

NEXT LOSS MODELS FOR CATEGORY 5 LINKS

Tests were conducted at the Lucent Technologies Middletown, NJ location. The number of cables and configurations were:

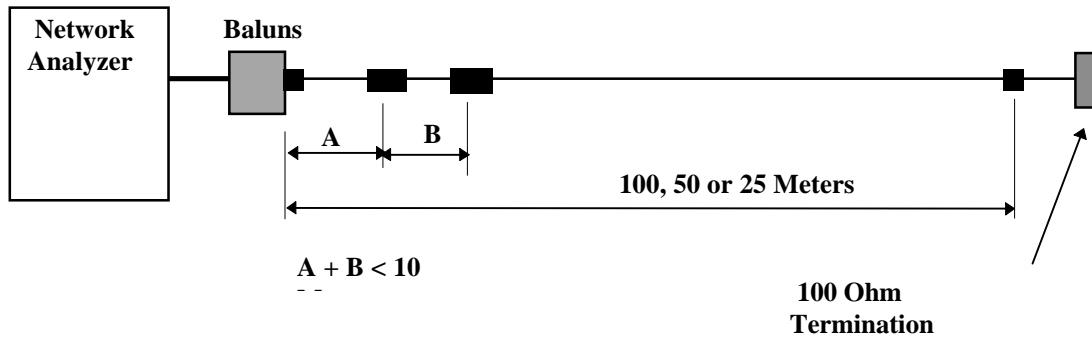
- 1. 4 cable links 100 meters in length including connectors and cords.**
 - 2 links contained 2 M100 connectors (8-pin modular jacks) at the near end.
 - 2 links contained 2 110 connecting blocks at the near end.
 - NEXT loss measurements conducted at each end of the link.
 - Number of NEXT loss measurements: 48
- 2. 1 cable link 100 meters in length consisting of only cable.**
 - NEXT loss measured at only one end of the link.
 - Number of NEXT loss measurements: 6
- 3. 1 cable link 50 meters in length including connectors and cords.**
 - Link contained 2 M100 connectors (8-pin modular jacks) at the near end.
 - NEXT loss measurements conducted at only one end of the link.
 - Number of NEXT loss measurements: 6
- 4. 1 cable link 25 meters in length including connectors and cords.**
 - Link contained 2 M100 connectors (8-pin modular jacks) at the near end.
 - NEXT loss measurements conducted at only one end of the link.
 - Number of NEXT loss measurements: 6

Total number of NEXT loss measurements = 66

The 66 measurements were scaled to just touch the NEXT loss limit specified in ANSI/TIA/EIA-568-A Annex E. From the 66 scaled measurements four curves were selected that would:

- 1. Maximize the amount of NEXT noise energy available at the output of the link.**
- 2. Provide equal distribution of NEXT loss peaks over the band 1-100 MHz.**
- 3. Ensure there was a contribution by the connectors.**

TEST SETUP FOR MEASURING NEXT LOSS OF A 4-PAIR CABLE



Network Analyzer: HP 3577A

Baluns: North Hills 322BF

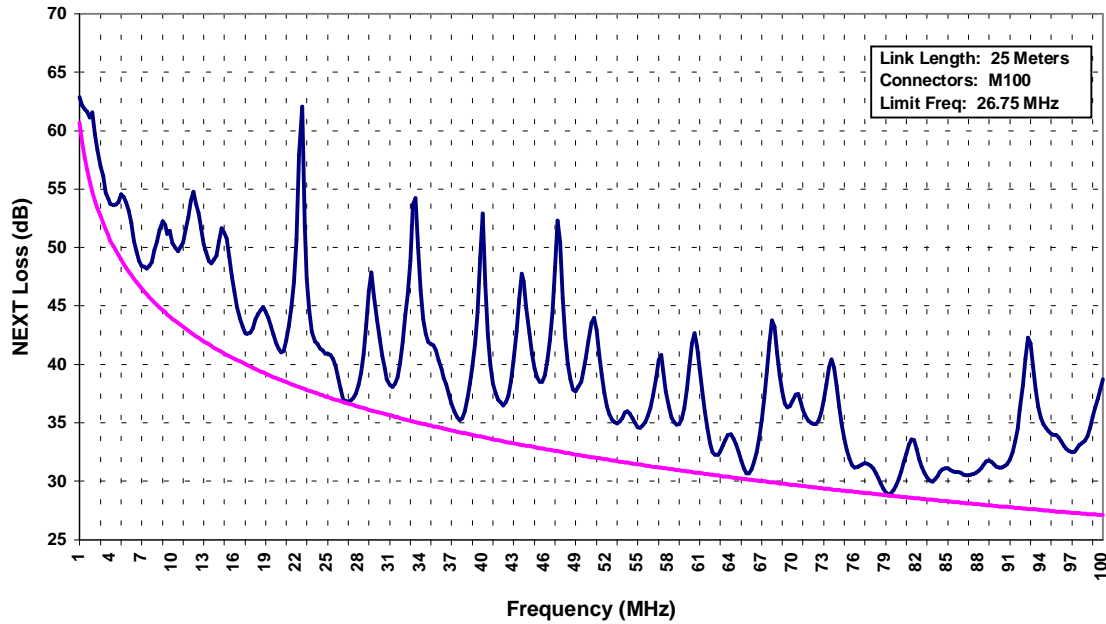
Cable Type: Lucent Technologies 1061 Type (Category 5)

