

### The study on reliability of gold-plate MLPCB with a micro-circuit

김기영\*  
한국생산기술연구원  
(kykim@kitech.re.kr\*)

A multilayer PCB is used for electronic machine requiring a large-scale integration such as computer, electronic exchanger and high performance communication equipment, and as wiring pattern is getting elaborative because of increasing circuit on board and need of high precision, the circuit width of the multilayer PCB tends to become narrower. This study was intended to evaluate the reliability of the multilayer PCB with micro-circuit width. For this purpose, a 6-layer PCB with a circuit width of 100 $\mu$ m or less and the pitch interval of 0.5mm was used as a test PCB. And the tests including solder dipping, thermal shock test, PCT (Pressure cooker test) and hot oil test were conducted, and the conduction resistance and the surface state were monitored before and after test. As a result, conduction resistance remained at the range of 0.4~0.7 $\Omega$ , indicating no significant variation. Surface oxidation appeared on part of the PCB surface after pressure cooker test (PCT) and the color was changed to light brown, while no change was monitored on surface after finishing other tests.