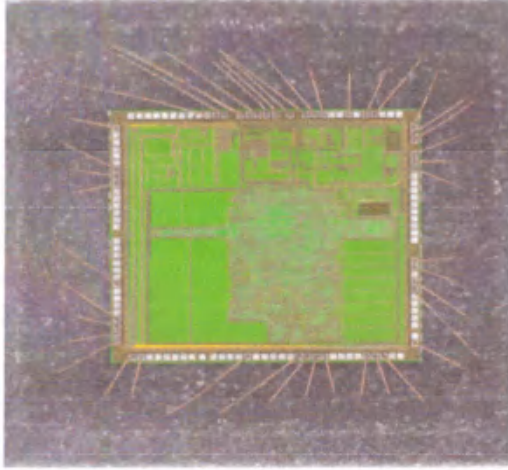
SAT	
C8B03J1G_SAT before PC	C8B03J1G_SAT after PC
	
C8B03J2G_SAT before PC	C8B03J2G_SAT after PC
	
C8B03J3G_SAT before PC	C8B03J3G_SAT after PC
	

SAT	
C8B03J1G_SAT after 96hrs HAST	C8B03J1G_SAT after 192hrs HAST
	
C8B03J2G_SAT after 96hrs HAST	C8B03J2G_SAT after 192hrs HAST
	
C8B03J3G_SAT after 96hrs HAST	C8B03J3G_SAT after 192hrs HAST
	

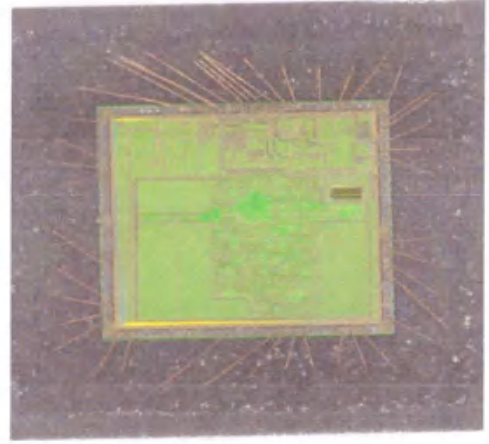
SAT	
C8B03J1G_SAT after 500cycles TC	C8B03J1G_SAT after 1000cycles TC
	
