1435-V series
Vector Signal Generator

1435A/B-V, 1435CV/DV/GV

(9kHz～3GHz/6GHz/13GHz/20GHz/45GHz)

Ceyear Technologies Co., Ltd

Product Overview

The 1435 series vector signal generator boasts excellent performance, covering a frequency range of 9kHz to 3GHz/6GHz/13GHz/20GHz/45GHz. It offers a complete range of digital modulation styles, comes standard with a 120MHz modulation bandwidth, and offers optional 200MHz/500MHz/800MHz modulation bandwidths to meet the analog needs of various wideband digital modulation signals.

It supports arbitrary wave modulation in five formats, allowing users to edit and download the required waveforms to simulate various signals and meet the testing needs of complex signals. Its baseband signal generator is simple to set up and offers superior performance, supporting real-time generation of over 20 common digital modulation signal formats, including PSK, QAM, FSK, and MSK.

It exhibits excellent spectral purity, with single-sideband phase noise of -136dBc/Hz for 1GHz carrier@10kHz, -122dBc/Hz for 6GHz carrier@10kHz, -118dBc/Hz for 10GHz carrier@10kHz, -112dBc/Hz for 20GHz carrier@10kHz, and -106dBc/Hz for 40GHz carrier@10kHz; it also features high power output and a wide dynamic range, with a maximum output power of 19dBm@3GHz and 15dBm@40GHz, and an output power dynamic range greater than 150dB.

Featuring a 7-inch high-sensitivity LED touchscreen, it supports multiple operation methods including touchscreen, panel buttons, rotary knob, and external mouse and keyboard, offering a comprehensively upgraded user experience. Its 3U portable chassis structure is compact and lightweight, making it easy to carry.

The 1435 vector signal generator achieves excellent performance within a compact space, supporting multiple control interfaces such as LAN and GPIB, and providing IVI-C/COM drivers. It can meet the high-performance testing needs of the equipment development stage as well as the high-efficiency testing needs of the production stage.

Main Features

- High compatibility, downloading of arbitrary wave data in various formats
- Supports user-defined simulation data download and playback, and can generate signals for multiple communication protocols such as 5G NR, LTE, WCDMA, GSM, WLAN, and Bluetooth.
- Complete universal digital modulation modes
- Excellent SSB phase noise
- High output power
- Small size and light weight
- High-sensitivity LED touch screen

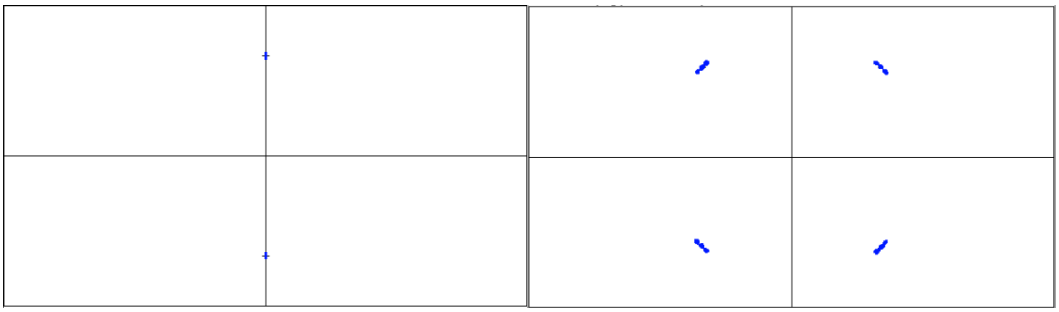
1435 series Vector Signal Generator

High compatibility, downloading of wave data in arbitrary format

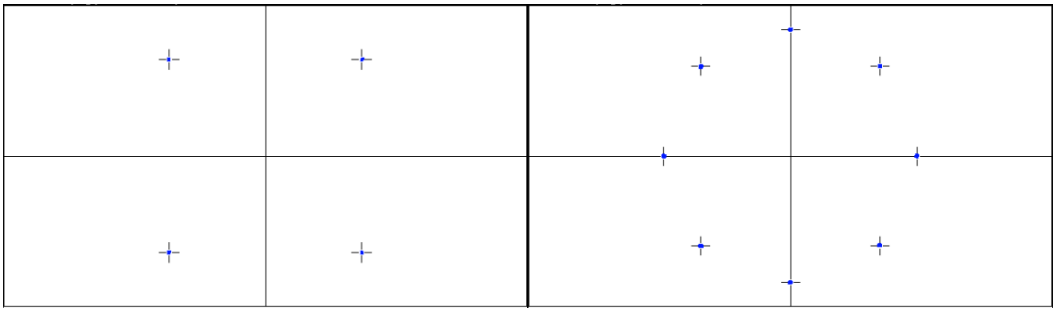
The 1435-V series signal generator supports direct downloading and playing of arbitrary wave data in five formats: Mat-File 5, ASCII, Binary, cap and csv, and provides a storage depth of 2G sampling points.

