RIGOL

User's Guide

DSA700 Options and Accessories

Jun. 2016

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Publication Number

UMD18100-1110

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E-mail: service@rigol.com

Websites: www.rigol.com

Content

DSA700 Options and Accessories

Options and accessories provided by DSA700 series spectrum analyzer are as shown in the table below. If needed, please contact **RIGOL** or the local distributors. This manual only introduces the functions of some options. For the option with remark in the table below, refer to the dedicated manual.

	Description	Order Number
Model	spectrum analyzer, 100 kHz to 500 MHz (with preamplifier)	DSA705
	spectrum analyzer, 100 kHz to 1 GHz (with preamplifier)	DSA710
Standard accessories	quick guide (hard copy)	-
	power cable	-
Options	EMI filter & quasi-peak detector	EMI-DSA800
	advanced measurement kit	AMK-DSA800
	DSA PC software[1]	Ultra Spectrum
	signal seamless capture	SSC-DSA
Optional accessories	include: N-SMA cable, BNC-BNC cable, N-BNC adaptor, N-SMA adaptor, 75 Ω to 50 Ω adaptor, 900 MHz/1.8 GHz antenna (2pcs), 2.4 GHz antenna (2pcs)[2]	DSA Utility Kit
	include: N(F)-N(F) adaptor (1pcs), N(M)-N(M) adaptor (1pcs), N(M)-SMA(F) adaptor (2pcs), N(M)-BNC(F) adaptor (2pcs), SMA(F)-SMA(F) adaptor (1pcs), SMA(M)-SMA(M) adaptor (1pcs), BNC T type adaptor (1pcs), 50 Ω SMA load (1pcs), 50 Ω BNC impedance adaptor (1pcs)[2]	RF Adaptor Kit
	include: 50 Ω to 75 Ω adaptor (2pcs)[2]	RF CATV Kit
	include: 6dB attenuator (1pcs), 10dB attenuator (2pcs)[2]	RF Attenuator Kit
	30dB high power attenuator, max. power 100W[2]	ATT03301H
	N(M)-N(M) RF cable[2]	CB-NM-NM-75-L-12G

	N(M)-SMA(M) RF cable[2]	CB-NM-SMAM-75-L-12G
	RF demo kit (transmitter)[2]	TX1000
	RF demo kit (receiver)[2]	RX1000
	near field probe[2]	NFP-3
	EMI pre-compliance test software[3]	S1210 EMI Pre-compliance Software
	rack mount kit[2]	RM-DSA800
	soft carrying bag	BAG-G1
	USB cable	CB-USBA-USBB-FF-150
	USB to GPIB interface converter for instrument	USB-GPIB

Remark:

[1] For more details of this option, refer to the help document of Ultra Spectrum (you can call the manual by clicking the icon  in the upper right corner of the software, or download the manual from www.rigol.com).

[2] For more details, refer to the corresponding manual (included in the option package in hard copy form, or download the manual from www.rigol.com).

[3] For more details of this accessory, refer to the help document of S1210 EMI Pre-compliance Software (you can call the manual by clicking **Help** in the menu bar of the software, or download the manual from www.rigol.com).

Standard Accessories

The following are the standard accessories.

