

Anritsu envision : ensure

Signal Analyzer

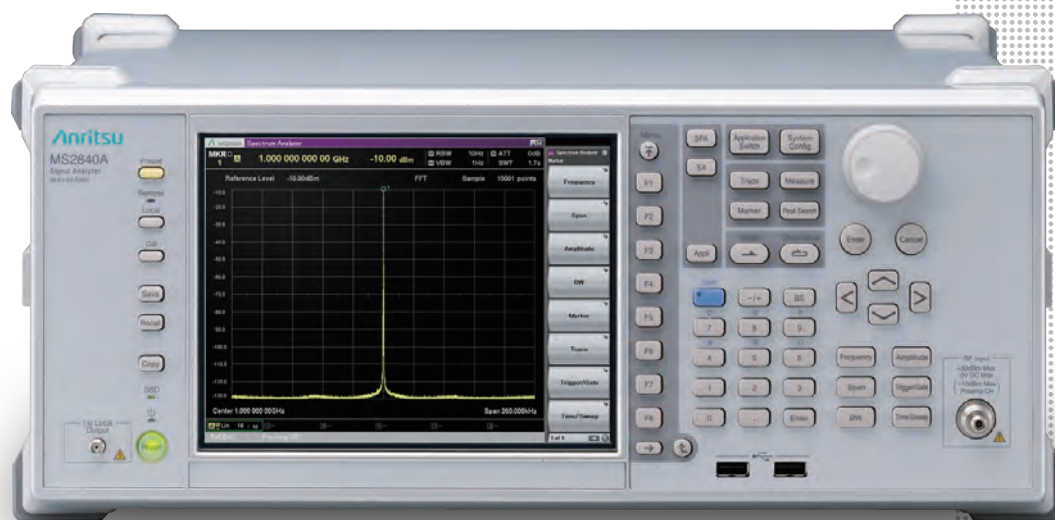
MS2840A

MS2840A-040: 9 kHz to 3.6 GHz

MS2840A-041: 9 kHz to 6 GHz

MS2840A-044: 9 kHz to 26.5 GHz

MS2840A-046: 9 kHz to 44.5 GHz



Signal Analyzer MS2840A

This explains how to order the new MS2840A and MS2840A retrofit options and measurement software. Follow the steps below to select the MS2840A 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 3.6 GHz | MS2840A-040 | Spectrum Analyzer/Signal Analyzer (Analysis Bandwidth 31.25 MHz) |
| Frequency range: 9 kHz to 6 GHz | MS2840A-041 | |
| Frequency range: 9 kHz to 26.5 GHz | MS2840A-044 | |
| Frequency range: 9 kHz to 44.5 GHz | MS2840A-046 | |

The following options are installed as standard and do not require separate orders when ordering the MS2840A-040/041/044.

| | |
|----------------------------------|-------------|
| Standard Software | MX269000A |
| Analysis Bandwidth 10 MHz | MS2840A-006 |
| Bandwidth Extension to 31.25 MHz | MS2840A-005 |

The following options are installed as standard and do not require separate orders when ordering the MS2840A-046.

| | |
|--|-------------|
| Standard Software | MX269000A |
| Analysis Bandwidth 10 MHz | MS2840A-006 |
| Bandwidth Extension to 31.25 MHz for Millimeter-wave | MS2840A-009 |

Step 2. Choose Frequency Reference

| Outline | Option No. | Additional Information |
|-------------------------------------|-------------|---|
| Frequency Reference | Standard | Aging rate: MS2840A-040/041: $\pm 1 \times 10^{-6}$ /year MS2840A-044/046: $\pm 1 \times 10^{-7}$ /year |
| Rubidium Reference Oscillator | MS2840A-001 | Aging rate: $\pm 1 \times 10^{-10}$ /month, $\pm 1 \times 10^{-9}$ /year |
| High Stability Reference Oscillator | MS2840A-002 | Aging rate: $\pm 1 \times 10^{-7}$ /year *: Dedicated option for MS2840A-040/041 Equivalent function installed as standard in MS2840A-044/046 |