Cords: Lucent Technologies D8AU Cords (Category 5) and
110 Patch cords (Category 5)

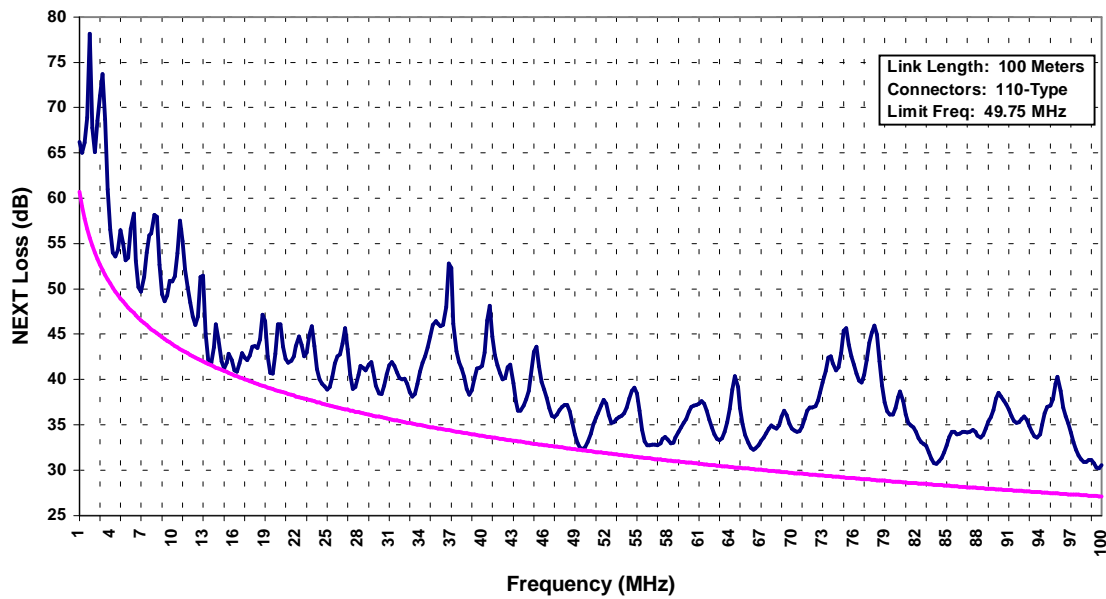
Connectors: Lucent Technologies M100 Type (Category 5) and
110 Connection Blocks (Category 5)

NEXT loss Models 1-4

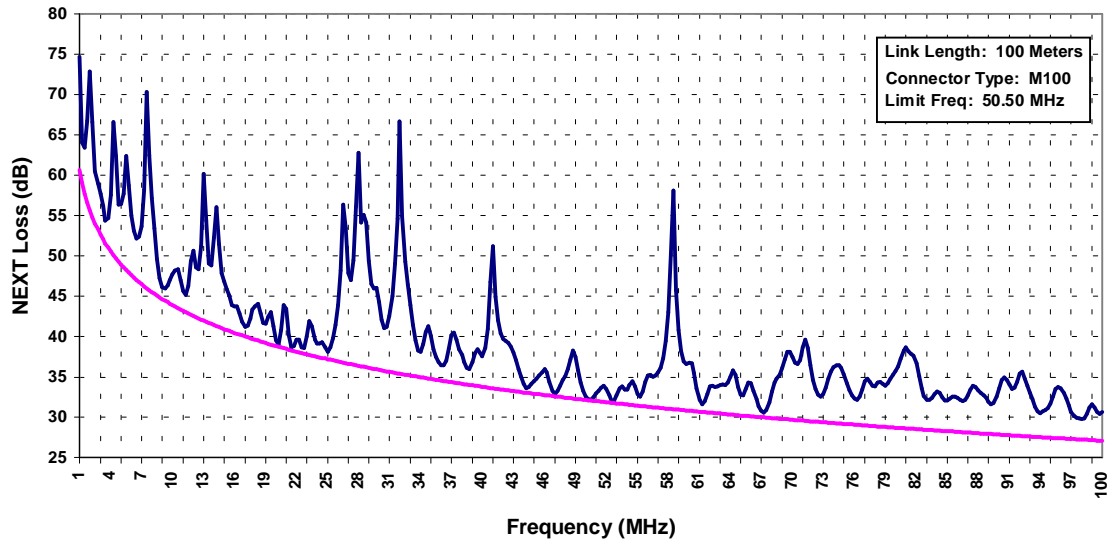
CATEGORY 5 NEXT LOSS MODEL 1



CATEGORY 5 NEXT LOSS MODEL 2



CATEGORY 5 NEXT LOSS MODEL 3



CATEGORY 5 NEXT LOSS MODEL 4

