

DSA800 Series Spectrum Analyzer



- **Features and Benefits**
- All-Digital IF Technology
 - Frequency Range from 9 kHz up to 7.5 GHz
 - Min. -161dBm Displayed Average Noise Level (DANL)
 - Min. < -98dBc/Hz @ 10kHz Offset Phase Noise
 - Level Measurement Uncertainty up to < 0.8dB
 - Up to 10Hz Minimum Resolution Bandwidth (RBW)
 - Up to 7.5GHz Tracking Generator (DSA8XX-TG)
 - Advanced Measurement functions (Opt.)
 - EMI Filter & Quasi-Peak Detector Kit(Opt.)
 - VSWR Measurement Kit(Opt.)
 - Complete Connectivity: LAN(LXI),USB Host & Device, GPIB (Opt.)
 - 8 Inch WVGA (800x480) Display
 - Compact Size, Light weight design

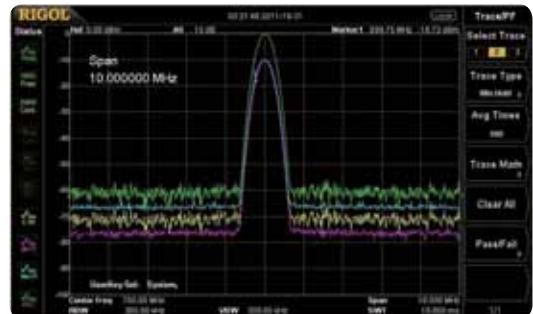
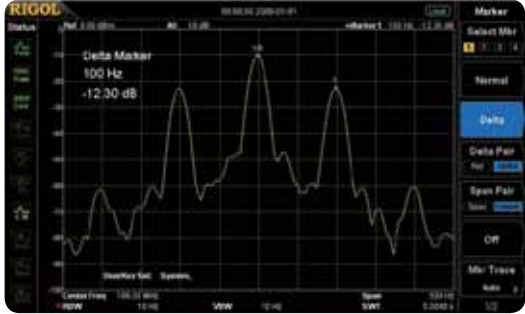


Product Dimensions: Width X Height X Depth = 361.6 mm x 178.8 mm x 128 mm

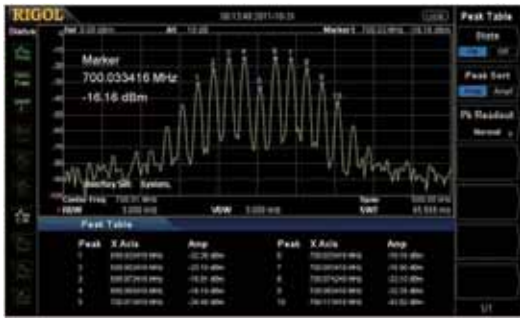
► **Features and Benefits**

Distinguish the two nearby signals clearly with the 10Hz RBW (DSA832/875)

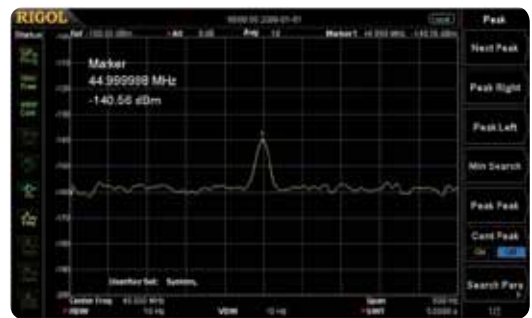
Compare the spectrums with different color trace



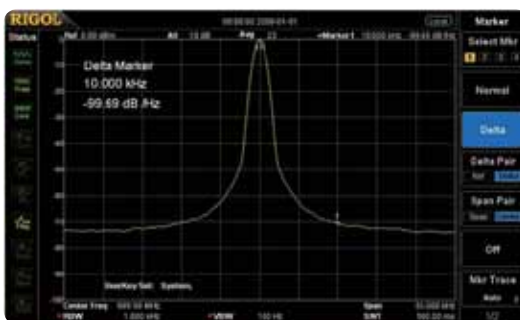
Readout the Spectrum Peak values with the Peak table function



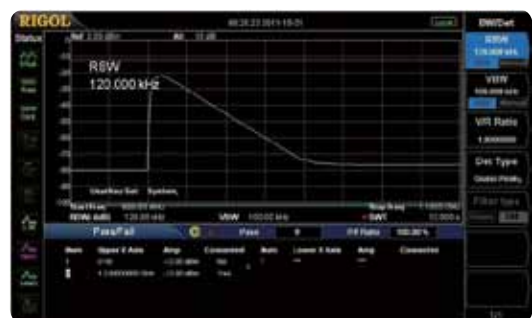
Measure lower level signal with the Preamplifier Turn on



