

## Project Summary:

### Conductive Anodic Filament (CAF) Qualification

A major circuit board manufacturer was interested in assessing its products' susceptibility to conductive anodic filament formation. Test vehicles with seven different insulation resistance coupons were subjected to preconditioning and then to CAF testing. One test point displayed degradation of the insulation resistance after a latency period with a confirmed lowered resistance value. This failed test point also has the finest pitch and smallest drilled hole diameter. DfR Solutions recommended more in-depth failure analysis of the suspected CAF event in order to determine root-cause and initiate a plan for corrective action.

Keywords: test vehicle, BGA insulation resistance, via-to-via, land-to-land, via-to-power, line-to-line insulation resistance, land-to-line, plane-to-PTH, shifted-line insulation resistance, shifted-plane insulation resistance, VHDM-accommodating insulation resistance, standard reflow profile, SnPb solder, environmental chamber, CAF event, leakage path, temperature-humidity bias, THB, warp, fill, drilling issues, fine pitch, small diameter