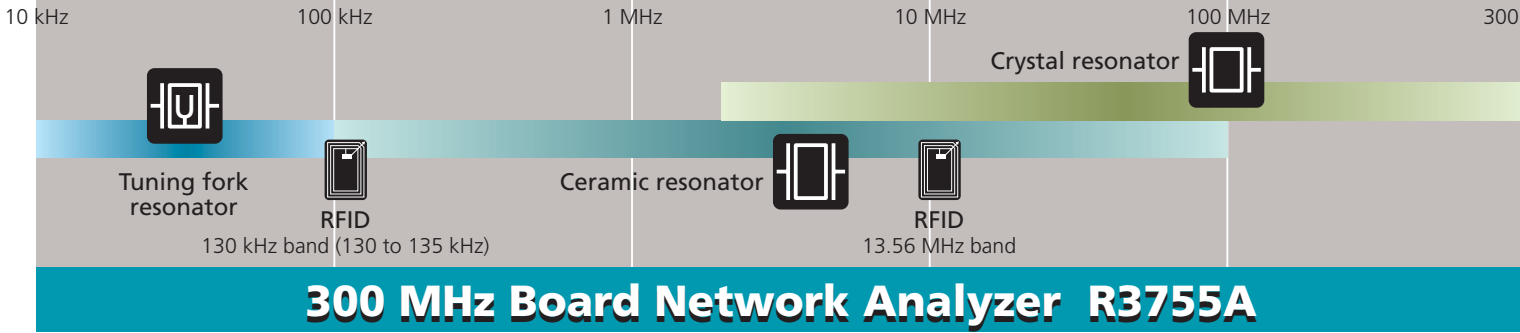


ADVANTEST

R3755A/3760

Making a personal computer a vector network analyzer





300 MHz Board Network Analyzer R3755A

Compact size, light weight, low power consumption of less than 15 W, and with the capacity to drive up to eight units in parallel.

The R3755A network analyzer evaluates the frequency characteristics of electronic components, such as the crystal resonator and ceramic resonator used in a broad range of electronic equipment, as well as antennas for receiving/transmitting wireless signals.



R3755A Key Specifications

Measurement functions

Measurement channels: 4
Measurement parameters: A/R (R channel is connected internally)

Signal source characteristics (25°C ± 5°C, calibration cycle one year)

Frequency characteristics
Range: 10 kHz to 300 MHz
Resolution: 1 mHz
Accuracy: ±20 ppm (OPT.20: ±1 ppm)

Output characteristics
Range: 10 kHz to 1 MHz: 0 to -30 dBm
1 to 300 MHz: +18 to -43 dBm 0.1 dB resolution
Range set-up: Start/Stop, or Center/Span
Sweep type: Arbitrary sweep of specified segment (Frequency, Output level, RBW, Point, Settling time)

Sweep speed: Maximum 50 µsec/point (RBW 15 kHz)
Measurement point: Maximum 1601 points (segment)
Output port: SMA (female) 50Ω connector

Receiving section characteristics (25°C ± 5°C, calibration cycle one year)

Input characteristics
Input: SMA (female) 50Ω connector
Frequency range: Same as the signal source characteristics
Average noise level: -70 dBm (RBW: 1 kHz)
Resolution bandwidth: 10 Hz to 15 kHz (1, 1.5, 2, 3, 4, 5, or 7 steps)
Error correction functions: Normalize, Trans Full Call (Full Call: Open, Short, Load)

Connections to external devices

Parallel I/O: 8-bit output (C-MOS), 4-bit input (C-MOS)

