EMI Test System Data Sheet

EMI Test System Software
DSA Series Spectrum Analyzer
EMC Laboratory

Antenna

Near Field Probe

DSA Spectrum Analyzer

EMI Test System

LISN

RIGOL Technologies, Inc.

Product Overview

EMI Test System is a PC application software developed by RIGOL for DSA1000A, DSA1000 and DSA800 (with the EMI-DSA800 option) with the EMI function. This software is designed on the basis of the standard drive VISA and you can realize the communication between the software and instrument via USB-TMC or LAN interface to control the instrument.

Users can perform conduction and radiation tests using EMI Test System and RIGOL DSA series spectrum analyzer. You can measure the interference voltage on the power cable using the linear impedance stability network (LISN) and perform amplitude correction on the results by loading the correction factor (antenna, cable, other or user) automatically in the radiation test.

This software also provides various functions to facilitate your measurements. You can set various parameters (such as the frequency range, resolution bandwidth and scan time) via the scan list. After performing a scan, the results can be displayed in log or linear format. You can search for signal, measure its peak value, quasi-peak value and average as well as display the results in the peak list. You can mark and delete the undesired signal as well as easily recognize signals that do not pass the standard limit line by using the peak list function.

Product Features

- Provide amplitude correction function.
- You can edit the scan list and perform scan by segments to improve the measurement speed.
- The limit line function can be used to quickly judge the measurement results.
- Provide fast pre-scan and final scan modes.
- Provide peak search function. You can define and save the peak list.
- The frequency axis supports linear and log scale display.
- Auto generation of test report.

Product Functions

For users to use the software to quickly perform EMI test, the measurement procedures as shown in the figure below are recommended.
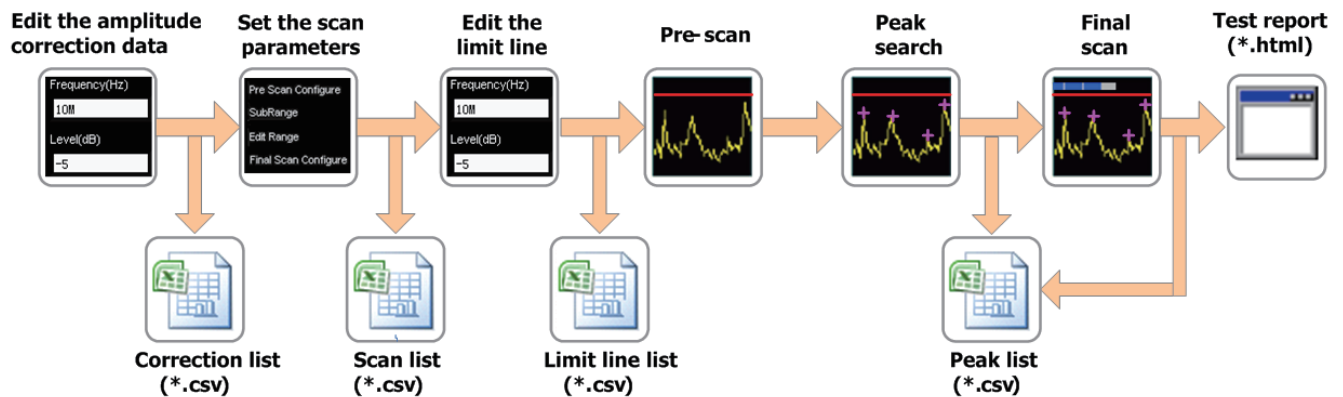
Edit the amplitude correction data

Enter amplitude correction setting and compensate the gain or loss of the external devices (such as the antenna and cable). You can view the correction data list in table form as well as save and load the correction data currently edited.

Set the scan parameters

Configure the pre-scan, segment scan and final scan parameters. You can set the segment scan parameters separately using EMI Test System, view the segment scan data list in table form as well as save and load the segment scan data currently edited.

Edit the limit line

Edit the limit line data and set the measurement limits. You can view the limit line data list in table form as well as save and load the limit line data currently edited. After performing a step frequency scan, you can preview the measurement results in the spectrum window and compare them with the preset limit line value.

