



信頼性試験成績書

1.0um Process Technology Product and Package Legacy Fujitsu Reliability Engineering Test Report

Wafer Process : Aizu Fujitsu
Assembly : J-Devices

Reliability Test 1

Device Type : MCU 1
Package Type : Plastic QFP-64 Package

Test Item	Test Condition	Tested Number	Tested Time	Failed Number
High Temperature Operation Life 高温連続動作試験	150 °C $V_{DD}=\text{Maximum Rating}$	105	1000h	0
Temperature Humidity Bias 高温連続動作試験	85 °C / 85% RH $V_{DD}=\text{Maximum Rating}$	55	1000h	0
Low Temperature Operation Life 低温連続動作試験	-55 °C $V_{DD}=\text{Maximum Rating}$	55	1000h	0
High Temperature Storage 高温保存試験	150 °C	55	1000h	0
Temperature Cycling 温度サイクル	-65°C~150°C	105	(a) 500cyc	0
Pressure Cooker Test	121°C, 100%RH: 2.03E5 Pa	55	(a) 168h	0
Pressure Cooker Test with Bias	121°C, 100%RH: 2.03E5 Pa $V_{DD}=\text{Maximum Rating}$	25	96h	0

(a) Pre-condition: Baking (125°C, 24h) +Moisture Absorption (85°C/85%RH, 48h) +SD 260°C,10sec

Reliability Test 2

Device Type : MCU 2
Package Type : Plastic QFP-100 Package

Test Item	Test Condition	Tested Number	Tested Time	Failed Number
High Temperature Storage 高温保存試験	150 °C	26	(b) 1000h	0
Temperature Cycling 温度サイクル	-65°C~150°C	46	(b) 500cyc	0
Pressure Cooker Test	121°C, 100%RH: 2.03E5 Pa	26	(b) 168h	0
Pressure Cooker Test with Bias	121°C, 100%RH: 2.03E5 Pa V _{DD} =Maximum Rating	26	(b) 96h	0

(b) Pre-condition: Baking (125°C, 24h) +Moisture Absorption (85°C/85%RH, 48h) +IR 245°C Max.

Reliability Test 3

Device Type : MCU 3
Package Type : Plastic LQFP-120 Package

Test Item	Test Condition	Tested Number	Tested Time	Failed Number
High Temperature Storage 高温保存試験	150 °C	77	(c) 1000h	0
Temperature Cycling 温度サイクル	-65°C~150°C	77	(c) 500cyc	0
Pressure Cooker Test	121°C, 100%RH: 2.03E5 Pa	77	(c) 168h	0

(c) Pre-condition: Baking (125°C, 24h) +Moisture Absorption (30°C/70%RH, 120h) +IR 250°C Max.
+Moisture Absorption (30°C/70%RH, 96h) +IR 250°C Max.

Reliability Test 4

Device Type : MCU 4
Package Type : Plastic SOP-28 Package

Test Item	Test Condition	Number Tested		Tested Time	Number Failed
Temperature Cycling 温度サイクル	-65 C~150 C	54 (18×3Lot)	(d)	200cyc	0
Pressure Cooker Test	121C, 100%RH:2.03E5Pa	54 (18×3Lot)	(d)	168h	0
Pressure Cooker Test with Bias	130C, 85%RH:2.33E5Pa V _{DD} =Maximum Rating	33 (11×3Lot)	(d)	96h	0

(d) Pre-condition: Baking (125C, 24h) +Moisture Absorption (30C/80%RH, 120h) + IR 260C Max.
+Moisture Absorption (30C/80%RH, 96h) + IR 260C Max.



Document History Page

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**	5768835	KUMI	Initial release.