

**Proposed
Draft**

**Serial ATA
International Organization**

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**Serial ATA Revision 2.6 + Gen3i ECN # 028
Title : Clarification of Test Patterns for
Measurements Defined in 7.2 Electrical
Specifications**

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1 Introduction

1.1 Problem Statement

Section 7.4.8 Transmit Jitter currently references patterns in section 7.2.4.3 to be used for jitter measurements. However, section 7.2.4 defines the use model as: “Non-Compliant test patterns for jitter measurements, physical connection media tests, and electrical parameter testing.” These non-compliant patterns are defined in section 7.2.4.1 Non-Compliant Patterns, and consist of the lone bit pattern, high-frequency test pattern, mid frequency test pattern and low frequency test pattern. Each of these patterns, as defined, are 2 DWords in length and are supported using the BIST Activate FIS with Far-End Transmit Mode, also called BIST-T,A,S mode.

1.2 Solution

A simple editorial text clarification change is proposed to strike the text reference “7.2.4.3” from section 7.4.8 and to replace it with “7.2.4.1”. This is believed to have been the original intent of the author for SATA 2.5 ECN 019.

1.3 Background Information

See SATA 2.5 ECN 019 for clarification of changes made to section 7.2.4.1 Non-Compliant Patterns.

2 Technical Specification Changes

2.1 7.4.8 Transmit Jitter

7.4.8 Transmit Jitter

The transmit jitter values specified in Table 29 refer to the output signal from the unit under test (UUT) at the mated connector into a Laboratory Load (LL) (for Gen1i, Gen2i, Gen1m, Gen2m, Gen1x, and Gen2x), or from the unit under test through a Compliance Interconnect Channel (CIC) into a Laboratory Load (for Gen1x and Gen2x). The signals are not specified when attached to a system cable or backplane. All the interconnect characteristics of the transmitter, package, printed circuit board traces, and mated connector pair are included in the measured transmitter jitter. Since the SATA adapter is also included as part of the measurement, good matching and low loss in the adapter are desirable to minimize its contributions to the measured transmitter jitter.

Transmit jitter is measured with each of the specified patterns in section ~~7.2.4.3~~ 7.2.4.1. The measurement of jitter is described in section 7.4.7. Transmit jitter is measured in one of the following two setups for Gen2i and both setups for Gen1x and Gen2x. For Gen1i, Gen2i, Gen1x, and Gen2x the transmitter is connected directly into the Laboratory Load (LL) shown in Figure 140. Additionally, for Gen1x and Gen2x the transmitter is connected through the Compliance Interconnect Channel (see section 7.2.7) into the Laboratory Load shown in Figure 141.