ATT-TP-76418-001
Differential Impedance Cable Test for BITS Clock Timing Cable

Abstract

Presented in this document provides the Differential Impedance Test for BITS Clock Timing Cables within AT&T central offices.

Audience: The primary audience for this document are AT&T LOCAL EXCHANGE companies in the following disciplines: Switch Capacity Planner/Engineer, Transport Equipment Engineer (TEE), Facility Equipment Engineer (FEE), Digital Transport Engineer (DTE) and Maintenance Engineer. This document is to be used internally within AT&T LOCAL EXCHANGE companies and their Authorized Vendors and has a limited distribution subject to the header/footer information.
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2. Reasons for Reissue

Issue 2. Updates the Contact List, Section 8.

3. Introduction

BITS Clock or TSG(Timing Signal Generator)Timing Cables, which are also known as Synchronous Timing Cables, act as the copper cable transport link between various BITS Clock timed network elements, including switches, and the actual BITS TSG timing source, or synchronous timing equipment. The application speed for these BITS Clock timing cables include the following: DS1 – 1.544 Mb/sec(higher) and 64 Kb/sec(lower) speeds. It is important that these BITS Clock timing cables, as manufactured, meet rigorous AT&T manufacturing and transport performance requirements, since failure to perform up to the bit error rate demands of the BITS Clock timing source network elements and the synchronous timing equipment will cause disruption to vital network services.

4. Testing

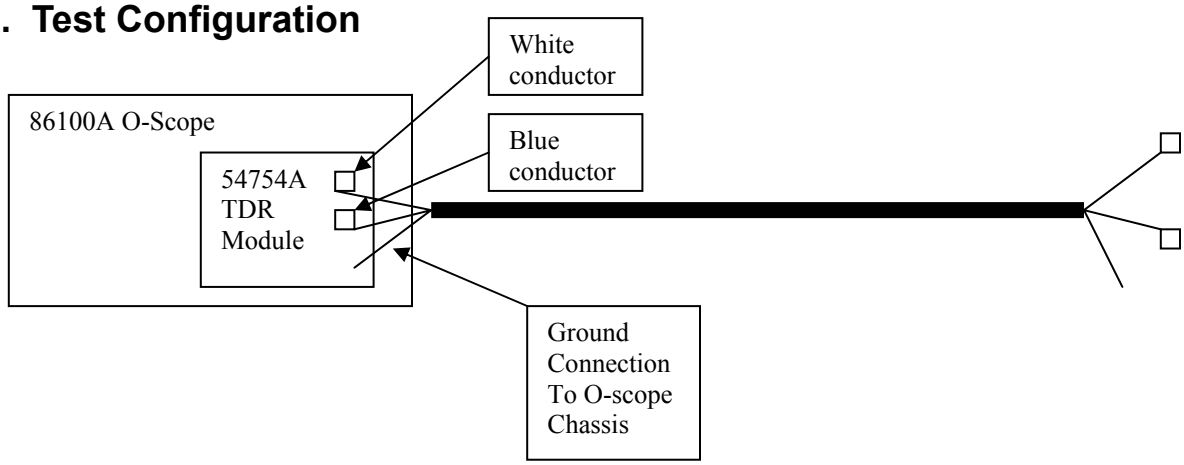
All production of manufactured BITS Clock Timing Cables must pass the AT&T testing criteria for Differential Cable Impedance found in the Fujitsu test method, which uses Agilent equipment. See Word Document Attachment entitled ATT-TP-76418-001, *Differential Impedance Cable Test*, Issue 4, dated September 3, 2004. Both the Hardware and Software included in this method, or its equivalence, must be used to qualify all lots of manufactured BITS Clock Timing Cables before potential purchase by AT&T.

5. Test Equipment

Agilent Infiniiun DCA Oscilloscope
Model # 86100A (or Equivalent)
Must be currently calibrated

Agilent Differential TDR Module
Model # 54754A (or Equivalent)
Must be currently calibrated

6. Test Configuration



Test equipment, other than Agilent's, may be used if equivalent in function.

7. References

ATT-TP-76418, *BITS Clock Timing Cable Standards for the AT&T LOCAL EXCHANGE companies*, Issue 5, dated May 25, 2005.

Westek Electronics: Differential Impedance Testing – Protocol using Tektronix Oscilloscope, Model TDS8000, specifically designed for differential impedance testing, with Electrical Sampling Module #80E04.

ICEA S-90-661

GR-137-CORE

Fujitsu Network Communications (05-12-04) - Agilent Oscilloscope and TDR Set Up for measurement of differential cable impedance.

8. Contact List

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