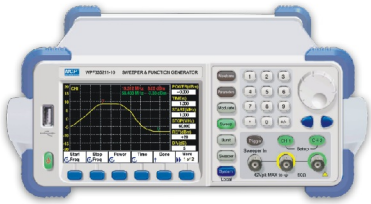
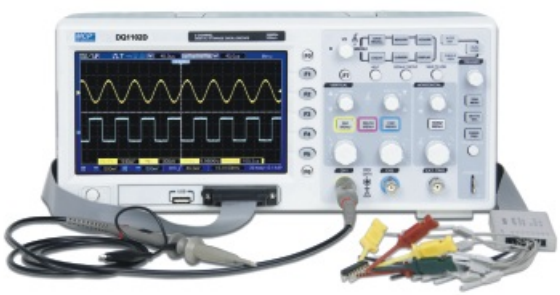




TEST INSTRUMENTS

- DIGITAL OSCILLOSCOPE
- FUNCTION GENERATOR
- SIGNAL GENERATOR
- UNIVERSAL COUNTER

DQ2000Y

CE

Features

. 1GSa/s sampling rate
. 2 or 4 channel mode
. 8 inch wide rectangle color LCD with WVGA(800x480) resolution
. Waveform capture rate up to 50,000wfms/s
. Memory depth 28Mpts per channel
. 1mV/div~20V/div wide range
. 256 level intensity grading
. 65,000 frames for waveform record and replay
. Support serial bus trigger and decoding
. Interface: USB Host, USB Device, LAN, AUX out

DQ2102Y

Technical Data		DQ2072Y	DQ2074Y	DQ2102Y	DQ2104Y	DQ2202Y
Display	Type	8" rectangle colour LCD				
	Backlight intensity	300nit (cd/m²)				
	Display resolution	800 horizontal×480 vertical pixels				
	Display contrast	Adjustable				
Vertical system	Channels	2	4	2	4	2
	Sensitivity	1mV / div~20V /div				
	Vertical resolution	8bit				
	Width of band (-3dB)	70MHz	70MHz	100MHz	100MHz	200MHz
	Rise time	≤5ns	≤5ns	≤3.5ns	≤3.5ns	≤1.8ns
	Single-shot band width	70MHz	70MHz	100MHz	100MHz	200MHz
	Input coupling	DC, GND, AC				
	DC gain accuracy	±3%				
Horizontal system	SEC/DIV range	5ns~50s/div	5ns~50s/div	5ns~50s/div	5ns~50s/div	2ns~50s/div
	Sampling rate range	250MSa/s（4CH）,500 MSa/s（2CH）, 1GSa/s（1CH）				
	Waveform capture rate	50,000 wfms/s				
	Waveform interpolation	(Sinx)/x				
	memory depth	28Mpts per channel				
	Sampling rate and delay time accuracy	±50ppm over any ⩾1ms time interval				
	Delta time measurement accuracy	Single ±(1 sampling interval time+50ppm×rdg+0.6ns) Average ±(1 sampling interval time+50ppm×rdg+0.4ns)				
Trigger system	Mode	Auto, Normal, Single				
	Type	Edge, Alternate, Runt, Time Out, Nth Edge, Delay, Duration, Setup/Hold, Pulse Width, Slope, Video, Pattern, RS232/UART,I2C,SPI				
	Bus decode (optional)	RS232/UART,I2C,SPI				
	Hold off range	100ns ~ 10s				
Math		+, -, × ÷, FFT, logical operations, editable advanced operations				
Acquire Input	Acquisition mode	Sampling, peak detection, high resolution, envelope, and average				
	Input coupling	DC, GND, AC				
	Input impedance	1MΩ ±2%// 20pF±3pF				
	Probe attenuation factor	0.001×, 0.01×, 0.1×, 1× 10×, 100×, 1000×				
	Max. input voltage	300V(DC+AC peak, 1MΩ)				
	Channel CMR	Better than 40: 1				
	Interchannel time delay	150ps				
Measurement	Cursor	Voltage difference (△V) between cursors Time difference (△T) between cursors Reciprocal of △T in Hz (1/△T)				
	Auto-measure	Peak-Peak, Amplitude, Maximum, Minimum, Top, Bottom, Mean, Middle, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, Overshoot, Preshoot, Frequency, Cycle, Rise Time, Fall Time, Positive Pulse, Negative Pulse. Positive Duty Ratio, Negative Duty Ratio, Delay A->B ↓, Delay A->B ↑, Delay B->A ↓, Delay B->A ↑				
	Number of measurements	Display up to 5 measurements at the same time				
	Measurement statistics	Average, Max, Min, standard deviation, number of measurements				
Frequency Counter		Hardware 6-bit counter (selectable channels)				
I/O	Standard	USB Host, USB Device, LAN, AUX OUT				
	Optional	LA Module, WaveGen Module, DMM Module				
Calibrator signal		10Hz,100Hz,1kHz,10kHz;≈3Vpp				
Power source		100~ 240VACrms, 50Hz/60Hz; 50VA Max				
Dimensions		336(W) × 164(H) × 105(D)mm				
Weight		3.5kg				
Accessories		Operation manual, power cord, USB cable, probe×2(×4), software CD-ROM				

DQ1000D SERIES

Features

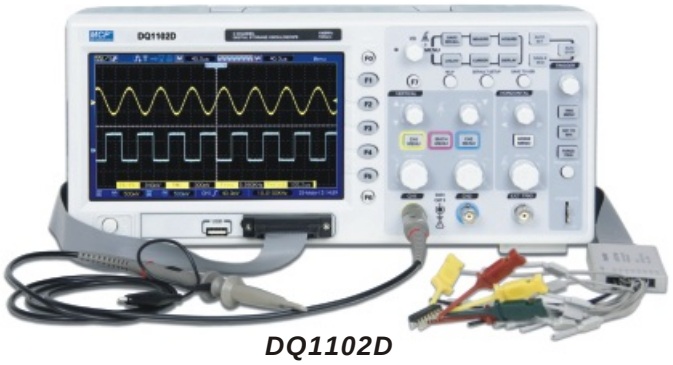
.Support logic analyzer and oscilloscope

.1GSa/s sampling rate and 50GSa/s equivalent sampling rate

.1024k recording length

.7″ wide screen 64k color TFT display

.USB-host for save and update



DQ1102D

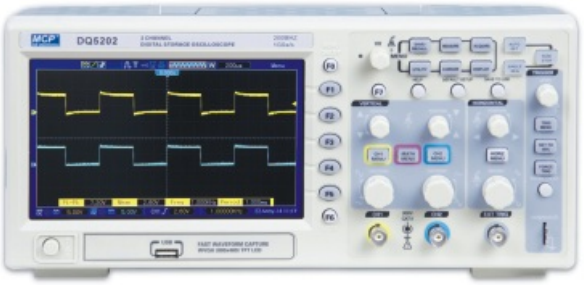
Technical Data		DQ1062D	DQ1102D	DQ1202D
Channels		2 channels oscilloscope+ 16 channels logical analyser		
Sampling rate		1GSa/s		
Equivalent sampling rate		25GSa/s		
Display	Type	7″ wide screen 64k color TFT LCD		
	Display resolution	800 horizontal × 480 vertical pixels		
	Display contrast	Adjustable (16 gears) with the progress bar		
Vertical system	Sensitivity	2mV/div~5V/div		
	Vertical resolution	8 bit		
	Width of band (-3dB)	DC (AC 10Hz) ~ 60MHz	DC (AC 10Hz) ~ 100MHz	DC (AC 10Hz) ~ 200MHz
	Selectable analog bandwidth limit	20MHz		
	Rise time	≤5.8ns	≤3.5ns	≤1.8ns
	DC gain Accuracy	±4%(2mV/div~5mV/div)	±3%(10mV/div~5V/div)	
	DC measurement accuracy	±(3%Rdg.+0.1div+1mV)(10mV/div~5V) ±(3%(Rdg.+vertical position)+0.2div+1%(vertical position) (2mV/div~200mV/div, +2mV; 200mV/div~5V/div, +50mV)		
Horizontal system	SEC/DIV range	2ns~40s/div, at 2-4-8 increment		
	Waveform interpolation	Sin(x)/x		
	Recording length	1024k		
	Sampling rate and delay time accuracy	±50ppm (any time interval ≥1ms)		
	Delta time measurement accuracy	Single: ±(1 sampling time interval + 100ppm×Rdg. + 0.6ns) Average values: ± (1 sampling time interval + 100ppm×Rdg. + 0.4ns)		
Trigger system	Mode	Auto, normal, single		
	Type	Edge, pulse, video, alternate, slope, over time		
	Hold off range	100ns~10s		
Math		+, −, ×, ÷		
		FFT		
Acquire input	Input coupling	DC, GND, AC		
	Input impedance	1MΩ ±2%, 20pF±3pF		
	Probe attenuation	1×, 10×, 100×, 1000×		
	Max. input voltage	300V (DC+AC peak)		
Measurement	Cursor	Voltage difference (ΔV) between cursors Time difference (ΔT) between cursors Reciprocal of ΔT in Hz (1/ΔT)		
	Auto-measure	Vrms, Vavg, Vp-p, Vmax, Vmin, Vtop, Vmid, Vamp,Period, Freq, Rise, Fall, +Width, -Width, +Duty, -Duty, Delay, FRF, FFR, LRR, LRF, LFR, LFF		

Technical Data			DQ1062D	DQ1102D	DQ1202D
I/O	Standard		USB(D), USB(H)		
	Options		LAN		
Calibrator	Output voltage		5V(≥1MΩ load)		
	Output frequency		1kHz		
Logical analyzer	Input channel		D0~D15		
	Max. input impedance		200k (C=10P)		
	Max. sampling rate		500MHz		
	Recording length		512k		
	Max. input voltage		±60V		
	Logic threshold range		±8V		
	Compatible input		TTL, CMOS, ECL		
	Cursors		Voltage difference (ΔV) between cursors Time difference (ΔT) between cursors Reciprocal of ΔT in Hz (1/ΔT)		
	Measurement		Period and Frequency		
	Record postion		RefA RefB		
	Trigger mode	Edge	D0~D15 select slope (rising or falling edge)		
		Pulse width	D0~D15 select pulse polarity (positive or negative pulse), trigger when (=, ≠, >, <), trigger pulse width		
		Code-type	D0~D15 select code-type (H, L, X)		
		Duration	D0~D15 select persist time and trigger when (data terminate, data start, and data delay)		
		Queue	D0~D15 select specific data index (0~3) and code-type (H, L, X)		
		Repeat	D0~D15 select code-type (H, L, X) and repeat times		
Power source	100~120VACrms (±10%), 45~440Hz; 30VA Max; CAT Ⅱ 120~240VACrms(±10%), 45~66Hz; 30VA Max; CAT Ⅱ				
Dimensions (W×H×D)	315×142×110mm				
Weight	2.1kg				
Accessories	Operation manual, power cord, USB cable, probe×2, sofrware CD-ROM, logic analyzer probe				