C8B03J2G_SAT after 500cycles TC	C8B03J2G_SAT after 1000cycles TC
	
C8B03J3G_SAT after 500cycles TC	C8B03J3G_SAT after 1000cycles TC
	

Decap

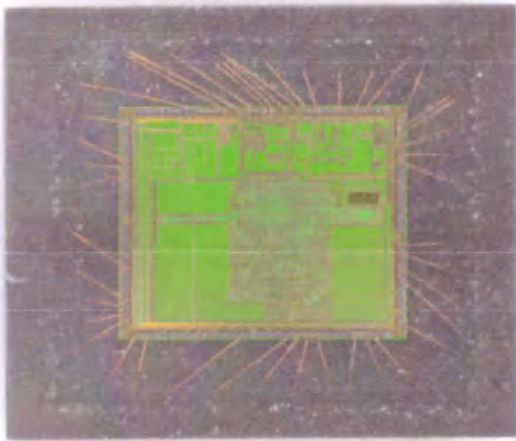
Graph 1



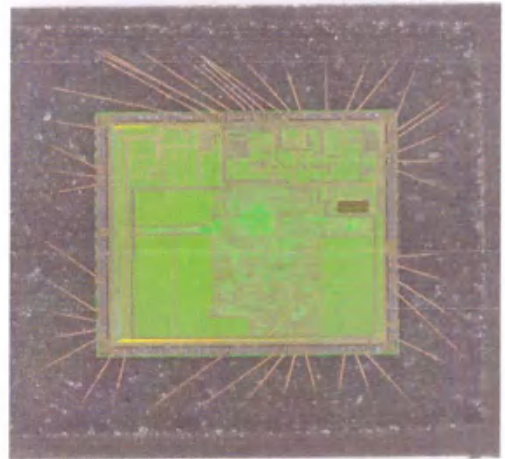
Graph 2



Graph 3

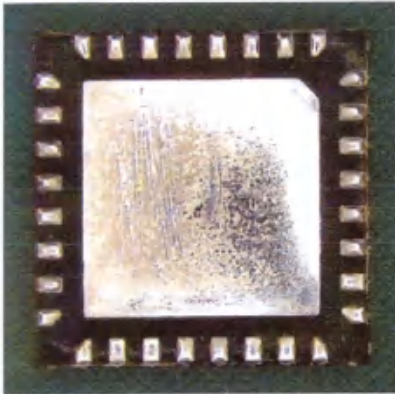


Graph 4

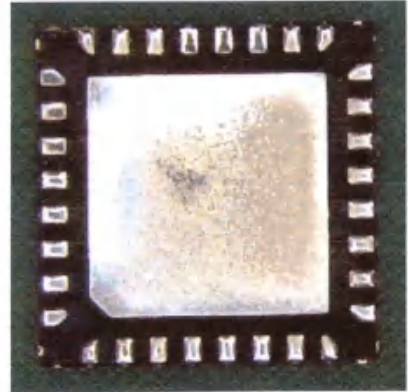


Solderability

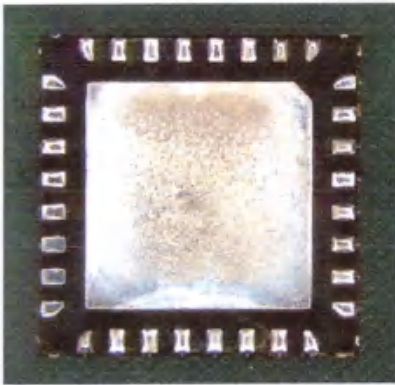
Graph 1



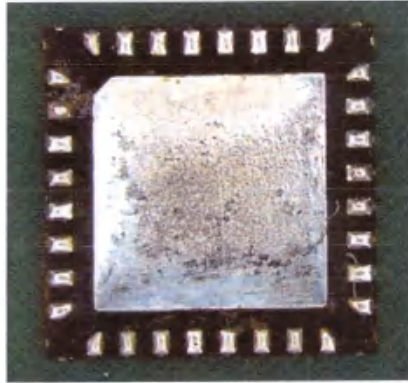
Graph 2



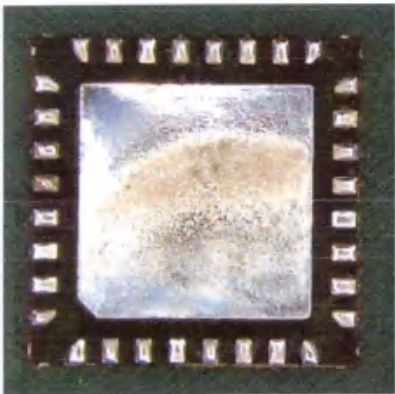
Graph 3



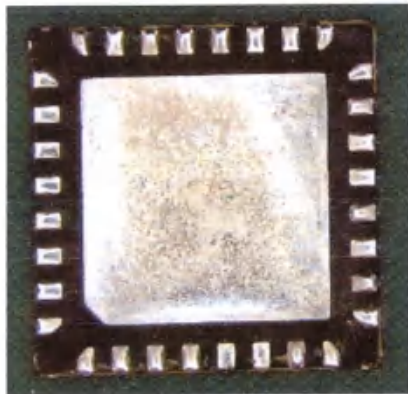
Graph 4

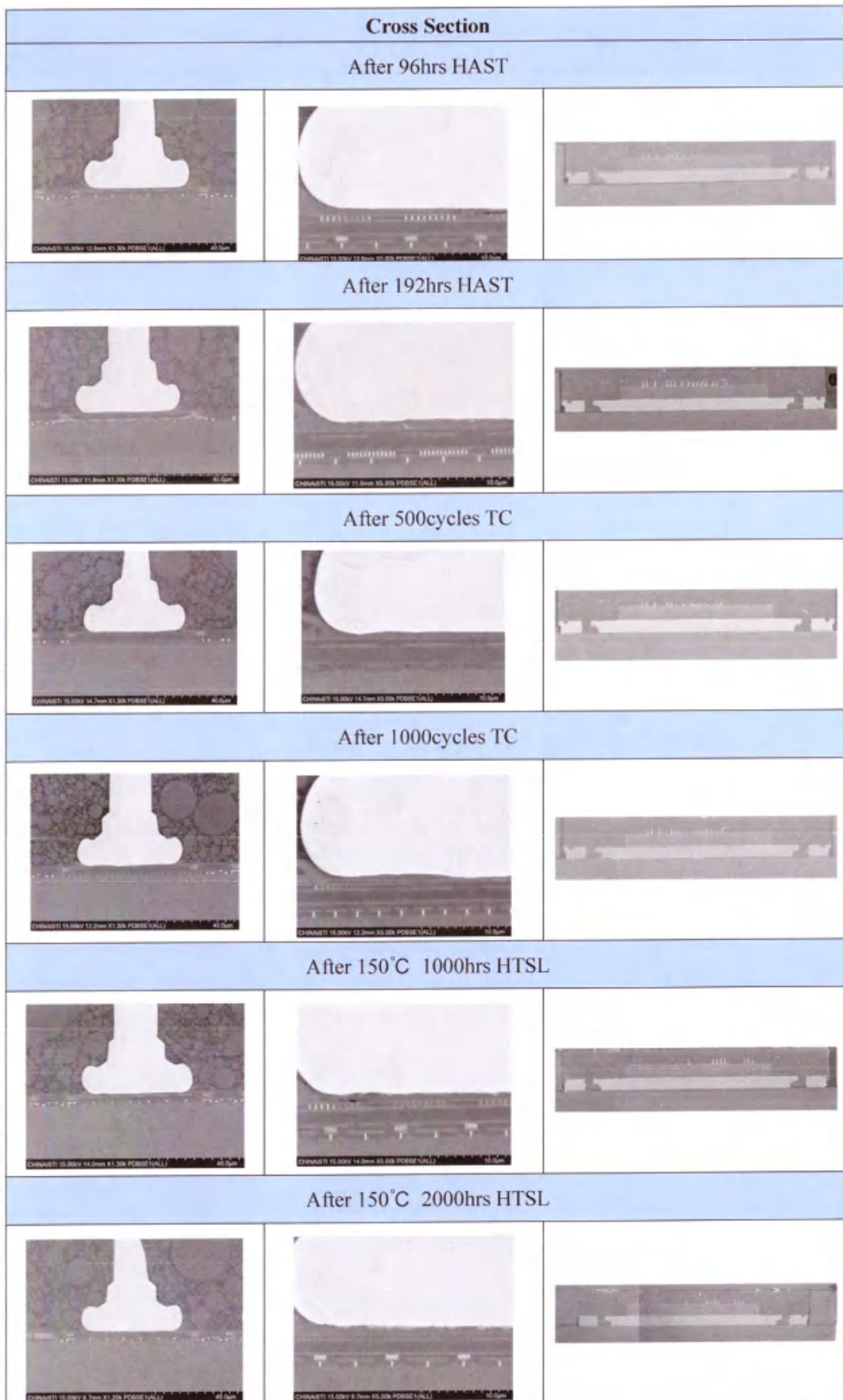


Graph 5



Graph 6





5. Test raw data

See the CD for the electrical performance test data.

6. Appendix

Appendix1: Wire Bond Pull Data

Appendix2: Wire Bond Shear Data

Appendix3: Physical Dimensions Data

Appendix4: Test Process Data

Appendix1-1: Wire Bond Pull Data (After 96hrs HAST)

Sample Model	Sample Batch Number		Wire type		Wire diameter	
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G		AuPdCu		20μm	
Wire Bond Pull Data (SPEC: ≥1.5g)						
Sample#	1#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.914	5.892	5.650	6.664	5.740	5.648
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	6.256	5.568	5.660	5.942	6.224	5.824
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	6.218	6.484	6.368	5.918	6.162	6.438
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.576	6.334	6.386	6.410	6.198	6.468
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	6.234	6.442	6.442	6.374	5.672	5.556
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix1-2: Wire Bond Pull Data (After 192hrs HAST)

