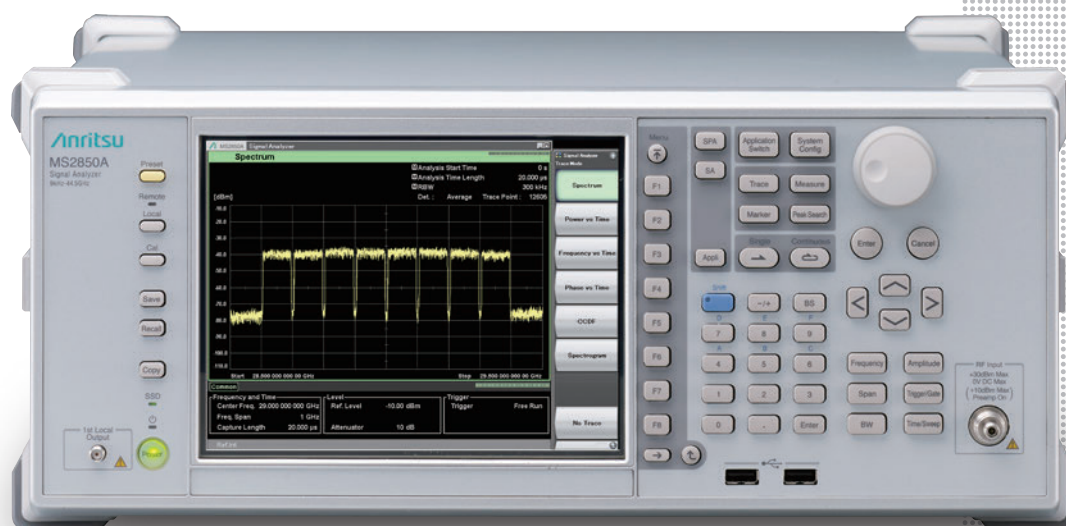**Anritsu** envision : ensure

2 TEST

Signal Analyzer

MS2850A

MS2850A-047: 9 kHz to 32 GHz
MS2850A-046: 9 kHz to 44.5 GHz

Signal Analyzer MS2850A

This explains how to order the new MS2850A and MS2850A retrofit options and measurement software.
Follow the steps below to select the MS2850A configuration.
Functions marked "standard" are built-in. Options and measurement software can be added as necessary.

Steps for New Purchase

Step 1. Select Maximum Frequency Range (Required option; Frequency range not upgradeable.)

Outline	Option No.	Additional Information
Frequency range: 9 kHz to 32 GHz	MS2850A-047	Spectrum Analyzer/Signal Analyzer (Analysis Bandwidth 255 MHz)
Frequency range: 9 kHz to 44.5 GHz	MS2850A-046	

The following options are installed as standard and do not require separate orders when ordering the MS2850A-046/047.

Standard Software	MX269000 A
Analysis Bandwidth 255 MHz	MS2850A-032
Microwave Preselector Bypass	MS2850A-067

Step 2. Select Analysis Bandwidth

Outline	Option No.	Additional Information
Analysis Bandwidth 255 MHz	Standard	
Analysis Bandwidth Extension to 510 MHz	MS2850A-033	
Analysis Bandwidth Extension to 1 GHz	MS2850A-034	Requires MS2850A-033

Step 3. Add Measurement Software

Outline	Option No.	Additional Information
5G Standard Measurement Software (Base License)	MX285051A	This license can't be used alone. Requires MX285051A-001 and/or 051
Pre-Standard CP-OFDM Downlink	MX285051A-001	Requires MX285051A
Pre-Standard CP-OFDM Uplink	MX285051A-051	Requires MX285051A
W-CDMA/HSPA Downlink Measurement Software	MX269011A	
W-CDMA/HSPA Uplink Measurement Software	MX269012A	
GSM/EDGE Measurement Software	MX269013A	
EDGE Evolution Measurement Software	MX269013A-001	Requires MX269013A
TD-SCDMA Measurement Software	MX269015A	
Vector Modulation Analysis Software	MX269017A*	
LTE Downlink Measurement Software	MX269020A	
LTE-Advanced FDD Downlink Measurement Software	MX269020A-001*	Requires MX269020A
LTE Uplink Measurement Software	MX269021A	
LTE-Advanced FDD Uplink Measurement Software	MX269021A-001*	Requires MX269021A
LTE TDD Downlink Measurement Software	MX269022A	
LTE-Advanced TDD Downlink Measurement Software	MX269022A-001*	Requires MX269022A
LTE TDD Uplink Measurement Software	MX269023A	
LTE-Advanced TDD Uplink Measurement Software	MX269023A-001*	Requires MX269023A

