memorandum

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T10/07-483r0

To	From	Subject	Date
INCITS T10 Committee	Michael Banther, HP	ADT-2 Signal connection changes	4 November 2007

Revision history

Revision 0 – Initial proposal.

Related documents

Automation/Drive Interface – Transport Protocol – 2 (ADT-2), T10/1742-D, Revision 5, 3 October 2007.

Background

The present ADT-2 draft standard does not specify a limit for the current of a signal connection in the negated state. Neither does it specify the resistance of the terminator. Consequently the standard does not include enough information to ensure interoperability of the signal connections. This document proposes a current limit for a signal connection in the negated state.

A review of the ADT-2 draft standard specification for the asserted state of a signal connection has revealed that the magnitude of the present current limit may require the use of an external transistor at the input compliance point in order to sink the available charge within the specified fall time. This document proposes a reduced limit for a signal connection in the asserted state to reduce the likelihood of needing an external transistor at the input compliance point.

In this proposal, deleted text appears in ~~red strikeout~~, new text appears in blue, and comments that do not form a part of the proposal appear in pink.

To aid in discussion, Figure 1 depicts a signal connection in the asserted state and Figure 2 depicts a signal connection in the negated state.

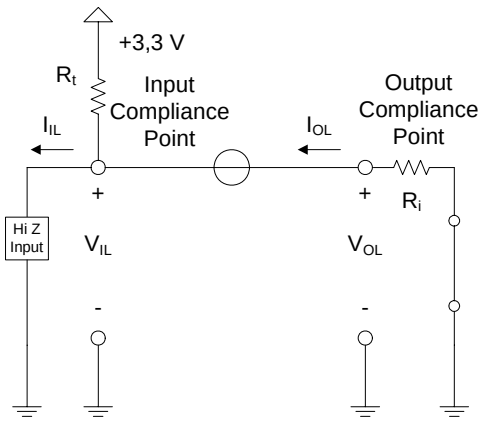

Figure 1

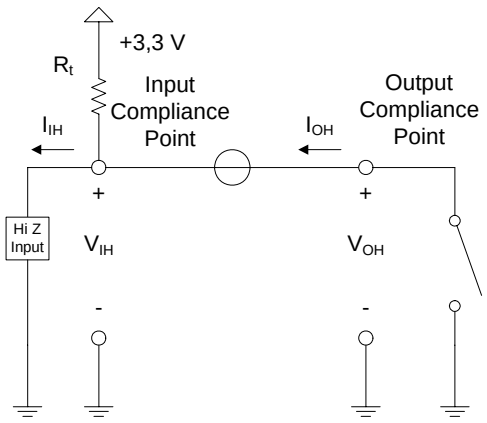

Figure 2

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Proposed changes

5.1.4 Signal connection

Table 3 describes the electrical characteristics of a Signal connection at the output compliance point.

Table 3 — Signal connection output characteristics

Signal State	Current	Voltage
Asserted	~~-12~~ -3 mA < I_{OL}	-0,2 V < V_{OL} < 0,4 V; V_{OL} < 0,2 V_{dd} [a]
Negated	I_{OH} < 50 µA	V_{OH} <= 3,6 V
[a] V_{dd} is the positive supply voltage at the receiving end.		

Table 4 describes the electrical characteristics of a Signal connection at the input compliance point.

Table 4 — Signal connection input characteristics

Signal State	Current	Voltage
Asserted	~~-12~~ -3 mA < I_{IL} at 0 V	-0,2 V < V_{IL} < 0,3 V_{dd} [a]
Negated	I_{OH} < 50 µA at 3,3 V	0,7 V_{dd} [a] < V_{IH} <= 3,6 V; 400 mV < $V_{hysteresis}$
[a] V_{dd} is the positive supply voltage at the receiving end.		