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0402 on hybrid

Hybrid assembly procedure

- Step 1 **Audit of kits to supplied BoM** notes supplied documents
Must supply Bill of Materials. Version numbers BoM, drawings, gerber should be obvious on parts, and BoM should also files, shipping have a version number. If any components instructions, changes, the BoM version must change. specifications + **run card(traveler)**
- 2 **Visual inspection of hybrid cricuits**
- 3 **Wire Bond Pull tests** Test wire bonding on unused part of circuit (test one or two circuit boards from lot) run card/kit
- 4 **Surface mount (SMT)**
- 5 **apply solder paste w/screen** Vendor will make screen for solder paste using gerber file Gerber files
- 6 **pick and place (automated)** Pick and Place machine uses Gerber file for part gerber file placement and denoting fiducial markers for the automated visual allignment
- 7 **put through oven** Must discuss properties of circuit to determine specifications appropriate temperature profile (perhaps a minor point with cerramic circuits)
- 8 **SMT visual inspection**
- 9 **Install connector** connector may need to be installed by hand (not compatible with oven?)
- 10 **ringout test** test for shorts to ground of cable out pads? Very supply test board? run card/unit useful for HDIs of run 2.
- 11 **Die attach**
- 12 **visual inspection of die**
- 13 **application of epoxy** must determine best conductive epoxy to use
- 14 **hand placement of die** Die (chip) attachment is done by hand due to the close separator run card/unit
- 15 **bake out epoxy**
- 16 **Wire Bonding** must supply printed map of wire bonds- color is drawings useful
- 16.5 **clean pads?** (Ar plasma) hopefully not necessary-- only if contaminated
- 17 **wire bonding**
- 18 **visual inspection**
- 18.5 **encapsulization of bonds?**
- 19 **Packing** place in shipping containers supplied with kit (much care with open wire bonds!!) Give detailed instructions.
- 20 **Shipping**

thickness of solder spec
epoxy conductance crucial! spec