Sample Model	Sample Batch Number		Wire type		Wire diameter	
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G		AuPdCu		20μm	
Wire Bond Pull Data (SPEC: ≥1.5g)						
Sample#	1#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	4.964	5.860	5.506	5.578	5.448	5.798
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.416	5.016	5.772	5.764	5.138	5.720
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.300	6.496	6.514	5.384	5.538	5.728
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.232	6.556	6.384	6.418	5.612	5.392
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.332	5.366	5.412	5.226	5.214	5.214
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix1-3: Wire Bond Pull Data (After 500cycles TC)

Sample Model	Sample Batch Number		Wire type		Wire diameter	
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G		AuPdCu		20μm	
Wire Bond Pull Data (SPEC: ≥1.5g)						
Sample#	1#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	6.822	6.472	5.720	5.962	6.294	5.512
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	6.240	6.320	6.004	7.242	6.708	5.704
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.582	5.808	6.686	7.154	7.414	7.296
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	7.132	5.590	7.130	7.272	5.536	5.350
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	6.836	6.216	7.042	7.294	6.030	5.610
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix1-4: Wire Bond Pull Data (After 1000cycles TC)

Sample Model	Sample Batch Number		Wire type		Wire diameter	
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G		AuPdCu		20μm	
Wire Bond Pull Data （SPEC: ≥1.5g）						
Sample#	1#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	6.652	6.124	5.742	5.820	6.380	6.464
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	7.232	6.826	6.514	6.386	7.342	7.092
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.608	6.296	7.238	6.060	6.892	7.092
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.958	6.294	5.900	6.340	6.794	6.180
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Wire#	Wire1	Wire2	Wire3	Wire4	Wire5	Wire6
Data	5.478	5.376	5.732	5.614	6.842	5.630
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix2-1: Wire Bond Shear Data(After 96hrs HAST)

Sample Model	Sample Batch Number			Bond diameter		
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G			2.0mil		
Wire Bond Shear Data （SPEC: ≥ 5.7 g）						
Sample#	1#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.486	25.018	24.828	26.098	25.486	24.882
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.084	24.956	25.416	25.936	26.230	25.194
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.474	25.580	24.764	26.324	25.866	25.638
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.354	26.122	26.072	25.758	26.664	25.556
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	27.204	26.908	26.890	27.632	26.858	26.446
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix2-2: Wire Bond Shear Data(After 192hrs HAST)

Sample Model	Sample Batch Number			Bond diameter		
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G			2.0mil		
Wire Bond Shear Data (SPEC: ≥ 5.7 g)						
Sample#	1#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.672	25.340	25.448	26.480	25.670	26.012
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.512	25.742	25.080	25.974	25.016	24.920
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.458	24.402	26.106	25.720	24.570	25.246
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.554	24.910	26.034	25.966	25.668	25.534
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.032	25.102	24.794	24.868	25.146	25.064
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix2-3: Wire Bond Shear Data(After 500cycles TC)

Sample Model	Sample Batch Number			Bond diameter		
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G			2.0mil		
Wire Bond Shear Data (SPEC: ≥ 5.7 g)						
Sample#	1#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.152	24.992	25.660	24.920	24.658	24.742
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.644	24.932	24.034	24.750	25.560	26.176
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.560	24.262	24.464	24.474	24.730	24.794
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.582	23.796	25.518	23.428	24.890	24.728
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	26.258	23.960	24.256	23.956	25.080	23.768
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix2-4: Wire Bond Shear Data(After 1000cycles TC)

Sample Model	Sample Batch Number			Bond diameter		
FM33HT053A	C8B03J1G、C8B03J2G、C8B03J3G			2.0mil		
Wire Bond Shear Data （SPEC: ≥ 5.7 g）						
Sample#	1#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	23.784	23.748	23.342	23.926	24.700	24.032
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	23.852	23.960	23.836	24.316	23.586	24.998
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.820	23.990	25.176	24.240	24.982	24.734
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.886	24.738	23.966	24.910	24.756	24.884
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.210	25.164	24.332	24.694	24.906	24.226
Result:	Pass	Pass	Pass	Pass	Pass	Pass