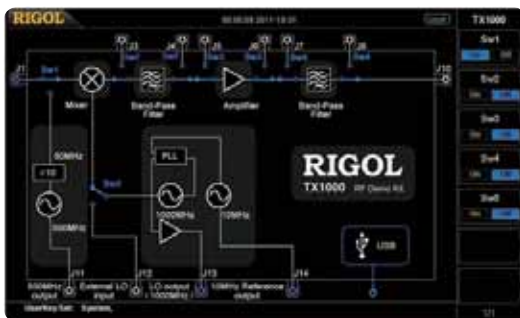
Phase Noise <-98dBc/Hz @10 kHz offset (DSA832/875)



EMI Kit(EMI Filter & Quasi-Peak & Pass_Fail)



The GUI to control the RF Demo Kit (Transmitter) directly



VSWR Measurement



▶ Key Specifications(Cont.)

| | DSA815 | DSA832 | DSA875 |
|---|-------------------------------------|------------------------------------|------------------|
| Frequency | | | |
| Frequency Range | 9 kHz to 1.5 GHz | 9 kHz to 3.2 GHz | 9 kHz to 7.5 GHz |
| Frequency Resolution | 1 Hz | | |
| SSB Phase Noise | 20°C to 30°C , f _c =1GHz | | |
| Carrier Offset | DSA815 | DSA832 | DSA875 |
| 10kHz | <-80dBc/Hz | <-98dBc/Hz | |
| 100kHz | <-100dBc/Hz (typ.) | <-100dBc/Hz (typ.) | |
| 1MHz | <-115dBc/Hz (typ.) | <-120dBc/Hz (typ.) | |
| Bandwidths | | | |
| Resolution Bandwidth (-3dB) | 100 Hz to 1 MHz, in 1-3-10 sequence | 10 Hz to 1 MHz, in 1-3-10 sequence | |
| RBW Uncertainty | <5% (nom.) | | |
| Resolution Filter Shape Factor (60dB: 3dB) | <5 (nom.) | | |
| Video Bandwidth (-3dB) | 1 Hz to 3 MHz, in 1-3-10 sequence | | |
| Resolution Bandwidth (-6dB) (EMI-DSA800 option) | 200 Hz, 9 kHz, 120 kHz | | |

► Key Specifications(Cont.)

| | | DSA815 | DSA832 | DSA875 |
|-------------------------------------|--------------------|---|---------------------------|---------------------------|
| Displayed Average Noise Level(DANL) | | 0 dB RF Attenuation, RBW=VBW=100Hz, Sample Detector, Trace Average ≥ 50, Tracking generator OFF, normalized to 1Hz 20°C to 30°C ,input terminated 50Ω | | |
| PA Off | 9 kHz to 100 kHz | | <-120dBm (typ.) | |
| | 100 kHz to 5 MHz | <-130dBm dbm, <-135dBm (typ.) | <-135dBm, <-138dBm (typ.) | |
| | 5MHz to 1.5 GHz | | | |
| | 1.5 MHz to 3.2 GHz | | <-140dBm, <-144dBm (typ.) | |
| | 3.2 GHz to 6 GHz | | | <-136dBm, <-140dBm (typ.) |
| 6GHz to 7.5GHz | | | <-131dBm, <-135dBm (typ.) | |
| PA On | 100 kHz to 5 MHz | <-150dBm, <-155dBm (typ.) | <-152dBm, <-155dBm (typ.) | |
| | 5 MHz to 1.5GHz | | | |
| | 1.5 GHz to 3.2 GHz | | <-157dBm, <-161dBm (typ.) | |
| | 3.2 GHz to 6 GHz | | | <-153dBm, <-157dBm (typ.) |
| | 6 GHz to 7.5 GHz | | | <-148dBm, <-152dBm (typ.) |

| Level Measurement Uncertainty | | | | | |
|-------------------------------|--|---|-------------------|-------------------|--|
| | | DSA815 | DSA832 | DSA875 | |
| | | 95% confidence level, S/N>20 dB, RBW=VBW=1 kHz, preamplifier off, 10 dB RF attenuation, -50dBm<RF input level≤0dBm, $f_c > 10\text{MHz}$, 20 °C to 30 °C | | | |
| Level Measurement Uncertainty | | <1.5 dB(nom.) | <0.8 dB(nom.) | | |
| TG Output | | DSA815 | DSA832 | DSA875 | |
| Frequency Range | | 100kHz to 1.5 GHz | 100kHz to 3.2 GHz | 100kHz to 7.5 GHz | |
| Output level range | | -20dBm to 0dBm | | -30dBm to 0dBm | |
| Output level Resolution | | 1dB | | | |