*: To be released in near future

Step 4. Add Other Signal Analyzer Options

Outline	Option No.	Additional Information
Phase Noise Measurement Function	MS2850A-010	Adds frequency offset range 10 Hz to 10 MHz phase noise measurement.
Noise Figure Measurement Function	MS2850A-017	Adds Noise Figure Measurement function. Noise Figure is measured with the measurement method of Y-factor method which uses a Noise Source*. *: Noisecom, NC346 series
Microwave Preamplifier	MS2850A-068	Increases level sensitivity from 100 kHz to 32 GHz/44.5GHz
Low Second Harmonic Distortion	MS2850A-076	This option improves DANL and second harmonic distortion over 4 GHz when Preamp is Off and Microwave Preselector Bypass is Off.
Secondary Storage Device	MS2850A-011	This removable secondary SSD is installed in the secondary SSD Option Slot of the MS2850A main frame to expand the user data storage space. It does not have the Windows OS installed. The MS2850A ships with it installed. Only one expansion SSD can be installed in the MS2850A.

Signal Analyzer MS2850A

Step 5. Add Accessories

Outline	Option No.	Additional Information
Inline Peak Power Sensor (350 MHz to 4 GHz)	MA24105A	Supports 350 MHz to 4 GHz and operates on Windows.
USB Power Sensor (50 MHz to 6 GHz)	MA24106A	Supports 50 MHz to 6 GHz and operates on Windows.
Microwave USB Power Sensor (10 MHz to 8 GHz)	MA24108A	Supports 10 MHz to 8 GHz and operates on Windows.
Microwave USB Power Sensor (10 MHz to 18 GHz)	MA24118A	Supports 10 MHz to 18 GHz and operates on Windows.
Microwave USB Power Sensor (10 MHz to 26 GHz)	MA24126A	Supports 10 MHz to 26 GHz and operates on Windows.
High Performance Waveguide Mixer (50 GHz to 75 GHz)	MA2806A*	It has the good features of both a harmonic mixer and a down converter and is ideal for spectrum analysis of millimeter-wave (50 GHz to 75 GHz) wireless transmitters now being used for future wider-band applications, such as IEEE 802.11ad W-LAN modules and wireless backhaul, etc.
High Performance Waveguide Mixer (60 GHz to 90 GHz)	MA2808A*	It has the good features of both a harmonic mixer and a down converter and is ideal for spectrum analysis of millimeter-wave (60 GHz to 90 GHz) wireless transmitters now being used for future wider-band applications, such as wireless backhaul, automotive radar, etc.
External Mixer (26.5 GHz to 40 GHz)	MA2741C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (33 GHz to 50 GHz)	MA2742C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (40 GHz to 60 GHz)	MA2743C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (50 GHz to 75 GHz)	MA2744C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (60 GHz to 90 GHz)	MA2745C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (75 GHz to 110 GHz)	MA2746C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (90 GHz to 140 GHz)	MA2747C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (110 GHz to 170 GHz)	MA2748C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (140 GHz to 220 GHz)	MA2749C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (170 GHz to 260 GHz)	MA2750C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.
External Mixer (220 GHz to 325 GHz)	MA2751C*	It is a harmonic mixer for spectrum analysis of millimeter-wave transmitters.

*: To be released in near future

Signal Analyzer MS2850A

Retrofit to Current MS2850A

Hardware Option Retrofit

The following hardware options can be retrofitted. Order the Z1957A Installation Kit as well.
The MS2850A must be returned to the Anritsu plant for hardware retrofitting.

	Model/Order No.	Name	Reference Steps
Hardware Options	MS2850A-133	Analysis Bandwidth Extension to 510 MHz Retrofit	2
	MS2850A-134	Analysis Bandwidth Extension to 1 GHz Retrofit	
	MS2850A-110	Phase Noise Measurement Function Retrofit	4
	MS2850A-117	Noise Figure Measurement Function Retrofit	
	MS2850A-168	Microwave Preamplifier Retrofit	
	MS2850A-176	Low Second Harmonic Distortion Retrofit	
	MS2850A-111	Secondary Storage Device Retrofit	
Application Parts	Z1957A	Installation Kit (Required when retrofitting options or installing software)	—

Software Option Retrofit

The following software options can be retrofitted. Order the Z1957A Installation Kit as well.
The MS2850A does not require return to the Anritsu plant for software retrofitting.

