In recent years, wire bonding packaging interconnect technology has shifted gears from gold to copper. The interest to use Ag-Alloy wire as an alternative wire bonding material has been explored for further process improvement in terms of bonding sensitive metallization devices that cannot be bonded using a hard but cheaper copper wire. However, second (stitch) bond associated to the change in wire properties has been one of the most common wire bonding related problems that cause poor productivity and low Mean-Time-Between-Assist (MTBA).

To achieve an optimal stitch formation and reliable bonding using Ag alloy wire, SPT’s Stitch Integrator (SI) capillary is the recommended working solution proven to enhance the coupling interface between the capillary tip surface and the Ag alloy wire as it provides the most efficient ultrasonic energy transfer.

**SI Features**

Enhanced coupling effect between the capillary and wire with better ultrasonic energy transfer versus conventional finishing.

![Conventional Finishing](image1) ![SI Finishing](image2)

Superior wire pull failure mode with comparable result as Au wire bonding.

![Ag Alloy Wire](image3) ![Au Wire](image4)

**Extended capillary tool life**

Typical cause of short tool life using Ag alloy wire is due to heavy load-up of foreign materials at the tip surface of the SI capillary. To overcome this problem, it is highly recommended to integrate the Infinity feature which increases the capillary touchdowns.

![Ag Alloy wire bonding – 1.5kk bonds](image5) ![Capillary build up issue](image6)

**How To Order**

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SI - 33 090 - 41 5 F - Z S 3 4 T P - Y
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