Complete universal digital modulation modes

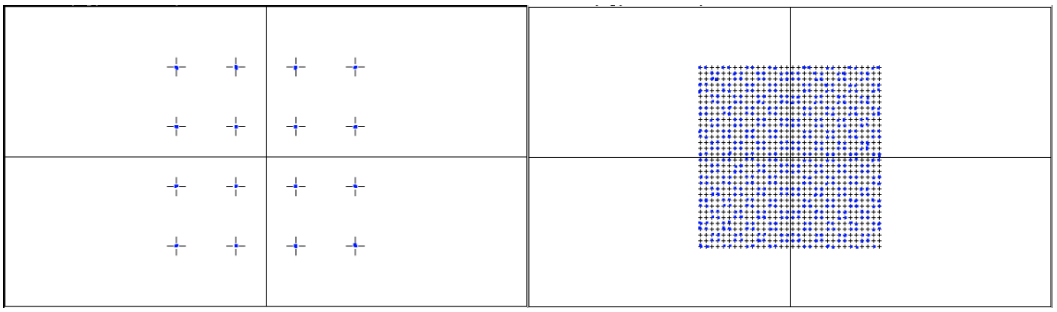
The 1435-V series signal generator supports real-time occurrence of universal digital modulation signals in more than 20 formats, including PSK, QAM, FSK and MSK.



2FSK MSK



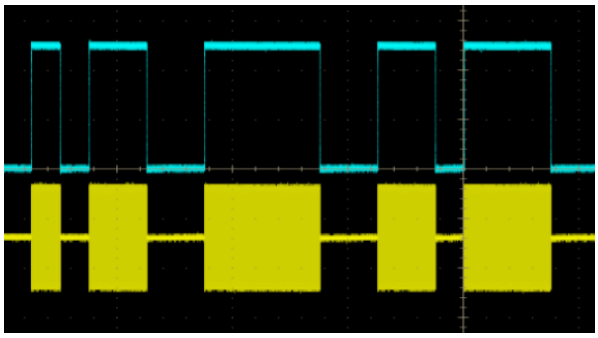
QPSK 8PSK



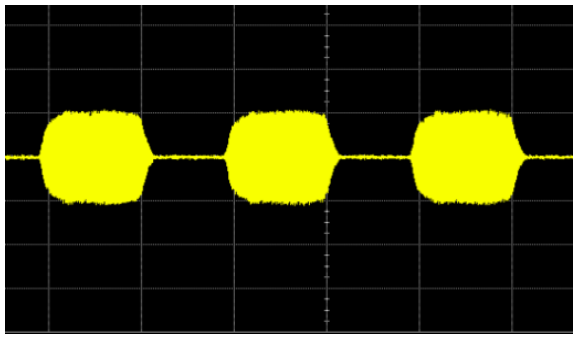
16QAM 1024QAM

High-performance pulse modulation

Pulse switching ratio greater than 80dB, rise and fall time less than 10ns, using narrow pulse option H04, minimum pulse width 20ns, pulse width range 20ns ~ 42s-10ns, step 10ns, with complex pulse modulation functions such as dual pulse, pulse train, repetition frequency stagger, repetition frequency jitter, and repetition frequency slip, and supports multiple triggering methods such as gating and external triggering.