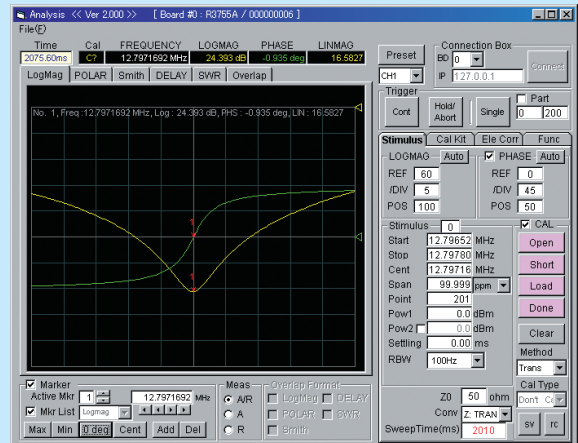
General specifications

Loadable PC¹⁾
Expansion-slot²⁾: PC which carries 1 PCI slot (32 Bit, 5 V, half-size)
OS: Windows XP
Development environment of application: Microsoft Visual Basic 2008 or Visual C++2008
Microsoft Visual Basic 6.0 or Visual C++6.0
Power supply: +5 VDC (5W), +3.3 VDC (5W), +12 VDC (1W), -12 VDC (1W) (typical)
Power consumption: 15 W or less
External dimensions: Approx. 190 (W) x 126 (H) x 20 (D) mm
Mass: 1 kg or less

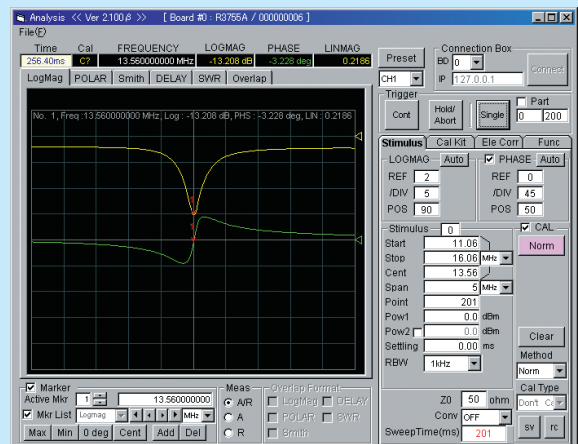
- 1) Depending on the specifications of the PC to be used, it may not operate.
- 2) Please keep the ambient air temperature (temperature in the PC) of this device equipped to the PC expansion slot from exceeding +55 degree C.

Microsoft, Windows and Visual Basic are registered trademarks of Microsoft Corporation in the United States and other countries.

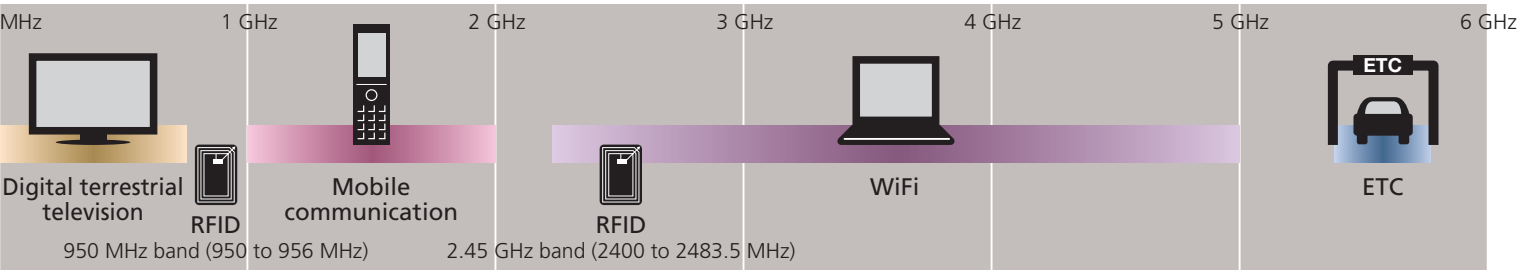
Measurement example with R3755A sample software



Example of oscillation characteristics measurement for crystal resonator



Example of oscillation frequency measurement for RFID



6 GHz Board Network Analyzer R3760



Compact size, light weight, low power consumption of less than 20 W, and with the capacity to drive up to eight units in parallel.

The R3760 network analyzer, low in cost and with a space-saving design, measures and evaluates the frequency characteristics of receiving/transmitting antennas and filters, which are used for wireless communications such as mobile phones, WiMAX, WiFi, and ETC systems for ubiquitous communication.