DQ5000 SERIES CE

Features

. 1GSa/s sampling rate
. 7 inch wide rectangle colour LCD
. 32 kinds of automatic measurement function
. FFT function
. Auto-setting for quick setup and waveform acquisition
. Advanced cursor modes: manual, auto and track
. 40k memory length

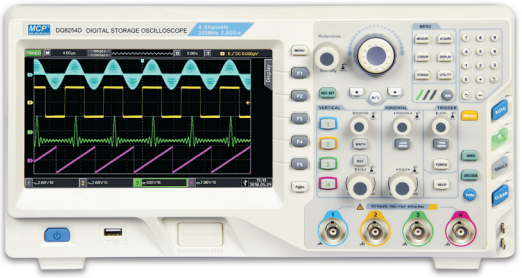


DQ5202

Technical Data		DQ5072	DQ5102	DQ5202
Display	Type	7" rectangle colour LCD		
	Display resolution	800 horizontal×480 vertical pixels		
	Display contrast	Adjustable		
Vertical system	Sensitivity	2mV / div~10V /div		
	Vertical resolution	8bit		
	Width of band (-3dB)	70MHz	100MHz	200MHz
	Rise time	≤5ns	≤3.5ns	≤1.7ns
	Single-shot band width	70MHz	100MHz	200MHz
	Input coupling	DC, GND, AC		
	DC gain accuracy	±3% (10mV/div~5V/div)	±4% (2mV/div~5mV/div)	
Horizontal system	SEC/DIV range (at 2-4-8 sequence)	4ns/div~80s/div	4ns/div~80s/div	2ns/div~80s/div
	Sampling rate range	1GSa/s		
	Waveform interpolation	(Sinx)/x		
	memory depth	40k		
	Sampling rate and delay time accuracy	±50ppm over any ≥1ms time interval		
	Delta time measurement accuracy	Single ±(1 sampling interval time+100ppm×rdg+0.6ns) Average ±(1 sampling interval time+100ppm×rdg+0.4ns)		
Trigger system	Mode	Auto, Normal, Single		
	Type	Edge, Pulse Width, Video, Slope, Overtime, Alternate trigger		
	Hold off range	100ns ~ 10s		
Math		+, −, ×, ÷		
		FFT		
Acquire Input	Acquisition mode	Normal, Peak Detect, Average		
	Input coupling	DC, GND, AC		
	Input impedance	1MΩ ±2% 20pF±3pF		
	Probe attenuation	1×, 10×		
	Supported probe attenuation factor	1×, 10×, 100×, 1000×		
	Max. input voltage	300V(DC+AC peak, 1MΩ) Voltage difference (△V) between cursors		
Measurement	Cursor	Time difference (△T) between cursors Reciprocal of △T in Hz (1/△T)		
	Auto-measure	Frequency,Period,Mean,Pk-Pk,Cycil RMS,Min.,Max.,Rise time,Fall time,+Pluse width -Pulse width,Delay1-2Rise,Delay1-2Fall,+Duty,-Duty,Vbase,Vtop,Vmid,Vamp Overshoot,Preshoot,Preiod Mean,Preiod RMS,FOVShoot,RPREShoot,BWIDTH FRF,FFR,LRR,LRF,LFR,LFF		
I/O	Standard	USB(H)		
Calibrator signal	Output voltage	5V (≥1MΩ load)		
	Output frequency	1kHz		
Power source		100~120V, 45Hz~440Hz; 121~ 240V, 45Hz~66Hz; 30VAMax; CAT Ⅱ		
Dimensions		313(W) × 108(H) × 142(D)mm		
Weight		2kg		
Accessories		Operation manual, power cord, USB cable, probe×2, software CD-ROM		

DQ8000D SERIES CE NEW

Features
. 250MHz/150MHz bandwidth, providing 2-channel and 4- channel models
. Real-time sampling rate up to 2.5GS/s, allowing you to observe faster signals.
. Standard memory depth of 70Mpts per channel
. Waveform capture rate up to 200,000wfms/s
. Hardware real-time waveform continuous recording and waveform analysis supports recordings up to 100,000 wave forms
. Ultra phosphor 256-level grayscale display
. 8-inch WVGA(800x480) TFT LCD, ultra widescreen, vivid colors display
.Multifarious trigger type: edge, pulse, runt, window, N-edge, delay, timeout, setup/hold, slope, video, code
. Automatic measurement of 34 waveform parameters
. Supports USB storage and firmware upgrades, one click screen copy function



DQ8000D

Technical Data	DQ8152D	DQ8252D	DQ8154D	DQ8254D
Input				
Input coupling	DC, AC, GND			
Input impedance	1MΩ ±1% // 18pF±3pF			
Probe attenuation coefficient	0.001x, 0.01x, 0.1x 1x, 10x, 100x,1000x			
Maximum input voltage	CATI 300Vrms, CATII 100Vrms, transient overvoltage 1000Vpk			
Vertical				
Analog bandwidth	150MHz	250MHz	150MHz	250MHz
Rise time(typical)	≤2.4ns	≤1.4ns	≤2.4ns	≤1.4ns
Channels	2	2	4	4
Vertical resolution	8 bits			
Vertical scale	1mV/div~20V/div (1-2-5 base)			
Vertical displacement range	1mV/div~50mV/div: ±2V; 100mV/div~1V/div: ±40V; 2V/div~20V/div: ±40V			
Bandwidth limit (typical)	20MHz			
Low frequency response (AC coupling, -3dB)	≤5Hz (on BNC)			
DC gain accuracy	<5mV: ±3% ≥5mV: ±2% (sampling or average sampling method)			
DC offset accuracy	≤ ±3% (sampling or average sampling method)			
Channel isolation	DC to maximum bandwidth: >40dB			
Horizontal				
Time scale	2ns/div~40s/div (1-2-4 base)			
Timing accuracy	≤ ±(50+2xservice life) ppm			
Delay range	Pre-trigger (negative selay): ≧1 screen width Post-trigger (positive delay): 1s~50s			
Time base mode	YT, XY, ROLL			
Waveform capture rate	200,000 wfms/s			
Sampling				
Sampling mode	Real-time sampling			
Real-time sampling rate	2.5GS/s(single channel), 1.25GS/s(dual channel), 1.25GS/s(quad channel)			
Acquisition mode	Sampling, peak detection, high resolution, envelope and average			
Average value	2,4,8,18,32,64,128,256,512,1024,2048,4096 and 8192			
Waveform interpolation	sin(x)/x			
Memory depth	Auto, 7kpts, 70kpts, 700kpts, 7Mpts, 70Mpts			
Acquisition mode	Sampling, peak detection, high resolution, envelope and average			
Average value	2,4,8,18,32,64,128,256,512,1024,2048,4096 and 8192			
Trigger				
Trigger level	Internal: center of the screen± 8 grids: external: ±0.8V			
Trigger mode	Auto, normal, single			
Trigger hold-off range	80ns~10s			
High frequency suppression	80kHz			
Low frequency suppression	8kHz			
Trigger sensitivity	≤ 1div			
Trigger type	Edge trigger, pulse width, runt trigger, window trigger, N-edge trigger, delay trigger, timeout trigger, setup/hold trigger, slope trigger, video trigger, code trigger (RS232 decode, I2C decode, SPI decode 4 channel only, USB decode optional, CAN decode optional)			

Technical Data		DQ8152D	DQ8252D	DQ8154D	DQ8254D
Measure					
Cursor	Manual	Voltage difference between cursors (ΔV) Time difference between cursors (ΔT) The reciprocal of ΔT (Hz) (1/ΔT)			
	Tacking mode	Voltage and time at waveform point			
	Indicator	Allows cursor display during automatic measurement			
Automatic measurement		Maximum, minimum, peak-to-peak, median, top, bottom, amplitude, period average, average, periodic RMS, RMS, overshoot, preshoot, frequency, period, rise time, fall time, positive pulse width, negative pulse width, rise delay, fall delay, FRR, FRF, FFR, FFF, LRF, LRR, LFR, LFF, positive duty ratio, negative duty ratio, phase, area, cycle area			
Number of measurement		Display 5 measurements at the same time			
Measurement range		Screen or cursor			
Measurement statistics		Average, maximum, minimum, standard deviation and number of measurement			
Frequency meter		6-bit hardware frequency meter			
Mathematical operations					
Waveform calculation		A+B, A-B, AXB, A/B, FFT, logic operation, digital filtering, advanced operation			
FFT window type		Rectangle, Hanning, Blackman, Hamming			
FFT display		Split screen, time base can be adjusted independently			
FFT vertical scale		Vrms, dBrms			
Digital filter		Low-pass, high-pass, band-pass, and band-stop			
Logic operation		AND, OR, NOT, XOR			
Advanced operation		Log, Exp, Sin, Cos, Tan, Sqrt, Inth, Diff			
Storage					
Setting		Internal (256), external USB storage device			
Waveform		Internal (256), external USB storage device			
Bitmap		External USB storage device, it can also store the relevant parameter information			
Display					
Display type		8-inch TFT LCD			
Display resolution		800 horizontal x RGB x480 vertical pixels			
Display color		160,000,000			
Duration		Minimum, 50ms, 100ms, 200ms, 500ms, 1s, 2s,5s, 10s, 20s, and infinite			
Menu duration		1s, 2s, 5s, 10s, 20s, manual			
Display mode		Point, vector			
Interface					
Standard interface		USB-Host, USB-Device, LAN, VGA, EXT Trig, AUT Out			
Option interface		Signal source output, multimeter module			
Probe compensation signal output					
Output voltage		About 3Vp-p			
Frequency		10Hz, 100Hz, 1kHz (default), 10kHz			
Power supply					
Power supply voltage		100V~240VACrms			
Frequency		45Hz~440Hz			
Fuse		2.5A, T,250V			
Environment					
Temperature range		Operational: 0℃~+40℃; non-operation: -20℃~+60℃			
Cooling method		Fan forced cooling			
Humidity range		Operational: below +35℃ ≤90% relative Non-operation: +35℃~+40℃ ≤60% relative			
Altitude		Operational: below 3000m Non-operation: below 15,000m			
Mechanical specifications					
Size		370mm(W) x 195mm(H) x 125mm(D)			
Weight		4.2kg			

DQ3000CL/DL SERIES CE

Features
.Digital oscilloscope and multimeter, 2 in 1
.Compact design for easy carrying
.High performance battery for long time operate
.3.5 inch TFT display with high resolution