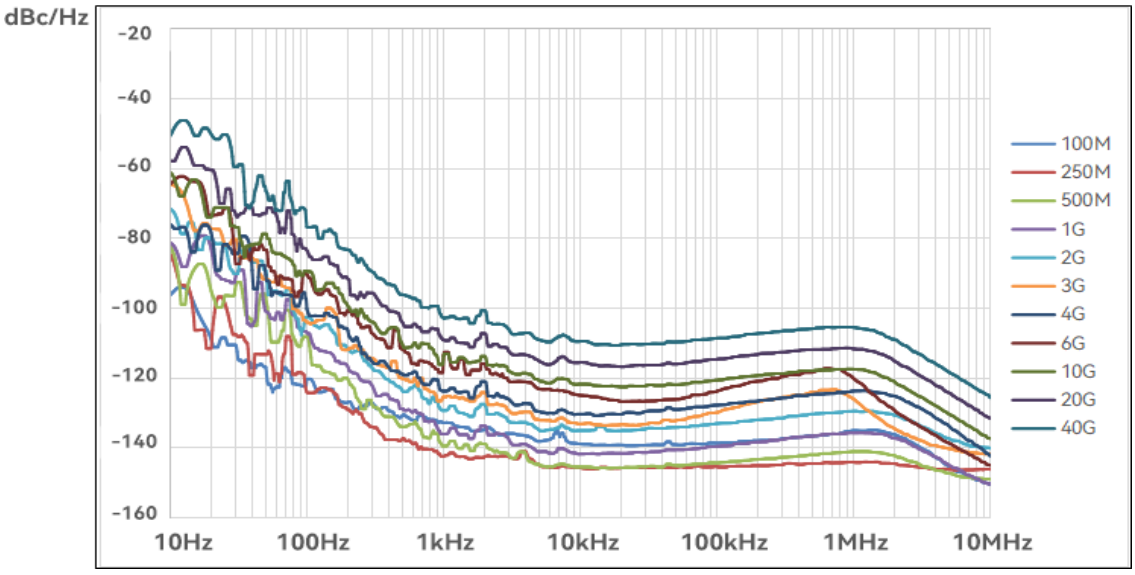
5 Pulse Series



Pulse width 20ns

Excellent SSB phase noise

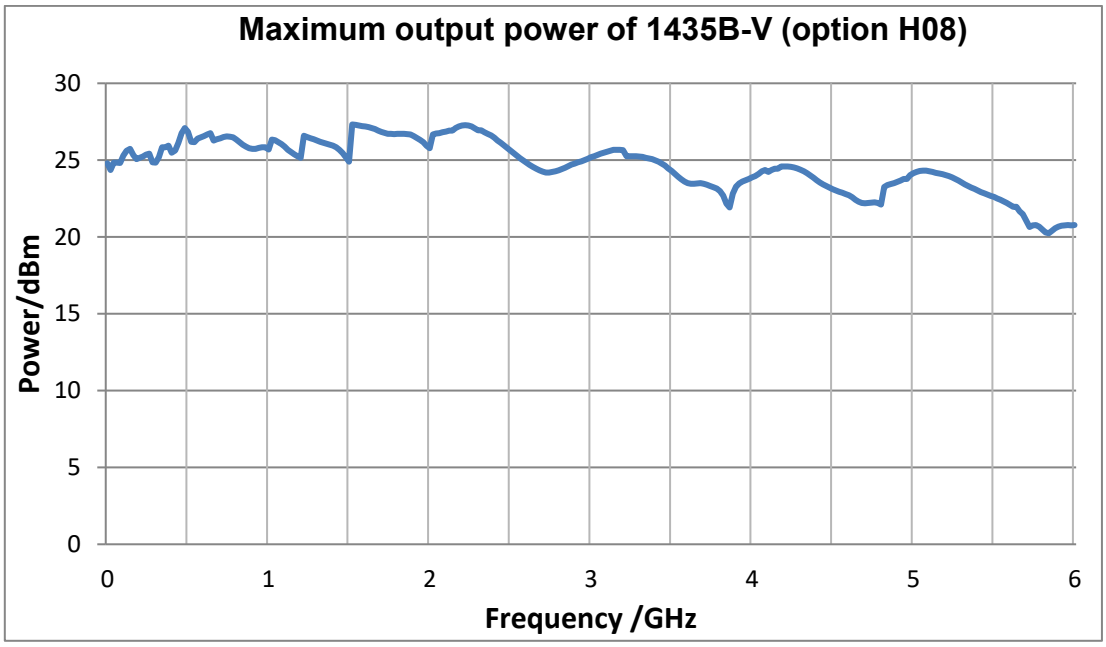
The 1435 series vector signal generator offers two phase noise levels for users to choose from: standard single-sideband phase noise of -100dBc/Hz (6GHz@10kHz) and -95dBc/Hz (10GHz@10kHz); and with the low phase noise option, single-sideband phase noise as low as -123dBc/Hz (6GHz@10kHz, measured value) and -120dBc/Hz (10GHz@10kHz, measured value). Users can select the phase noise level according to their actual needs to achieve a high cost-performance ratio.



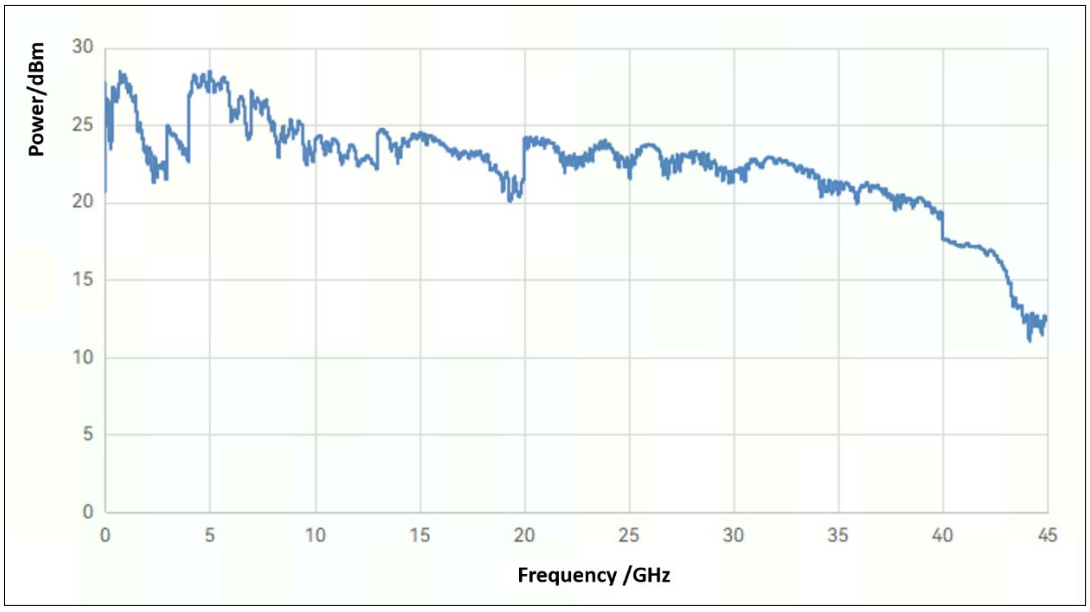
SSB Phase Noise (Low Phase Noise option)

High output power

When the H08 high-power output option is selected, the measured value of the full-band output power of the 1435-V series signal generator can be above 20dBm. In the test where high-power excitation signals are required, the 1435-V series signal generator can be used to obtain the required test signal without an external amplifier.



Maximum output power of 143GB-V (option H08)



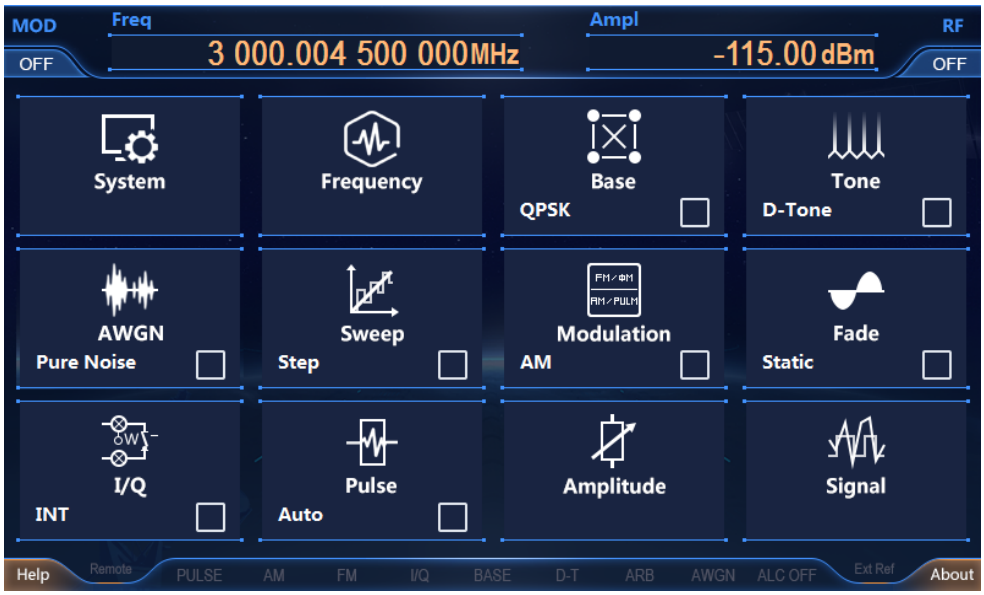
Small size and light weight

Adopting a 3U high-portable chassis design, the weight and volume are greatly reduced compared to desktop instruments. The heaviest model in the series weighs 12.9kg, and the lightest model weighs 7.8kg.

Rear panel of 1435A/B-V vector signal generator

High-sensitivity LED touch screen

The 7-inch wide LED display which supports a resolution of 800 × 480 pixels clearly shows the instrument status information. The combination of the capacitive screen and the tailored window interface enables the 1435-V series signal generator to respond sensitively and accurately to users' touch operations. In addition to the touch screen, the user can also operate the instrument by the panel buttons, the rotary knobs (with the Enter function), and the external keyboard and mouse conveniently and quickly.



User Interface of 1435 series vector signal generator

Typical Applications

General test

The 1435-V series signal generator has complete functions, and supports both digital modulation and AM, FM, ΦM and PM analog modulation functions, which can be widely used in the field of RF testing.

Test of communication systems

The 1435-V series signal generator provides excellent digital modulation performance, complete digital modulation modes, and supports real-time occurrence of universal digital modulation signals and user-defined modulation signals in more than 20 formats such as PSK, QAM, FSK, MSK, etc., which is suitable for various indicator tests, for example, the bit error rate of a communication system.

Digital demodulation receiver testing

Highly compatible arbitrary wave data format, allowing easy playback of user-defined waveform data files, while also featuring a power dynamic range of up to 150dB, suitable for testing the sensitivity, signal-to-noise ratio, and other performance indicators of digital demodulation receivers.

Technical Specifications [1]

<table>
<tr><th colspan="5">Frequency Features</th></tr>
<tr><td rowspan="10">Frequency Range</td><td rowspan="10">1435A-V: 9kHz~3GHz
1435B-V: 9kHz~6GHz
1435B-V+H20: 9kHz~75GHz
1435CV: 9kHz~13GHz
1435DV: 9kHz~20GHz
1435GV: 9kHz~45GHz</td><td colspan="2">Frequency</td><td>N (number of internal harmonic waves)</td></tr>
<tr><td colspan="2">9kHz≤f＜250MHz</td><td>1/4</td></tr>
<tr><td colspan="2">250MHz≤f≤375MHz</td><td>1/16</td></tr>
<tr><td colspan="2">375MHz＜f≤750MHz</td><td>1/8</td></tr>
<tr><td colspan="2">750MHz＜f≤1.5GHz</td><td>1/4</td></tr>
<tr><td colspan="2">1.5GHz＜f≤3GHz</td><td>1/2</td></tr>
<tr><td colspan="2">3GHz＜f≤6GHz</td><td>1</td></tr>
<tr><td colspan="2">6GHz＜f≤12GHz</td><td>2</td></tr>
<tr><td colspan="2">12GHz＜f≤24GHz</td><td>4</td></tr>
<tr><td colspan="2">24GHz＜f≤45GHz</td><td>8</td></tr>
<tr><td>Frequency Resolution</td><td colspan="4">0.001Hz</td></tr>
<tr><td>Frequency Switching Time</td><td colspan="4">≤1ms (typical value[2])</td></tr>
<tr><td>Time Base Aging Rate (Typical Value)</td><td colspan="4">Standard: ±5×10^{-7}/year(after continuous switch-on for 30 days)
High stability time base option H10:
±5×10^{-8}/year (after continuous switch-on for 30 days);
±5×10^{-10}/day (after continuous switch-on for 30 days)</td></tr>
<tr><td rowspan="2">Reference Output</td><td colspan="2">Frequency</td><td colspan="2">10MHz</td></tr>
<tr><td colspan="2">Power</td><td colspan="2">>+4dBm, impedance 50Ω</td></tr>
<tr><td rowspan="2">Reference Input</td><td colspan="2">Frequency</td><td colspan="2">1MHz～50MHz, step 1Hz</td></tr>
<tr><td colspan="2">Power</td><td colspan="2">0dBm～+7dBm, impedance 50Ω</td></tr>
</table>

