



SUT3 series Reliability test results

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 OS DESIGN DEPT.2

 Approved : *Hayami Asano*

 Prepared : *Sho Saito*

No.	Test Item	Testing conditions	Conditions of acceptability	Number of samples	Number of failures
1	Heat cycle test	(1) Pre-process Step1 Humidification processing (85°C, 85%, 168H) Step2 Reflow soldering (Peak temperature 245°C, 2times) (2) -40°C ~ 125°C 30minutes each (3) 800cycles	(1) No degradation of electric characteristics after test. (2) No crack at solder joint.	5	0
2	High temperature/ High humidity bias test	(1) Pre-process Step1 Humidification processing (85°C, 85%, 168H) Step2 Reflow soldering (Peak temperature 245°C, 2times) (2) Ta=85°C, RH=85% (3) At rated input (4) Load 0% (5) 1000hours	(1) No degradation of electric characteristics after test.	3	0
3	Vibration test	(1) $f=10\sim 55\text{Hz}$, 98.0m/s^2 (10G) (2) 3minutes period (3) 60minutes each X, Y and Z axis	(1) No degradation of electric characteristics after test. (2) No crack at solder joint. (3) No mechanical damage of appearance.	3	0
4	Impact test	(1) 490.3m/s^2 (55G), 11ms (2) Once each X, Y and Z axis	(1) No degradation of electric characteristics after test. (2) No crack at solder joint. (3) No thermal damage of appearance.	3	0
5	Soldering heat test	(1) Soldering iron 340~360°C, 7.5 seconds (2) Mounting board : $t=1.6\text{mm}$ / FR4	(1) No crack at solder joint. (2) No marked damage of appearance.	1	0
6	Pin solderability test	(1) Pre-process Step1 Humidifying processing (100°C, 100%, 1H) Step2 Dip into flux (2) Dip soldering 230~240°C, 2sec	(1) Over 95% of dipped part is covered with solder.	1	0
7	Pin strength test	(1) Weight : 250g (2) Bending angle : 90 deg., total 180 deg. (3) 1 cycle	(1) No crack at solder joint. (2) No mechanical damage of appearance.	1	0
8	Static electricity immunity test	(1) Applied voltage $\pm 4\text{kV}$ (2) At rated input and load	(1) No protection circuit fail. (2) No output voltage drop due to control circuit fail. (3) No any other function fail.	4	0