

**ECR #: 45**

**Title: Secondary Side Keepout Removal**

**Release Date: 4/1/98**

**Impact: Change**

**Spec Version: A.G.P. 1.0**

**Summary:**

This ECR supersedes note #3 of Figure 5-1 of ECR #35. Note #3 currently refers to a 16.5 mm (0.650 inch) keepout region on the secondary side of the AGP card for potential thermal solutions. This keepout volume was added as part of ECR #35. To date this volume has not been utilized for thermal solutions, and this keepout area interferes with potential Fan Duct cooling system designs and potential AGP add-in card retainer concepts.

**Background:**

The original intent of the 16.5 mm keepout on the backside of the AGP card was to allow the addition of a passive or active heat sink to the secondary side of the AGP card. Thermal vias or heat pipes would conduct heat through the card from the graphics accelerator chip or similar higher powered parts on the primary side to the secondary side. A heat sink is mounted to the secondary side of the card and is thermally linked to the thermal vias or heat pipes through the use of thermal grease or similar conducting material. Airflow on the secondary side would then augment the cooling of the components on the primary side of the card. But to date this method of cooling has not been implemented.

The current Fan Duct cooling system design concept provides 100 ft/min air velocity to the primary side of the AGP card at a temperature of approximately 45 C. Current design criteria is 55 C under natural convection (0 m/sec cooling air velocity). The 16.5 mm keepout volume on the secondary side of the AGP card interferes with the Fan Duct cooling system, and also with some potential AGP retainer concepts.

**Change Request:**

Remove Note 3 of Figure 5-1, reorder remaining notes in note section and references in Figure 5-1. Also remove hatched area in figure referring to Note 3.