► Ordering Information

| | Description | Order Number | |
|-------------|---|---|-----------------|
| Model | Spectrum Analyzer, 9kHz to 1.5GHz (with preamplifier) | DSA815 | |
| | Spectrum Analyzer, 9kHz to 3.2GHz | DSA832 | |
| | Spectrum Analyzer, 9kHz to 7.5GHz | DSA875 | |
| | Spectrum Analyzer, 9kHz to 1.5GHz (with preamplifier, with tracking generator, factory installed) | DSA815-TG | |
| | Spectrum Analyzer, 9kHz to 3.2GHz (with tracking generator, factory installed) | DSA832-TG | |
| | Spectrum Analyzer, 9kHz to 7.5GHz (with tracking generator, factory installed) | DSA875-TG | |
| Standard | Quick Guide (Hard Copy) | QGD03X00 | |
| Accessories | CDROM (User's Guide, Programming Guide) | - | |
| | Power Cable | - | |
| Options | Preamplifier, 100kHz to 3.2GHz (only for DSA832) | PA-DSA832 | |
| | Preamplifier, 100kHz to 7.5GHz (only for DSA875) | PA-DSA875 | |
| | EMI Filter & Quasi-Peak Detector | EMI-DSA800 | |
| | Advanced Measurement Kit | AMK-DSA800 | |
| | VSWR Measure Package | VSWR-DSA800 | |
| | DSA PC Software | Ultra Spectrum | |
| | Optional Accessories | Include: N-SMA Cable, BNC-BNC Cable, N-BNC Adaptor, N-SMA Adaptor, 75Ω-50Ω Adaptor, 2 Antennas (900MHz/1.8GHz), 2 Antennas (2.4GHz) | 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), 50Ω SMA Load (1pcs), 50Ω Impedance Adaptor (1pcs) | RF Adaptor Kit |
| | Include: 50Ω to 75Ω Adaptor (2pcs) | RF CATV Kit | |
| | Include: 6dB Attenuator (1pcs), 10dB Attenuator (2pcs) | RF Attenuator Kit | |
| | 30dB High Power Attenuator, Max Power 100W | ATT03301H | |
| | N(M)-N(M) RF Cable | CB-NM-NM-75-L-12G | |
| | N(M)-SMA(M) RF Cable | CB-NM-SMAM-75-L-12G | |
| | RF Demo Kit (Transmitter) | TX1000 | |
| | RF Demo Kit (Receiver) | RX1000 | |
| | VSWR Bridge (2 GHz) | VB1020 | |
| | VSWR Bridge (800 MHz to 4 GHz) | VB1040 | |
| | VSWR Bridge (2 GHz to 8 GHz) | VB1080 | |
| | Rack Mount Kit | RM-DSA800 | |
| | Soft Carrying Bag | BAG-G1 | |
| | USB to GPIB Interface Converter for Instrument | USB-GPIB | |

► RIGOL Spectrum Analyzer Option and Accessory

| | | |
|------------------------|------------------------|--------------------|
| Harmonic Distortion | TOI | Emission Bandwidth |
| Channel Power | Occupied Bandwidth | |
| Time Domain Power | Carrier to Noise Ratio | |
| Adjacent Channel Power | Pass/Fail | |

Advanced Measurement Kit
(AMK-DSA800,AMK-DSA1000)



Rack Mount Kit
(RM-DSA800, RM-DSA1000)



VSWR Bridge
(VB1020/VB1040/VB1080)



RF Demo Kit
(TX1000)



RF Demo Kit
(RX1000)



RF CATV Kit



DSA Utility Kit



RF Adaptor Kit



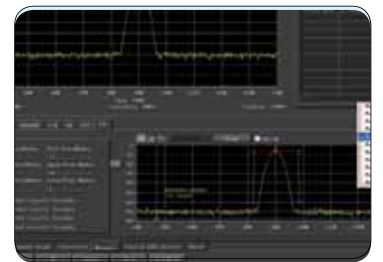
RF Attenuator Kit



RF Cable Kit



High Power Attenuator



DSA PC Software
(Ultra Spectrum)



Soft Carrying Bag
(BAG-DSA1000)



Soft Carrying Bag
(BAG-G1)



USB to GPIB Converter
(USB-GPIB)