Scanning Features					
Scanning Mode	Step scan, list scan				
Scan Dwell Time	100μs～100s				
Power Features					
Minimum Power	Module	Standard	Option H01/H01-E		
	1435A-V/B-V	-15dBm (settable -20dBm)	H01: -110dBm (settable -135dBm) H01-E: -90dBm (settable -110dBm)		
	1435CV/DV/GV	-15dBm (settable -20dBm)	H01: -110dBm (settable -135dBm)		
Maximum Power (25±10°C)	1435A-V/B-V				
	Frequency range	Standard	High power output option H08		
	9kHz≤f≤3GHz	≥18dBm	≥22dBm		
	3GHz＜f≤5GHz	≥16dBm	≥20dBm		
	5GHz＜f≤6GHz	≥15dBm	≥18dBm		
	6GHz＜f≤7.5GHz (Option H20)	≥14dBm	≥17dBm		
	1435CV/DV				
	Frequency range	Standard	High power output option H08		
	9kHz≤f≤3GHz	≥16dBm	≥21dBm		
	3GHz < f≤20GHz	≥15dBm	≥20dBm		
	1435GV				
	Frequency range	Standard	High power output option H08		
	9kHz≤f≤3GHz	≥14dBm	≥19dBm		
	3GHz < f≤17GHz	≥13dBm	≥17dBm		
	17GHz < f≤40GHz	≥11dBm	≥15dBm		
	40GHz < f≤45GHz	≥7dBm	≥10dBm		
Power Accuracy (25±10°C)	Standard				
	Power (dBm) / Frequency	10~maximum power	-10~10	-15~-10	
	9kHz≤f≤2GHz	±0.8dB	±0.6dB	±1.5dB	
	2GHz < f≤20GHz	±0.9dB	±0.7dB	±1.5dB	
	20GHz < f≤40GHz	±0.9dB	±0.8dB	±1.8dB	
	40GHz < f≤45GHz	±1.5dB	±1.5dB	±2.0dB	
	H01 programmable step attenuator option				
	Power (dBm) / Frequency	10~maximum power	-10~10	-70~-10	-90~-70
	9kHz≤f≤2GHz	±0.8dB	±0.6dB	±0.7dB	±1.4dB

	2GHz < f≤20GHz	±0.9dB	±0.7dB	±0.7dB	±1.6dB
	20GHz < f≤40GHz	±0.9dB	±0.8dB	±1.1dB	±2.0dB
	40GHz < f≤45GHz	±1.5dB	±1.5dB	±1.8dB	±3.0dB
Power Resolution	0.01dB				
Output Impedance	50Ω (rated value [3])				
Source Standing Wave Ratio, VSWR (Internal Fixed Amplitude) (Typical Value)	9kHz≤f≤3GHz	< 1.7			
	3GHz < f≤13GHz	< 1.6			
	13GHz < f≤20GHz	< 1.8			
	20GHz < f≤40GHz	< 2.0			
	40GHz < f≤45GHz	< 2.0			
Maximum Reverse Power	0.5W (0V DC) (rated value[3])				
Spectral Purity [4]					
Harmonic Wave (at +10dBm)	Frequency	Standard			
	9kHz≤f≤10MHz	< -23dBc			
	10MHz < f≤3GHz（1435A-V）	< -30dBc			
	10MHz < f≤6GHz（1435B-V）	< -30dBc			
	10MHz < f≤7.5GHz (1435B-V + Option H20)	< -30dBc			
	10MHz < f≤4GHz (1435CV/DV/GV)	< -30dBc			
	4GHz < f≤20GHz (1435CV/DV/GV)	< -55dBc			
	20GHz < f≤45GHz（1435GV）	< -50dBc			
Subharmonic Wave (at +10dBm)	9kHz≤f≤6GHz	None			
	6GHz < f≤12GHz	< -60dBc			
	12GHz < f≤24GHz	< -55dBc			
	24GHz < f≤45GHz	< -50dBc			
Non-harmonic Wave (at 0dBm, 10kHz Frequency Offset)	Frequency	Standard	Low phase noise option (Actual measured value)		
	9kHz≤f＜250MHz	＜-54dBc	＜-58dBc（-65dBc）		
	250MHz≤f≤3GHz	＜-62dBc	＜-77dBc（-86dBc）		

