

# **DPA Techniques for Next Generation Packaged Components**

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As New Space and New Missile programs have begun routinely utilizing commercial grade automotive electronics in their designs, there has been a rapid onslaught of new packaging technologies that are being analyzed at Destructive Physical Analysis. The techniques to address these constructions will be discussed based upon recent experiences with a varying array of packaging methodologies. These range from conventional PEMs with wire bonds (Au and Cu wires), FBGA packaged devices with bond wires (Au and Cu wires), Ball Grid Array (BGA) Flip Chip constructed devices with L1 and L2 solder bumped connections, Wafer Level Packaged (WLP) devices, Vertically Stacked Discrete Modules, as well as Stacked Die PEMs. Test Plans/Methodologies will be discussed that contributed to the PEMs Testing Plans put forth in Mil-Std-1580 Rev. C.