



# **S.E.C. Cartridge Disassembly Process**

## **Application Note**

Revision History

Revision 1.0 First Release 1/16/97

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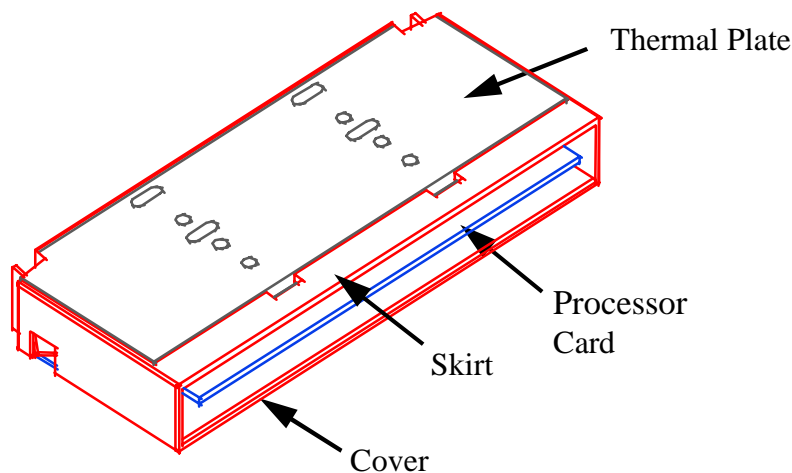
***WARNING: OPENING, ALTERING OR TAMPERING WITH THE COVER, THERMAL PLATE OR OTHER S.E.C CARTRIDGE MECHANICAL PIECE OF THE PROCESSOR VOIDS ANY WARRANTY, EXPRESS OR IMPLIED, ON THIS PRODUCT.***

The Klamath processor is packaged in a S.E.C. cartridge. This package is an assembly consisting of a thermal plate, cover, processor card and skirt. The assembled S.E.C. cartridge is shown in Figure 1. Removal of the cover, skirt and thermal plate is required to use the Klamath processor card with a Logic Analyzer Interface (LAI).

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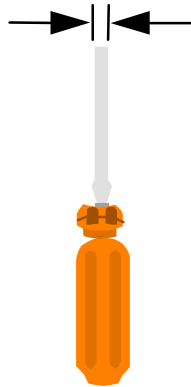
The following procedure is Intel's best known method for removal of the cover and thermal plate, however this is not a 100% proven method. There is still a possibility that damage to the processor card or components will occur leaving the processor non-functional. Please read all instructions prior to cover and thermal plate removal and exercise caution during the removal process in order to minimize damage.



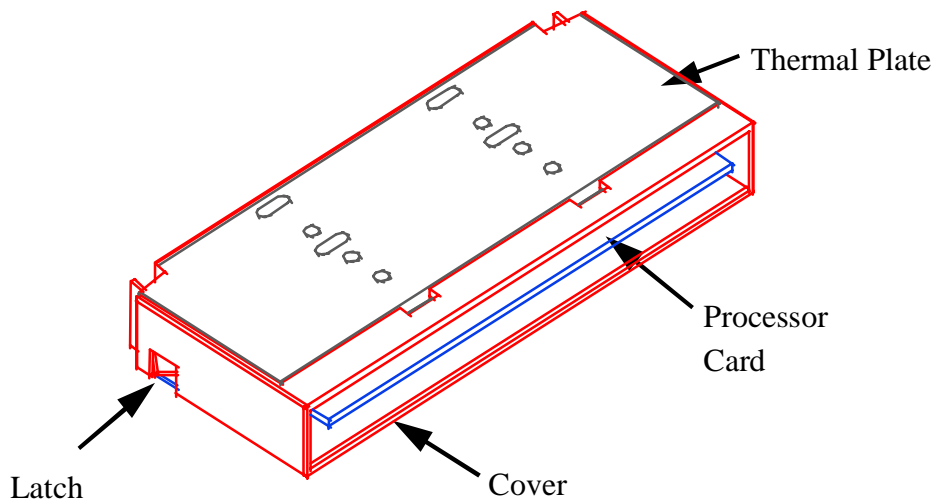
**Figure 1: S.E.C. Cartridge**

## *Equipment Required*

- 1/8" small flat blade screwdriver (shown below)
- S.E.C. Cartridge (shown below)
- Wipes
- Round-nosed pliers (e.g., Sandvik part # 7590)



**Figure 2: 1/8" Small Flat-blade Screwdriver**



**Figure 3: S.E.C. Cartridge**

## To Open the S.E.C. Cartridge

**Note:** This procedure is not intended to allow re-assembly of the S.E.C. Cartridge. Damage to the cover and thermal plate is likely to occur.

