Opto-board Rework Procedure

K.K. Gan, R. Kass, S. Nderitu, A. Rahimi, M. Ziolkowski

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1. Opto-pack Housing Removal

a. Slice the housing into two pieces using a scalpel.
b. Rock the two halves of housing back and forth to break them off the opto-board.
c. Clean out the guide pins from the holes on the opto-board with a sharp scalpel.
d. Clean off the remaining adhesive on the opto-pack and opto-board with a scalpel.

2. Chip Removal

a. Protect the chips on the other side of the opto-board with encapsulant if this is not yet done.
b. Cover the encapsulant using a piece paper secured with tapes.
c. Cover the opening of the housings with tapes.
d. Mount the opto-board on a precision vise.
e. Machine off the chips with a 0.0625" carbide end mill. The thickness of the chip is 300 μm. Remove as much silicon as possible but the end mill should never touch the gold pad. The end mill should never excurse out of the chip area or else traces on the opto-board might be cut. In particular, the drill bit should be lifted up when moving from one DORIC to the other or from one pair of VDCs to the other.
f. Scrape off the remaining chips on the opto-board with a scalpel. The scalpel should not touch any wire bond traces.
g. Clean the opto-board with a cotton swap and acetone.
h. Clean the opto-board with a cotton swap and ethanol.
i. Clean the opto-board with a cotton swap and distilled water.

3. Guide Pin Replacement

a. Use a scalpel to scrape some optical epoxy off the location on the opto-pack where the guide pin has pulled off.
b. Insert the guide pin into an MT ferrule.
c. Insert another guide pin into the MT ferrule to push the guide pin into the proper location.
d. Insert the MT ferrule into the opto-pack.
e. Add a drop of optical epoxy to the hole on the opto-pack.
f. Push the guide pin back and forth to coat the epoxy along the guide pin.
g. Cure the epoxy at 100^{o}C for one hour.