Step 3. Choose Analysis Bandwidth

| Outline | Option No. | Additional Information |
|--|-------------|--|
| Bandwidth Extension to 31.25 MHz | Standard | |
| Analysis Bandwidth Extension to 62.5 MHz | MS2840A-077 | Extends analysis bandwidth to 62.5 MHz *: An image response is received when setting the bandwidth to more than 31.25 MHz. This can be used when not inputting a signal frequency outside the MS2840A analysis bandwidth (62.5 MHz max.). The Signal Analyzer series MS2690A/91A/92A is recommended for other measurement purposes. |
| Analysis Bandwidth Extension to 125 MHz | MS2840A-078 | Extends analysis bandwidth to 125 MHz *: Requires MS2840A-077 An image response is received when setting the bandwidth to more than 31.25 MHz. This can be used when not inputting a signal frequency outside the MS2840A analysis bandwidth (125 MHz max.). The Signal Analyzer series MS2690A/91A/92A is recommended for other measurement purposes. |

Step 4. Add Preampifier

| Outline | Option No. | Additional Information |
|---|-------------|---|
| Preampifier for all frequency options | MS2840A-008 | Improves level sensitivity from 100 kHz to 6 GHz. Supports all frequency options. 3.6 GHz upper frequency limit with MS2840A-040. |
| 26.5 GHz Microwave Preampifier for MS2840A-044 (26.5 GHz) | MS2840A-069 | For MS2840A-044 (26.5 GHz) Increases level sensitivity from 100 kHz to 26.5 GHz |
| Microwave Preampifier for MS2840A-046 (44.5 GHz) | MS2840A-068 | For MS2840A-046 (44.5 GHz) Increases level sensitivity from 100 kHz to 44.5 GHz |

Step 5. Add microwave preselector bypass

| Outline | Option No. | Additional Information |
|------------------------------|-------------|---|
| Microwave Preselector Bypass | MS2840A-067 | Bypassing the preselector used for the microwave band improves RF frequency characteristics and in-band frequency characteristics. Supports signal analyzer measurement functions up to main-frame upper limit frequency. *: Dedicated option for MS2840A-044/046. Add MS2840A-067 when using the signal analyzer measurement functions at bandwidth: >31.25 MHz and frequency: >6 GHz. |

Signal Analyzer MS2840A

Step 6. Improve phase noise performance

| Outline | Option No. | Additional Information |
|-----------------------------|-------------|--|
| Low Phase Noise Performance | MS2840A-066 | Greatly improves SSB phase noise performance at offset frequencies from the carrier of 1 kHz to 1 MHz for RF input signals of 3.7 GHz or less *: Dedicated option for MS2840A-040/041 |

Step 7. Add Measurement Software

| Outline | Option No. | Additional Information |
|-------------------------------------|------------|--|
| Vector Modulation Analysis Software | MX269017A | Supports evaluation of RF Tx characteristics of digital radio equipment and components for wide range of applications such as digital private mobile radio (PMR), wireless backhaul, aerospace and satellite |
| Analog Measurement Software | MX269018A | For measurement of analog wireless Tx characteristics and output of demodulated audio. Requires USB Audio A0086C. Separate speakers or earphones required to hear demodulated audio. |

