## 1. PCI Engineering Change Notice – Low Profile PCI Card

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| **TITLE:** | Low Profile PCI Card |
| **DATE:** | February 14, 2000 |
| **AFFECTED DOCUMENT(S):** | PCI Local Bus Specification, Revision 2.2, December 18, 1998 |
| **SPONSOR:** | My-Hanh Dransfeldt, Intel Corporation |

### 1.1. Clarification

This ECN adds a new mechanical specification to the *PCI Local Bus Specification, Revision 2.2*. Low profile PCI cards have the same signal protocol, electrical definitions, and configuration definitions as standard PCI cards; however, they are defined by a new card form factor.

### 1.2. Benefits

PCI cards play a critical role in the configuration and expansion of desktop PC and server designs. By decreasing the overall size of the I/O cards, low profile PCI allows a reduction in overall system height and size. It offers a low cost, low profile system solution based on an accepted industry specification as well as greater flexibility in system layouts.

### 1.3. PCI Local Bus Specification, Rev. 2.2 Changes

**Chapter 5 "Mechanical Specification"**

Add the following section to Chapter 5:

➜ **NOTE: At the next revision of the PCI Local Bus Specification, this section will be integrated into Chapter 5. This will, most likely, require a minor reorganization of the chapter.**

# 5.X. Low Profile PCI Cards

Low profile PCI allows the design of small footprint, low profile systems while still offering expandability and upgradeability to the end user. There are two defined card lengths for low profile PCI, MD1 and MD2. MD1 defines the shortest 32-bit card length available, 119,91 mm (4.721 inches). MD2 defines the maximum length of low profile PCI cards, 167,64 mm (6.600 inches). Any low profile PCI card that is longer than the MD1 definition is considered an MD2 card form factor. The two card lengths allow system designers to support either all low profile PCI cards, which include MD1 and MD2, or limit their design to support only MD1 cards. Low profile PCI MD1 cards provide 4.8 square inches of board real estate and may be very limiting to adapter card vendors. Low profile PCI is intended for use in the smallest system designs. See Figures 5-XX through 5-XX for low profile PCI expansion card physical dimensions.