	Model/Order No.	Name	Reference Steps
Measurement Software	MX285051A	5G Standard Measurement Software (Base License)	3
	MX285051A-001	Pre-Standard CP-OFDM Downlink	
	MX285051A-051	Pre-Standard CP-OFDM Uplink	
	MX269011A	W-CDMA/HSPA Downlink Measurement Software	
	MX269012A	W-CDMA/HSPA Uplink Measurement Software	
	MX269013A	GSM/EDGE Measurement Software	
	MX269013A-001	EDGE Evolution Measurement Software	
	MX269015A	TD-SCDMA Measurement Software	
	MX269017A*	Vector Modulation Analysis Software	
	MX269020A	LTE Downlink Measurement Software	
	MX269020A-001*	LTE-Advanced FDD Downlink Measurement Software	
	MX269021A	LTE Uplink Measurement Software	
	MX269021A-001*	LTE-Advanced FDD Uplink Measurement Software	
	MX269022A	LTE TDD Downlink Measurement Software	
	MX269022A-001*	LTE-Advanced TDD Downlink Measurement Software	
	MX269023A	LTE TDD Uplink Measurement Software	
	MX269023A-001*	LTE-Advanced TDD Uplink Measurement Software	
Application Parts	Z1957A	Installation Kit (Required when retrofitting options or installing software)	—

*: To be released in near future

Software Update

Software is updated regularly to add new functions, improve performance and fix bugs.
Download the latest software from the following URL. Register before use.

Software Download Site URL

https://my.anritsu.com

Signal Analyzer MS2850A

Options Configuration Guide

Hardware Configuration

Frequency range (MS2850A-046/047) not upgradable.

✓ = Can be installed, No = Cannot be installed, R = Require, U = Upgrade

Option	Name	Retrofit	Addition to Main frame		Combination with "Option" (Refer to the left line)								
			MS2850A-046 (44.5 GHz model)	MS2850A-047 (32 GHz model)	MS2850A-032 (standard install)	MS2850A-033	MS2850A-034	MS2850A-011	MS2850A-017	MS2850A-067 (standard install)	MS2850A-068	MS2850A-076	MS2850A-010
MS2850A-032	Analysis Bandwidth 255MHz	—	Standard install	Standard install	✕								
MS2850A-033	Analysis Bandwidth Extension to 510 MHz	Yes	✓	✓		✕							
MS2850A-034	Analysis Bandwidth Extension to 1 GHz	Yes	✓	✓		R	✕						
MS2850A-010	Phase Noise Measurement Function	Yes	✓	✓					✕				
MS2850A-017	Noise Figure Measurement Function	Yes	✓	✓						✕	U		
MS2850A-067	Microwave Preselector Bypass	—	Standard install	Standard install						✕			
MS2850A-068	Microwave Preamplifier	Yes	✓	✓							✕		
MS2850A-076	Low Second Harmonic Distortion	Yes	✓	✓								✕	
MS2850A-011	Secondary Storage Device	Yes	✓	✓									✕

Software Configuration

Option	Name	Addition to Main frame ✓ = Can be installed		Analysis Bandwidth option U = Upgrade		Note
		MS2850A-046 (44.5 GHz model)	MS2850A-047 (32 GHz model)	MS2850A-033 (510 MHz)	MS2850A-034 (1 GHz)	
MX285051A	5G Standard Measurement Software (Base License)	✓	✓	U	U	This license can't be used alone. Require MX285051A-001/051
MX285051A-001	Pre-Standard CP-OFDM Downlink	✓	✓	U	U	Require MX285051A
MX285051A-051	Pre-Standard CP-OFDM Uplink	✓	✓	U	U	Require MX285051A
MX269011A	W-CDMA/HSPA Downlink Measurement Software	✓	✓			
MX269012A	W-CDMA/HSPA Uplink Measurement Software	✓	✓			
MX269013A	GSM/EDGE Measurement Software	✓	✓			
MX269013A-001	EDGE Evolution Measurement Software	✓	✓			Require MX269013A
MX269015A	TD-SCDMA Measurement Software	✓	✓			
MX269020A	LTE Downlink Measurement Software	✓	✓			
MX269020A-001*	LTE-Advanced FDD Downlink Measurement Software	✓	✓			Require MX269020A
MX269021A	LTE Uplink Measurement Software	✓	✓			
MX269021A-001*	LTE-Advanced FDD Uplink Measurement Software	✓	✓			Require MX269021A
MX269022A	LTE TDD Downlink Measurement Software	✓	✓			
MX269022A-001*	LTE-Advanced TDD Downlink Measurement Software	✓	✓			Require MX269022A
MX269023A	LTE TDD Uplink Measurement Software	✓	✓			
MX269023A-001*	LTE-Advanced TDD Uplink Measurement Software	✓	✓			Require MX269023A
MX269017A*	Vector Modulation Analysis Software	✓	✓			