Step 8. Add Other Signal Analyzer Options

| Outline | Option No. | Additional Information |
|--|-------------|--|
| Phase Noise Measurement | MS2840A-010 | Adds frequency offset range 10 Hz to 10 MHz phase noise measurement. |
| Secondary SSD | MS2840A-011 | This removable secondary SSD is installed in the secondary HDD/SSD Option Slot of the MS2840A main frame to expand the user data storage space. It does not have the Windows OS installed. The MS2840A ships with it installed. Only one expansion SSD can be installed in the MS2840A. |
| Precompliance EMI Function | MS2840A-016 | This option adds an EMI measurement detection mode and RBW to the spectrum analyzer function. Both the detection mode used for CISPR standards (Quasi-Peak, CISPR-AVG, RMS-AVG) and RBW (200 Hz (6 dB), 9 kHz (6 dB), 120 kHz (6 dB), 1 MHz (Imp)) as well as conventional settings can be selected. |
| Noise Figure Measurement Function | MS2840A-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 |
| 2 dB Step Attenuator for Millimeter-wave | MS2840A-019 | For MS2840A-046 (44.5 GHz) Expand attenuator steps to 2 dB (Standard: 10 dB steps) and input level for internal mixer can be adjusted with high resolution. |
| Noise Floor Reduction | MS2840A-051 | The Noise Floor Reduction (NFR) function increases the measurement accuracy for low-level signals. It subtracts the internal noise components (11 dB max. nominal) of the measuring instrument itself from the displayed measurement result. |
| BER Measurement Function | MS2840A-026 | Adds BER Measurement Function for input bit rates of 100 bps to 10 Mbps. It supports Rx sensitivity tests by inputting the receiver-demodulated Data/Clock/Enable to the back of the MS2840A. *: The Aux Conversion Adapter J1556A is a standard accessory supplied with MS2840A-026. |

Step 9. Add built-in signal generator (Dedicated options for MS2840A-040/041)

| Outline | Option No. | Additional Information |
|---------------------------------|-------------|--|
| 3.6 GHz Vector Signal Generator | MS2840A-020 | Covers 250 kHz to 3.6 GHz frequency range and adds waveform generator with 120 MHz wide vector modulation bandwidth. |
| 6 GHz Vector Signal Generator | MS2840A-021 | Covers 250 kHz to 6 GHz frequency range and adds waveform generator with 120 MHz wide vector modulation bandwidth. |
| Analog Signal Generator | MS2840A-088 | Covers 100 kHz to 3 GHz frequency range. Requires Analog Measurement Software and USB Audio A0086C. |

Order the following options at new orders when requiring an vector signal generator and analog signal generator.

3.6 GHz Vector Signal Generator MS2840A-020 or 6 GHz Vector Signal Generator MS2840A-021

Low Power Extension for Vector Signal Generator MS2840A-022

Analog Function Extension for Vector Signal Generator MS2840A-029

Analog Measurement Software MX269018A

USB Audio A0086C

The following options are installed as standard and do not require separate orders when ordering the MS2840A-020/021.

Standard waveform pattern MX269099A

Signal Analyzer MS2840A

Step 9-1. Add options for vector signal generator (Requires MS2840A-020 or MS2840A-021)

| Outline | Option No. | Additional Information |
|--|-------------|---|
| Vector Signal Generator Low-power Extension | MS2840A-022 | Expands lower limit of output level from -40 to -136 dBm. (Note: 5-dB drop in upper output level.) |
| Vector Signal Generator ARB Memory Extension 256 Msample | MS2840A-027 | Expands ARB memory capacity from 64 to 256 Msamples. |
| AWGN | MS2840A-028 | Adds AWGN generator function. |
| Analog Function Extension for Vector Signal Generator | MS2840A-029 | Adds analog signal generation function using Analog Measurement Software MX269018A to Vector Signal Generator option (MS2840A-020/021). Can calibrate lower limit frequency up to 100 kHz (MS2840A-020/021 lower limit frequency is 250 kHz). Requires MX269018A, MS2840A-020 or 021, MS2840A-022, and A0086C |

Step 9-2. Add vector waveform generation tool (IQproducer) license (Requires MS2840A-020 or MS2840A-021)

| Outline | Option No. | Additional Information |
|--------------------------|------------|---|
| TDMA IQproducer | MX269902A | Outputs waveform pattern created by setting TDMA parameter with TDMA IQproducer from vector signal generator option. |
| Multi-carrier IQproducer | MX269904A | Outputs multi-carrier waveform pattern of tone signal and various communication method modulated signals from vector signal generator option. |