DQ3025CL

Technical Data		DQ3025CL	DQ3050CL	DQ3025DL	DQ3050DL
Bandwidth		25MHz	50MHz	25MHz	50MHz
Channel(s)		1	1	2	2
Sample	Real time	200M Sa/s	200M Sa/s	250M Sa/s	250M Sa/s
Acquisition mode		Real time, peak detect, averaging			
Display	Type	3.5″ TFT display			
	Resolution	320×240			
	Backlight intensity	300 nit			
	Backlight brightness	Adjustable			
Input	Input coupling	DC, AC, GND			
	Input impedance	1MΩ ±2%, 20pF±3pF			
	Probe attenuation factor	1×, 10×, 100×, 1000×			
	Max. input voltage	300V (DC+AC peak)			
Horizontal system	Time base range	10ns/div~50s/div	5ns/div~50s/div	10ns/div~50s/div	5ns/div~50s/div
	Time base accuracy	±50ppm			
	Waveform interpolation	Sin(x)/x			
	Recording length	3.5M			
	Storage depth	12k			
	Delta time measurement accuracy	single: ±(1 sampling interval time + 50ppm×rdg + 0.6ns) 16 average: ±(1 sampling interval time + 50ppm×rdg + 0.4ns)			
Vertical system	Resolution	8 bits			
	Sensitivity	5mV/div~20V/div			
	Rise time	≤14ns	≤7ns	≤14ns	≤7ns
	Low frequency response	≤10Hz (at the input BNC port)			
	DC gain accuracy	±4%(5mV/div), ±3%(10mV~20V/div)			
	Delta voltage measurement accuracy	±(3%Rdg+0.05div)			
Trigger	Trigger mode	Auto, normal, single			
	Type	Edge, pulse width, video, slope			
	Hold off range	100ns~1.5s			
Measurement	FFT	Hanning, Hamming, Biackman, Rectangular			
	Cursor	Voltage difference (ΔV) between cursors Time difference (ΔT) between cursors			
	Auto-mesure	Vrms, Varg, Vp-p, Vmax, Vmin, Vtop, Vhigh, Vlow, Vmid, Vamp, Period, Freq, Rise, Fall, +Width, -Width, +Duty, -Duty, Delay			

Technical Data		DQ3025CL DQ3050CL	DQ3025DL DQ3050DL
Digital multimeter characterizes	Resistance	400Ω,4kΩ,40kΩ,400kΩ,4MΩ,40MΩ	
	Accuracy	±(1.2%+5digits) ±(1.5%+5digits) (40M)	
	DC voltage	400mV, 4V, 40V, 400V	
	Accuracy	±(1%+5digits)	
	AC voltage (45Hz~400Hz)	400mV, 4V, 40V, 400V	
	Accuracy	±(1.2%+5digits)	
	DC current	400μA, 4000μA, 40mA, 400mA, 10A (10A use Ext. convertor)	400μA, 4000μA, 40mA, 400mA, 4A (4A use Ext. convertor)
	Accuracy	±(1.2%+5digits)(μA) ±(1%+5digits)(mA) ±(1.5%+5digits)(10A)	±(1.2%+5digits)(μA) ±(1%+5digits)(mA) ±(1.5%+5digits)(4A)
	AC current (45Hz~400Hz)	400μA, 4000μA, 40mA, 400mA, 10A (10A use Ext. convertor)	400μA, 4000μA, 40mA, 400mA, 4A (4A use Ext. convertor)
	Accuracy	±(2%+5digits)(μA) ±(1.5%+5digits)(mA) ±(2.5%+5digits)(10A)	±(2%+5digits)(μA) ±(1.5%+5digits)(mA) ±(2.5%+5digits)(4A)
	Capacitance	51.2nF, 512nF, 5.12μF, 51.2μF, 100μF	
	Accuracy	±(3%+5digits)	
	On/off	√ (≤75Ω)	
	Diode	√ (0V~1.5V)	
Power source		AC: 100~240VACrms, 45~440Hz, CAT II DC: 7.4V/3600mA battery (8 hours)	
Dimensions(W×H×D)		199×118×49mm	
Weight		0.9kg	
Accessories	Operation manual, adapter, probe×1 (CL series), probe×2 (DL series), multimeter pen×2 current-voltage convertor module×1, USB cable		

Oscilloscope mode

Multimeter mode

MCP® lab electronics

UPF25/UPF60/UPF80/UPF120 CE

Features

.Two same function outputs
.Using Direct Digital Synthesis(DDS) technology
.1μHz~120MHz frequency range for main waveforms
.100MHz equal-accuracy frequency counter
.Arbitrary setting of start and stop for frequency sweep output
.More than 50 kinds of output waveform(arbitrary is optional)
.4.3 " TFT colour display
.Standard USB(H), USB(D) and optional LAN interface (UPF25 optional)

UPF60

Technical Data			UPF25	UPF60	UPF80	UPF120
CH1,CH2	Output frequency	Square: Ramp: Pulse: Arbitrary:	1μHz ~ 25MHz 1μHz~5MHz 1μHz~400kHz 500μHz~5MHz 1μHz~5MHz	1μHz ~ 60MHz 1μHz~60MHz 1μHz~3MHz 1μHz~20MHz 1μHz~15MHz	1μHz ~ 80MHz 1μHz~70MHz 1μHz~4MHz 1μHz~25MHz 1μHz~20MHz	1μHz ~ 120MHz 1μHz~80MHz 1μHz~5MHz 1μHz~30MHz 1μHz~25MHz
	Output amplitude		≤10MHz: 1mVpp~10Vpp; (50Ω, UPF25) ≤25MHz: 1mVpp~5Vpp; (50Ω, UPF25)		≤20MHz: 1mVpp~10Vpp; (50Ω) ≤60MHz: 1mVpp~5Vpp; (50Ω) ≤120MHz: 1mVpp~2Vpp; (50Ω)	
	Output wave		Sine, Square, Ramp, Burst, Noise, DC, Arbitrary Harmonic, Expression (UPF60/80/120)			
	Output modulation		AM, FM, PM, ASK, FSK, PWM, PSK BPSK, QPSK, OSK, SUM, DSB-AM, QAM (UPF60/80/120)			
	Wave length		2pts~8kpts		8pts~16Mpts	
	Wave accuracy		14bits		16bits(Symbol included)	
	Sampling rate		125MSa/s		1.28GSa/s (320MSa/s, 4 times interpolation)	
	Frequency resolution		1μHz			
	Frequency stability		±50ppm (90 days); ±100ppm (1 year)			
	Amplitude resolution		1μVp-p			
	Amplitude accuracy		≤1%+2mVp-p			
	Amplitude flatness		±0.1dB (<200kHz); ±0.2dB (200kHz~60MHz)			
	Offset range		±10V (High Resistance)/±5V (50Ω load)			
	Offset resolution		±(1%+5mV)			
	AM modulation depth		0% ~ 120%			
	FM modulation deviation		Max.50%			
	PM modulation range		0~ 360.0°			
	FSK/ASK		2mHz~100kHz (50% duty cycle square)			
	PWM		2mHz~50kHz			
Sine wave	Harmonic distortion		DC~100kHz -60dBc 100kHz ~1MHz -50dBc 1MHz~25MHz -35dBc		DC~1MHz -60dBc 1MHz ~10MHz -55dBc 10MHz ~40MHz -50dBc	
	THD		<0.2%(DC~20kHz,1Vpp)			
Square wave	Rise time		<24ns		<4ns	
	Duty Ratio		0~100.00%		0.001%~99.999%	
Sweep	Sweep time		1ms~500s			
	Sweep mode		line/log			
Burst	Alternation		1μs~500s			
	Burst count		1~50000 cycle			
	Burst mode		single, internal, external			
Pulse	Wave width		20ns~2000s			
	Over shoot		<2%			
Counter(UPF25 only)	Frequency range		100mHz ~ 200MHz			
	Frequency resolution		6 digits/s			
Interface	USB (H), USB (D), LAN (optional only for UPF60/80/120)					
Power supply			100~240 V AC, 45~440Hz, CAT II, 50VA			
Dimensions(W × H × D)			305 × 93 × 230mm			
Weight			4.2 kg			

XPF4080/XPF4120/XPF4160 CE

Features

.Respective dual channels function/arbitrary waveform generator
.Sine wave output up to 160MHz, full-band resolution of 1μHz
.Pulse waveform up to 50MHz（or 40MHz）, adjustable time of rising, falling and duty ratio
.Sampling rate of 500MSa/s and vertical resolution of 16bit
.6-bit high-precision frequency meter compatible with TTL level signal
.Arbitrary wave storage of 8~32M points, 7GB non-volatile waveform storage
.Multi modulation function:： AM,FM,PM, ASK,FSK,PSK, BPSK, QPSK, OSK,PWM, QAM, SUM
.16bit digital arbitrary wave (TTL level) DARB
.16th Harmonic Generation Function
.Protocol output: I2C, SPI, UART (TTL level)
.8 Inch high-resolution TFT color LCD,WVGA(800×480)
.Standard interface: USB Host, USB Device, LAN, 10MHz clock source input/output
.Frequency sweep and burst output
.Easy-to-use multi-functional knob and numeric keypad

XPF4120

Technical Data		XPF4080	XPF4120	XPF4160
CH1,CH2	Output frequency	Sine: 1μHz~80MHz Square: 1μHz~30MHz Ramp:1μHz~2MHz Pulse: 1μHz~30MHz Arbitrary:1μHz~20MHz Harmonic: 1μHz~40MHz White noise: 80MHz BW (-3dB)	Sine: 1μHz~120MHz Square: 1μHz~40MHz Ramp:1μHz~3MHz Pulse: 1μHz~40MHz Arbitrary:1μHz~30MHz Harmonic: 1μHz~60MHz White noise: 120MHz BW (-3dB)	Sine: 1μHz~160MHz Square: 1μHz~50MHz Ramp:1μHz~4MHz Pulse: 1μHz~50MHz Arbitrary:1μHz~40MHz Harmonic: 1μHz~80MHz White noise: 160MHz BW (-3dB)
	Output amplitude	1mVp - p~10Vp-p (50Ω load) (f ≤ 20MHz) 1mVp-p ~ 5Vp-p (50Ω load) (f ≤ 80MHz) 1mVp-p ~ 2.5Vp-p (50Ω load) (f≤120MHz) 1mVp-p ~ 1Vp-p (50Ω load) (f≤160MHz) 1mVp - p~20Vp-p (1MΩ load) ((f ≤ 20MHz) 1mVp-p ~ 10Vp-p (1MΩ load) (f ≤ 80MHz) 1mVp-p ~ 5Vp-p (1MΩ load) (f≤120MHz) 1mVp-p ~ 2Vp-p (1MΩ load) (f≤160MHz)		
	Output wave	Sine, Square, Ramp, Harmonic, Pulse, Noise, DC, Arbitrary, 7 types of standard waveform, not less than 160 types of built-in arbitrary waveform		
	Output modulation	AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, OSK, PWM, SUM, QAM		
	Frequency resolution	1μHz		
	Frequency stability	±50ppm(90days), ±100ppm(1 year)		
	Amplitude resolution	1μVp-p		
	Amplitude accuracy	≤1%+1mVp-p		
	Amplitude flatness	f≤10MHz： ±0.1dB, f≤80MHz： ±0.2dB, f≤120MHz： ±0.4dB, f≤160MHz： ±0.8dB		
	Offset range	±10V (1MΩ load)/±5V (50Ω load)		
	Offset accuracy	±(2% of |offset setting|+ 0.5% of amplitude+2mV)		
	AM modulation depth	0% ~ 120%		
	FM modulation deviation	Max.50%, 10μHz resolution		
	PM modulation range	0~ 360.0°, 0.1° resolution		
	FSK/ASK/PSK BPSK/QPSK	2mHz~1mHz (50% duty cycle square)		
	PWM	2mHz~50kHz		
	OSK	Oscillation time: 8ns~200s, keying frequency: 2mHz~1MHz		
	SUM	0~100%		
Sine wave	Harmonic distortion	-60dBC (DC~1MHz), -55dBC (1MHz ~10MHz) -50dBC (10MHz ~100MHz),-40dBC (100MHz ~160MHz)		
	Distortion factor	≤0.2 % (DC~20kHz,1 Vp-p)		
Square wave	Rise time	< 7ns	< 6ns	< 5ns
	SYMM.	1% of period +4ns		
	Overshoot	< 2%		
	Jitter	1ns + 100ppm of period		

