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## 1.0 INTRODUCTION

### 1.1 SCOPE

This document describes the functional and test requirements for the PCI Express™ retention mechanism (RM).

### 1.2 APPLICABLE DOCUMENTS


- 1.2.1 Solderability : BUS-19-002/A
- 1.2.2 AFCI drawing, PCI Express retention mechanism, inspection & customer copy, part number 10035591.
- 1.2.3 EIA-364-56, Resistance to Soldering Heat

### 1.3 DRAWING PRECEDENCE

In the event of conflict between this document and product prints, the product prints shall take precedence.

## 2.0 GENERAL REQUIREMENTS

- 2.1 Visual examination, unless otherwise specified, shall be made at 7X.
- 2.2 Silicone compounds (mold releases, lubricants, etc.) May not be used in the manufacturing processes.
- 2.3 Flammability to be rated UL 94V-0 minimum.
- 2.4 Unless otherwise specified, tests that require the use of a pc retention mechanism shall use the following

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2.4.1 Card material: FR-4 glass epoxy.

2.4.2 Thickness: 1.57 +/- 0.13

## 2.5 SOLDERTAIL TERMINATION

Tests requiring termination of the to a PC board shall be prepared as follows:

2.5.1 A 1.57mm +/- 0.13 thick FR-4 glass epoxy board having no internal ground planes with plated thru holes in the pattern specified in APCI customer drawing, shall be used.

2.5.2 Solder the RM to the PCB as described in paragraph 4.1

## 3.0 MECHANICAL REQUIREMENTS

### 3.1 EXAMINATION OF PRODUCT

Samples must comply to applicable APCI product prints.

### 3.2 BOARD INSERTION / WITHDRAWAL FORCE

3.2.1 When applying the RM to a PCB 1.57mm thick and having a footprint as defined on the APCI customer drawing prior to soldering, the total maximum insertion force is 21N.

3.2.2 The force required to remove the RM from the PCB shall be 10N minimum. The RM should be pulled in a direction normal to the surface of the PCB. The PCB should be mounted in a way as to minimize board deflection when pull loads are applied.

### 3.3 SOLDER PIN RETENTION


Minimum retention force is 30 N of solder pin in the product housing. Pull rate to be 1.27 mm/min.

### 3.4 SOLDERABILITY

Per EIA-364-638

- steam age for 1 hour
- Solder areas evaluated shall meet 95% minimum coverage.

## 4.0. Resistance To Soldering Heat

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#### 4.1 RESISTANCE TO SOLDERING HEAT

Per EIA-364-56 procedure 3, test condition C.  
260°±5°C 10±2 seconds

### REVISION RECORD

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A	ALL	RELEASED	T04-0415	11/25/2004
B	ALL	MODIFY PARAGRAPH	T04-0417	11/29/2004

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