Appendix2-5: Wire Bond Shear Data(TEST GROUP C)


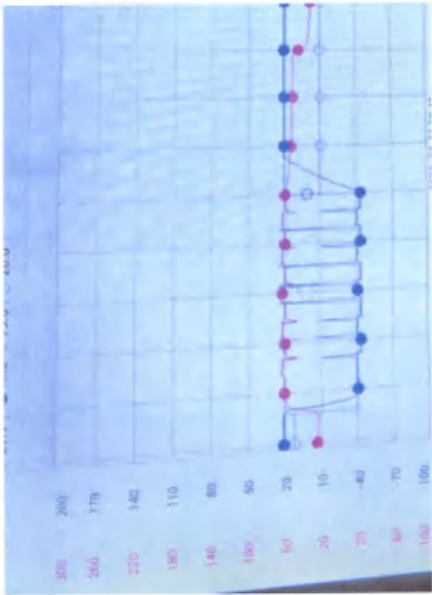
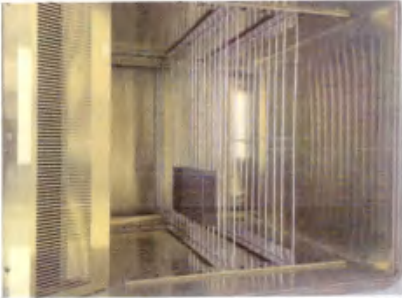

Sample Model	Sample Batch Number			Bond diameter		
FM33HT053A	C8B03J1G			2.0mil		
Wire Bond Shear Data (SPEC: ≥ 5.7 g)						
Sample#	1#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.438	25.748	24.688	25.386	25.036	26.046
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	2#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.692	24.938	24.640	24.728	24.352	24.552
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	3#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	25.074	24.818	24.312	25.258	23.666	24.258
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	4#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	24.596	24.106	24.154	23.886	25.844	23.922
Result:	Pass	Pass	Pass	Pass	Pass	Pass
Sample#	5#					
Bond #	Bond 1	Bond 2	Bond 3	Bond 4	Bond 5	Bond 6
Data	23.274	23.048	23.764	23.396	23.988	23.634
Result:	Pass	Pass	Pass	Pass	Pass	Pass