Power Cord

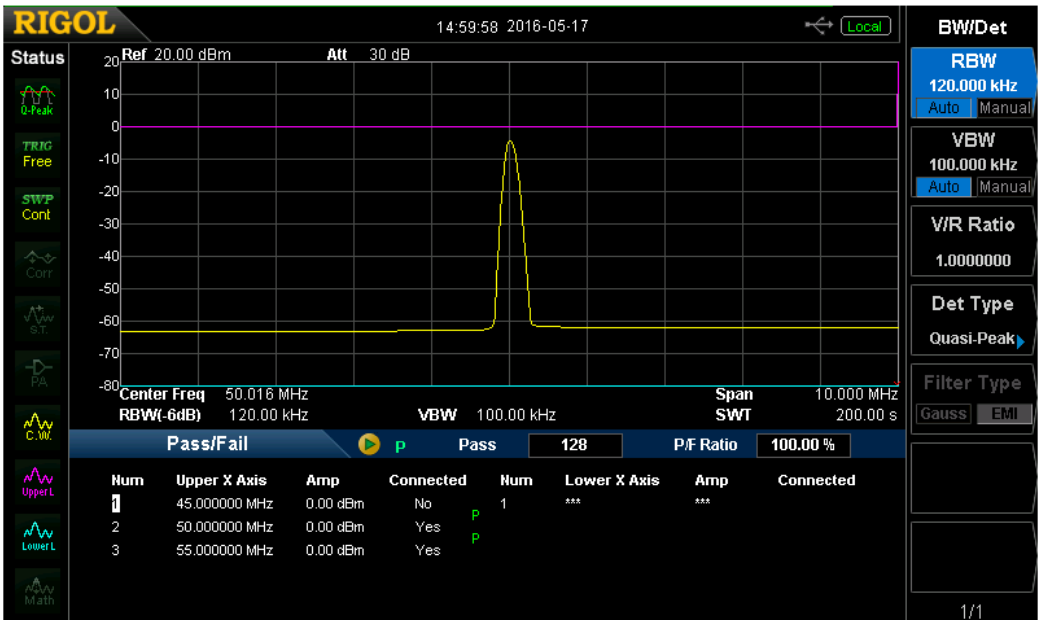
Quick Guide

Note: Images in this section are indicative only. The actual products you receive may differ.

EMI Filter and Quasi-Peak Detector

EMI-DSA800 option provides Quasi-Peak detector and EMI filter (200 Hz, 9 kHz, 120 kHz, -6 dB bandwidth). Quasi-Peak detection is a weighted form of peak detection. For each data point, the detector detects the peaks within the specified time interval, weights the peaks detected using circuit with specified charge and discharge structures as well as the display time constant specified in the CISPR Publication 16 standards and display the result. By default, the instrument uses Gauss filter and will switch to EMI filter automatically if Quasi-Peak detector is selected.

Press **BW/Det** at the front panel. Then, press **Det Type** to select Quasi-Peak detector. At this point, the instrument automatically changes the filter type to EMI and the **Filter Type** menu is grayed out and disabled. EMI-DSA800 option is used in electromagnetic interference test.



