



STMGFS80 series Reliability test results

May 17, 2021
CS DESIGN DEPT.

Approved : Hironobu Shimizu

Prepared : Satoru Yokoi

No.	Test Item	Testing conditions	Conditions of acceptability	Number of samples	Number of failures
1	Heat cycle test	(1) $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ 30minutes each (2) 200cycles	(1)No degradation of electric characteristics after test. (2)No crack at solder joint.	2	0
2	High temperature/ High humidity bias test	(1) $T_a=85^{\circ}\text{C}$, RH=85% (2) At rated input (3) Load 0% (4) 1000hours	(1)No degradation of electric characteristics after test.	5	0
3	Vibration test	(1) $f=10 \sim 150\text{Hz}$, 29.4m/s^2 (3G) (2) 3 minutes 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) 294m/s^2 (30G), 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	Static electricity immunity test	(1) Rated load (2) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (3) Contact Discharge : Level 4 (8kV) (4) Applied to Chassis, Input, Output and FG terminal	(1)No protection circuit fail. (2)No output voltage drop due to control (3)No any other function fail.	2	0