

Ag Paste Coating with Ultrasonic Nozzle

김기영*, 한동우, 이성일
한국생산기술연구원
(kykim@kitech.re.kr*)

Since no motion energy is given to sprayed droplets, ultrasonic nozzles use less spray material than general air-pressure nozzles. Therefore, ultrasonic nozzles are suitable for the coating processes which make use of expensive materials. In this study, conductive Ag paste which is used for electromagnetic wave shielding was coated using an ultrasonic nozzle. The conductive Ag paste consisted with Ag powder of which size is 4-5 μ m, water soluble urethane, and the additives including antifoamer and evaporate materials. Absolute ethanol was used to dilute the Ag paste. The thickness and specific resistivity of the coating film were measured in accordance with the flow and dilution of the coating liquid, and the travel speed of the substrate. Coating thickness was controlled within 10~30 μ m range according to the feed rate of the coating liquid and the travel speed of the substrate, wherein, the surface resistance was in 0.1~100 Ω/\square range.