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EIA STANDARD

TP-103

**Propagation Delay Test
Procedure for Electrical
Connectors, Sockets, Cable
Assemblies or Interconnection
Systems**

EIA-364-103

November 1998



Electronic Components Industry Association

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(From Standards Proposal No. 5099.06, formulated under the cognizance of the EIA CE-2.0 Committee on National Connector and Socket Standards and reaffirmed under Project Number 5499.06).

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TEST PROCEDURE No. 103

PROPAGATION DELAY TEST PROCEDURE
FOR
ELECTRICAL CONNECTORS, SOCKETS,
CABLE ASSEMBLIES OR INTERCONNECTION SYSTEMS

(From EIA Standards Proposal No. 4155, formulated under the cognizance EIA CE-2.0 Committee on National Connector Standards)

1 Introduction**1.1 Scope**

This standard is applicable to electrical connectors, sockets, cable assemblies or interconnection systems.

1.2 Object

This standard describes a method for measuring the time it takes for a digital signal to propagate from one specified point to a second specified point.

1.2 Definitions**1.2.1 Measurement system rise time**

Rise time measured with the fixture in place, without the specimen, and with filtering (or normalization). Rise time is typically measured from 10% to 90 % levels; see figure 1.

1.2.2 Specimen environment impedance

The impedance presented to the signal conductors by the fixture. This impedance is a result of transmission lines, termination resistors, attached receivers or signal sources, and fixture parasitics.

1.2.3 Propagation delay

The time required for a signal to travel between two specified points of an interconnect system; see figure 2.

1.2.4 Termination (electronics usage)

An impedance connected to the end of a transmission line, typically to minimize reflected energy on the line.