R3760 Key Specifications

Measurement functions

Measurement channels: 4
Measurement parameters: Reflection (S11), Transmission (S21)

Signal source characteristics (25°C ± 5°C, calibration cycle one year)

Frequency characteristics

Range: S11/S21: 300 MHz to 6 GHz
Resolution: 10 kHz
Accuracy: ±50 ppm (OPT.20: ±1 ppm stability)

Output characteristics

Range: ≤3 GHz: 0 to -10 dBm
>3 GHz: -5 to -10 dBm 0.1 dB resolution
Start/Stop, or Center/Span
Arbitrary sweep of specified segment (Frequency, Output level, RBW, Point, Settling time)

Sweep speed: Maximum 300 μsec/point
Measurement point: Maximum 1601 points (segment)
Output port: SMA (female) 50Ω connector

Receiving section characteristics (25°C ± 5°C, calibration cycle one year)

Input characteristics

Input: SMA (female) 50Ω connector
Frequency range: Same as the signal source characteristics
Average noise level: -70 dBm (RBW: 1 kHz)
Resolution bandwidth: 10 Hz to 15 kHz (1, 1.5, 2, 3, 4, 5, or 7 steps)
Error correction functions: 1-Port Full Cal, Normalize, Trans Full Cal

Connections to external devices

Parallel I/O: 8-bit output (C-MOS), 4-bit input (C-MOS)

General specifications

Loadable PC¹⁾

Expansion-slot²⁾: PC which carries two PCI slots (32Bit, 5V, half-size)
OS: Windows XP

Development environment of application:

Microsoft Visual Basic 2008 or Visual C++2008
Microsoft Visual Basic 6.0 or Visual C++6.0

Power supply:

+5 VDC (7W), +3.3 VDC (10W), +12 VDC (1W), -12 VDC (1W) (typical)

Power consumption:

20 W or less

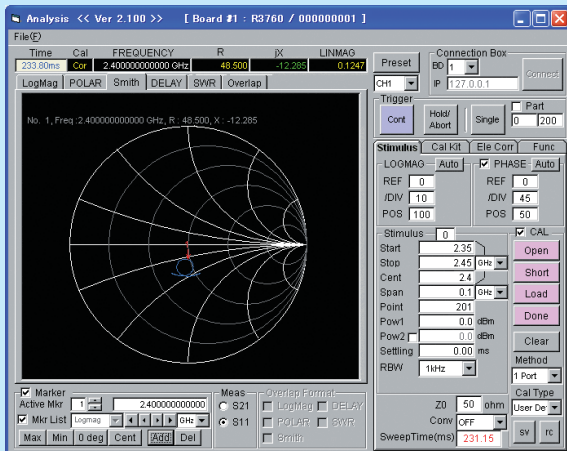
External dimensions:

Approx. 190 (W) x 126 (H) x 42 (D) mm

Mass:

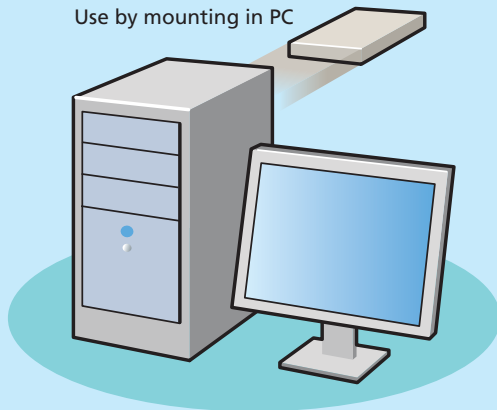
1 kg or less

Measurement example with R3760 sample software



Example of impedance measurement for antenna

Use by mounting in PC



For more information on the calibration kit required for impedance measurement, please contact our office.

Please refer to product manual for complete system specifications. Specifications may change without notification.

ADVANTEST[®]

<http://www.advantest.co.jp>

ADVANTEST CORPORATION
Shin-Marunouchi Center Building, 1-6-2 Marunouchi, Chiyoda-ku, Tokyo 100-0005, Japan Phone: +81-3-3214-7500