	3GHz＜f≤6GHz	＜-56dBc	＜-71dBc（-80dBc）		
	6GHz＜f≤12GHz	＜-50dBc	＜-65dBc（-74dBc）		
	12GHz＜f≤24GHz	＜-44dBc	＜-59dBc（-68dBc）		
	24GHz＜f≤45GHz	＜-38dBc	＜-53dBc（-62dBc）		
SSB Phase Noise (dBc/Hz at +10dBm)	Standard				
	Frequency	100Hz	10kHz		
	100MHz	＜-83	＜-115		
	250MHz	＜-93	＜-127		
	500MHz	＜-89	＜-121		
	1GHz	＜-83	＜-115		
	2GHz	＜-77	＜-109		
	3GHz	＜-74	＜-105		
	4GHz	＜-71	＜-103		
	6GHz	＜-68	＜-99		
	10GHz	＜-63	＜-95		
	20GHz	＜-57	＜-89		
	40GHz	＜-51	＜-83		
	Low phase noise option H06				
	Frequency	100Hz	1kHz	10kHz	100kHz
	100MHz	＜-83	＜-122	＜-136	＜-131
	250MHz	＜-93	＜-133	＜-142	＜-139
	500MHz	＜-89	＜-129	＜-139	＜-135
	1GHz	＜-83	＜-123	＜-136	＜-132
	2GHz	＜-77	＜-117	＜-132	＜-126
	3GHz	＜-74	＜-114	＜-126	＜-121
	4GHz	＜-71	＜-111	＜-125	＜-120
	6GHz	＜-68	＜-108	＜-122	＜-115
	10GHz	＜-63	＜-103	＜-118	＜-113
	20GHz	＜-57	＜-97	＜-112	＜-107
	40GHz	＜-51	＜-91	＜-106	＜-101
Modulation Features					
Frequency Modulation[5] (Option H02)	Maximum frequency offset: N × 16MHz (N is the number of fundamental harmonic wave) Accuracy (1kHz modulation rate, frequency offset: N × 500kHz): ± (2% × set frequency offset + 20Hz) Modulation rate (3dB bandwidth, frequency offset: N × 500kHz): DC-7MHz Distortion (1 kHz rate, frequency offset: N × 500kHz): <0.4%				
Phase Modulation[5] (Option H02)	Maximum phase offset: N × 16rad (N is the number of fundamental harmonic wave) Accuracy (1kHz modulation rate, frequency offset: N × 500kHz): ± (2% × set phase offset + 0.01rad) Modulation rate (3dB bandwidth, phase offset: N × 8rad): DC-1MHz				

	Distortion (1kHz modulation rate, phase offset: N × 8rad): <0.4%	
Amplitude Modulation[5] (Option H02)	Maximum depth: >90% Amplitude modulation accuracy: (1 kHz modulation rate, 30% modulation depth): ± (4% × set depth +1%) Amplitude modulation distortion: (1kHz modulation rate, linear mode, total harmonic distortion, 30% modulation depth): <2%; Amplitude modulation bandwidth (3dB bandwidth, 30% modulation depth, frequency test point: 1GHz, 5GHz): DC~100kHz.	
Pulse Modulation [6] (Option H03)	Switching ratio	＞80dB
	Rise and fall time	＜10ns
	Minimum pulse of internal fixed amplitude	1μs
	Minimum pulse of non-fixed amplitude	100ns
Narrow Pulse Modulation [6] (Option H04)	Switching ratio	＞80dB
	Rise and fall time	＜10ns
	Minimum pulse of internal fixed amplitude	1μs
	Minimum pulse of non-fixed amplitude	20ns
Internal Analog Modulation Signal Generator (Option H02)	It provides three independent signals for frequency/phase modulation, amplitude modulation and low frequency output signals Waveform: sine wave, square wave, triangle wave, sawtooth wave Frequency range: sine wave 0.1Hz~10MHz Square wave, triangle wave, sawtooth wave 0.1Hz~1MHz Frequency resolution: 0.1Hz Low frequency output: amplitude 0~5V peak (rated value), to 50Ω load	
Internal Pulse Generator (Option H03)	H03 Pulse Modulation: Pulse width: 100ns~(42s-10ns) (rated value) Pulse period: 120ns~42s (rated value) H04 Pulse Modulation: Pulse width: 20ns~(42s-10ns) (rated value) Pulse period: 40ns~42s (rated value) Resolution: 10ns	
Multi-function Function Generator (Option H05)	The multi-functional generator consists of 7 waveform generators. By using the composite modulation characteristics in AM, FM/ΦM and low-frequency outputs, the generators can be set individually or all 5 generators can be set simultaneously. Waveform: Function generator 1: sine wave, triangle wave, square wave, sawtooth wave, pulse Function generator 2: sine wave, triangle wave, square wave, sawtooth wave, pulse Dual function generator: sine wave, triangle wave, square wave, sawtooth wave, pulse, phase offset and amplitude ratio of audio 2 relative to audio 1; Scan function generator: sine wave, triangle wave, square wave, sawtooth wave; Noise generator 1: uniform, Gaussian; Noise generator 2: uniform, Gaussian; DC: LF output only; Frequency parameters: Sine wave: 0.1Hz to 10MHz; Triangle wave, square wave, sawtooth wave, pulse: 0.1Hz to 1MHz;	