Pre-scan

Perform segment pre-scan according to the segment scan setting to improve the measurement speed of the software.

Peak search

Set the peak parameters and perform peak search. The spectrum analyzer filters and marks the peak list according to the user-defined conditions. Users can edit the peak list, add or delete frequency points as well as save and load the peak list currently edited.

Final scan

One-key final scan. You can perform more accurate scan on the critical interference signal using the final scan function to ensure the measurement accuracy of the software.

Test report

Add report parameters and other explanations according to the actual test environment. The software generates a test report (*.html file) automatically for further processing of the measurement values.

▶ Specifications

EMI Test System		
Frequency range	DSA815/ DSA815−TG	9 kHz to 1.5 GHz
	DSA832/ DSA832−TG	9 kHz to 3.2 GHz
	DSA875/ DSA875−TG	9 kHz to 7.5 GHz
	DSA1020	9 kHz to 2 GHz
	DSA1030/ DSA1030−TG	9 kHz to 3 GHz
	DSA1030A/ DSA1030A−TG	9 kHz to 3 GHz
Attenuation	DSA815/ DSA815−TG	0 dB to 30 dB
	DSA832/ DSA832−TG	
	DSA875/ DSA875−TG	
	DSA1020	0 dB to 50 dB
	DSA1030/ DSA1030−TG	
	DSA1030A/ DSA1030A−TG	
Pre−scan resolution bandwidth/final scan resolution bandwidth (−3 dB)	DSA815/ DSA815−TG	100 Hz, 300 Hz, 1 kHz, 3 kHz, 10 kHz, 30 kHz, 100 kHz, 300 kHz, 1 MHz
	DSA1020	
	DSA1030/ DSA1030−TG	
	DSA832/ DSA832−TG	10 Hz, 30 Hz, 100 Hz, 300 Hz, 1 kHz, 3 kHz, 10 kHz, 30 kHz, 100 kHz, 300 kHz, 1 MHz
	DSA875/ DSA875−TG	
	DSA1030A/ DSA1030A−TG	
Pre−scan resolution bandwidth/final scan resolution bandwidth (−6 dB)	DSA815/ DSA815−TG	200 Hz, 9 kHz, 120 kHz
	DSA832/ DSA832−TG	
	DSA875/ DSA875−TG	
	DSA1020	
	DSA1030/ DSA1030−TG	
	DSA1030A/ DSA1030A−TG	
Measurement time	DSA815/ DSA815−TG	0.0167 ms to 2500 ms
	DSA832/ DSA832−TG	0.0167 ms to 5333.3 ms
	DSA875/ DSA875−TG	0.0167 ms to 12500 ms
	DSA1020	0.0167 ms to 3333 ms
	DSA1030/ DSA1030−TG	0.0167 ms to 5000 ms
	DSA1030A/ DSA1030A−TG	

▶ Ordering Information

	Description	Order Number
	EMI Test System software	EMI Test System
Model	spectrum analyzer, 9 kHz to 1.5 GHz (with preamplifier)	DSA815
	spectrum analyzer, 9 kHz to 3.2 GHz	DSA832
	spectrum analyzer, 9 kHz to 7.5 GHz	DSA875
	spectrum analyzer, 9 kHz to 1.5 GHz (with preamplifier, with tracking generator, factory installed)	DSA815-TG
	spectrum analyzer, 9 kHz to 3.2 GHz (with tracking generator, factory installed)	DSA832-TG
	spectrum analyzer, 9 kHz to 7.5 GHz (with tracking generator, factory installed)	DSA875-TG
	spectrum analyzer, 9 kHz to 3 GHz (with preamplifier)	DSA1030A
	spectrum analyzer, 9 kHz to 3 GHz	DSA1030
	spectrum analyzer, 9 kHz to 2 GHz	DSA1020
	spectrum analyzer, 9 kHz to 3 GHz (with preamplifier, with tracking generator, factory installed)	DSA1030A-TG
	spectrum analyzer, 9 kHz to 3 GHz (with tracking generator, factory installed)	DSA1030-TG
Option	EMI filter & quasi-peak detector	EMI-DSA800

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