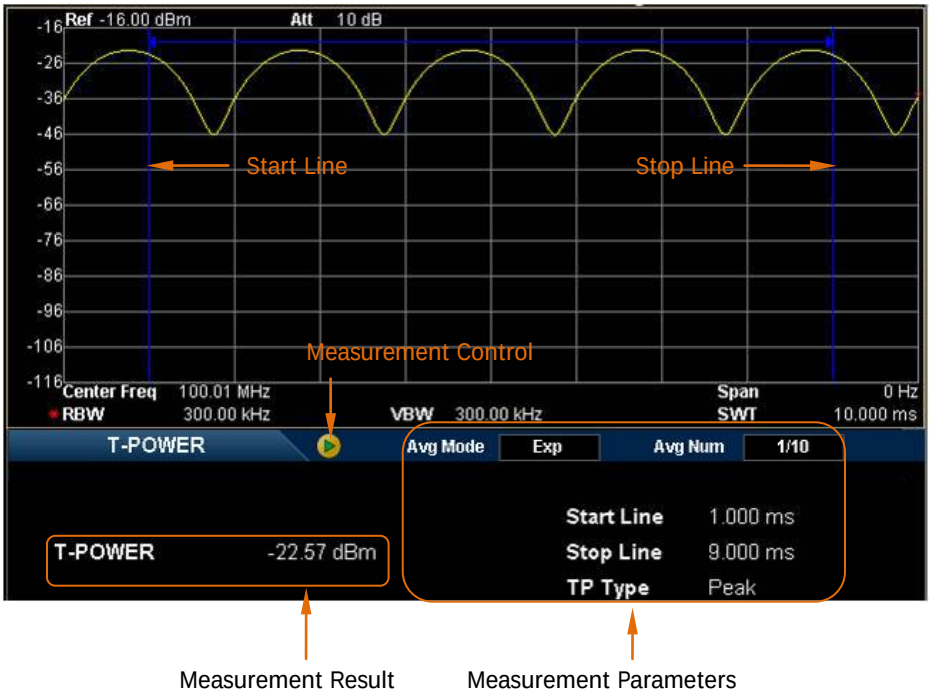
Advanced Measurement Kit

AMK-DSA800 option provides various measurement functions, including T-Power, ACP (Adjacent Channel Power), Chan Pwr (Channel Power), OBW (Occupied Bandwidth), EBW (Emission Bandwidth), C/N Ratio, Harmo Dist (Harmonic Distortion) and TOI (Third Order Intermodulation). For advanced measurement functions, the measurement mode can be single or continuous and you can control the measurement including Restart, Pause and Resume.

Press **Meas** at the front panel and then press **Meas Fctn** to select a measurement function. The screen is divided into two windows with the upper window (the basic measurement window) displaying the sweep trace and the lower window displaying the measurement results.

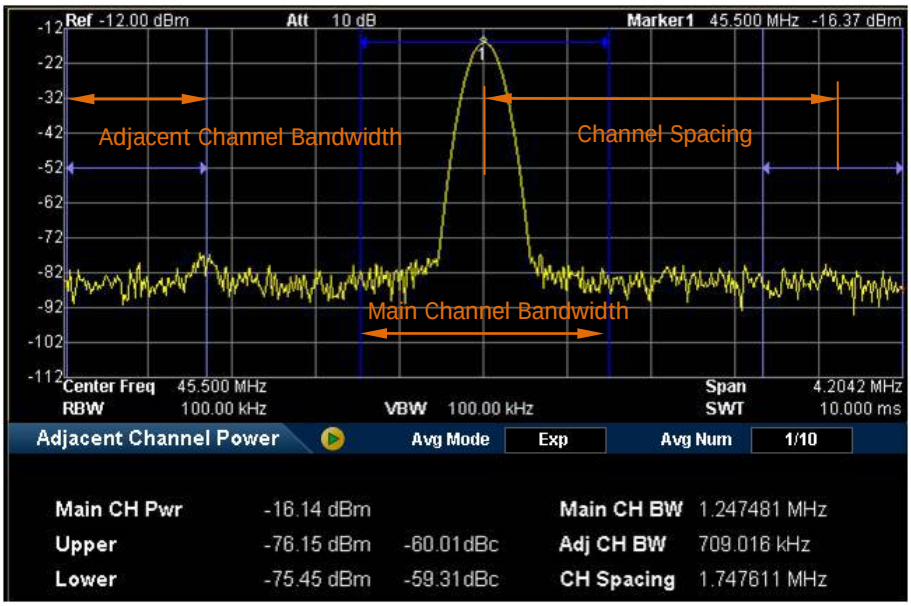
1. T-power

The system enters zero span mode and calculates the power within the time domain. The types of powers available include Peak, Average and RMS.



