

The Performance of Typical Kinds of Coating of Printed Circuit Board under Accelerated Degradation Test

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Abstract : Printed circuit board (PCB) is the carrier of electronic components. Its coating is the first barrier for protecting itself. If the coating is damaged, the performance of printed circuit board will decrease rapidly until failure. Therefore, the coating plays an important role in the entire printed circuit board. There are common four kinds of coating of printed circuit board that the material of the coatings are paryleneC, acrylic, polyurethane, silicone. In this paper, we designed an accelerated degradation test of humid and heat for these four kinds of coating. And chose insulation resistance, moisture absorption and surface morphology as its test indexes. By comparing the change of insulation resistance of the coating before and after the test, we estimate failure time of these coatings based on the degradation of insulation resistance. Based on the above, we estimate the service life of the four kinds of PCB.

Keywords : printed circuit board, life assessment, insulation resistance, coating material

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