- 1) Place the S.E.C. cartridge (and possible attached heat sink) on an anti-static surface with the thermal plate/heat sink facing up. It is not necessary to remove the heat sink, but this would reduce the weight of the thermal plate/heat sink assembly and improve the handling of the S.E.C. cartridge assembly.
- 2) Place the screwdriver between the latch and thermal plate as shown in figure 4 below. Twist the screwdriver until the thermal plate pops up away from the cover. The cover might crush under the force.
- 3) Slide the screwdriver down near the indent on the thermal plate and twist until the thermal plate pops up.
- 4) Repeat steps 2 and 3 on the other end of the S.E.C. cartridge. The skirt will separate from the cartridge as well as the thermal plate and processor card.

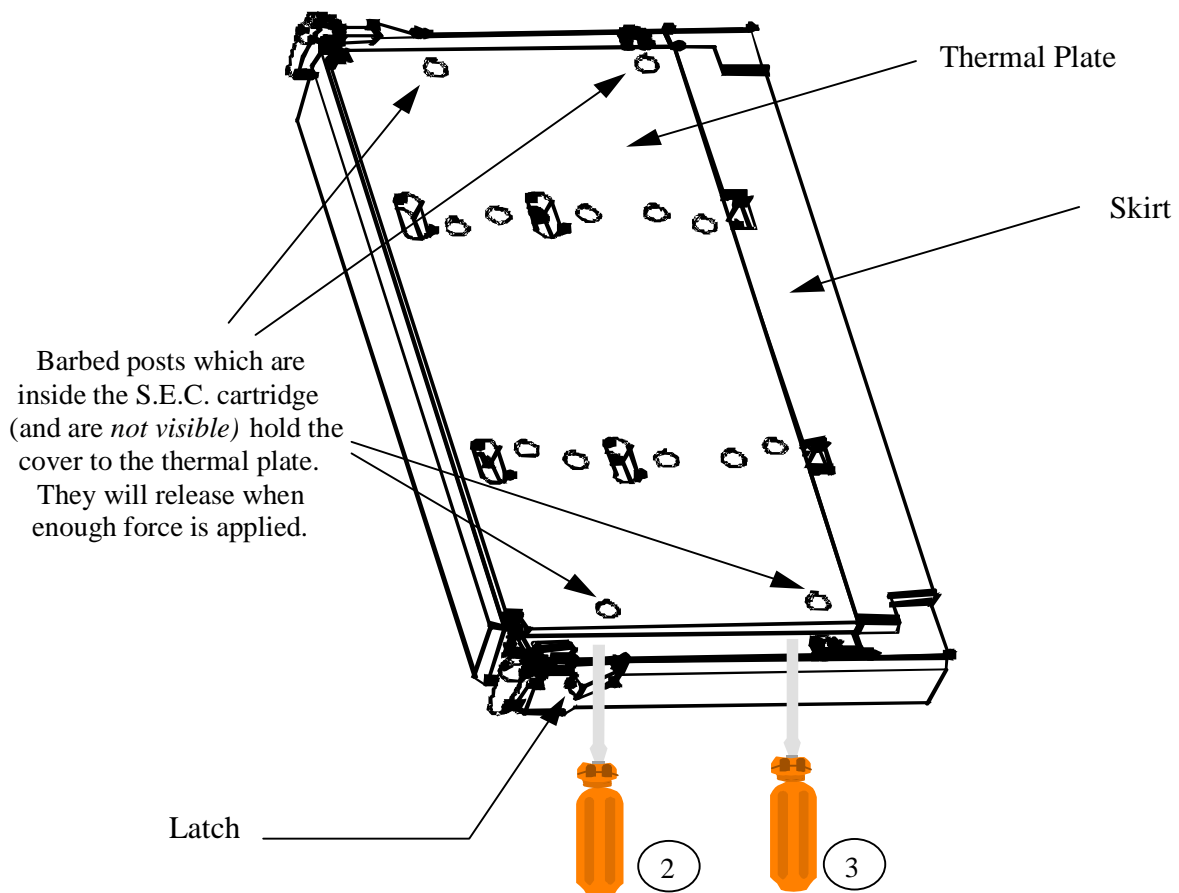
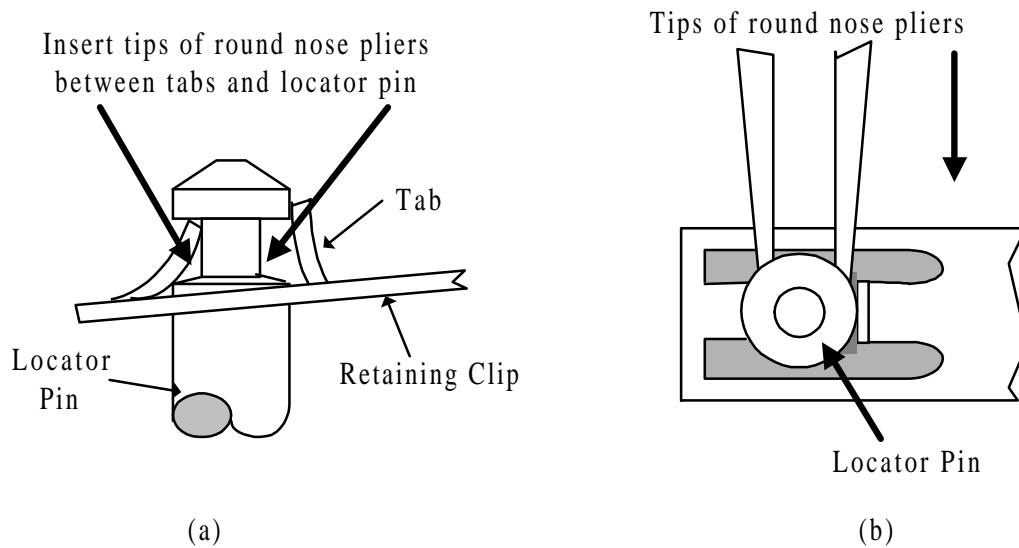