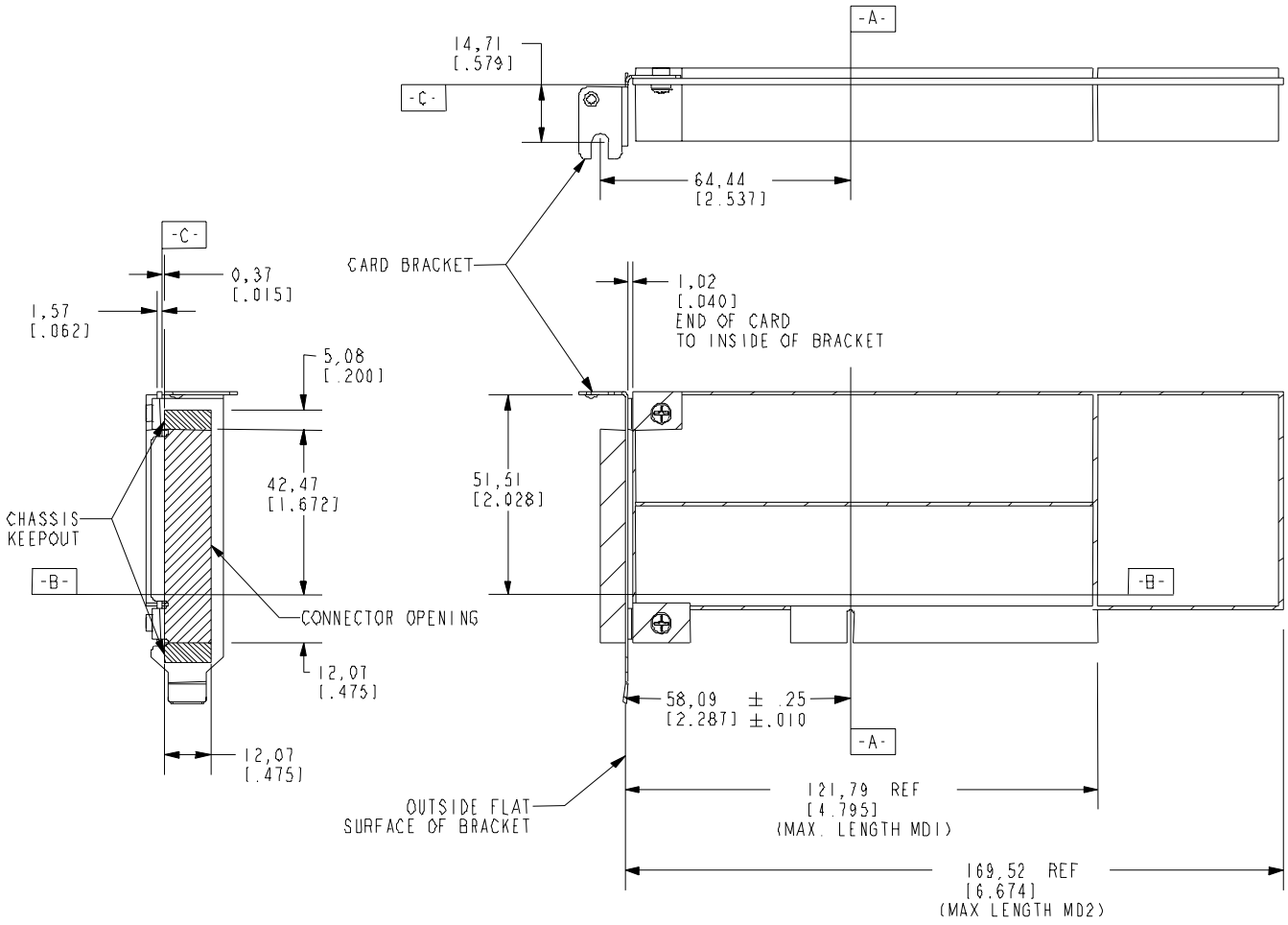
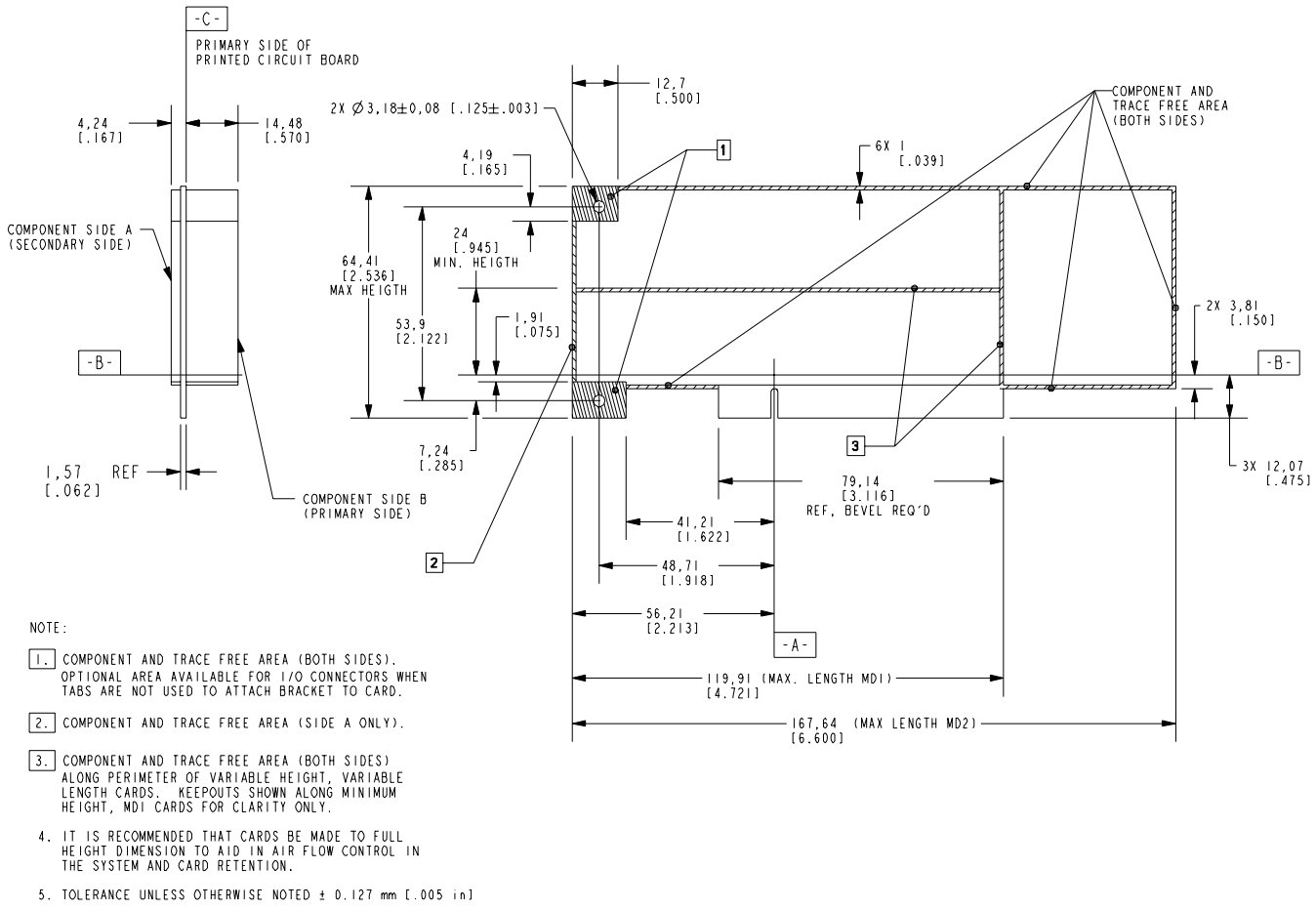