<table>
<tr><td></td><td colspan="3">Resolution: 0.1Hz;</td></tr>
<tr><td rowspan="10">Vector Modulation Accuracy (25°C ± 10°C After Calibration)</td><td>50MHz～6GHz</td><td>Standard Configuration</td><td>EVM（RMS%）<1.8%</td></tr>
<tr><td>6GHz～7.5GHz</td><td>Standard Configuration</td><td>EVM（RMS%）<2.0%</td></tr>
<tr><td>50MHz～7.5GHz</td><td>Low Phase Noise Option H06</td><td>EVM（RMS%）<1.0%</td></tr>
<tr><td>7.5GHz～20GHz</td><td>Low Phase Noise Option H06</td><td>EVM（RMS%）<1.2%</td></tr>
<tr><td>20GHz～30GHz</td><td>Low Phase Noise Option H06</td><td>EVM（RMS%）<1.4%</td></tr>
<tr><td>30GHz～45GHz</td><td>Low Phase Noise Option H06</td><td>EVM（RMS%）<1.6%（Typical 1.4%）</td></tr>
<tr><td colspan="3">5GNR（FR1，Test Model 3.1a，FDD，100MHz，30kHz SCS，256QAM）</td></tr>
<tr><td>3.5GHz</td><td><1.0%</td><td></td></tr>
<tr><td colspan="3">5GNR（FR2，Test Model 3.1a，TDD，100MHz，60kHz SCS，256QAM）</td></tr>
<tr><td colspan="2">10GHz：<1.2%（Low phase Noise option H06）</td><td>28GHz：<1.5%（Low phase Noise option H06）</td></tr>
<tr><td>Adjacent channel rejection ratio (ACLR, after calibration, 25℃±10℃)</td><td colspan="3">WCDMA: (symbol rate 3.84 Msps, root Nyquist filter, α=0.22, QPSK format, 0dBm)
>60dB (2GHz)
5G NR:
>50dB (3.5GHz, FR1, Test Model 3.1a, FDD, 100MHz, 30kHz SCS, 256QAM, 0dBm)
>47dB (10GHz, FR2, Test Model 3.1a, TDD, 100MHz, 60kHz SCS, 256QAM, 0dBm)
>46dB (28GHz, FR2, Test Model 3.1a, TDD, 100MHz, 60kHz SCS, 256QAM, 0dBm)</td></tr>
<tr><td>Internal modulation bandwidth (carrier 900MHz, 2.6GHz, 3.5GHz, 10GHz, 28GHz, 42.5GHz)</td><td colspan="3">Standard configuration:
120MHz (multi-tone, 51 tones, carrier ≥ 240MHz, frequency spacing 2.4MHz, ± 3.0dB bandwidth);
H09 Large modulation bandwidth option:
200MHz (multi-tone, 51 tones, carrier ≥ 400MHz, frequency spacing 4MHz, ± 3.0dB bandwidth);
H09-500 500MHz modulation bandwidth option:
500MHz (multi-tone, 101 tones, carrier ≥ 1GHz, frequency spacing 5MHz, ± 3.0dB bandwidth);
H09-800 800MHz modulation bandwidth option:
800MHz (multi-tone, 101 tones, carrier ≥ 1.6GHz, frequency spacing 8MHz, ± 3.0dB bandwidth).</td></tr>
<tr><td>External modulation bandwidth (carrier 2.6GHz, 3.5GHz, 10GHz, 28GHz, 42.5GHz)</td><td colspan="3">800MHz (carrier ≥ 1.6GHz, amplitude-stabilized open-loop, I-channel input 100mVrms sine wave, ±4dB bandwidth)</td></tr>
<tr><td>Internal Baseband Signal Generator</td><td colspan="3">Number of Channels: 2 (I and Q)
Maximum Symbol Rate:
Standard: 75Msps
Option H09: 125Msps
Option H09-500: 156.25Msps
Option H09-800: 250Msps
Baseband Waveform Memory:
Standard: 1G samples
Option H32: 2G samples</td></tr>
</table>

	Real-time Baseband Mode: Modulation Format: PSK: BPSK, QPSK, OQPSK, π/4 DQPSK, D8PSK, 16PSK QAM: 4, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096 FSK: 2, 4, 8, 16 ASK, MSK, Arbitrary Wave (Option S01) EVM: <1.0% (Typical value, Note 3) (RMS%, Symbol rate 4Msps, Root Nyquist filter, α=0.3, QPSK format) Maximum Frequency Spacing in Dual-Tone Mode: Standard: 120MHz; H09 Large Modulation Bandwidth Option: 200MHz; H09-500 500MHz Modulation Bandwidth Option: 500MHz; H09-800 800MHz Modulation Bandwidth Option: 800MHz Arbitrary Wave Mode: Data Format: Binary. Trigger: Trigger Type: Continuous, Single, Gated; Trigger Source: Key Trigger, External Trigger, Bus Trigger (GPIB, LAN); Trigger Mode: Auto Play, Triggered Play, Real-Time Play, Single, Gated (Active High, Active Low);
AWGN (option S03)	Types: Pure noise, Continuous wave jamming, Additive noise Noise bandwidth: 120/200MHz/500MHz/800MHz Setting range: 0 to 40dB
General Features	
RF Output Port	1435A-V/B-V: N-type (female), 50Ω impedance 1435CV: 3.5mm (male), 50Ω impedance 1435DV: 3.5mm (male), N-type (female) (option H91), 50Ω impedance 1435GV: 2.4mm (male), 50Ω impedance
Programming Interface	LAN, GPIB
Maximum Dimensions	Nominal dimensions (excluding handles, side carrying straps, feet, pads, grounding posts, rear trim, knobs, connectors, and other protrusions): 1435A-V/B-V: (319.3±1.20)mm × (132.5±1.2)mm × (351±1.2)mm 1435CV/DV/GV: (319.3±1.20)mm × (132.5±1.2)mm × (401±1.2)mm
Weight	<15kg (the weight varies with the model and option configuration)
Power Supply	100~120VAC, 50~60Hz; or 200~240VAC, 50~60Hz (self-adaptive)
Power Consumption	Less than 300W
Temperature Range	Operating temperature: 0°C~+50°C; storage temperature: -40°C~+70°C

