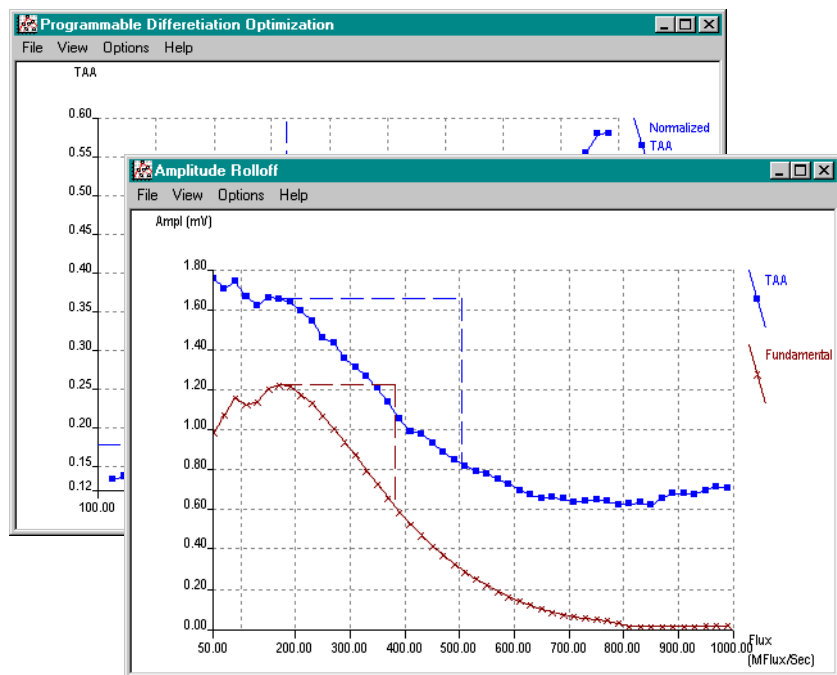# GUZIK PRODUCT BULLETIN

Perpendicular Recording Test Package For WITE32

- ## Amplitude Asymmetry Test

- ## Differentiator Optimization Test

- ## Rise-and-fall Time (T50) Test

- ## Rolloff Test

- ## Saturation Asymmetry Test

The test package targets perpendicular recording, when the magnetic domains are oriented perpendicularly to the surface of the magnetic disc, rather than parallel to it. The read-back signal for perpendicularly recorded media can be considered proportional to the media magnetization.

Programmable differentiator boards can be installed inside Guzik RWA to convert a perpendicular signal into a longitudinal equivalent. Such differentiators allow you to perform all standard Guzik measurements (including parametric, NLTS, and error rate) for the derivative of the read-back signal with high-frequency noise filtered out. The **Differentiator Optimization** test optimizes the cut-off frequency of a Guzik differentiator.

The **Rolloff**, **Rise-and-fall Time**, **Saturation Asymmetry**, and **Amplitude Asymmetry** tests of the package make the measurements directly on a perpendicular signal without the differentiators:

- The **Rolloff** test measures inter-symbol interference (ISI) and helps to estimate the slope shape of the signal gained from a transition. Average amplitude (TAA) and fundamental harmonic measurements are available.

- The **Rise-and-fall Time (T50)** test measures rise-and-fall time – a parameter needed for data rate estimation.

- The **Saturation Asymmetry** test detects the asymmetrical saturation in the read element.

- The **Amplitude Asymmetry** test measures the asymmetry of the magnetization magnitude between positive and negative domains.

The test package is available starting with WITE32 Revision 3.20. It is compatible with RWA2000 series, RWA2585 series, and RWA2550++A.