THIS SHEET HAS BEEN REPLACED

ULTRA-THIN NOBLE METAL COATINGS FOR ELECTRONIC PACKAGING

Abstract

This problem has been solved by providing an ultra-thin composite of noble metal layers on a nickel surface. The composite ranges from 2.5 to 11 microinches in thickness and includes in succession from nickel, a 0.5 to 3.5 microinches of palladium or gold strike, a 0.5 to 5 microinches thick palladium-nickel alloy layer having 10 to 90 weight percent nickel by weight of the alloy, a 0.5 to 5 microinches thick palladium layer, and a 0 to 1 microinch thick gold layer. The gold layer is being used whenever it is desirable to achieve high speed of solder wetting, relative to the speed of solder wetting of palladium. Viable ultra-thin coatings are most effectively obtained by deposition of the layers in a reel-to-reel metal deposition process.

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