Step 10. 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. |
| 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. |
| AUX Conversion Adaptor | J1556A | AUX Conversion Adaptor J1556A Adapter for converting from AUX to BNC. Used for MARKER output from vector signal generator option, pulse modulation signals, baseband reference clock signals and Clock, Data and Enable signals for BER Measurement Function option. *: The Aux Conversion Adapter J1556A is a standard accessory supplied with the BER Measurement Function MS2840A-026. |

Signal Analyzer MS2840A

Retrofit to Current MS2840A

Hardware Option Retrofit

The following hardware options can be retrofitted. Order the Z1932A Installation Kit as well. The MS2840A must be returned to the Anritsu plant for hardware retrofitting.

| Model/Order No. | Name | ReferenceSteps | |
|-------------------|--|--|-----|
| Hardware Options | MS2840A-101 | Rubidium Reference Oscillator Retrofit | 2 |
| | MS2840A-102 | High Stability Reference Oscillator Retrofit | |
| | MS2840A-177 | Analysis Bandwidth Extension to 62.5 MHz Retrofit | 3 |
| | MS2840A-178 | Analysis Bandwidth Extension to 125 MHz Retrofit | |
| | MS2840A-108 | Preamplifier Retrofit | 4 |
| | MS2840A-169 | 26.5 GHz Microwave Preamplifier Retrofit | |
| | MS2840A-168 | Analysis Bandwidth Extension to 125 MHz Retrofit | |
| | MS2840A-110 | Phase Noise Measurement Function Retrofit | 8 |
| | MS2840A-111 | 2ndary SSD Retrofit | |
| | MS2840A-116 | Precompliance EMI Function Retrofit | |
| | MS2840A-117 | Noise Figure Measurement Function Retrofit | |
| | MS2840A-119 | 2 dB Step Attenuator for Millimeter-wave | |
| | MS2840A-151 | Noise Floor Reduction Retrofit | |
| | MS2840A-126 | BER Measurement Function Retrofit | |
| | MS2840A-166 | Low Phase Noise Performance Retrofit | |
| | MS2840A-167 | Microwave Preselector Bypass Retrofit | 5 |
| | MS2840A-120 | 3.6 GHz Vector Signal Generator Retrofit | 9 |
| | MS2840A-121 | 6 GHz Vector Signal Generator Retrofit | |
| | MS2840A-122 | Low Power Extension for Vector Signal Generator Retrofit | 9-1 |
| | MS2840A-127 | ARB Memory Upgrade 256 Msa for Vector Signal Generator Retrofit | |
| MS2840A-128 | AWGN Retrofit | | |
| MS2840A-129 | Analog Function Extension for Vector Signal Generator Retrofit | 9 | |
| MS2840A-188 | 3.6 GHz Analog Signal Generator Retrofit | | |
| MS2840A-189 | Vector Function Extension for Analog Signal Generator Retrofit | 9-1 | |
| Application Parts | Z1932A | Installation Kit (Required when retrofitting options or installing software) | - |

The Rubidium Reference Oscillator can be retrofitted to the MS2840A-040/041 with installed High Stability Reference Oscillator. In this case, the Rubidium Reference Oscillator is functional.

The 26.5 GHz Microwave Preamplifier or Microwave Preamplifier can be retrofitted to the MS2840A-044/046 with installed Preamplifier. In this case, the 26.5 GHz Microwave Preamplifier or Microwave Preamplifier are functional.

The following options are installed as standard and do not require separate orders when ordering the MS2840A-120/121/189.

Standard waveform pattern MX269099A

Software Option Retrofit

The following software options can be retrofitted. Order the Z1932A Installation Kit as well.

The MS2840A does not require return to the Anritsu plant for software retrofitting.

| Model/Order No. | Name | Reference Steps | |
|--|-----------|--|-----|
| Measurement Software | MX269017A | Vector Modulation Analysis Software | 3 |
| | MX269018A | Analog Measurement Software* | |
| Waveform generation tools (IQproducer) | MX269902A | TDMA IQproducer | 9-2 |
| | MX269904A | Multi-Carrier IQproducer | |
| Application Parts | Z1932A | Installation Kit (Required when retrofitting options or installing software) | - |

*: Requires USB Audio A0086C

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 MS2840A

Options Configuration Guide

Hardware Configuration

Frequency range (MS2840A-040/041/044/046) not upgradable.

