

Insertion Loss Measurement Procedure

2-way tester - One Cord SMF

TIA 568-C-0 / 526-7

To achieve consistent results, clean all connectors, through-connects and adapters associated with the test prior to and during measurement.

Ensure all MMF test cords meet IL specification of ≤ 0.1 dB.

Ensure the source has warmed up before commencing measurements.

1. Fit correctly sized air coil to source end of each launch/tail cord.

Minimum of 1 single air-coiled turn or mandrel wrap of
30 mm / 1.2 inch diameter.

Table 1, Air Coil specification

2. Connect a test cord to each 2-way Loss Test Set (LTS) and set the reference on both instruments. For clarity mandrels are not shown.



Figure 1, One cord reference

3. Disconnect test cord from the meter side of an instrument and connect to the cabling under test (CUT / DUT).

Similarly, connect the other instrument's test cord, to the other end of the DUT.

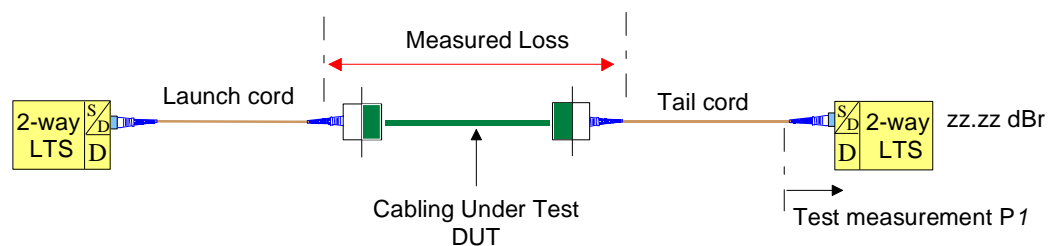


Figure 2, One cord measure

4. Read the insertion loss directly in dBr.
5. Standard based pass/ fail calculations as shown over the page can be applied to the result.

TIA Cabling Specifications 568.C.3

For installations tested in accordance with TIA specifications, the following maximum limits apply to the various cable plant components.

Item	Specification
Connector loss	0.75 dB
Splice loss	0.3 dB
1310 nm	1.0 dB/km
1550 nm	1.0 dB/km

Table 2, TIA 568.C.3 cable plant specification

Pass / Fail formula

The American TIA pass-fail standard uses a standard Telco type formula.

One cord referencing is specified.

SMF

Maximum IL at 1310 / 1550 nm = 1.0L + 0.3N + 0.75C

Where:-

L = Cable length in Km,

N = number of splices and

C = number of connectors.

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