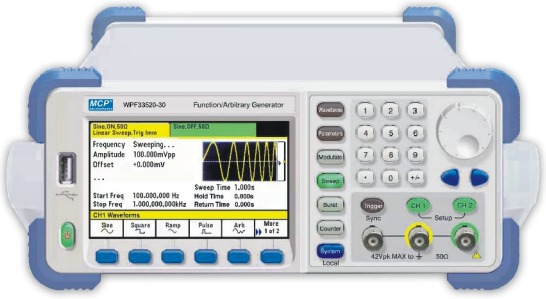
DDS FUNCTION (ARBITRARY) GENERATOR

		XPF4080	XPF4120	XPF4160
Triangle wave	Linearity	<1% of peak output（typical，1 kHz，1 Vp-p，Symmetry 100%）		
	Symmetry	0~100%		
Sweep	Sweep time	1ms ~ 500s±0.1%		
	Sweep mode	line/log		
Pulse	Frequency range	1μHz ~ 30MHz	1μHz ~ 40MHz	1μHz ~ 50MHz
	Pulse width	10ns~2000s, 1ns resolution		
	Variable edge	7ns~10s	6ns~10s	5ns~10s
	Overshoot	<2%		
	Jitter	1ns + 100ppm ofperiod		
Burst	Type	Count(1~50,000 periods), infinite, gated		
	Initial and stop phas	-360° ~ +360°		
	Internal cycle	1μs ~ 500s ±1%		
	Gate source	External trigger		
	Trigger source	Manual, external or internal		
Arbitrary	Waveform length	8~32M points		
	Amplitude resolution	16 bits		
	Sample rate	500 MSa/s		
	Rising/falling time (1Vp-p)	<7ns		
	Jitter (RMS)	6ns+30ppm		
	Non-volatile memory	7GB		
Harmonic	Harmonic number	≤16		
	Harmonic type	Even harmonic, odd harmonic, allharmonics, user-defined		
Counter	Frequency range	100mHz~800MHz		
	Frequency resolution	7 digits/s		
	Input level	TTL compatible (200mVpp ~9Vpp)		
	Trigger level	0~2.5VDC		
	Accuracy	±51ppm		
SPI protocol output	Waveform length	1~512 bytes		
	Clock frequency	10kHz~40MHz		
	Sending mode	Single manual trigger,continuous trigger		
	Continuous trigger time interval	0~2.5VDC		
I2C protocol output	SPI Waveform length	1~512 bytes		
	Clock frequency	10kHz~1MHz		
	Sending mode	Single manual trigger,continuous trigger		
	Continuous trigger time interval	1ms~10s		
	Address	Send 7-bit/10-bit I2C address		
UART protocol output	SPI Waveform length	1~1K bytes		
	Baud rate	110, 300,1200, 2400, 4800, 9600,19200, 38400, 56700, 115200, 230400, 460800, 921600, user-defined		
	Data bit	4 bits, 5 bits, 6 bits, 7bits, 8 bits		
	Sending mode	Single manual trigger,continuous trigger		
	Continuous trigger time interval	1ms~10s		
	Stop bit	1 bit, 2 bits		
	Check bit	No check bit, odd,even		
DARB	Waveform length	1~1K bytes		
	Sampling rate	1S/s ~ 40MS/s		
	Sending mode	Single manual trigger,continuous trigger（no time interval）		
	Waveform resolution	Maximum 16 bits		
QAM	QAM mode	QAM4, QAM8, QAM16, QAM32, QAM64, QAM12, QAM256（built-in constellation modulation）		
	Modulation source	Built-in PN code, Pn7,Pn9, Pn11,Pn15, Pn17, Pn21, Pn23, PN25		
	Chip rate	2mHz~100kHz		
	Amplitude	10mVpp~10Vpp(50Ω)		
Interface		USB Host(maximum 32G), USB Device, LAN,10MHz clock source input, 10MHz clock source output		
Power supply		100~240VACrms, 50/60Hz, CATII 300V		
Dimensions(W × H × D)		336 × 164 × 108mm		
Weight		2.5 kg		

WPF33520-20/ WPF33520-30/ WPF33520-60/ WPF33520-80 CE NEW

Features

. Compelete dual channels function/arbitrary waveform generator
. Channel independence, coupling, track working mode
. 200 MSa/s sampling rate and 14-bit vertical resolution per channel
. Output of 6 standard waveforms, built-in 50 kinds of arbitrary waveform
. 1uHz~ 20M/30M/60M/80MHz frequency range for main waveform
. 10Hz ~ 250 MHz equal-accuracy frequency counter
. Multi modulation function: AM, DSSC - AM, FM, PM,PWM, FSK, ASK, BPSK and logarithm/linear sweep
. All modulation internal channel mutual and external: also
. Standard USB (H), USB (D), LAN and optional GPIB interface
. Various input and output: waveform output, synchronous signal output, external modulation input, counter input,10 MHz clock input, external trigger input, power signal output/power meter input



WPF33520-30

Technical Data		WPF33520-20	WPF33520-30	WPF33520-60	WPF33520-80
CH1,CH2	Output frequency	Sine: 1μHz~20MHz Square: 1μHz~20MHz Ramp:1μHz~1MHz Pulse: 1μHz~20MHz	Sine: 1μHz~30MHz Square: 1μHz~20MHz Ramp:1μHz~1MHz Pulse: 1μHz~20MHz	Sine: 1μHz~60MHz Square: 1μHz~20MHz Ramp:1μHz~1MHz Pulse: 1μHz~20MHz	Sine: 1μHz~80MHz Square: 1μHz~20MHz Ramp:1μHz~1MHz Pulse: 1μHz~20MHz
	Output amplitude	2mVpp~20Vpp (High Z) 1mVpp~10Vpp (50Ω)			
	Output impendence	50Ω (BNC)			
	Output wave	sine, square, ramp, pulse, triangle, noise, DC, arbitrary 50 kinds			
	Output modulation (CH1)	AM, DSSC - AM, FM, PM, FSK, ASK, PWM			
	Frequency resolution	1μHz			
	Frequency stability	≤ $\pm 5\times10^{-5}$			
	Amplitude resolution	four effective digits			
	Amplitude accuracy	±1%±1mVp-p (1 kHz)			
	Amplitude flatness	<100kHz: ±0.5dB, 100kHz ~ 75MHz: ±1dB, 75MHz ~ 80MHz: -5dB			
	Offset range	±(10 VDC - AC peak/2) (High Z) ±(5 VDC - AC peak/2) (50 Ω)			
	Offset range accuracy	±1%±0.25% amplitude ±2mV(≤180mV)		±1%±0.25% amplitude ±6mV(>180mV)	
Waveform feature	Sine wave	Harmonic distortion (0dB)	< -70dBc(<20kHz) < -50dBc (20kHz ~ 1MHz)	< -40dBc (1MHz ~ 30MHz) < -30dBc (30MHz ~ 80MHz)	
		Distortion factor（0dBm）	≤0.05%(20Hz ≤ f ≤100 kHz)		
		Phase noise	≤-108 dBc/Hz		
		Spurious signal	≤-70dBc		
	Square wave	Rise and fall time	13ns		
		Duty ratio	0.01% ~ 99.9%, 0.01% resolution		
		Overshoot (50Ω)	≤ 2%		
		Jitter	≤200ps rms		
	Ramp	Symmetry	0.0% ~ 100.0%, 0.1% resolution		
		Non-linear distortion	≤ 0.1%		
	Pulse	Rise and fall time	13ns~1us 0.1ns resolution		
		Duty ratio	0.01% ~ 99.9%, 0.01% resolution		
		Pulse width	21.3 ns ~ period- 21.35 ns, 0.1nsresolution		
		Overshoot (50Ω)	≤ 2% (CH1)		
		Jitter	≤200ps rms		
	Noise	Symmetry	30 MHz band width whitenoise (-3 dB)		
		Non-linear distortion	Cycle ≥ 50 years		
	Arbitrary	Sampling rate	1μSa/s ~ 50 MSa/s, 1μSa/s resolution		
		Waveform length	8~16384 dots (CH1), 8~2048 dots (CH2)		
		Vertical resolution	14 bits		

