



Dear Reader,

Expanding skills and gaining knowledge are among the key targets most people have in life. But just knowing how something works or how something is done is not enough as stated in the title of David H. Sandler's book: "You can't teach kid to ride a bike in a Seminar". Well I never read the book, but I fully agree with the title. You have to apply theoretically gained knowledge in praxis and try things out to really understand them. This is exactly the reason why our Application Notes are so praxis oriented and application focused that some people prefer to refer to them as "Tutorials". However, we are not tutors but see ourselves as life-long students and not a single day passes in which we do not learn something new and interesting from our customers and business partners. - **Enjoy your reading.**

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Measuring xDSL Cables with the Bode 100

The quality and speed of a data connection depends on many factors. One of them is the cable used for the installation of the network infrastructure. Together with AESA-Cortaillod, a leading specialist for testing and quality control data cables, we have developed an application note for the Bode 100 on xDSL cable testing. In this application note, we describe how parameters such as cable attenuation or far end cross talk (FEXT) can be measured with the Bode 100. By measuring the cable parameters, it can be checked if the cable fulfills normative standards such as IEC 62255-3.



In a special application note add-on, we describe a method showing how the equal level far end cross talk (ELFEXT) can be measured directly. This is special since the ELFEXT is usually just calculated and not measured.

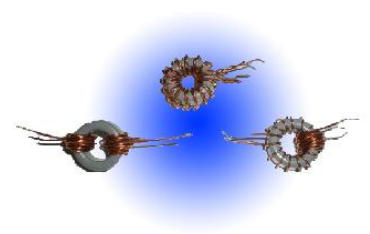
For more information just visit: <http://www.omicron-lab.com/application-notes/dsl-cable-analysis.html>

Debunking Transformer Myths

In the **How2power Today Newsletter**, an article involving measurements with the Bode 100 has been published. In their article "Debunking Transformer Performance Myths", the authors *Steven M. Sandler* and *Danny Chow* of [AEI Systems](#), Los Angeles, California intend to dispel three common myths regarding transformers, and more generally, magnetic coupling.

- Myth 1: The turns ratio of a transformer is the $Ratio = \frac{N2}{N1}$ and $\frac{N1}{N2}$ is the reciprocal of $\frac{N2}{N1}$
- Myth 2: The leakage inductance of a transformer is based on the coupling from one winding to another
- Myth 3: The inductance of a transformer is $L = N^2 A_L$

To provide the proof that these myths are false, three transformers were constructed. Each transformer included only two windings, with 15 turns on each winding. A series of measurements were made for each of the three transformers. All of the measurements were made using one piece of test equipment, OMICRON Lab's Bode 100 portable vector network analyzer.



Read the whole article at: www.how2power.com/newsletters/0910/articles/a1/index.html