

**Proposed  
Draft**

**Serial ATA  
International Organization**

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**Serial ATA Revision 2.6 ECN # 023  
Title : L-Key Opening Correction (Slimline Host  
Receptacle Connector)**

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## Document History

Version	Date	Comments
0.1	10/17/2007	Initial release.
0.11	10/18/2007	Adding ECN number
0.12	10/18/2007	Editorial updates
0.13	10/19/2007	Editorial updates, title and current design is complaint only effect on future
1.0	10/25/2007	Correction on JAE author.

## 1 Introduction

### 1.1 Problem Statement

At the worst case tolerance situation, when the Slimline Host Receptacle is shifted to the extreme left with respect to the Device Plug connector, there is no gap between Power Pin 1 of the Plug connector and Power Pin 2 of the Receptacle connector.

Using Root Sum Square analysis, there will still be a gap of 0.185mm

### 1.2 Solution Summary

Reduce the L-Key feature opening length of Slimline Host Receptacle Connector and tighten the tolerance. Dimension  $20.7 \pm 0.15$  is changed to  $20.6 \pm 0.1$  and  $1.24 \pm 0.05$  is changed to  $1.29 \pm 0.05$ . **Existing designs in compliance with the old dimension are considered to be acceptable based on the RSS analysis. New designs shall incorporate the revised dimensions.** This will restrict the relative left/right movement between the Plug and Receptacle after mating.

No change is required to the device plug.

### 1.3 Background

During the development of Slimline SATA Connector specification, Root Sum Square tolerance analysis was used.

It is now deemed that tolerance analysis based on Worst Case situation would provide an increase safety margin to prevent potential electrical short.

## 2 Technical Specification Changes

### 2.1 Slimline Host Receptacle Connector

[Editor's Note: The changes marked in red (and underlined/strikethrough) will be incorporated in section 6.3.4.2 Fig 72]