DDS FUNCTION (ARBITRARY) GENERATOR

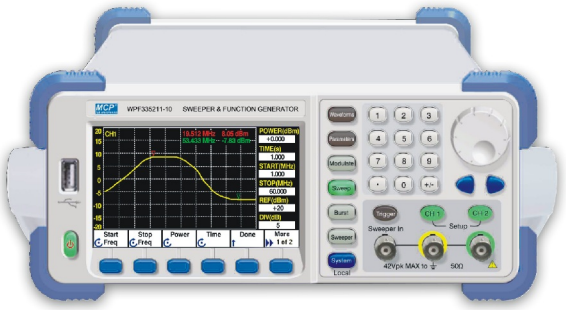
Technical Data		WPF33520-20	WPF33520-45	WPF33520-60	WPF33520-80
AM modulation	Type	FC AM, DSSC AM			
	Carrier wave	sine, square, ramp, noise, arbitrary			
	Modulation waveform	sine, square, ramp, triangle, noise, arbitrary			
	Modulation frequency	internal: sine, square, ramp, pulsefull range , 1μHz resolution Arbitrary 1μSa/s ~ 50MSa/s, 1μSa/s resolution external: 1μHz ~100 kHz (-3dB)			
	Modulation depth	0.0%~ 120.0%, 0.1% resolution, ±1.0% accuracy			
FM modulation	Carrier wave	sine, square, ramp, pulse			
	Modulation waveform	sine, square, ramp, triangle, noise, arbitrary			
	Modulation frequency	internal: 1μHz ~ 100kHz , 1μHz resolution 1μSa/s ~ 50MSa/s (Arb), 1μSa/s resolution external: 1μHz ~100 kHz (-3dB)			
	Modulation deviation	0~carrier 50% (≤max.modulated frequency+100KHz), 1uHz resolution			
PM modulation	Carrier wave	sine, square, ramp, pulse			
	Modulation waveform	sine, square, ramp, triangle, noise, arbitrary			
	Modulation frequency	internal: sine, square, ramp, pulsefull range , 1μHz resolution 1μSa/s ~ 50MSa/s (Arb), 1μSa/s resolution external: 1μHz ~100 kHz (-3dB)			
	Modulation range	0.0°~360.0°, 0.01° resolution			
PWM	Carrier wave	pulse			
	Modulation waveform	sine, square, ramp, triangle, noise, arbitrary			
	Modulation frequency	internal: sine, square, ramp, pulsefull range , 1μHz resolution Arbitrary 1μSa/s ~ 50MSa/s, 1μSa/s resolution external: 1μHz ~100 kHz (-3dB)			
	Modulation range	0.0ns~width-21.3ns, 0.1ns resolution			
FSK	Carrier wave	sine, square, ramp, pulse			
	Jump frequency	internal: sine, square, ramp, pulsefull range , 1μHz resolution			
	Switching rate	1μHz ~1 MHz, 1μHz resolution			
BPSK	Carrier wave	sine, square, ramp, pulse, arbitrary			
	Jump phase	0.00°~360.00°, 0.01° resolution			
	Switching rate	1μHz ~1 MHz, 1μHz resolution			
ASK	Carrier wave	sine, square, ramp, pulse, arbitrary, noise			
	Jump amplitude	2mVpp~ 20Vpp (High Z)			
	Switching rate	1μHz ~1MHz, 1μHz resolution			
Sweep	Wave form	sine, square, ramp, pulse			
	Starting frequency	sine, square, ramp, pulsefull range , 1μHz resolution			
	Ending Frequency	sine, square, ramp, pulsefull range , 1μHz resolution			
	Sweep mode	Linear/Log			
	Sweep time	0.001S ~ 1000S, 1mSresolution			
	Retention time	0.001S ~ 1000S, 1mSresolution			
	Fly back time	0.001S ~ 1000S, 1mSresolution			
Burst	Carrier wave	sine, square, ramp, pulse, arbitrary			
	Burst mode	N Cycle/Gated			
	Starting phase	0.0 ~ 360.0° , 0.1° resolution			
	Burst number	1 ~ 1000000000, 1resolution			
	Interval time	1μS ~ 8000S, 1μS resolution			
Counter	Measuring function	frequency, period, count			
	Frequency input range	10Hz ~ 250 MHz AC coupling			
	Input voltage range	200mVrms ~ 1.5Vrms ≤200MHz			
	Gate time	50ms ~ 10s			
	Counter capacity	56 bits			
	Frequency accuracy	6 digits/s			

Technical Data		WPF33520-20	WPF33520-45	WPF33520-60	WPF33520-80
Power Meter (option)	Frequency range	1KHz ~ 100MHz (sine)			
	Dynamic range	+15dBm～ -60dBm (RMS simultaneous display)			
	Accuracy	±1dB			
	Input impedance	50 Ω			
Power output (option)	Output wave	sine, square, ramp, pulse, arbitrary			
	Bandwidth	10Hz ~ 200 kHz			
	Output power	8W (sina,8Ω)			
	Output impedance	2 Ω			
	Accuracy	±1%，1kHz			
	Protection	Over load			
Dual channel character	Mode	sine, square, ramp, pulse, arbitrary			
	Couple parameter	10Hz ~ 200 kHz			
	Tracing parameter	in-phase, inverse phase, phase difference			
	Output impedance	2 Ω			
Power supply		100~240 V AC,47Hz ~ 63Hz, <45VA			
Dimensions(W × H × D)		260 × 105 × 290mm			
Weight		2.5 kg			

WPF33521-06/ WPF33521-10/ WPF33521-30/ WPF33521-60 CE NEW

Features

. Sweeper & function generator dual function
. Wide sweep frequency up to 60MHz
.150 MSa/s sampling rate and 14-bit vertical resolution per channel
. Dual channels function/arbitrary waveform generation
. Channel independence, coupling, track working mode
.Output of 6 standard waveforms, built-in 50 kinds of arbitrary waveform
.1uHz~ 6M/10M/30M/60M frequency range for main waveform
.10Hz ~ 250 MHz equal-accuracy frequency counter
.Multi modulation function: AM, DSSC - AM, FM, PM, FSK, ASK, BPSK and logarithm/linear sweep
.Standard USB (H), USB (D), LAN and optional GPIB interface
.Various input and output: sweep output & input ,waveform output, synchronous signal output, external modulation input, counter input, 10 MHz clock input, external trigger input, power signal output/power meter input



WPF33521-10

Technical Data		WPF33521-06	WPF33521-10	WPF33521-30	WPF33521-60
CH1,CH2	Output frequency	Sine: 1μHz~6MHz Square: 1μHz~6MHz Ramp:1μHz~1MHz Pulse: 1μHz~6MHz	Sine: 1μHz~10MHz Square: 1μHz~10MHz Ramp:1μHz~1MHz Pulse: 1μHz~10MHz	Sine: 1μHz~30MHz Square: 1μHz~15MHz Ramp:1μHz~1MHz Pulse: 1μHz~15MHz	Sine: 1μHz~60MHz Square: 1μHz~15MHz Ramp:1μHz~1MHz Pulse: 1μHz~15MHz
	Output amplitude	2mVpp~20Vpp (High Z) ≤20MHz (CH1) 2mVpp~10Vpp (High Z) ≤60MHz (CH1) 1mVpp~10Vpp (50Ω) ≤20MHz (CH1) 1mVpp~5Vpp (50Ω) ≤60MHz (CH1)		2mVpp~6Vpp (High Z) ≤60MHz (CH2) 1mVpp~ 3Vpp (50Ω) ≤60MHz (CH2)	
	Output impendence	50Ω (BNC)			
	Output wave	sine, square, ramp, pulse, triangle, noise, DC, arbitrary 50 kinds			
	Output modulation (CH1)	AM, DSSC - AM, FM, PM, FSK, ASK, PWM			
	Frequency resolution	1μHz			
	Frequency stability	≤ $\pm 1\times 10^{-5}$			
	Amplitude resolution	four effective digits			
	Amplitude accuracy	1%+1mVp-p (1 kHz)			
	Offset range	±(10 VDC - AC peak/2) (High Z / CH1) ±(5 VDC - AC peak/2) (50 Ω/ CH1)		±(3 VDC - AC peak/2) (>378.6mVpp High Z /CH2) ±(1.5 VDC - AC peak/2) (>378.6mVpp 50 Ω/ CH2) ±(189.3mVDC - AC peak/2) (≤378.6mVpp High Z/ CH2) ±(94.7mVDC - AC peak/2) (≤378.6mVpp 50 Ω / CH2)	
	Offset accuracy	CH1: ±1%±0.25% amplitude ±2mV		CH2: ±1%±0.25% amplitude ±6mV	
Sweeper	Frequency range	1KHz ~ 60MHz max.frequency (sine)			
	Frequency resolution	±1uHz			
	Dynamic range	+15dBm~ -60dBm(CH1), +13dBm~ -60dBm(CH2)			
	Accuracy	±1dB			
	Sweep time	100ms~10s			
	Frequency cursor	2 pcs			
	Input impedance	50 Ω or high Z			
Waveform feature	Sine wave	Harmonic distortion (0dB)	< -70dBc(<20kHz) < -50dBc (20kHz ~ 1MHz)	< -40dBc (1MHz ~ 30MHz) < -30dBc (30MHz ~ 60MHz)	
		Distortion factor (0dBm)	≤0.2%(20Hz ≤ f ≤100 kHz)		
		Phase noise	≤-108 dBc/Hz		
		Spurious signal	≤-70dBc		
	Square wave	Rise and fall time	18ns		
		Duty ratio	0.1% ~ 99.9%, 0.1% resolution		
		Overshoot (50Ω)	≤ 2% (CH1)		
		Jitter	≤200ps rms		
	Ramp	Symmetry	0.0% ~ 100.0%, 0.1% resolution		
		Non-linear?distortion	0.1% ~ 99.9%, 0.1% resolution		
	Pulse	Rise and fall time	18ns		
		Duty ratio	0.1% ~ 99.9%, 0.1% resolution		
		Overshoot (50Ω)	≤ 2% (CH1)		
		Jitter	≤200ps rms		
	Noise	Symmetry	30 MHz band width whitenoise (-3 dB)		
		Non-linear distortion	Cycle ≥ 50 years		
	Arbitrary	Sampling rate	1μSa/s ~ 50 MSa/s, 1μSa/s resolution		
		Waveform length	8~16384 dots (CH1), 8~2048 dots (CH2)		
		Vertical resolution	14 bits		

Technical Data		WPF33521-06	WPF33521-10	WPF33521-30	WPF33521-60
AM modulation (CH1)	Type	FC AM, DSSC AM			
	Carrier wave	sine, square, ramp, noise, arbitrary			
	Modulation waveform	sine, square, ramp, triangle, noise, arbitrary			
	Modulation frequency	internal: 1μHz ~ 100kHz , 1μHz resolution 1μSa/s ~ 50MSa/s (Arb), 1μSa/s resolution external: 1μHz ~100 kHz (-3dB)			
	Modulation depth	0.0%~ 120.0%, 0.1% resolution, ±1.0% accuracy			
FM modulation (CH1)	Carrier wave	sine, square, ramp, pulse			
	Modulation waveform	sine, square, ramp, triangle, noise, arbitrary			
	Modulation frequency	internal: 1μHz ~ 100kHz , 1μHz resolution 1μSa/s ~ 50MSa/s (Arb), 1μSa/s resolution external: 1μHz ~100 kHz (-3dB)			
	Modulation deviation	Max.50%, 10u Hz resolution			
PM modulation (CH1)	Carrier wave	sine, square, ramp, pulse			
	Modulation waveform	sine, square, ramp, triangle, noise, arbitrary			
	Modulation frequency	internal: 1μHz ~ 100kHz , 1μHz resolution 1μSa/s ~ 50MSa/s (Arb), 1μSa/s resolution external: 1μHz ~100 kHz (-3dB)			
	Modulation range	0.0°~360.0°, 0.1° resolution			
FSK (CH1)	Carrier wave	sine, square, ramp, pulse			
	Jump frequency	1μHz ~ max.frequency (sine) 1μHz ~ 1MHz (ramp) 1μHz ~ 15MHz (square, pulse) 1μHz resolution			
	Switching rate	1μHz ~1 MHz, 1μHz resolution			
BPSK (CH1)	Carrier wave	sine, square, ramp, pulse, arbitrary			
	Jump phase	0.00°~360.00°, 0.10° resolution			
	Switching rate	1μHz ~1 MHz, 1μHz resolution			
ASK (CH1)	Carrier wave	sine, square, ramp, pulse, arbitrary, noise			
	Jump amplitude	2mVpp~ 20Vpp (High Z)			
	Switching rate	1μHz ~1MHz, 1μHz resolution			
Sweep (CH1)	Wave form	sine, square, ramp, pulse			
	Starting frequency	1μHz ~ max.frequency (sine) 1μHz ~ 15MHz (square, pulse) 1μHz ~ 1MHz (ramp) 1μHz resolution			
	Ending Frequency	1μHz ~ max.frequency (sine) 1μHz ~ 15MHz (square, pulse) 1μHz ~ 1MHz (ramp) 1μHz resolution			
	Sweep mode	Linear/Log			
	Sweep time	0.001S ~ 1000S, 1mSresolution			
	Retention time	0.001S ~ 1000S, 1mSresolution			
	Fly back time	0.001S ~ 1000S, 1mSresolution			
Burst (CH1)	Carrier wave	sine, square, ramp, pulse, arbitrary			
	Burst mode	N Cycle/Gated			
	Starting phase	0.0 ~ 360.0° , 0.1° resolution			
	Burst number	1 ~ 1000000, 1resolution			
	Interval time	1μS ~ 1000S, 1μS resolution			
Counter	Measuring function	frequency, period, count			
	Frequency input range	10Hz ~ 250 MHz AC coupling			
	Input voltage range	200mVrms ~ 1.5Vrms ≤200MHz			
	Gate time	50ms ~ 10s			
	Counter capacity	40 bits			
	Frequency accuracy	6 digits/s			