✱: To be released in near future

Signal Analyzer MS2850A Ordering Information

Please specify the model/order number, name and quantity when ordering.
The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Model/Order No.	Name
	Main Frame
MS2850A	Signal Analyzer
	Standard accessories
	Power Cord: 1 pc
P0031A	USB Memory (≥1 GB): 1 pc
Z0541A	USB Mouse: 1 pc
	Install DVD-ROM (Application software, instruction manual DVD-ROM): 1 pc
	Options
MS2850A-047	32 GHz Signal Analyzer
MS2850A-046	44.5 GHz Signal Analyzer
MS2850A-033	Analysis Bandwidth Extension 510 MHz
MS2850A-034	Analysis Bandwidth Extension 1 GHz
MS2850A-010	Phase Noise Measurement Function
MS2850A-017	Noise Figure Measurement Function
MS2850A-068	Microwave Preamplifier
MS2850A-076	Low Second Harmonic Distortion
MS2850A-011	Secondary Storage Device
	Retrofit options
MS2850A-133	Analysis Bandwidth Extension 510 MHz Retrofit
MS2850A-134	Analysis Bandwidth Extension 1 GHz Retrofit
MS2850A-110	Phase Noise Measurement Function Retrofit
MS2850A-117	Noise Figure Measurement Function Retrofit
MS2850A-168	Microwave Preamplifier Retrofit
MS2850A-176	Low Second Harmonic Distortion Retrofit
MS2850A-111	Secondary Storage Device Retrofit
	Software options
	DVD-ROM with License and Operation manuals
MX285051A	5G Standard Measurement Software (Base License) (Requires MX285051A-001 and/or 051)
MX285051A-001	Pre-Standard CP-OFDM Downlink (Requires MX285051A)
MX285051A-051	Pre-Standard CP-OFDM Uplink (Requires MX285051A)
MX269011A	W-CDMA/HSPA Downlink Measurement Software
MX269012A	W-CDMA/HSPA Uplink Measurement Software
MX269013A	GSM/EDGE Measurement Software
MX269013A-001	EDGE Evolution Measurement Software (Requires MX269013A)
MX269015A	TD-SCDMA Measurement Software
MX269017A*	Vector Modulation Analysis Software
MX269020A	LTE Downlink Measurement Software
MX269020A-001*	LTE-Advanced FDD Downlink Measurement Software (Requires MX269020A)
MX269021A	LTE Uplink Measurement Software
MX269021A-001*	LTE-Advanced FDD Uplink Measurement Software (Requires MX269021A)
MX269022A	LTE TDD Downlink Measurement Software
MX269022A-001*	LTE-Advanced TDD Downlink Measurement Software (Requires MX269022A)
MX269023A	LTE TDD Uplink Measurement Software
MX269023A-001*	LTE-Advanced TDD Uplink Measurement Software (Requires MX269023A)
	Warranty service
MS2850A-ES210	2 years Extended Warranty Service
MS2850A-ES310	3 years Extended Warranty Service
MS2850A-ES510	5 years Extended Warranty Service

Model/Order No.	Name
	Application parts
MA24105A	Inline Peak Power Sensor (350 MHz to 4 GHz, with USB A to mini B cable)
MA24106A	USB Power Sensor (50 MHz to 6 GHz, with USB A to mini B cable)
MA24108A	Microwave USB Power Sensor (10 MHz to 8 GHz, with USB A to Micro-B cable)
MA24118A	Microwave USB Power Sensor (10 MHz to 18 GHz, with USB A to Micro-B cable)
MA24126A	Microwave USB Power Sensor (10 MHz to 26 GHz, with USB A to Micro-B cable)
MA2806A*	High Performance Waveguide Mixer (50 to 75 GHz)
MA2808A*	High Performance Waveguide Mixer (60 to 90 GHz)
MA2741C*	External Mixer (26.5 GHz to 40 GHz)
MA2742C*	External Mixer (33 GHz to 50 GHz)
MA2743C*	External Mixer (40 GHz to 60 GHz)
MA2744C*	External Mixer (50 GHz to 75 GHz)
MA2745C*	External Mixer (60 GHz to 90 GHz)
MA2746C*	External Mixer (75 GHz to 110 GHz)
MA2747C*	External Mixer (90 GHz to 140 GHz)
MA2748C*	External Mixer (110 GHz to 170 GHz)
MA2749C*	External Mixer (140 GHz to 220 GHz)
MA2750C*	External Mixer (170 GHz to 260 GHz)
MA2751C*	External Mixer (220 GHz to 325 GHz)

*: To be released in near future

The following options are installed as standard and do not require separate orders when ordering the MS2850A-046/047.

Standard Software	MX269000A
Analysis Bandwidth 255 MHz	MS2850A-032
Microwave Preselector Bypass	MS2850A-067

Requires Installation Kit Z1957A when retrofitting options or installing software.

The instruction manuals are published on our website except some.

Note: