



Mar 15, 2025

New Product Development Dept.3

MUW1R5 series Reliability test results

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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°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=10~150Hz, 147.0m/s ² (15G) (2) 3 minutes period (3) 60 minutes along 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) 735.0m/s ² (75G), 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.	6	0
5	Soldering heat test	(1) Soldering iron 360°C, 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 strength test	(1) Weight : 1.0kg (2) Bending angle : 90 deg., total 180 deg. (3) 1 cycle	(1)No degradation of electric characteristics after test. (2)No degradation of terminal	2	0
7	Electrostatic discharge immunity test	(1) Applied voltage ±8kV (2) At rated input and load (3) Testing circuitry Fig1-1,1-2	(1)No protection circuit fail. (2)No output voltage drop with control circuit fail. (3)No function fail.	1	0

Conditions

Test : Electrostatic discharge immunity test

Model Name : MUW1R5□□

○Testing circuitry

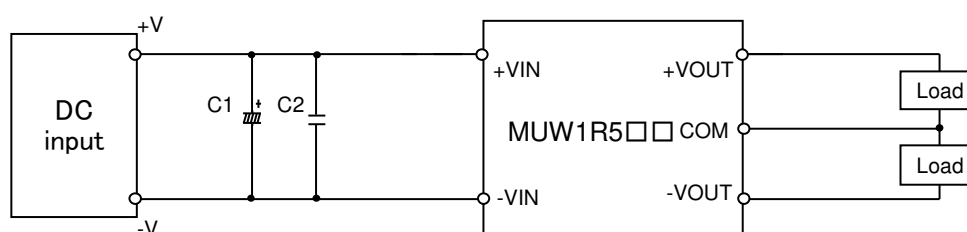


Fig.1-1 MUW1R505□, MUW1R512□, MUW1R524□ Testing circuitry

- | | | | |
|------|-----------|-----------------|---|
| C1 : | MUW1R505□ | 16V 220 μ F | Electric capacitor (UPWseries NICHICON) |
| | MUW1R512□ | 50V 100 μ F | Electric capacitor (UPWseries NICHICON) |
| | MUW1R524□ | — | |
| C2 : | MUW1R505□ | 16V 22 μ F | Ceramic capacitor (GRM31CC71C226M MURATA MANUFACTURING) |
| | MUW1R512□ | 25V 22 μ F | Ceramic capacitor (C3216JB1E226MT TDK) |
| | MUW1R524□ | 50V 10 μ F | Ceramic capacitor (C3216X7R1H106KT TDK) |

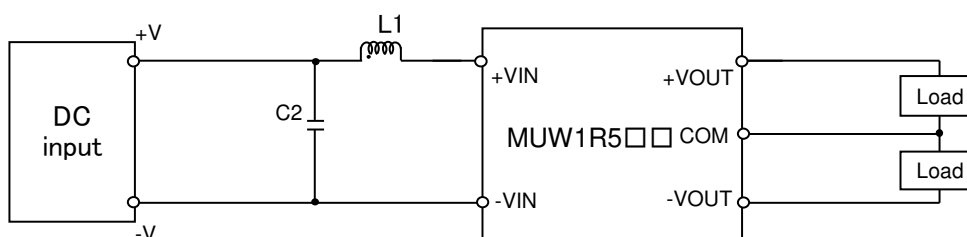


Fig.1-2 MUW1R548□ Testing circuitry

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|------|-----------|------------------|--|
| C2 : | MUW1R548□ | 100V 2.2 μ F | Ceramic capacitor (C3216X7S2A225KT TDK) |
| L1 : | MUW1R548□ | 520mA 15 μ H | Inductor (LQH32PN150MN0L MURATA MANUFACTURING) |