Technical Data		WPF33521-06	WPF33521-10	WPF33521-30	WPF33521-60
Sweeper	Frequency range	1KHz ~ 60MHz max.frequency (sine)			
	Frequency resolution	±1uHz			
	Dynamic range	+15dBm~ -60dBm(CH1), +13dBm~ -60dBm(CH2)			
	Accuracy	±1dB			
	Sweep time	100ms~10s			
	Frequency cursor	2 pcs			
	Input impedance	50 Ω or high Z			
Power Meter (option)	Frequency range	1KHz ~ 100MHz (sine)			
	Dynamic range	+15dBm~ -60dBm (RMS simultaneous display)			
	Accuracy	±1dB			
	Input impedance	50 Ω			
Power output (option)	Output wave	sine, square, ramp, pulse, arbitrary			
	Bandwidth	10Hz ~ 200 kHz			
	Output power	8W (sina,8Ω)			
	Output impedance	2 Ω			
	Accuracy	±1%, 1kHz			
	Protection	Over load			
Power supply		100~240 V AC,47Hz ~ 63Hz, CAT II, 30VA			
Dimensions(W × H × D)		262 × 108 × 284mm			
Weight		2.5 kg			

HG1462 SERIES

Feature

.4.3 " TFT colour LCD display

.DDS, CPLD modulation and digital modulation technology

.SMT technology with high stability

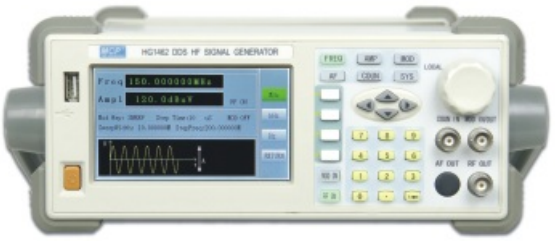
.External standard frequency input for higher frequency accuracy in whole band

.Arbitrarily stored and recalled for carrier frequency level, or modulation

.1GHz frequency counter (optional)

.Pulse modulation (optional)

.Standard RS-232 interface and optional GP-IB interface



HG1462

Technical Data		HG1462 (A/B/C)
RF signal generator	Frequency	100kHz~150MHz(HG1462)
		100kHz~250MHz(HG1462A)
		100kHz~350MHz(HG1462B)
		100kHz~450MHz(HG1462C)
	Resolving capability	1Hz
	Frequency accuracy	±2.5ppm
	Frequency conversed time	<100ms (within 100Hz if final frequency)
	Internal standard frequency	TCXO 10.000MHz
	External frequency input (internal and external frequency switching automatically)	Frequency: 10MHz
		Amplitude: 0.3Vrms~1Vrms (50 load)
	Output level	-117dBm~+13dBm (≤250MHz) -117dBm~+10dBm (>250MHz) Can reach to -127dBm
	Resolving capability	0.1dB
	Output impedance	50Ω
	SWR	<1.5 (frequency of carrier wave > 300kHz, level < -6dBm)
	Level smoothness	±1dB（output level =+4dBm; frequency >400kHz）
		±2dB（output level =+4dBm; frequency >250MHz）
	Attenuation precision	±2dB (output level <-105dBm, frequency <200MHz)
	Harmonic	<-30dBc (output level ≤+4dBm)
	Non harmonics	<-40dBc (output level ≤+4dBm, frequency departure of carrier wave ≥5kHz)
	Sub harmonics	<-40dBc (output level ≤+4dBm)
	Residual FM	<100Hz
Frequency modulation	Deviation	0～100kHz
	Resolving capability	100Hz
	Accuracy	±5% ±50Hz
	Modulation frequency	internal 1kHz or 400Hz
	Distortion	<5%
Amplitude modulation	Carrier frequency	≥1.5MHz
	Depth	0~70% (output level ≤+4dBm, frequency ≤75MHz) 0~50% (output level ≤+4dBm, frequency >75MHz) (can be establish to 100%)
	Resolution	1% (modulation degree ≥10%)
		0.1% (modulation degree <10%)
	Accuracy	±(1.5%+7% set value)
	Modulation frequency	Internal 1kHz or 400Hz;external:20Hz to 10kHz
	Distortion	<5%
	Surplus AM	<0.1%

Technical Data		HG1462 (A/B/C)
FSK	Modulation signal	External TTL level
	FSK modulation frequency	＜25kHz (100kHz~20MHz) ＜50kHz (20MHz~75MHz) ＜2kHz (75MHz~450MHz)
	Sweep frequency	10ms~1000ms
	Sweep step	10ms
	Frequency range	0.1MHz~75MHz, 75MHz~140MHz, 140MHz~260MHz, 260MHz~360MHz, 360MHz~450MHz
Modulation source	Impedance	600Ω (BNC)
	Internal modulation source output	Frequency：1kHz or 400Hz；Amplitude:1Vpk
	External modulation source input	Amplitude:0～1Vpk
Interface	RS-232 (standard), GP-IB (optional)	
Power source	110～127VAC±10%/220～240VAC±10%, 50Hz±2Hz/60Hz±2Hz	
Dimensions(W×H×D)	250×120×400 mm	
Weight	3kg	

HG2461 SERIES

CE

Features

.Signal frequency up to 600MHz

.DDS Technology provides for a superior signal with low distortion and high stability
.Both RF output and function output
.3.5'' QVGA color LCD and soft keys
.Produced by SMT, smart metal case
.1μHz frequency resolution
.RS 232 interface and USB, GPIB optional
.Versatile modulation
AM, FM, PM, FSK, PSK, Sweep, Burst
.Variety of waveforms
Sine, square, pulse, triangle, ramp

HG2461 I

Technical Data			HG2461 I/II/III/IV/V/VI	
RF output (output A)				
Frequency range			100μHz~80MHz	HG2461 I
			100μHz~110MHz	HG2461 II
			100μHz~150MHz	HG2461 III
			100μHz~200MHz	HG2461 IV
			100μHz~300MHz	HG2461 V
			100μHz~600MHz	HG2461 VI
Frequency resolution			1μHz	≤80MHz
			1Hz	>80MHz
Frequency stability			$\leq 5\times10^{-6}$	
RF output level			-127dBm~+13dBm	
RF output resolution			0.1dB	
Attenuator accuracy			±2dB	
Output impedance			50Ω,VSWR<1.5	
Spectral purity		Harmonic	<-30dBc	(output level≤+4dBm)
		Non harmonic	<-40dBc	(output level≤+4dBm, deviation>5kHz)
		Sub harmonic	<-40dBc	(output level≤+4dBm)
		Residual FM	<100Hz	
AM Modulation		Frequency	int. 100mHz~10kHz	
			ext.	20Hz~10kHz
		Depth	0~120%	(fc≤80MHz,level≤+4dBm)
			0~80%	(fc>80MHz, level≤+4dBm)
		Resolution	0.1%	
FM Modulation		Frequency	int. 100μHz~10kHz	(fc≤80MHz)
			int. 100μHz~1kHz	(fc>80MHz)
		Deviation	fc/2	(fc≤80MHz)
			1μHz~100kHz	(fc>80MHz)
		Resolution	100Hz	
Pulse Modulation (option)		Carrier frequency	≥9kHz	
		Frequency	ext.DC~10MHz (TTL level)	
		Rise and fall	<15nS	
		On/Off	>65dB	
FSK Modulation		F1, F2 range	100μHz~80MHz	(FSK rate<10kHz)
			80.000001MHz~120MHz	(FSK rate<2kHz)
			120.000001MHz~200MHz	(FSK rate<2kHz)
			200.000001MHz~300MHz	(FSK rate<2kHz)
		Control mode	internal and external (TTL level, low-F1,high-F2)	

Technical Data		HG2461 I/II/III/IV/V/VI
PSK Modulation	Carrier frequency	＜80MHz
	P1, P2 range	0~360°
	Resolution	0.1°
	Alternation	0.1ms~800s
	Control mode	internal and external (TTL level, high-P2, low-P1)
Burst Modulation	Carrier frequency	＜80MHz
	Burst count	1~10000 cycle (≤800*fc)
	Alternation	0.1ms~800s
	Control mode	internal
		single
		external (TTL level)
Sweep	Sweep rate	1ms~800s (lin., fc≤80MHz)
		100ms~800s (log., fc≤80MHz)
	Stepping time	10ms~800s (fc＞80MHz)
	Frequency range	100μHz~80MHz
		80.000001MHz~120MHz
		120.000001MHz~200MHz
		200.000001MHz~300MHz
	Sweep mode	lin. and log. (fc≤80MHz)
		Stepping (fc＞80MHz)
MOD Signal output	Frequency	100mHz~10kHz
	Waveform	sine
	Amplitude	5Vp-p±2%
	Impedance	620Ω
Function output (output B)		
Frequency range		100μHz~2MHz
Resolution		100μHz
Accuracy		$\pm 5 \times 10^{-6}$
Amplitude (sine)		100mVp-p~6Vp-p (high impedance)
		50mVp-p~3Vp-p (50Ω)
Resolution		±0.1mVp-p
Accuracy		≤5%±5mVp-p (f≤100kHz)
Distortion		1% (2Vp-p, 1kHz)
Impedance		50Ω
Waveform		Sine, square, triangle, ramp, pulse (rise and fall time≤500nS)
A/B sine phase range		0.0~360.0°
Power supply		110~127 VAC±10%, 220~240VAC±10% 50Hz±2Hz, 60Hz±2Hz
Dimensions(W×H×D)		255×170×370mm
Weight		4kg

RG9000 SERIES CE NEW

Features

.Signal frequency up to 6GHz
.High Amplitude precision
.Output power up to +10dBm
.Versatile modulation AM/FM/ ϕM/ASK/PSK/FSK
.Pulse modulation 160s to 200ns,
minimum pulse width 100ns
.Up-conversion with external IF signal input
.Internal modulation source: sine wave,
square wave, triangle wave, sawtooth wave
.I/Q modulation optional
.USB/LAN interface with SCPI commands
.Low power consumption,
light weight and compact shape

