

# Selection Guide

Spectrum Analyzer Series  
Board Network Analyzer Series

New Concept Solution

## Spectrum Analyzer:

Compact and high performance  
High accuracy measurement by adopting digital IF and  
variegated measurement function



## Board Network Analyzer:

New measurement to build in personal  
computer and to construct system



ADVANTEST

# Spectrum Analyzer Series

## 3GHz Spectrum Analyzer U3741

## 8GHz Spectrum Analyzer U3751



U3741/U3751

**Frequency range:** U3741 9kHz to 3GHz, 9kHz to 2.2GHz(OPT.15)  
U3751 9kHz to 8GHz

**Resolution bandwidth range:** U3741 100Hz to 1MHz,  
30Hz to 1MHz(OPT.70/71)  
U3751 100Hz to 3MHz,  
30Hz to 3MHz(OPT.70/71)

**Measurement range:** +30dBm to -123dBm(PreAmp Off)  
-138dBm(PreAmp On)

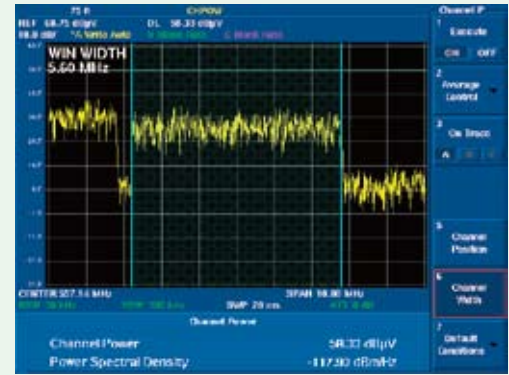
**Total level accuracy:** ±0.8dB(10MHz to 3GHz)

### Common feature to series

- Many options of the first 2ch inputs in the world, time domain analysis, etc.
- Measurement data preservation by USB memory and Remote control by LAN, and GPIB interface.
- Correspond broadly from the field to production lines by the Compact and light weight, 3 power supply systems.

### Terrestrial digital broadcasting:

Example of OFDM channel power measurement



### Tire air pressure sensor:

Example of synchronous sweep measurement by OPT.10



## Spectrum Analyzer Series Options Guide

Product name	Model No.	Overview	Main unit support			
			U3741		U3751/3771/3772	
			1ch	2ch	1ch	2ch
50 Ω series <sup>1)</sup>	2 Channel input (50 Ω)	OPT.10 Addition of RF INPUT2 (9 kHz to 3 GHz) Individual RF measurement with RF INPUT 1 and RF INPUT 2	—	○	—	○ <sup>3)</sup>
	EMC filter	OPT.28 Addition of CISPR bandwidth for EMI measurement RBW (6dB Down): 200 Hz, 9 kHz, 120 kHz, 1 MHz	○	○	○	○
	High-purity spectrum analysis (1 ch)	OPT.70 Spectrum analysis with -102 dBc/Hz @ 10 kHz offset (Typical) Addition of RBW 30 Hz	○	—	○	—
	High-purity spectrum analysis(2 ch)	OPT.71 Spectrum analysis with -102 dBc/Hz @ 10 kHz offset (Typical) Addition of RBW 30 Hz	—	○	—	○
	Tracking generator (3 GHz)	OPT.76 Frequency range: 100 kHz to 3 GHz Output level range: 0 to -60 dBm	○	○	○ <sup>2)</sup>	×
	Tracking generator (6 GHz)	OPT.77 Frequency range: 100 kHz to 6 GHz Output level range: 0 to -30 dBm	×	×	○ <sup>2)</sup>	×
75 Ω series <sup>1)</sup>	2 Channel input (75 Ω)	OPT.11 RF INPUT 2 (9 kHz to 2.2 GHz) in addition to OPT.15 Individual RF measurement with RF INPUT 1 and RF INPUT 2	—	○	—	×
	1 Channel input (75 Ω)	OPT.15 RF INPUT: 75 Ω (100 kHz to 2.2 GHz) For CATV and TV signal measurement. Channel table data installed.	○	—	×	—
	Tracking generator (2.2 GHz)	OPT.75 Frequency range: 100 kHz to 2.2 GHz. Output level range: 107 to 47 dBμV	○	○	×	×
Commons	High-stability frequency reference source	OPT.20 Reference oscillator with an aging rate of ± 2 x 10 <sup>-8</sup> /day, ± 1 x 10 <sup>-7</sup> /year	○	○	○	○
	Time-domain analysis (1 ch)	OPT.53 Analyze the basic parameter of RF signal on a time domain Max CBW: 3MHz (amplitude/phase/frequency/FFT/IQ/IQ output)	○	—	○	—
	Time-domain analysis (2 ch)	OPT.54 Analyze the basic parameter of RF signal on a time domain Max CBW: 3MHz (amplitude/phase/frequency/FFT/IQ/IQ output)	—	○	—	○
	Wide-band time-domain analysis (1 ch)	OPT.55 Analyze the basic parameter of RF signal on a time domain Max CBW: 40MHz (amplitude/phase/frequency/FFT/IQ/IQ output)	○	—	○	—
	Wide-band time-domain analysis(2ch)	OPT.56 Analyze the basic parameter of RF signal on a time domain Max CBW: 40MHz (amplitude/phase/frequency/FFT/IQ/IQ output)	—	○	—	○