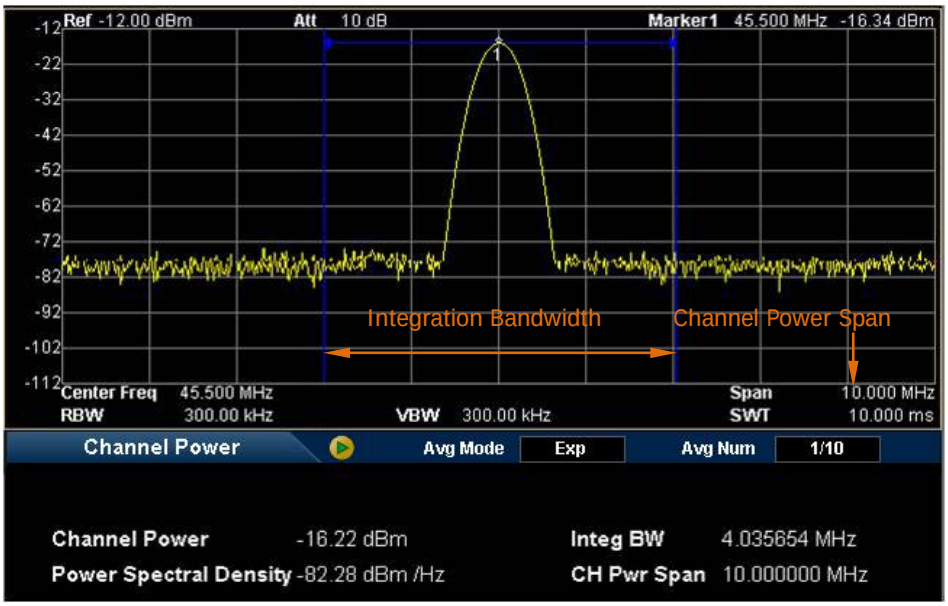
2. ACP

Measure the powers of the main channel and adjacent channels as well as the power difference between the main channel and each of the adjacent channels. When this function is enabled, the span and resolution bandwidth of the analyzer are adjusted to smaller values automatically.



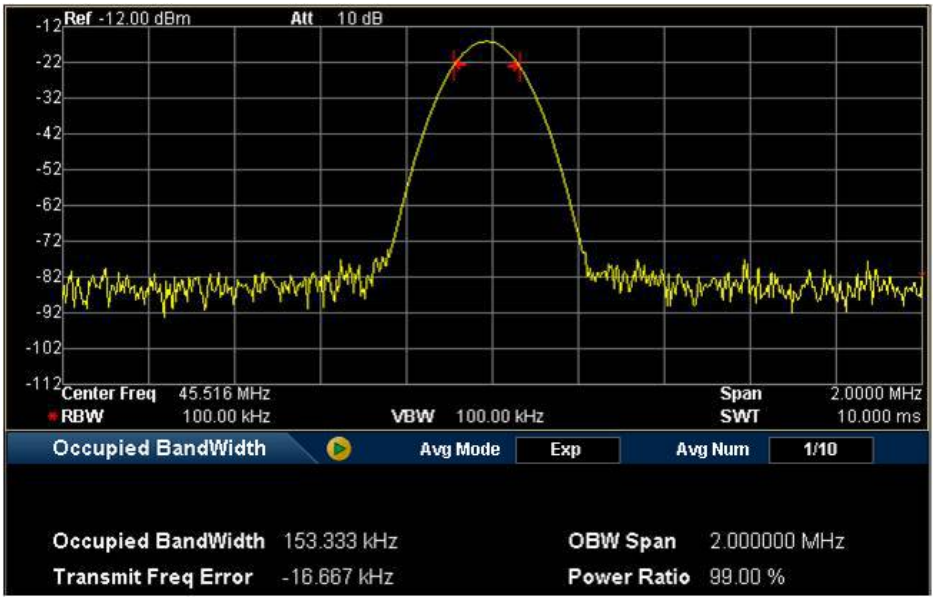
3. Chan Pwr

Measure the power and power spectral density within the specified channel bandwidth. When this function is enabled, the span and resolution bandwidth are automatically adjusted to smaller values.