RG9030

Technical Data			RG9030	RG9060
Frequency	Frequency range		9kHz~3.0GHz	9kHz~6.0GHz
	Frequency resolution		0.23Hz	
	Frequency standard		10MHz	
	Frequency stability		±0.5ppm	
	Aging rate		±1ppm/year	
	Internal reference output		10MHz，+2dBm	
Spectrum purity	Harmonic		≤-30dBc	
	Non-harmonic		≤-50dBc	
	SSB phase noise	*f* = 300MHz	-100dBc/Hz@10kHz；-115dBc/Hz@100kHz	
		f = 1GHz	-90dBc/Hz@10kHz；-105dBc/Hz@100kHz	
Amplitude	Output power range		9kHz~500kHz (-120dBm~0dBm) 500kHz~6.0GHz (-120dBm~+10dBm)	
	Amplitude resolution		0.1dB	
	Amplitude accuracy		±1dB	
	VSWR		≤1.8	
Level set	ALC dynamic range		50dB	
	Level set time		≤5ms(ALC On)	
	Maximum back-feed power		1W	
Sweep function	Sweep mode		frequency, amplitude, amplitude frequency	
	Sweep type		Step, list	
	Repeating		single, continuous	
	Step type		linear variation	
	Sweep points	Step sweep	2~65535	
		List sweep	2~16383	
	Sweep time		20ms ~ 50s	
	Trigger type		Auto, external	
Internal modulation source（LF）	Waveform		Sine, square, triangle, sawtooth	
	Frequency range	sine	0.1Hz ~ 500kHz	
		square	0.1Hz ~ 20kHz	
		triangle, sawtooth	0.1Hz ~ 100kHz	
	Resolution		0.01Hz	
	Output voltage range		200mVp-p ~ 4.0Vp-p	
	Resolution		1mV	

Technical Data			RG9030	RG9060
Analog modulation	AM	Depth	0~100%	
		MF	20Hz~1MHz, (1Hz~25kHz with I/Q modulation)	
	FM	deviation	5MHz	
		MF	20Hz~1MHz, (1Hz~25kHz with I/Q modulation)	
	ΦM	deviation	0~360°	
		MF	20Hz~1MHz, (1Hz~25kHz with I/Q modulation)	
Pulse modulation	Rise/fall time		100ns (10%/90%)	
	Pulse period	range	200ns ~ 160s	
		resolution	100ns	
	Pulse width	range	100ns~85ns	
		resolution	100ns	
	On/Off		≥70dB	
	Trigger type		auto, external, manual	
I/Q digital modulation	Modulation source		internal	external, internal
	Modulation rate		1Hz~1MHz	10kHz~20MHz
	External data import			Arb
	Modulation mode		ASK/2FSK/4FSK/8FSK 2PSK/4PSK/8PSK	ASK/2FSK/4FSK/MSK GMSK BPSK/π/2-DBPSK QPSK/OQPSK /π/4-QPSK π/4-DQPSK/8PSK π/8-D8PSK/16QAM 32QAM/64QAM/128QAM
	Forming filter		Gauss, RC, RRC	
Port	Input	BNC, 50Ω	external if signal input, external pulsemodulation input, 10MHz reference input	
		BNC, 1kΩ	external trigger input	
	Output	N, 50Ω	RF output	
		BNC, 50Ω	LF output	
Interface			USB2.0、LAN10/100 Base-T	
Power Source			AC 110V~240V，50Hz /60Hz	
Weight			≤5kg	
Dimension (W×H×D)			265mm×110mm×200mm	

SP10B / SP100B CE

SP10B

Features

.Under the control of MCU
.Equal accuracy measure
.Measure speed: 20 times/s
.High performance, low Price, high reliability
.Speical apply to crystal with PPM FM
.PPM measure F_0 preset able
.Channel A has LP filter and ×20 attenuator function
.10 LED display (8 data, 2 exponent)

Technical Data	SP10B / SP100B
Function	Measure frequency, period, totalize, self-calibrate, PPM
Frequency range	1Hz ~ 10MHz (SP10B) 1Hz ~100MHz (SP100B)
Period range	100ns ~ 1s (SP10B) 10ns ~1s (SP100B)
Totalize capacity	10^8 -1
Sensitivity	40mVrms (1Hz ~10Hz) 20mVrms (10Hz - 10MHz/ 100MHz)
Input impedance	1MΩ / 40pF
Couple mode	AC
Measure error	±Time Base accuracy ± Trigger error × Measured frequecny (or Period) ±digits
Time base stability	$\pm 5 \times 10^{-6}$/d
Power source	110 ~127VAC±10%/220 ~ 240VAC±10%, 50Hz±2Hz/60Hz±2Hz
Dimensions (W×H×D)	210 × 80 × 230mm
Weight	1.8kg

SP1500A / 1500B / 1500C
SP2500B / 3000B / 3000C CE

SP1500B

Technical Data	SP1500A	SP1500B	SP1500C	SP2500B	SP3000B	SP3000C
Function	Measure frequency, period, totalize self-calibrate					
Frequency range	1Hz ~ 1.5GHz	1Hz ~ 1.5GHz	0.005Hz ~ 1.5GHz	1Hz ~ 2.5GHz	1Hz ~ 3.0GHz	0.005Hz ~ 3.0GHz
Period range	10ns ~ 1s					
Totalize capability	10^8 -1					
Sensitivity	40mVrms (1Hz ~10Hz) 20mVrms (10Hz ~ 100MHz) 30mVrms (100MHz ~ 3GHz)					
Input impedance	1MΩ / 40pF (Channel A) 50Ω (Channel B)					
Input voltage	20mVrms ~ 250Vp-p (Channel A) 30mVrms ~ 1Vrms (Channel B)					
Couple mode	AC	AC	AC/DC	AC	AC	AC/DC
Trigger level	0V	0V	0V	0V	0V	-2.5V~+2.5V
Measure error	±Time base accuracy ±Trigger error × Measured frequency (or Period) ±LSD					
Time base stability	$\pm 5 \times 10^{-5}$/d					$\pm 1 \times 10^{-6}$/d
Power source	110 ~127VAC±10%/220 ~ 240VAC±10%, 50Hz±2Hz/60Hz±2Hz					
Dimensions (W×H×D)	230 ×92 ×230mm					
Weight	1.8kg					

WSP3312 CE NEW

Features

.Apply high performance AVR CPU, LSI and CPLD device high reliability
.Single time interval and single pulse width measurement
.Automatic extreme calculate and mathematical statistics for frequency measurement, include mean, maximum, minimum, delta, absolute deviation, relative deviatio(PPM), stand deviation, Allan variance
.Average measurement function for the accuracy increasing of time interval, pulse width, phase, duty cycle
.Set time gate totalizing and manual operation totalizing
.Current value automatically stored, zero data loss
.Save up to 9 different measurement setups
.USB, RS232 and centronics printer interface
.VFD display, appearance graceful, compact, and operation comfortable

WSP3312

Technical Data	WSP3312
Function	Measure frequency, time interval ,period, frequency ratio, totalize, pulse width, duty cycle, phase ,self-calibrate and etc.
Measure frequency range	0.14mHz~50MHz/100MHz(Channel A& Channel B)
Channel C	100MHz~500MHz(WSP3312 I) 100MHz~1.5GHz(WSP3312 II) 100MHz~2.5GHz (WSP3312 III) 100MHz~3GHz (WSP3312 IV)
Input voltage	30mVrms ~ 1.5Vrms(100MHz below) 50mVrms ~ 1.5Vrms(100MHz ~ 1.5GHz) 30mVrms ~ 1Vrms (1.5GHz ~ 3GHz)
Period range	20ns/10ns ~ 7000s, 20ns resolution
Time interval range	40ns ~ 7000s, 20nsresolution
Phase range	0 ~ 359°
PW range	≥20ns,(cycle＜100s)
Duty cycle range	1 ~ 99%,(cycle＜100s)
Measure accuracy	$\pm 2\times 10^{-8}$ /Gate time (s)
Frequency resolution	7.5 digits/Gate time (s)
Totalize capacity	1×10^{12}
Couple mode	Channel A, B: AC / DC Channel C: AC
Input impedance	1MΩ / 45pF or 50Ω
Time base stability	10MHz, ≤$\pm 1\times 10^{-8}$/d
Power supply	110 ~127VAC±10%/220 ~ 240VAC±10%, 50Hz±2Hz/60Hz±2Hz
Dimensions (W×H×D)	255 × 100 × 370mm
Weight	3 kg

WSP3389 CE NEW

Features

.Apply high performance AVR CPU, LSI and CPLD device high reliability
.Single time interval and single pulse width measurement
.Automatic extreme calculate and mathematical statistics for frequency measurement, include mean, maximum, minimum, delta, absolute deviation, relative deviatio(PPM), stand deviation, Allan variance
.Average measurement function for the accuracy increasing of time interval, pulse width, phase, duty cycle
.Set time gate totalizing and manual operation totalizing
.Current value automatically stored, zero data loss
.Save up to 9 different measurement setups
.USB, RS232 and centronics printer interface
.QVGA display, appearance graceful, compact, and operation comfortable

WSP3389

Technical Data	WSP3389
Function	Measure frequency, time interval ,period, frequency ratio, totalize, pulse width, duty cycle, phase
Measure frequency range	0.14mHz~150MHz(Channel A& Channel B)
Channel C	100MHz~500MHz (WSP3389 I) 100MHz~1.5GHz (WSP3389 II) 100MHz~2.5GHz (WSP3389 III) 100MHz~3GHz (WSP3389 IV) 100MHz~6GHz (WSP3389 V) 100MHz~9GHz (WSP3389 VI)
Input voltage	30mVrms ~ 1.5Vrms(100MHz below) 50mVrms ~ 1.5Vrms(100MHz ~ 1.5GHz) 30mVrms ~ 1Vrms (1.5GHz ~ 9GHz)
Period range	7ns ~ 7000s, 7nsresolution
Time interval range	20ns ~ 7000s, 7nsresolution
Phase range	0 ~ 359°
PW range	≥20ns,(cycle<100s)
Duty cycle range	1 ~ 99%,(cycle<100s)
Measure accuracy	±2× 10^{-8} /Gate time (s)
Couple mode	Channel A, B: AC / DC Channel C: AC
Input impedance	1MΩ / 45pF or 50Ω
Totalize capacity	0 ~ 1 × 10^{12}
Time base stability	10MHz, ≤ ±1 × 10^{-8} /d
Power supply	110 ~127VAC±10%/220 ~ 240VAC±10%, 50Hz±2Hz/60Hz±2Hz
Dimensions (W×H×D)	265 × 104 × 375mm
Weight	3 kg

WSP53131 CE NEW

Features

.Independent two channels measurement and display simultaneously
.Time interval and phase difference measurement from channel A to channel B
.Apply high performance AVR CPU, LSI and CPLD device high reliability
.Positive / negative pulse width measurement and rise/fall time measurement
.Automatic extreme calculate and mathematical statistics for frequency measurement, include mean, maximum, minimum, delta, absolute deviation, relative deviatio(PPM), stand deviation, Allan variance
.Average measurement function for the accuracy increasing of time interval, pulse width, phase, duty cycle
.Set time gate totalizing and manual operation totalizing
.Current value automatically stored, zero data loss
.Save up to 9 different measurement setups
.USB, RS232 and centronics printer interface
.QVGA display, appearance graceful, compact, and operation comfortable