1) : The options of 50 Ω series and 75 Ω series cannot be installed simultaneously.

2) : One must be selected from OPT.76/77.

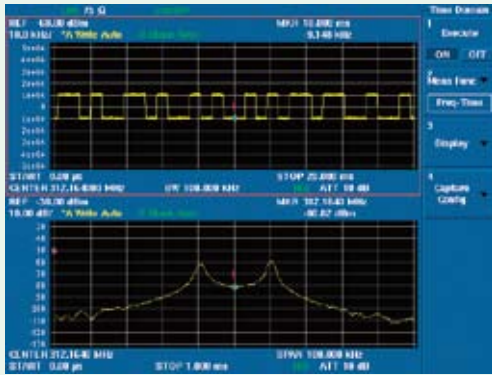
3) : When the OPT10 is installed, RF1 of 9kHz~8GHz is deleted, then RF1 is 10MHz~31.8GHz(U3771)/10MHz~43GHz(U3772) and RF2 is 9kHz~3GHz.

○ Available  
× Not available

## Spectrum Analyzer Series

### Specific low power supply unit:

Example of F-T and FFT measurement



### Antenna or filter:

Example of return loss VSWR measurement



### 31GHz Spectrum Analyzer U3771

### 43GHz Spectrum Analyzer U3772



U3771/U3772

Frequency range: U3771 9kHz to 31.8GHz

U3772 9kHz to 43GHz

Resolution bandwidth range: 100Hz to 3MHz, 30Hz to 3MHz(OPT.70/71)

Measurement range: RF1 +30dBm to -123dBm(Band:0,PreAmp Off)  
RF2 +10dBm to -105dBm(Band:4)

### ■ Feature of option (Refer to the options guide for the combination)

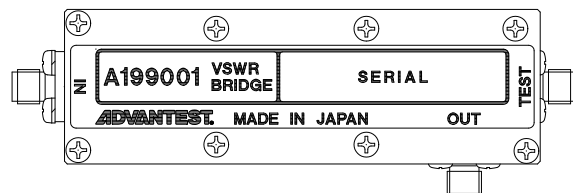
- Corresponds to the broadcasting equipment by 75Ω input (OPT.11,15).
- Parallel monitoring RF and IF signals by 2 ch input (OPT.10,11).
- Simultaneous measurement of different signals or different items by 2 ch input.
- Measurement of RF fundamental parameter by time domain analysis. (OPT.53,54,55,56).
- Time-domain analysis for high-frequency signal to 43GHz.
- Reflection/transmission measurement up to 6GHz by Tracking generator (OPT.77).