Note:

1. The 1435 series vector signal generator, after being stored at ambient temperature for 2 hours, with the frequency set to 1GHz, RF on, and a 30-minute warm-up, will automatically couple with the attenuator (or ALC power greater than -5dBm) within the given operating range, meeting all performance specifications.
2. Measured values are actual data from a specific instrument, representative to a certain extent, and for user reference only; they are not for evaluation.
3. Typical values refer to performance information outside the product's "guaranteed

specifications." Approximately 80% of instruments achieve performance within a temperature range of 20℃ to 30℃. Typical values do not include uncertainties during the measurement process.

4. Optional option to move the RF output to the rear panel (H92) reduces maximum power by 2dB.
5. Rated values refer to expected performance or describe product performance useful in the product but not included in the product warranty.
6. Spectral purity specifications are for point-frequency unmodulated mode.
7. Frequency modulation, phase modulation, and amplitude modulation specifications apply to frequencies greater than 10MHz.
8. The pulse modulation and narrow pulse modulation technical specifications are applicable to frequencies above 50MHz.

Order Information

- **Main unit:**

1435A-V signal generator: 9kHz~3GHz

1435B-V signal generator: 9kHz~6GHz

1435CV signal generator: 9kHz~13GHz

1435DV signal generator: 9kHz~20GHz

1435GV signal generator: 9kHz~45GHz

- **Standard:**

No.	Designation	Description
1	Power cord assembly	Standard three-core power cord
2	Product certificate	-

- **Options:**

	Designation	Function
1435-H01	115dB programmable step attenuator	Expand the output power dynamic range.
1435-H01-E	Electronic attenuator	Expand the output power dynamic range. Only for 1435A-V/B-V
1435-H02	Analog modulation	Increase analog modulation functions, including AM, FM, ΦM and low frequency output.
1435-H03	Pulse modulation	Increase the pulse modulation function with a minimum pulse width of 100ns.
1435-H04	Narrow pulse modulation	Increase the pulse modulation function with a minimum pulse width of 20ns. H03 is not necessary.
1435-H05	Multi-function function generator	Add a richer analog modulation signal format. (Note: The H05 option is available after the H02 analog modulation option is selected.)
1435-H06	Low phase noise	Optimize SSB phase noise, 6GHz@10kHz: -115dBc/Hz.
1435-H08	High power output	Increase the maximum output power.
1435-H09	Large modulation bandwidth	The internal modulation bandwidth is extended to 200MHz, suitable for 1435A-V/B-V/CV/DV/GV.
1435-H09-500	500MHz modulation bandwidth	The internal modulation bandwidth is extended to 500MHz, suitable for 1435A-V/B-V/CV/DV/GV.
1435-H09-800	800MHz modulation	The internal modulation bandwidth is extended to

	bandwidth	800MHz, suitable for 1435A-V/B-V/CV/DV/GV.
1435-H10	High stability time base option	Internal time base aging rate.
1435-H20	Frequency extension	Extend the frequency to 7.5GHz. Only for 1435B-V.
1435-H32	Large-capacity memory of built-in baseband	Built-in baseband memory is expanded to 8GB, suitable for the -V series.
1435-H92	RF output moved to the rear panel	RF output on rear panel.
1435-H93	Portable handle	3U handle.
1435-H94	Rack mount kit	Mounting kit for the upper cabinet.
1435-H95	Aluminum alloy transport case	High-strength lightweight aluminum alloy transport case with handle and universal roller for easy transportation.
1435-H98	English kit	English panel, English manual, English operation interface and English operating system.
1435-S01	Arbitrary waveform mode	Support arbitrary wave data download and playback, generation of baseband signal or signal playback
1435-S02	Linear Frequency Modulation (LFM)	Supported intra-pulse linear frequency modulation function
1435-S03	Gaussian White Noise	Supported pure noise generation, additive noise generation and continuous wave jamming generation
1435A-V-EWT1	Extend 1 year warranty	Extend 1 year warranty after 3 years standard warranty. For 1435A-V
1435B-V-EWT1	Extend 1 year warranty	Extend 1 year warranty after 3 years standard warranty. For 1435B-V
1435CV-EWT1	Extend 1 year warranty	Extend 1 year warranty after 3 years standard warranty. For 1435CV
1435DV-EWT1	Extend 1 year warranty	Extend 1 year warranty after 3 years standard warranty. For 1435DV
1435GV-EWT1	Extend 1 year warranty	Extend 1 year warranty after 3 years standard warranty. For 1435GV
1435A-V-JL	Metrology Certificate	Metrology Certificate Report. For 1435A-V
1435B-V-JL	Metrology Certificate	Metrology Certificate Report. For 1435B-V
1435CV-JL	Metrology Certificate	Metrology Certificate Report. For 1435CV
1435DV-JL	Metrology Certificate	Metrology Certificate Report. For 1435DV
1435GV-JL	Metrology Certificate	Metrology Certificate Report. For 1435GV

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