

An Overview of IPC Plating Specification Completions, Revisions and Future Plans

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Abstract

An IPC specification is a consensus document that specifies attributes relevant to the plated surface. Plating specifications are designed to be applicable to a wide range of products types. As product continues to evolve and new product types are needed, it is necessary for the committee to periodically revise its documents. Between revisions it may be necessary for designers to take exception with one or more of the provision in the specification.

The IPC 4-14 Plating subcommittee has issued a series of specifications starting with ENIG Specification 4552 in 2002 to ENEPIG Specification 4556 in 2013. In between it has issued specification for Immersion Silver 4553 and for Immersion Tin 4554. The committee has made a sincere effort to issue an OSP specification 4555. This effort did not produce results for various reasons.

The committee has completed a revision of the immersion silver specification 4553-A and is presently working on revising the ENIG specification 4552-A.

As new surface finishes come to the forefront the committee will attempt to add new specifications. Examples are palladium on copper, ENIS electroless nickel immersion silver, and plasma nano coatings.

Although traditional plating like electrolytic acid copper and electrolytic tin have been in use since the 1980s, it may be necessary to specify plated attributes as the demands for controlled impedance for high frequency, harsh use environments like automotive, as well as very high reliability like aerospace and medical, put new demands on these plated surfaces.

This paper will give an update of the completed and present activities of the plating committee. It will also attempt to layout a roadmap for future specifications.

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He is the author of the chapters on “Plating” and “Surface Finishing” in Clyde Coomb’s “Printed Circuit handbook” Fifth Edition, 2001.

He is the recipient of the IPC 2009 President’s award. He presently chairs the Plating Committee and is a permanent member of the Technical Activities Executive Committee of the IPC.