Figure 4: Opening the Cartridge

## *Separating the Thermal Plate and Processor Card*

- 1) Turn the thermal plate and processor card over, so that the thermal plate is on the bottom.
- 2) Insert the tips of a round-nose plier between the tabs and the locator pin as illustrated in Figure 5a and 5b below.



**Figure 5: Round-nose plier's insertion points (a) side view (b) top view**

- 3) Hold the thermal plate firmly and push the round-nose pliers toward the locator pin (in the direction of the arrow in Figure 2b). Push until the tabs bend away from the locator pin.

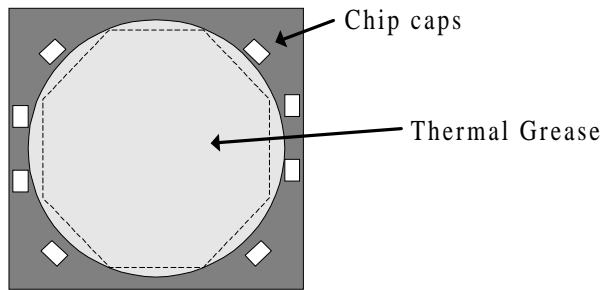
*Note:* When pushing the pliers in, be sure not to angle the pliers so that they damage the secondary side of the processor card. Pliers should be parallel to processor card.

- 4) Remove the round-nose pliers. The retaining clip should no longer be attached to the locator pin. If the retaining clip is still attached, repeat steps 2 and 3 on same locator pin.

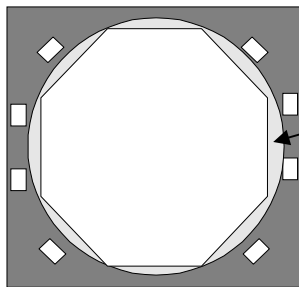
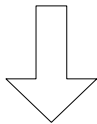
*Note:* Remove retaining clips carefully. The spring clip is under compression and may spring back. Keep the edges of the clips away from processor card.

- 5) Repeat steps 2 through 4 until both retaining clips are no longer attached to the locator pin.

## ***Removing Thermal Grease from the PLGA Heat Slug***

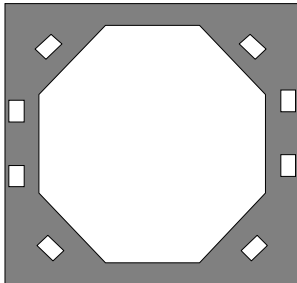
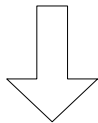


Wipe grease off heat slug

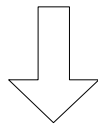


Place wiper at the edge and wipe residual grease from edge of heat slug (follow along edge of slug with wiper - stay clear of chip caps)

Wipe grease off edges of heat slug



Re-wipe top surface of slug



# **Done**

1. Use a wiper to remove large deposits of grease from the topside of the PLGA heat slug. Wipe until all visible traces of grease are eliminated from the topside of the heat slug.

Note: Be careful not to smear grease onto the PLGA topside pads or the processor card board.

2. Use a wiper to clean deposits from the edges of the heat slug.

Note: Be careful not to damage the chip caps on the PLGA when wiping the edges (see Figure 3).

3. Re-wipe the topside of the heat slug.

**Figure 6: Removing Grease from the PLGA Heat Slug**



Part No. E2492-20001