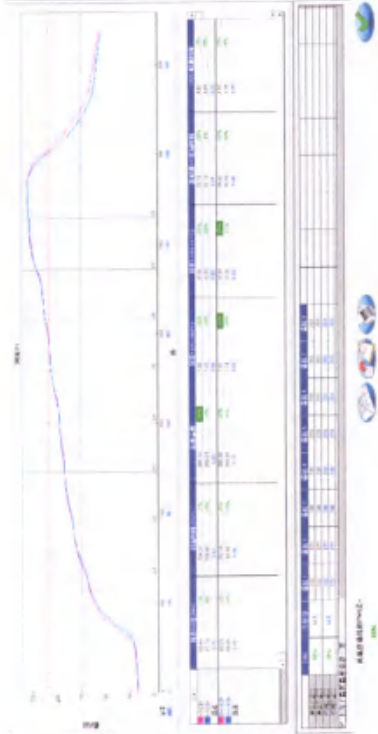

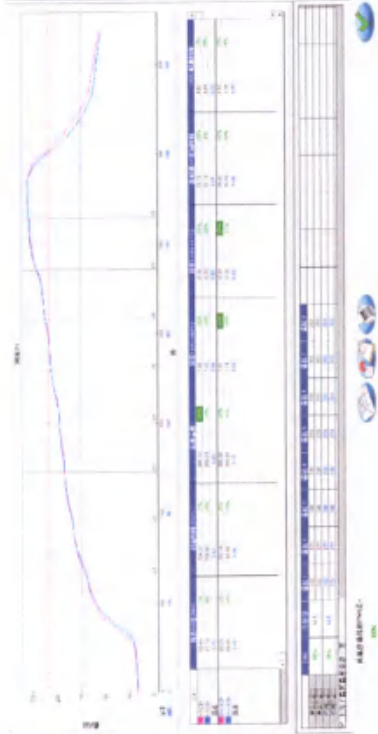
Appendix3: Physical Dimensions Data

Sample Model		FM33HT053A		Samples Count		30 (10/lot)		Package Type			QFN32		
Symbol	Sample ID	1#	2#	3#	4#	5#	6#	7#	8#	9#	10#	CPK	
A	C8B03J1G	0.765	0.770	0.753	0.763	0.765	0.771	0.758	0.760	0.762	0.760	1.71	
	C8B03J2G	0.762	0.762	0.779	0.765	0.779	0.772	0.765	0.767	0.764	0.764		
	C8B03J3G	0.774	0.778	0.776	0.767	0.765	0.776	0.763	0.769	0.765	0.769		
A1	C8B03J1G	0.014	0.012	0.012	0.014	0.016	0.012	0.012	0.012	0.014	0.009	1.76	
	C8B03J2G	0.012	0.012	0.009	0.012	0.018	0.016	0.009	0.009	0.014	0.012		
	C8B03J3G	0.016	0.012	0.016	0.012	0.012	0.014	0.014	0.018	0.016	0.012		
A2	C8B03J1G	0.535	0.544	0.532	0.537	0.530	0.548	0.539	0.541	0.541	0.539	/	
	C8B03J2G	0.539	0.539	0.560	0.544	0.544	0.544	0.537	0.544	0.541	0.541		
	C8B03J3G	0.546	0.548	0.546	0.544	0.546	0.555	0.537	0.539	0.539	0.541		
A3	C8B03J1G	0.230	0.226	0.221	0.226	0.235	0.223	0.219	0.219	0.221	0.221	/	
	C8B03J2G	0.223	0.223	0.219	0.221	0.235	0.228	0.228	0.223	0.223	0.223		
	C8B03J3G	0.228	0.230	0.230	0.223	0.219	0.221	0.226	0.230	0.226	0.228		
A4	C8B03J1G	0.157	0.157	0.154	0.154	0.156	0.159	0.157	0.150	0.154	0.152	1.70	
	C8B03J2G	0.138	0.138	0.143	0.147	0.156	0.152	0.152	0.138	0.150	0.145		
	C8B03J3G	0.145	0.150	0.145	0.148	0.147	0.141	0.145	0.152	0.145	0.145		
b	C8B03J1G	0.258	0.251	0.256	0.258	0.253	0.256	0.256	0.253	0.258	0.256	3.29	
	C8B03J2G	0.258	0.260	0.263	0.258	0.258	0.263	0.265	0.267	0.267	0.263		
	C8B03J3G	0.253	0.256	0.253	0.253	0.253	0.253	0.258	0.256	0.256	0.256		
D	C8B03J1G	4.962	4.966	4.963	4.963	4.967	4.968	4.966	4.964	4.960	4.964	/	
	C8B03J2G	4.961	4.959	4.965	4.964	4.955	4.961	4.964	4.964	4.960	4.966		
	C8B03J3G	4.971	4.963	4.956	4.962	4.960	4.964	4.964	4.953	4.956	4.963		
E	C8B03J1G	4.957	4.959	4.966	4.971	4.968	4.957	4.969	4.965	4.956	4.965	/	
	C8B03J2G	4.954	4.963	4.959	4.964	4.957	4.964	4.969	4.968	4.966	4.957		
	C8B03J3G	4.962	4.965	4.962	4.967	4.964	4.964	4.969	4.964	4.964	4.963		

