ADVANTEST

Options for the Spectrum Analyzer U3700 Series

U3700 Series Options OPT.10/53/77

Options such as 2 Channel Inputs, Time-based Analysis, and 6 GHz TG

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Option Guide

Product name	Model number	Overview	Main unit support	
			U3741	U3751/3771/3772
2 Channel Input Option	OPT.10	Add RF INPUT 2 The RF INPUT 1 and 2 individually measure parameters	●	—
Time-Based Analysis Option	OPT.53	Analyz the basic parameter of RF signal on a time domain (amplitude, phase, frequency, or IQ output)	●	●
6 GHz Tracking Generator Option	OPT.77	Frequency range: 100 kHz to 6 GHz Output level: 0 to -30 dBm Output impedance: 50 Ω	—	●

Note: The OPT.10 is exclusively for use by U3741.
The OPT.10 is not allowed to be installed with the OPT.53 option.
The input impedance of the OPT.10 is 50 Ω. The input impedance is not allowed to be changed to 75 Ω.

Frequency range of main unit: U3741 (9 kHz to 3 GHz), U3751 (9 kHz to 8 GHz), U3771 (9 kHz to 31.8 GHz), U3772 (9 kHz to 43 GHz)

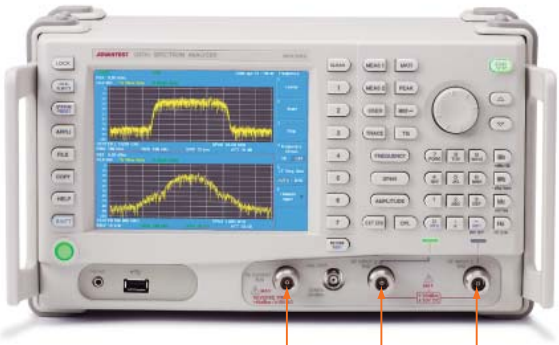
2 Channel Input Option

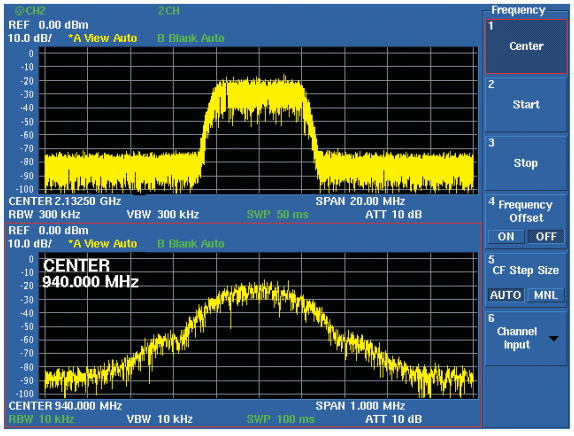
OPT.10

The 2 channel input option provides 2 RF-input measurment that operate independently. Various measuring conditions such as measuring frequency or span can be set individually. The devices, including different communication systems showing a mixture of wireless LAN and Bluetooth® can be measured, so that high-speed processing can be achieved by measuring the set items in parallel. Furthermore, since the sweep trigger has a start mode for simultaneous sweeps, the synchronous spectrum can be measured at different frequency bands. The 2 channel input option allows a unique measuring method, which is an option beyond the conventional spectrum analyzer.

