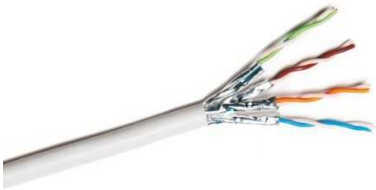
Newsletter

AT&T Cabling Systems Category 6A Unshielded Horizontal Cable ETL Verified

Cologne, Germany, November 2015



AT&T Cabling System
Category 6A 4-Pair 23AWG Unshielded Cable
P/N 11M6Axy004N
Available with LS0H or PVC jacket
and various flame tests

One of the major obstacles in designing a high-quality unshielded Category 6A horizontal cable is the alien crosstalk (AXT). Reducing the AXT between unshielded cables can be done by increasing the distance between adjacent cables or by applying a metal layer inside the cable. In order to minimize AXT without the use of metal layers (U/UTP construction) and without a substantial cable OD increase the twisted pairs lay lengths must be substantially reduced. This reduction has several disadvantages, including higher DC resistance, increasing the amount of copper, reducing production speed and slowing cable termination, which all increase costs.
In addition, Category 6A U/UTP cables provide by design minimal headroom in NEXT, FEXT and AXT. Small headroom in these parameters may result in link and channel failure, increased BER and slower data-rate.

These inherent design problems led several vendors to offer Category 6A unshielded cables with a layer of metal surrounding the cable core. Adding a metal barrier between cables substantially reduces the AXT, providing a simple, effective and low-cost solution. It should be noted that these metal barriers (usually made of aluminum foils) are not grounded so they cannot act as a shield. Applying an overall metal tape indeed solves the AXT problem but it has an adverse effect on the internal crosstalk. As a result, cables with an overall metal tape have good AXT values but very small NEXT and FEXT headroom.

AT&T Cabling CATEGORY 6A unshielded cable has 4 internal metal tapes, one around each pair (PiMF construction). The individual tapes provide a perfect AXT rejection and as side benefits they provide outstanding NEXT and FEXT values, shown in the next page.
PiMF cable design provides other important benefits, as compared to any other CATEGORY 6A cable:

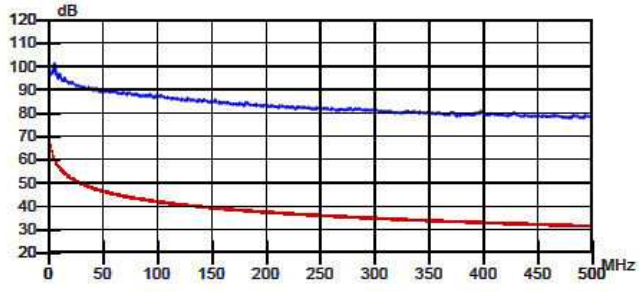
- Pairs twisted in longer lay lengths, using less copper, having lower DC resistance, enabling faster and easier termination.
- The aluminum foils laid in close proximity to the conductors provide efficient heat dissipation which is critically important for PoE TYPE 4 support.
- Better support of very short links (<10m) thanks to the outstanding FEXT headroom.
- Seamless interoperability with any other CATEGORY 6A cable, which cannot be guaranteed when using U/UTP cables.

The outstanding performance of AT&T Cabling CATEGORY 6A unshielded cable has been verified by Intertek – ETL (USA) and a formal verification has been granted to this cable, which is now included in the ETL follow-up program, as done with all AT&T Cabling ETL verified products.

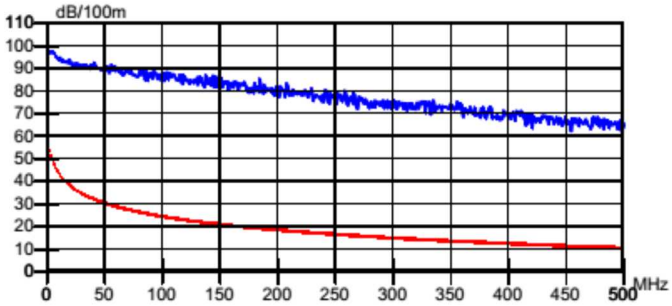
The full list of AT&T Cabling ETL verified products is available at http://www.intertek.com/ETL-Verified-Directory/Cabling-Products/ATT-Cabling-Systems/AT-T-Cabling-Systems/.
A copy of the ETL certificate for AT&T Cabling CATEGORY 6A unshielded cable is attached to this newsletter. A copy of the full ETL test report is available upon request.