e	C8B03J1G	0.500	0.500	0.500	0.505	0.498	0.500	0.505	0.500	0.498	0.500	/
	C8B03J2G	0.505	0.502	0.502	0.498	0.495	0.502	0.500	0.502	0.500	0.500	
	C8B03J3G	0.500	0.505	0.502	0.495	0.502	0.502	0.500	0.500	0.498	0.495	
D2	C8B03J1G	3.498	3.508	3.501	3.504	3.508	3.521	3.521	3.510	3.508	3.510	5.38
	C8B03J2G	3.509	3.507	3.505	3.508	3.506	3.511	3.517	3.513	3.520	3.510	
	C8B03J3G	3.505	3.516	3.507	3.516	3.502	3.511	3.508	3.510	3.509	3.506	
E2	C8B03J1G	3.506	3.509	3.509	3.511	3.510	3.515	3.515	3.515	3.517	3.517	5.48
	C8B03J2G	3.505	3.502	3.503	3.498	3.509	3.516	3.513	3.504	3.504	3.500	
	C8B03J3G	3.506	3.507	3.513	3.511	3.503	3.501	3.505	3.507	3.501	3.515	
L	C8B03J1G	0.438	0.433	0.435	0.440	0.440	0.429	0.438	0.435	0.440	0.433	4.26
	C8B03J2G	0.438	0.440	0.438	0.440	0.438	0.438	0.449	0.438	0.447	0.438	
	C8B03J3G	0.435	0.435	0.421	0.432	0.427	0.436	0.435	0.425	0.426	0.419	
L1	C8B03J1G	0.058	0.065	0.060	0.065	0.065	0.062	0.065	0.062	0.062	0.058	1.74
	C8B03J2G	0.060	0.062	0.061	0.056	0.071	0.062	0.071	0.065	0.062	0.060	
	C8B03J3G	0.056	0.057	0.045	0.054	0.053	0.058	0.050	0.065	0.052	0.062	
K	C8B03J1G	0.300	0.297	0.300	0.300	0.300	0.300	0.300	0.302	0.302	0.295	/
	C8B03J2G	0.300	0.293	0.295	0.293	0.290	0.288	0.293	0.288	0.290	0.290	
	C8B03J3G	0.298	0.293	0.297	0.300	0.298	0.287	0.286	0.287	0.290	0.292	


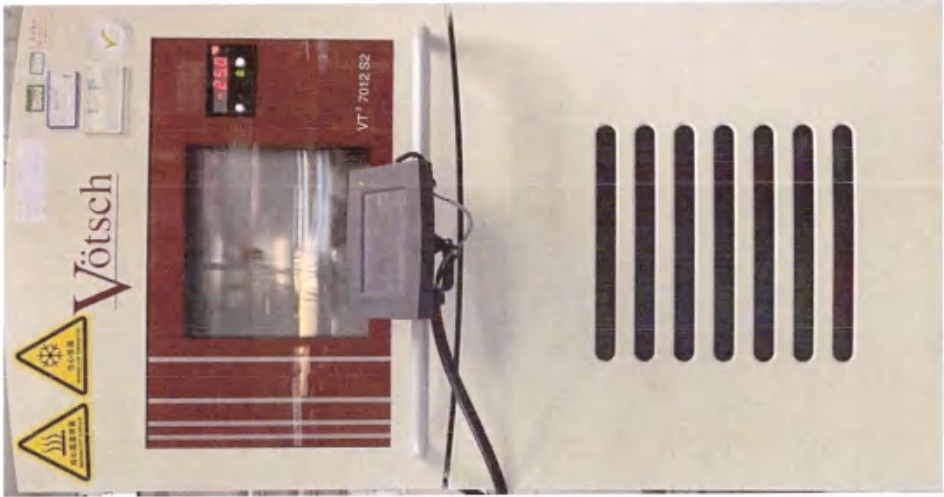


Appendix4: Test Process Data





Test Item	Test process picture	
PC		
	PC-TC Test picture	PC-TC Test curve
		
	PC-Bake Test picture	PC-Bake Test setting

Test Item	Test process picture	
PC		
	<div>PC-Soke Test picture</div> 	<div>PC-Soke Test setting</div> 
	<div>PC-Reflow Test picture</div> 	<div>PC-Reflow Test curve</div> 

Test Item	Test process picture	
HAST		
UHA	HAST Test picture	
		
	UHA Test picture	UHA Test setting

Test process picture	
Test Item	TC
	<div>TC Test picture</div> <div>TC Test curve</div>
HTSL	<div>HTSL Test picture</div> <div>HTSL Test setting</div>

Test equipment				
Test Item				
PC	SAT	TC		Soak
				
	Bake	Reflow		

Test Item	Test equipment
HAST / UFAST	
WBS / WBP	
PD	
SD	

__END__