The POWER and OBW are simultaneously measured

Allocating Connectors on Front Panel



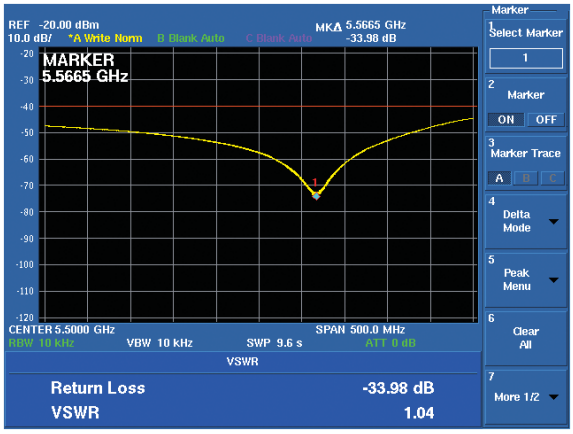


The different communication systems are simultaneously measured

6 GHz Tracking Generator Option

OPT.77

High-frequency information equipment such as Wireless LAN and ETC have spread rapidly. On the testing process of high-frequency devices such as antennas or filters, cost reduction has emerged as a formidable challenge to us. Because the tracking generator OPT.77 supports up to 6 GHz, the generator is capable of supporting up to 6 GHz of devices, which the conventional OPT.76 (3 GHz) tracking generator could not support. On the other hand, the OPT.77 can support a wide range of devices such as high-frequency information equipment, so that the OPT.77 makes a great contribution to reducing the cost of testing various devices used for information equipment.

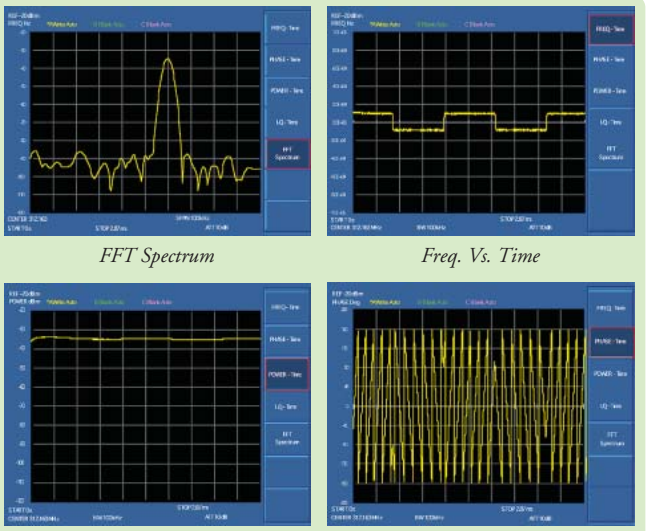


Measuring Reflection Characteristic in Conjunction with SWR Bridge

Time-Based Analysis Option

OPT.53

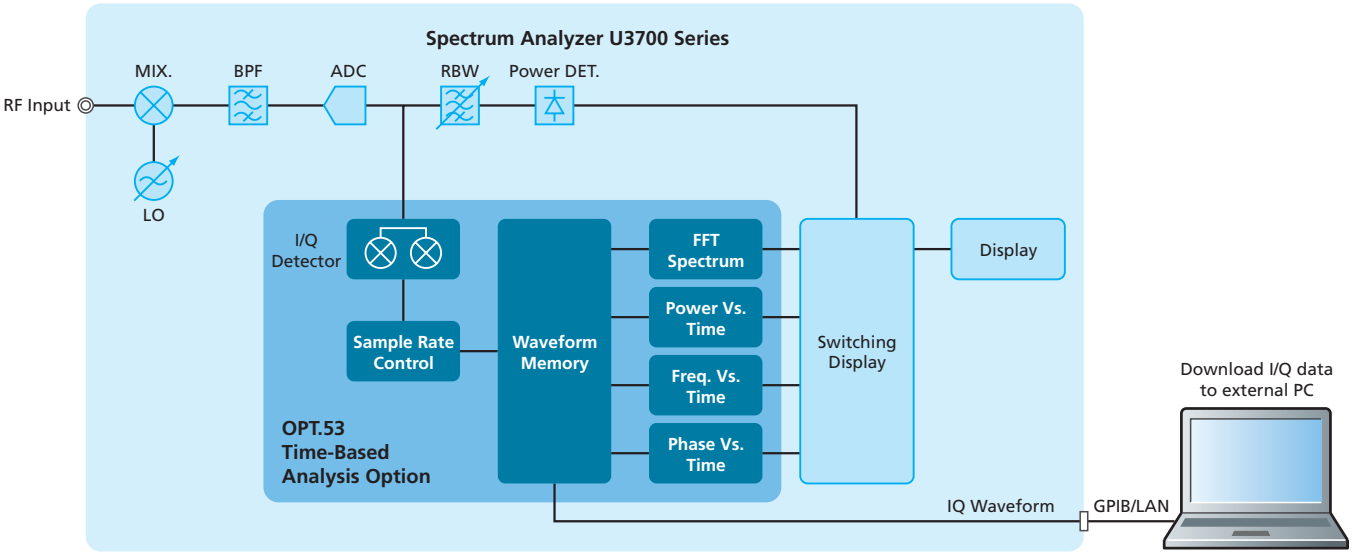
In order to produce or maintain equipment utilizing a digital modulation that is used for information-communication terminals, in-car electronics, game machines, etc., it is important to analyze the variations of power, phase, and frequency on a time basis, as well as a function of the conventional sweep type spectrum analyzer. The OPT.53 is capable of installing a function of time-based fundamental analysis, and outputting IQ signals externally. We supply the function of time-based analysis even to the manufacture and maintenance departments of equipment, at a low price.