### ■ Spectrum Analyzer Series Accessory

	Model No.	Product name	Outline
Accessory	JU3700S-A	Japanese operating manual (printed manual)	The operating manual on the CD is supplied as standard.
	EU3700S-A	English operating manual (printed manual)	The operating manual on the CD is supplied as standard.
	A870008	Battery pack	for U3700 series, A maximum of 2.5-hour enabled
	A870009	Charger	Two-piece charge is simultaneously possible in A87008
	ZT-130NC	75 Ω input impedance converter	Loss 6dB Frequency characteristic up to 2GHz
	A114020	DC power cable	DC +11V to +17V
	A129001	Carrying bag	Cloth bag
	A129002	Transit case	Aluminum cases (with the handle which can be expanded and contracted)
	A122003	Rack mount kit (JIS)	-
	A124004	Rack mount kit (EIA)	-
	A899001	Filter for spurious measurement	2.8 to 18 GHz (HPF)
	A899002	Filter for spurious measurement	8 to 18 GHz (HPF)
	A899003	Filter for spurious measurement	11 to 26 GHz (HPF)
A899004	Filter for spurious measurement	18 to 30 GHz (HPF):	

### A199001 6GHz VSWR Bridge

Frequency range: 100MHz to 6GHz  
 Directivity:  $\geq 34$ dB (100MHz to 1GHz)  
 $\geq 29$ dB (1 to 3.8GHz)  
 $\geq 25$ dB (3.8 to 6GHz)  
 External dimensions: Approx. 103 × 35 × 20mm  
 (W × H × D)



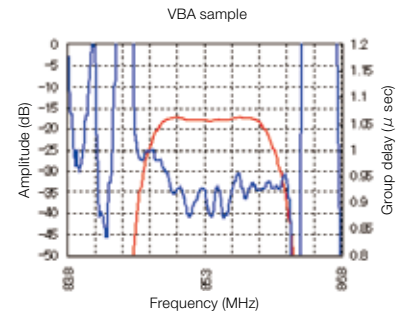
# Board Network Analyzer Series

## 300MHz Board Network Analyzer R3755A



**Frequency range:** 10kHz to 300MHz  
**Output level:** +18dBm to -43dBm (1MHz to 300MHz)  
**Measurement parameter:** A/R  
**External dimensions:** PCI board, half size, 1 slot  
**Input/output:** Parallel I/O (Standard)

## Example of Excel/VBA measurement

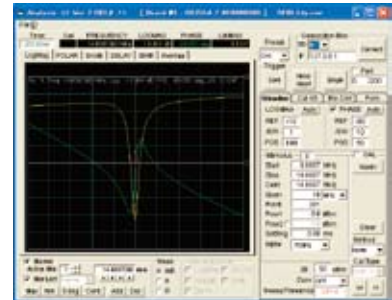


## 6GHz Board Network Analyzer R3760

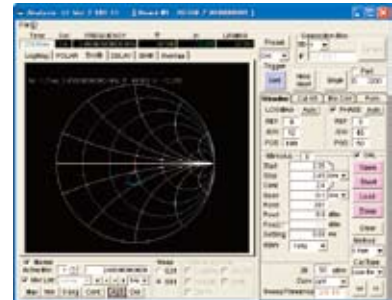


**Frequency range:** 300MHz to 6GHz  
**Output level:** 0dBm to -10dBm ( $\leq 3$ GHz)  
**Measurement parameter:** Transmission/Reflection  
**External dimensions:** PCI board, half size, 2 slots  
**Input/output:** Parallel I/O (Standard)

## Example of sample software measurement



R3755A Log/Mag Display



R3760 Smith Chart Display

### Common feature to series

- The new board network analyzer used including in a personal computer.
- Software development environments: Microsoft VB and C++.
- Provide a production line with optimality space-saving and low cost-ization.

\*Please inquire about recommended personal computer.

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

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