

DOBLE OFF-LINE TESTING & ASSESSMENT

# SFRA SOFTWARE V6

Sweep Frequency Response Analyzer

## OPERATE M5500 UNITS AND ANALYZE TRANSFORMER DIAGNOSTICS

Doble SFRA Software v6 is our new and improved SFRA application for Doble's Sweep Frequency Response Analysis solutions for transformer diagnostics. SFRA V6 is a complete overhaul of the software, which is now built on a framework derived from our powerful Doble Test Assistant (DTA) application. This major release features a brand new user interface similar to DTA, Protection Suite, and T-Doble and operates in the Microsoft® Windows operating environment. Powerful new tools for set up, data management and analysis make it easier to perform SFRA tests and manage and interpret the results.

### FEATURES

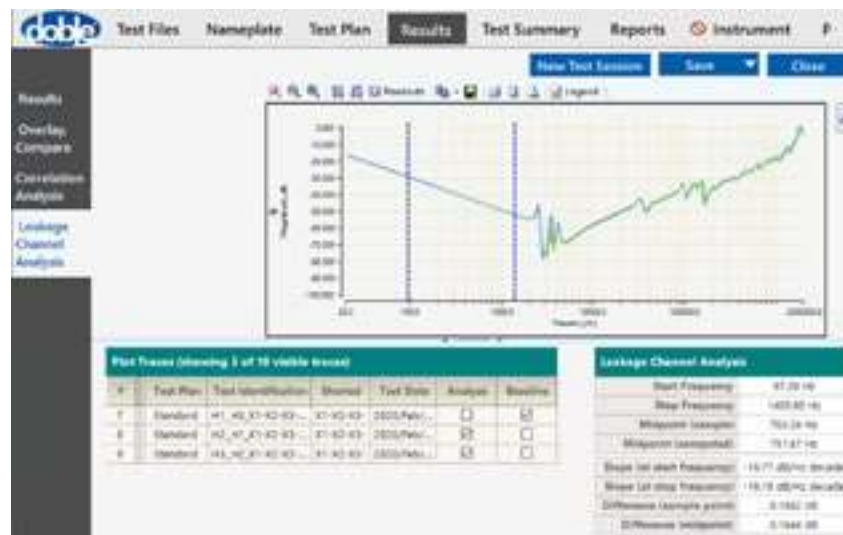
- Instrument support: Operates Doble's next-generation M5500 instrument as well as legacy M5400 and M5200 units.
- All-in-one test files: Provide session-based test results – one file per apparatus – containing all results and test session history. This simplifies data storage and makes comparing new results against previous test sessions much easier.
- Automatic test file conversion: Supports all legacy Doble SFRA test results and can detect if legacy files belong to the same apparatus and convert them into a single test file under the new model.
- DTA nameplate model: Uses the DTA apparatus nameplate model, which is more intuitive and easier to use than previous versions of SFRA. This results in data that is consistent with Doble's other test and database applications.
- DTA nameplate import: Allows the user to pull in nameplate data from existing DTA records, which eliminates redundant data entry and reduces nameplate errors. This capability streamlines test file creation and ensures apparatus identification in maintenance databases.
- Standard test plan generation: Generate standard test sequence plans based on apparatus nameplate information, saving time and ensuring consistency.
- Custom test plan editor: Create your own test sequence for non-standard testing or for a quick operational check. Create hybrid test plans by combining standard and custom plans for complete flexibility in testing.



View of SFRA V6 test results.

## FEATURES (Cont.)

- Results plotting options: Plot test results as Magnitude (dB), Phase, Impedance, or Magnitude (ratio) - over frequency.
  - Multiple sweeps per plan line: Record multiple sweeps against a single line of the test plan, for repeatability checking or to assess the impact of a change in test conditions.
  - Import of non-Doble file types: Import and convert test results created using SFRA test systems from certain other manufacturers. SFRA V6 also imports results saved using file formats outlined in international standards for SFRA testing.
  - Export of test results into IEC and CIGRE suggested formats, as well as raw-data comma-separate-value (CSV) files.
  - Overlay and compare: Retrieve test results from other test sessions within a test file or from other sources and compare those results by overlaying multiple test plots or using the built-in analysis tools.
  - Leakage Channel Analysis: New leakage channel algorithm automates analysis of the short circuit SFRA test results across all three phases of a transformer – providing an invaluable indicator of radial distortion of windings relative to each other and to the core. (cont.)
- SFRA 6 employs a proprietary algorithm to identify the linear region in the inductive roll off and calculates the offset between evaluated traces with a few mouse clicks. The results are displayed to the user for easy interpretation.
  - Ratio Analysis: New Ratio Analysis algorithm uses inter-winding tests to automatically identify which winding (high-side or low-side) is shorted.
  - Correlation Analysis: Includes and improves on the existing correlation analysis tools found in previous versions of Doble SFRA software.
  - Doble Database access: Built-in access to the Doble Database test data storage system for upload and download of test data.
  - Reporting: Incorporates the robust, customizable report generation features found in DTA and other Doble applications. View reports in preview mode; send to a printer; or export to PDF, Microsoft® Word, or Microsoft® Excel formats.
  - Language localization: In addition to English, SFRA 6 software is available in the Spanish, Portuguese, French and Chinese (traditional & simplified) languages.



Results of automated Leakage Channel Analysis presented to the user.



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