FFT Spectrum *Freq. Vs. Time*

Power Vs. Time *Phase Vs. Time*

Multi-Domain Analysis for a Modulation Signal



Specifications

OPT.10 2 Channel Input Option (*1)

Cross talk between input channels (between RF input 1 and RF input 2):	<-90 dBc (Input level -10 dBm, Input attenuator 0 dB, Preamplifier off)
RF input 2	
Connector:	N type female
Impedance:	50 Ω (nominal)
VSWR:	<1.5 : 1 (Input attenuator > 10 dB)
External trigger input:	An external trigger input can be selected as a trigger input of RF input 2 when installing the OPT.10. The input connector is only 1 system.
21.4 MHz IF output:	Only IF output which supports RF input 1, when installing the OPT.10.

Except for all items mentioned above, the frequency, sweep, amplitude range, amplitude accuracy, dynamic range, input/output, and performance of specifications follow the standard specifications of the RF input 1 option of the U3741 spectrum analyzer.

*(*1) The OPT.10 is not allowed to be installed on the U3741 spectrum analyzer with 75 Ω input impedance analysis (OPT.15), time-based analysis (OPT.53), or high-purity spectrum analysis (OPT.70).*

OPT.53 Time-Based Analysis Option

RF range:	Follows U3700 series models.
RF amplitude range:	Noise level to +30 dBm (*2)
Wave recording method:	I/Q vector time waveform
Measuring bandwidth (BW):	100 Hz to 3 MHz (1 to 3 steps)
IQ sampling rate:	713 Hz (BW 100 Hz) to 21.4 MHz (BW 3 MHz)
IQ waveform recording time:	49 msec (BW 3 MHz) to 1000 sec (BW 100 Hz)
Number of IQ waveform recording samples:	1 M samples (I/Q)

*(*2) The noise level follows the dynamic range of the U3700 series products.*

OPT.77 6 GHz Tracking Generator Option (*3)

Frequency range:	100 kHz to 6 GHz
Output level range:	0 to -30 dBm (0.5 dB step)
Output level accuracy:	20 MHz on -10 dBm criterion, at +20 to +30°C ≤ ±0.5 dB
Output level flatness:	20 MHz on -10 dBm criterion, at +20 to +30°C ≤ ±1 dB (1 MHz to 1 GHz) ≤ ±1.5 dB (100 kHz to 3.1 GHz) ≤ ±2.0 dB (100 kHz to 6 GHz)
TG leakage:	≤ -80 dBm (input attenuator: 0 dB)
Output impedance:	50 Ω (nominal)
VSWR:	≤ 2 : 1 (Output level ≤ -10 dBm)
Maximum allowable level:	+10 dBm, ±10 VDC

*(*3) The OPT.77 is not allowed to be installed on the U3741.*

Ordering Information

2 Channel Input Option:	OPT.10
Accessory	
N-BNC adapter:	JUG-201A/U
Time-based analysis option:	OPT.53
6 GHz Tracking Generator Option:	OPT.77
Accessory	
N-BNC adapter:	JUG-201A/U

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

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