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

| Opt. | Name | Retrofit | Addition to Main frame | | | | Combination with "Opt." (Refer to the left line) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|--|----------|------------------------|------------------|-------------------------------|------------------|--|-----|------------------------|------------------------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|--|
| | | | 040 (3.6 GHz) | 041 (6 GHz) | 044 (26.5 GHz) | 046 (44.5 GHz) | 001 | 002 | 005 (standard install) | 006 (standard install) | 009 (standard install) | 077 | 078 | 008 | 069 | 068 | 019 | 010 | 011 | 016 | 017 | 026 | 051 | 066 | 067 | 020 | 021 | 189 | 022 | 027 | 028 | 088 | 029 | | | | | |
| 001 | Rubidium Reference Oscillator | Yes | ✓ | ✓ | ✓ | ✓ | ✗ | *4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 002 | High Stability Reference Oscillator | Yes | ✓ | ✓ | Equivalent function installed | | *4 | ✗ | | No | | | No | No | No | | | | | | | | | | No | | | | | | | | | | | | | |
| 005 | Analysis Bandwidth Extension to 31.25 MHz | - | Standard install | Standard install | Standard install | No | | ✗ | ✗ | ✗ | No | | | | No | | | | | | | | | | | | | | | | | | | | | | | |
| 006 | Analysis Bandwidth 10 MHz | - | Standard install | Standard install | Standard install | Standard install | | ✗ | ✗ | ✗ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 009 | Bandwidth Extension to 31.25 MHz for Millimeter-wave | - | No | No | No | Standard install | | No | No | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | No | No | No | No | No | No | No | No | No | No | No | No | | |
| 077 | Analysis Bandwidth Extension to 62.5 MHz*1 | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 078 | Analysis Bandwidth Extension to 125 MHz*1 | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 008 | Preamplifier | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 069 | 26.5 GHz Microwave Preamplifier | Yes | No | No | ✓ | No | | No | No | | | | | *5 | ✗ | No | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 068 | Microwave Preamplifier | Yes | No | No | No | ✓ | | No | No | | | | | *5 | No | ✗ | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 019 | 2 dB Step Attenuator for Millimeter-wave | Yes | No | No | No | ✓ | | No | No | | | | | | | | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 010 | Preamplifier | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 011 | 2ndary SSD | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 016 | Precompliance EMI Function | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 017 | Noise Figure Measurement Function | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 026 | BER Measurement Function | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 051 | Noise Floor Reduction | Yes | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 066 | Low Phase Noise Performance | Yes | ✓ | ✓ | No | No | | | | No | | | | | No | No | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 067 | Microwave Preselector Bypass | Yes | No | No | ✓ | ✓ | | No | | | | | | | | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 020 | 3.6 GHz Vector Signal Generator | Yes | ✓ | ✓ | ✓ | No | | | No | | | | | | No | No | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 021 | 6 GHz Vector Signal Generator | Yes | ✓ | ✓ | No | No | | | No | | | | | | No | No | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 189 | Vector Function Extension for Analog Signal Generator Retrofit | Yes | ✓ | ✓ | No | No | | | No | | | | | | No | No | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | R | No | |
| 022 | Low Power Extension for Vector Signal Generator | Yes | ✓ | ✓ | No | No | | | No | | | | | | No | No | | | | | | | | No | R | No | No | No | No | No | No | No | No | No | No | No | No | |
| 027 | ARB Memory Upgrade 256 Msa for Vector Signal Generator*2 | Yes | ✓ | ✓ | No | No | | | No | | | | | | No | No | | | | | | | | No | R | No | No | No | No | No | No | No | No | No | No | No | No | |
| 028 | AWGN*2 | Yes | ✓ | ✓ | No | No | | | No | | | | | | No | No | | | | | | | | No | R | No | No | No | No | No | No | No | No | No | No | No | No | |
| 088 | 3.6 GHz Analog Signal Generator*3 | Yes | ✓ | ✓ | No | No | | | No | | | | | | No | No | | | | | | | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | |
| 029 | Analog Function Extension for Vector Signal Generator*3 | Yes | ✓ | ✓ | No | No | | | No | | | | | | No | No | | | | | | | | No | R | No | R | No | No | No | No | No | No | No | No | No | No | |

*1: An image response is received when setting the bandwidth to more than 31.25 MHz.