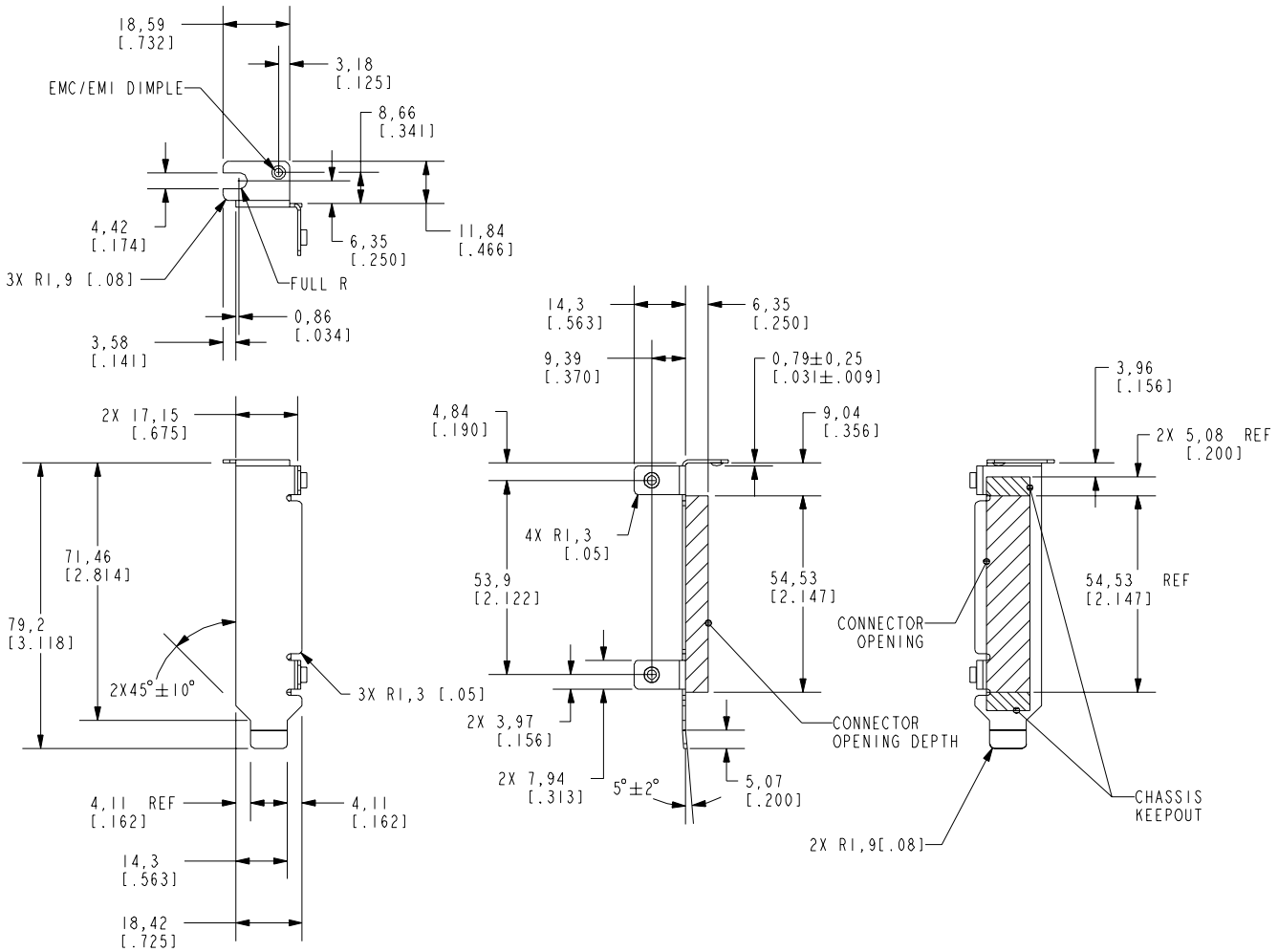

**Figure 5-XX: Low Profile PCI Card Assembly (3.3V, 32-bit)**




NOTE:

1. COMPONENT AND TRACE FREE AREA (BOTH SIDES). OPTIONAL AREA AVAILABLE FOR I/O CONNECTORS WHEN TABS ARE NOT USED TO ATTACH BRACKET TO CARD.
2. COMPONENT AND TRACE FREE AREA (SIDE A ONLY).
3. COMPONENT AND TRACE FREE AREA (BOTH SIDES) ALONG PERIMETER OF VARIABLE HEIGHT, VARIABLE LENGTH CARDS. KEEPOUTS SHOWN ALONG MINIMUM HEIGHT, MDI CARDS FOR CLARITY ONLY.
4. IT IS RECOMMENDED THAT CARDS BE MADE TO FULL HEIGHT DIMENSION TO AID IN AIR FLOW CONTROL IN THE SYSTEM AND CARD RETENTION.
5. TOLERANCE UNLESS OTHERWISE NOTED ± 0.127 mm [.005 in]

**Figure 5-XX: Low Profile PCI Raw Variable Height Card (3.3V, 32-bit)**




Note 1:
Material: 0.86 mm (.034 inch) THK (20 GA)

**Figure 5-XX: Low Profile PCI Bracket**