Typical PS-NEXT, PS-ACRF, PS-ANEXT and PS-AACRF test results are shown below.

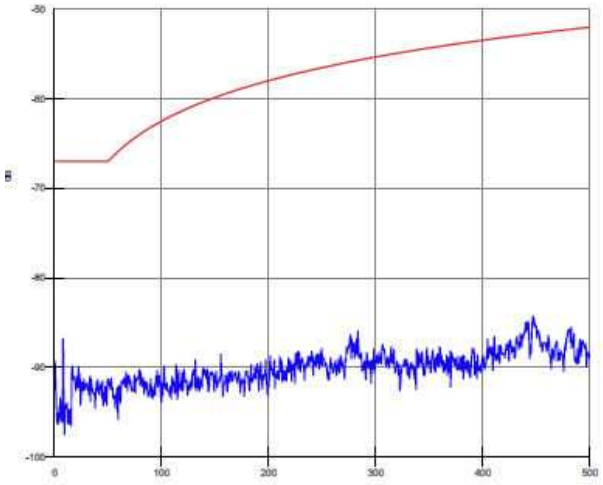
AT&T CAT6A Unshielded cable typical PS-NEXT Loss



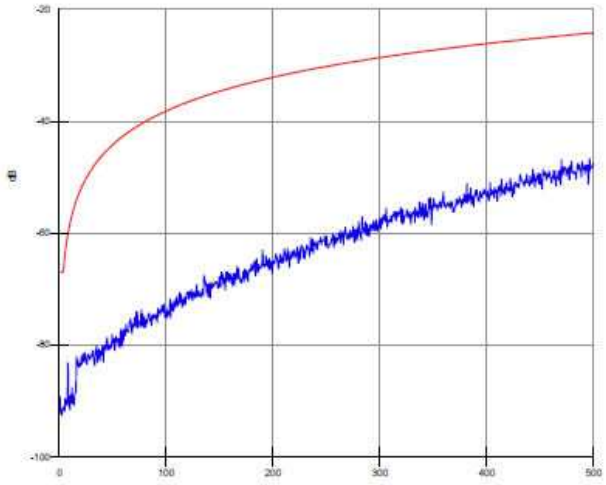
AT&T CAT6A Unshielded cable typical PS-ACRF



AT&T CAT6A Unshielded cable typical PS-ANEXT Loss



AT&T CAT6A Unshielded cable typical PS-AACRF



3933 US Route 11
Cortland, New York 13045 USA
Phone Number: (800) 345-3851
Fax Number: (607) 758-6637
Web: www.intertek.com

ETL Verified Certificate of Conformance Number: 102361234CRT-001

On the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out.

Rendered to:
AT&T Cabling Systems
Hohenstaufenring 62
50674 Cologne
Germany
www.att.com/cabling

Product Tested	4 pair, 23 AWG, Unshielded, LSOH, Non-Plenum, Horizontal (Solid) Cable.
Model(s) and or Brand Name:	11M6Axy004N; Notes: "x" may be replaced by V or H and "y" and "N" may be replaced by A,B, C, D or E.
Standard(s)/Specification	ANSI/TIA-568-C.2 and ISO/IEC 11801 Category 6A with the applicable electrical transmission characteristics
Jacket marking shall include:	ETL Verified to ANSI/TIA-568-C.2 and ISO/IEC 11801 Category 6A

Continuing compliance to this specification is monitored through production testing, ongoing inspections by Intertek at the production facility and random sample testing.

Date Issued: November 11, 2015

Approved By:

John Cash, Associate Engineer

Antoine Pelletier, Project Engineer

This verification supersedes all previous verifications with the noted Verification/Report number(s) dated before this verification notice.

NOTE: This verification is part of the full test report(s) and should be read in conjunction with it.