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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 APCI 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 AFCI 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 AFCI 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 AFCI 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

- a. steam age for 1 hour
- b. 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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