This can be used when not inputting a signal frequency outside the MS2840A analysis bandwidth (125 MHz max.).

The Signal Analyzer series MS2690A/91A/92A is recommended for other measurement purposes.

*2: The ARB Memory Upgrade 256 Msa for Vector Signal Generator (MS2840A-027) and AWGN (MS2840A-028) are non-functional in the Analog Signal Generator (MS2840A-029/088).

*3: Requires Analog Measurement Software (MX269018A).

*4: The Rubidium Reference Oscillator can be retrofitted to the MS2840A-040/041 with installed High Stability Reference Oscillator.

In this case, the Rubidium Reference Oscillator is functional.

*5: The 26.5 GHz Microwave Preamplifier or Microwave Preamplifier can be retrofitted to the MS2840A-044/046 with installed Preamplifier.

In this case, the 26.5 GHz Microwave Preamplifier or Microwave Preamplifier are functional.

Software Configuration

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

| Model | Name | Addition to Main frame | | | | Analysis Bandwidth | |
|-----------|-------------------------------------|------------------------|-------------|----------------|----------------|--------------------|---------------|
| | | 040 (3.6 GHz) | 041 (6 GHz) | 044 (26.5 GHz) | 046 (44.5 GHz) | 077 (62.5 MHz) | 078 (125 MHz) |
| MX269017A | Vector Modulation Analysis Software | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| MX269018A | Analog Measurement Software* | ✓ | ✓ | ✓ | ✓ | | |

*: Requires USB Audio A0086C

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 |
|---|---|
| MS2840A | Main frame Signal Analyzer |
| P0031A Z0541A | Standard accessories Power Cord: 1 pc USB Memory (≥256 MB, USB2.0 Flash Driver): 1 pc USB Mouse: 1 pc Install CD-ROM (Application software, instruction manual CD-ROM): 1 pc |
| MS2840A-040 MS2840A-041 MS2840A-044 MS2840A-046 | Options 3.6 GHz Signal Analyzer 6 GHz Signal Analyzer 26.5 GHz Signal Analyzer 44.5 GHz Signal Analyzer |
| MS2840A-001 MS2840A-002 | Rubidium Reference Oscillator High Stability Reference Oscillator |
| MS2840A-077 MS2840A-078 | Analysis Bandwidth Extension to 62.5 MHz Analysis Bandwidth Extension to 125 MHz (Requires MS2840A-077) |
| MS2840A-008 MS2840A-069 MS2840A-068 | Preamplifier 26.5 GHz Microwave Preamplifier (for MS2840A-044) Microwave Preamplifier (for MS2840A-046) |
| MS2840A-010 MS2840A-011 MS2840A-016 MS2840A-017 MS2840A-019 MS2840A-051 MS2840A-026 | Phase Noise Measurement Function 2ndary SSD Precompliance EMI Function Noise Figure Measurement Function 2 dB Step Attenuator for Millimeter-wave (for MS2840A-046) Noise Floor Reduction BER Measurement Function (AUX Conversion Adapter J1556A as standard accessory) |
| MS2840A-066 MS2840A-067 | Low Phase Noise Performance Microwave Preselector Bypass |
| MS2840A-020 MS2840A-021 MS2840A-022 MS2840A-027 MS2840A-028 MS2840A-029 MS2840A-088 | 3.6 GHz Vector Signal Generator 6 GHz Vector Signal Generator Low Power Extension for Vector Signal Generator ARB Memory Upgrade 256 Msa for Vector Signal Generator AWGN Analog Function Extension for Vector Signal Generator 3.6 GHz Analog Signal Generator |
| MS2840A-101 MS2840A-102 | Retrofit options Rubidium Reference Oscillator Retrofit High Stability Reference Oscillator Retrofit |
| MS2840A-177 MS2840A-178 | Analysis Bandwidth Extension to 62.5 MHz Retrofit Analysis Bandwidth Extension to 125 MHz Retrofit (Requires MS2840A-077 or 177) |
| MS2840A-108 MS2840A-169 MS2840A-168 | Preamplifier Retrofit 26.5 GHz Microwave Preamplifier Retrofit Microwave Preamplifier Retrofit |
| MS2840A-110 MS2840A-111 MS2840A-116 MS2840A-117 MS2840A-119 | Phase Noise Measurement Function Retrofit 2ndary SSD Retrofit Precompliance EMI Function Retrofit Noise Figure Measurement Function Retrofit 2 dB Step Attenuator for Millimeter-wave Retrofit (for MS2840A-046) |
| MS2840A-151 MS2840A-126 | Noise Floor Reduction Retrofit BER Measurement Function Retrofit (AUX Conversion Adapter J1556A as standard accessory) |
| MS2840A-166 MS2840A-167 | Low Phase Noise Performance Retrofit Microwave Preselector Bypass Retrofit |
| MS2840A-120 MS2840A-121 MS2840A-122 MS2840A-127 | 3.6 GHz Vector Signal Generator Retrofit 6 GHz Vector Signal Generator Retrofit Low Power Extension for Vector Signal Generator Retrofit ARB Memory Upgrade 256 Msa for Vector Signal Generator Retrofit |
| MS2840A-128 MS2840A-129 MS2840A-188 MS2840A-189 | AWGN Retrofit Analog Function Extension for Vector Signal Generator Retrofit 3.6 GHz Analog Signal Generator Retrofit Vector Function Extension for Analog Signal Generator Retrofit |