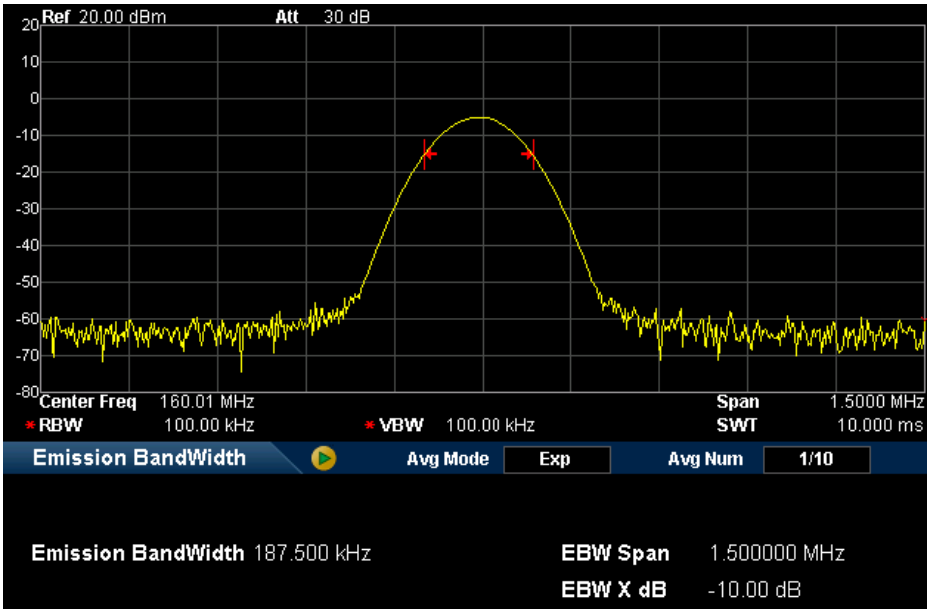
4. OBW

Integrate the power within the whole span and calculate the bandwidth occupied by this power according to the specified power ratio. The OBW function also indicates the difference between the center frequency of the channel under measurement and the center frequency of the analyzer.



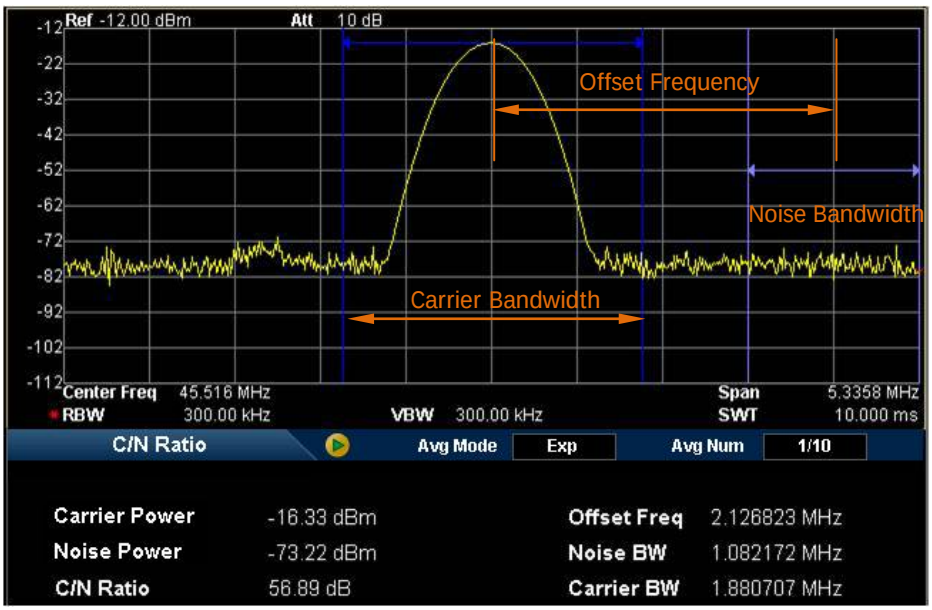
5. EBW

Measure the bandwidth between two points on the signal which are X dB below the highest point within the span.



