参考資料

COSEL

MGXS6 series Reliability test results

May 7, 2018
OS DESIGN DEPT.

Approved : Takayuki Fukuda
Takayuki Fukuda

Prepared : Masumi Kitamura
Masumi Kitamura

No.	Test Item	Testing conditions	Conditions of acceptability	Number of samples	Number of failures
1	Heat cycle test	(1) −40° C ～ 125° C 30minutes each (2) 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) Ta=85℃, RH=85% (2) Input Max.Voltege (3) Load 0% (4) 1000hours	(1)No degradation of electric characteristics after test.	5	0
3	Vibration test	(1) f=10～55Hz, 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.	6	0
4	Impact test	(1) 490.3m/s^2(50G), 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℃, 7.5 seconds (2) Mounting board : t=1.6mm / FR4	(1)No crack at solder joint. (2)No marked damage of appearance.	1	0
6	Pin solder ability test	(1) Pre-process Step1 Humidifying processing (100℃, 100%, 1H) Step2 Dip into flux (2) Dip soldering 230～240℃, 2sec	(1)Over 95% of dipped part is covered with solder.	3	0
7	Pin strength test	(1) Weight : 1kg (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 ±4kV (2) At rated input and load (3) Testing circuitry Fig.1	(1)No protection circuit fail. (2)No output voltage drop due to control (3)No any other function fail.	1	0

COSEL

○Testing circuitry

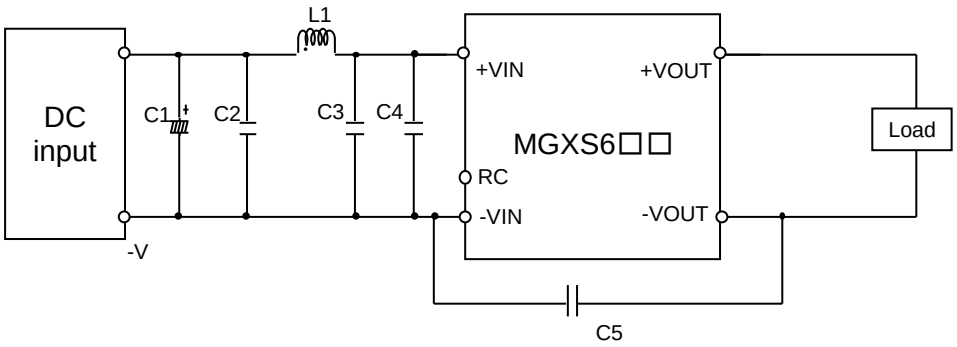

Fig.1 Testing circuitry

C1 : MGXS624□□ 100V 39μF Electric capacitor (LXVseries NIPPON CHEMI-CON)

C2 : MGXS624□□ 100V 2.2μF Ceramic capacitor (GRM31CR72A225K MURATA MANUFACTURING)

C3 : MGXS624□□ 100V 2.2μF Ceramic capacitor (GRM31CR72A225K MURATA MANUFACTURING)

C4 : MGXS624□□ 100V 2.2μF Ceramic capacitor (GRM31CR72A225K MURATA MANUFACTURING)

C5 : MGXS624□□ 2kV 2200pF Ceramic capacitor (GR443QR73D222K MURATA MANUFACTURING)

L1 : MGXS624□□ 1050mA 22μH Inductor(LQH5BPN220MT0 MURATA MANUFACTURING)