| Model/Order No | Name |
|---|--|
| | Software options DVD-ROM with license and operation manuals Vector Modulation Analysis Software Analog Measurement Software (Requires A0086C) |
| MX269017A MX269018A | |
| MX269902A MX269904A | TDMA IQproducer Multi-Carrier IQproducer |
| MS2840A-ES210 MS2840A-ES310 MS2840A-ES510 | Warranty service 2 years Extended Warranty Service 3 years Extended Warranty Service 5 years Extended Warranty Service |
| A0086C J1556A | Application parts USB Audio (for MX269018A) AUX Conversion Adapter (AUX → BNC), for vector signal generator option and BER measurement function option, standard accessory with BER Measurement Function MS2840A-026 |
| 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) |
| MA2741C MA2742C MA2743C MA2744C MA2745C MA2746C MA2747C MA2748C MA2749C MA2750C MA2751C Z1932A | External Mixer (26.5 GHz to 40 GHz) External Mixer (33 GHz to 50 GHz) External Mixer (40 GHz to 60 GHz) External Mixer (50 GHz to 75 GHz) External Mixer (60 GHz to 90 GHz) External Mixer (75 GHz to 110 GHz) External Mixer (90 GHz to 140 GHz) External Mixer (110 GHz to 170 GHz) External Mixer (140 GHz to 220 GHz) External Mixer (170 GHz to 260 GHz) External Mixer (220 GHz to 325 GHz) Installation Kit (required when retrofitting options or installing software) |

The following options are installed as standard and do not require separate orders when ordering the MS2840A-040/041/044.

| | |
|----------------------------------|-------------|
| Standard Software | MX269000A |
| Analysis Bandwidth 10 MHz | MS2840A-006 |
| Bandwidth Extension to 31.25 MHz | MS2840A-005 |

The following options are installed as standard and do not require separate orders when ordering the MS2840A-046.

| | |
|--|-------------|
| Standard Software | MX269000A |
| Analysis Bandwidth 10 MHz | MS2840A-006 |
| Bandwidth Extension to 31.25 MHz for Millimeter-wave | MS2840A-009 |

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