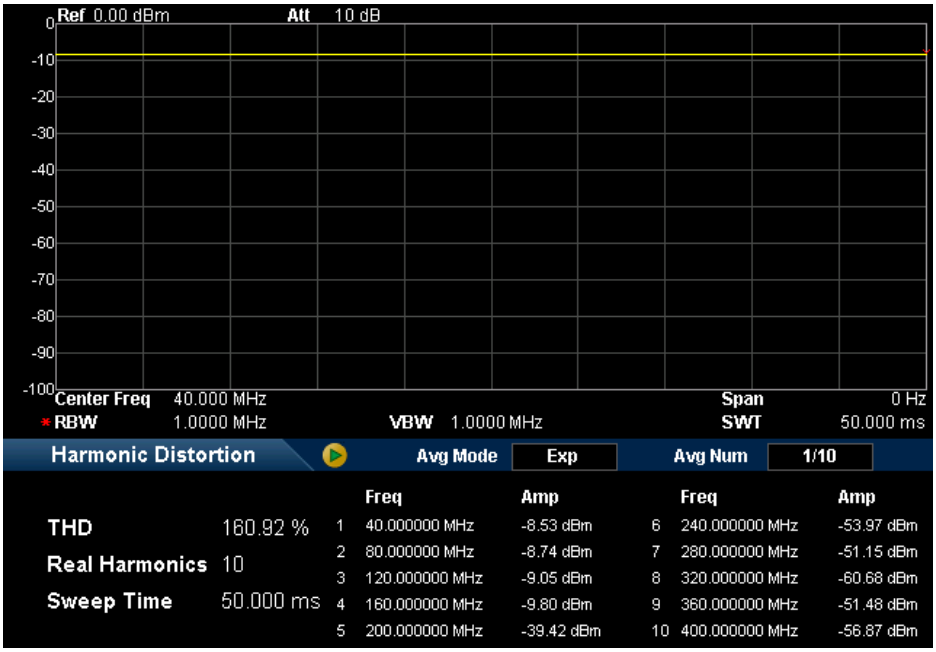
6. C/N Ratio

Measure the powers of the carrier and noise with the specified bandwidths as well as their power ratio.



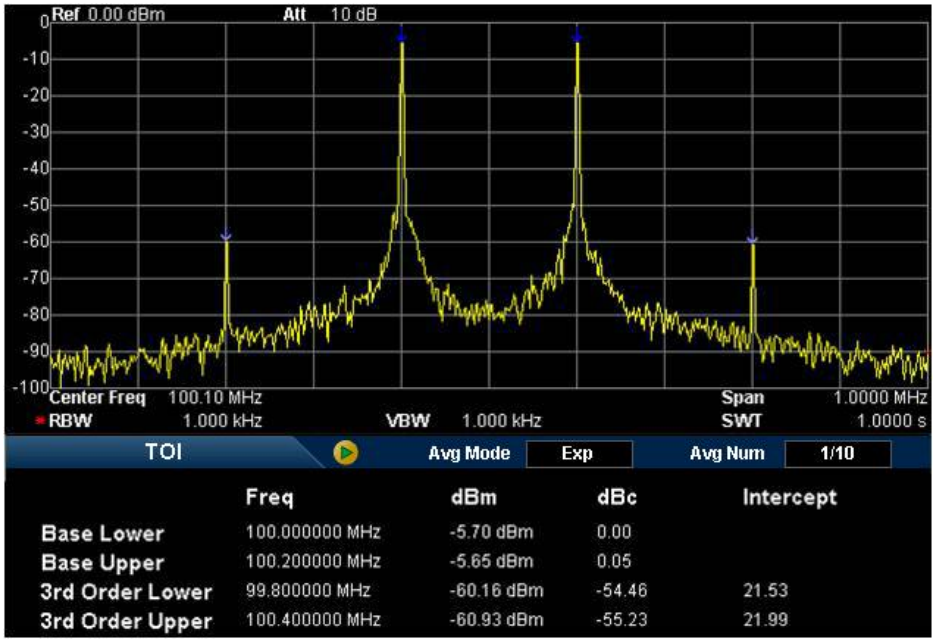
7. Harmo Dist

Measure the power of each order of harmonic and THD (total harmonic distortion) of the carrier. The highest order of harmonic available is 10 and the fundamental wave amplitude must be greater than -50 dBm, or else the measurement will be invalid.



8. TOI

Measure the parameters of the TOI production of two signals with the same amplitude and similar frequency. Those parameters include the frequencies and amplitudes of the Base Lower, Base Upper, 3rd Order Lower and 3rd Order Upper signal, as well as the Intercepts of both the Base Lower and Base Upper.



USB-GPIB Interface Converter

Through the **RIGOL** USB-GPIB interface converter, the spectrum analyzer can be connected to the GPIB bus controller of the PC, namely to expand a GPIB interface through which the spectrum analyzer can finish various tasks using the GPIB instructions more easily for the spectrum analyzer. The performance characteristics of the USB-GPIB interface converter are listed below.

- Achieve GPIB control via the USB Host interface of the spectrum analyzer.
- Distribute a GPIB address for the spectrum analyzer via the GPIB host device (PC).
- USB powered instead of external power supply.
- Indicate the power status via a LED.

Connect the USB interface and the GPIB interface of the USB-GPIB interface converter to the USB Host interface of the spectrum analyzer and the GPIB bus controller of the PC respectively.