WSP53131

Technical Data	WSP53131
Function	Measure frequency, time interval ,period, frequency ratio, totalize, duty cycle, phase , self-calibrate and etc..
Measure frequency range	DC~225MHz (Channel A, Channel B)
Channel C	100MHz~1.5GHz(WSP53131 I) 100MHz~2.5GHz (WSP53131 II) 100MHz~3GHz(WSP53131 III) 100MHz~6GHz (WSP53131 IV)
Input voltage	30mVrms ~ 1.5Vrms(225MHz below) 50mVrms ~ 1.5Vrms(225MHz ~ 1.5GHz) 30mVrms ~ 1Vrms (1.5GHz ~ 6GHz)
Period range	4.44ns ~ 1000s, 100ps resolution
Time interval range	-1ns ~ 1000s, 100psresolution
Single shot time intervalresolution	100ps
Phase range	0 ~ 359°
PW range	⩾20ns,(cycle＜100s)
Duty cycle range	1 ~ 99%,(cycle＜100s)
Frequency resolution	10 digits/s
LPF	100kHz
Attenuator	x1, x10
Triggler mode	Rise edge/fall edge
Triggle level	-5V~+5V presetable
Couple mode	Channel A, B: AC / DC Channel C: AC
Emternal time base	5MHz/10MHz auto select
Input impedance	1MΩ / 45pF or50Ω
Totalize capacity	1×10^{12}
Time base stability	5MHz, $\leqslant 1 \times 10^{-8}$/d
Power supply	110 ~127VAC±10%/220 ~ 240VAC±10%, 50Hz±2Hz/60Hz±2Hz
Dimensions (W×H×D)	265 × 104 × 375mm
Weight	2.5 kg

WSP3382 SERIES CE NEW

Features

.Measure frequency up to 40GHz
.Dynamic and wide measure range
.High accuracy and high performance
.Advanced design, compact and plastic die-casting
.Reliability MTBF>8000h
.3.5 inch QVGA color LCD and soft keys
.Automatic and manual frequency measurement
.USB interface and GPIB optional

WSP3382

Technical Data		WSP3382	
CH A			
1MΩ impedance			
Measure frequency range		10Hz~80MHz	
Resolution		1Hz, 10Hz, 100Hz, 1kHz, 10kHz, selectable and 9 digits/s	
Input sensitivity		30mVram	
Max. input level		1Vrms (+13dBm)	
Damage level		3Vram(+23dBm)	
50Ω impedance			
Measure frequency range		60MHz~3GHz	
Resolution		1Hz, 10Hz, 100Hz, 1kHz, 10kHz, selectable and 9 digits/s	
Input sensitivity		25mVram (-20dBm)	
Max. input level		1Vrms (+13dBm)	
Damage level		3Vram(+23dBm)	
CH B			
Measure frequency range		2GHz~9GHz	WSP3382 I
		2GHz~12.4GHz	WSP3382 II
		2GHz~18GHz	WSP3382 III
		2GHz~20GHz	WSP3382 IV
		2GHz~22GHz	WSP3382 V
		2GHz~26.5GHz	WSP3382 VI
		2GHz~36GHz	WSP3382 VII
		2GHz~40GHz	WSP3382 VIII
Input sensitivity		≤-25dBm	2GHz~12.4GHz
		≤-20dBm	12.4GHz~18GHz
		≤-15dBm	18GHz~26.5GHz
		≤-10dBm	26.5GHz~40GHz
Input impedance		50Ω	
Max. input level		+7dBm	
Damage level		+20dBm	
Input SWR		≤3.5(2GHz~40GHz) typical	
Time base		10MHz	
Frequency stability		1×10^{-8}/day	
Power supply		100~240VAC 47~ 63Hz	
Dimensions(W×H×D)		265×104×375mm	
Weight		3kg	

WSP53180 CE NEW

Features

.High accurate frequency counter, 10 digits/s resolution
.Apply high performance AVR CPU, LSI and CPLD device high reliability
.Single time interval and single pulse width measurement
.Automatic extreme calculate and mathematical statistics for frequency measurement, include mean, maximum, minimum, delta, absolute deviation, relative deviatio(PPM), stand deviation, Allan variance
.Average measurement function for the accuracy increasing of time interval, pulse width, phase, duty cycle
.Set time gate totalizing and manual operation totalizing
.Current value automatically stored, zero data loss
.Save up to 9 different measurement setups
.USB, RS232 and centronics printer interface
.Upper computer software
.VFD display, appearance graceful, compact, and operation comfortable

WSP53180

Technical Data	WSP53180
Function	Measurement: frequency, period, frequency ratio Analyse: extreme calculate, mean, maximum, minimum, delta, absolute deviation, relative deviatio(PPM), stand deviation, Allan variance
Measure frequency range	0.001Hz~225MHz (CH A), DC~225MHz (military)
Channel B & Channel C	200MHz~1.5GHz(WSP53180 I) 200MHz~3GHz(WSP53180 II) 200MHz~6GHz(WSP53180 III) 200MHz~9GHz (WSP53180 IV) 200MHz~12.4GHz(WSP53180 V) 200MHz~16GHz (WSP53180 VI)
Input voltage	40mVrms ~ ±5Vrms+dc
Period range	20ns/10ns ~ 7000s
Frequency resolution	10 digits/s
Couple mode	Channel A: AC / DC Channel B, C: AC
Input impedance	1MΩ / 45pF or 50Ω
LPF	100kHz
Attenuator	x1, x10
Time base stability	5MHz, ≤1 × 10 -8 /d, external time base 5MHz or 10MHz auto switching
Power supply	110 ~127VAC±10%/220 ~ 240VAC±10%, 50Hz±2Hz/60Hz±2Hz
Dimensions (W×H×D)	255 × 100 × 370mm
Weight	2.5 kg

QT4810 SERIES

Features

.Clear feature curves
.Double cluster display circuit for multiple current amplification
.Max. step potential source output is up to 2V/STAGE
.Conjugation function for the parallel FET

QT4810A

Technical data		QT4810A
Deflection coefficient of vertical axis	Scope of collector current(I_C)	20μA/div~1A/div, divided into 15 grades, error is not more than ±3%
	Reversal drain current of diode(I_R)	0.2μA/div~1A/div, divided into 6 grades
		2μA/div~10μA/div, error is not more than ±3%
		0.2μA/div~1μA/div, error is not more than ±10%
		0.2μA/div, interfere ≤0.5V/div
	Base current or base voltage	20mV/div, error≤±3%, deflection multifying factor x0.5, error≤±10%
Deflection coefficient of horizontal axis	Scope of collector voltage	0.05V/div~500V/div divided into 10 grades, error≤±3%
	Scope of drain current voltage of diode	100V/div~500V/div divided into 3 grades, error≤±5% (for matching 5kV test floor)
	Scope of base voltage	0.05V/div~2V/div, divided into 6 grades, error≤±3%
	Base current or base source voltage	0.1V/div, error≤±3%
Step signal	Scope of step current	1μA/STAGE~0.1A/STAGE, divided into 16 grades, error≤±5%
	Scope of step voltage	0.05V/STAGE~2V/STAGE, divided into 6 grades, error≤±5%
	Stage number per cluster	4~10 stages continuously adjustable
	Step zeroing	Not less than ±1DIV
	Step number per second	200(commercial frequency:50Hz)
	Step polarity	Positive or negative
	Step form	Continuous or single cluster
Collector sweep supply	Max. current or power of sweep supply each grade	0~5V grade:10A
		0~20V grade:2.5A
		0~100V grade:0.5A
		0~500V grade:0.1A
	Dissipation resistance	0~500kΩ, divided into 11 ranges 2.5~100kΩ, divided into 6 ranges
		10Ω~500kΩ, error≤±10%
		0.5Ω~2.5Ω, error≤±20%
Power source		220VAC±10%, 50Hz±2Hz
Dimensions(W×H×D)		240×330×480mm
Weight		13.5kg

QT4818D

Features

.Store characteristic curves and panel setting parameters
.Programmable test conditions ,measured results PC stored
.Three cursor measurement modes: point, line, window
.Two cluster characteristic curves display simultaneously for compare and pairing
.Screen read out β , gm, Vce, Ic, breakdown voltage, leakage current and other parameters
.Repeat and single measurement
.Self-checking function
.7 Inch high-resolution TFT color LCD
.Standard interface: USB, RS232, LAN

QT4818D

Technical data		QT4818D
Deflection coefficient of vertical axis	Collector current (Ic) range	1uA/div～2A/div
	Cursor accuracy	≤2% Rdg+0.1 vertical scale grid
Deflection coefficient of horizontal axis	Collector voltage (Vce) range	50mV/div ～500V/div
	Step voltage (Vbe) range	50mV～5V/div
	Step voltage (Vbe) accuracy	≤0.1 horizontal scale grid
Step signal	Number	10 steps
	Polarity	positive, negative
	Bias voltage range	0 ~ ±20V
	Current scope	1uA～0.2A/div (at 1-2-5 sequence)
	Maximum current	2A
	Voltage scope	100mV～2V/div (at 1-2-5 sequence)
	Maximum voltage	40V
Collector	Output current	20A
	Peak voltage	10V/100V/500V/3KV
	Source type	Full wave /DC/ AC, positive / negative
Interface	USB Host, USB Device, RS232, LAN	
Power source	220VAC±10%, 50Hz±2Hz	
Dimensions(W×H×D)	375×390×230mm	
Weight	30kg	

QT4828 SERIES NEW

Features

. Maximum collector current 50A
. Store characteristic curves and panel setting parameters
.10 graphics store capacity and measured results PC store infinity
. Two cluster characteristic curves display simultaneously for compare and pairing
. Screen read out β , gm, VCE, IC, breakdown voltage, leakage current and other parameters
. Repeat and single measurement
. Self-checking function
. 640x480 high-resolution TFT color LCD
. Standard interface: USB

QT4828-B

Technical data

Deflection coefficient of vertical axis	Range of collector current (I_C)	QT4828-A: 20uA/div～1A/div, 15steps, max. 10A QT4828-B: 20uA/div～2A/div, 16steps, max. 20A QT4828-C: 20uA/div～5A/div, 17steps, max. 50A
	Diode reversal drain current (I_R)	0.02uA/div～1uA/div, 6steps
Deflection coefficient of horizontal axis	Collector voltage (V_{ce}) range	10mVdiv~50V/div, 12steps, max. 500V
	Base voltage range (V_{be})	50mVdiv~1V/div, 5steps
	Diode reverse breakdown voltage (V_d)	100Vdiv~500V/div, 3steps, max. 5000V
Step signal	Range of step current	QT4828-A: 0.2uA/div～0.11A/div, 18steps QT4828-B: 0.2uA/div～0.2A/div, 19steps QT4828-C: 0.2uA/div～0.5A/div, 20steps
	Range of step voltage	10mV/step~1V/step, 7steps
	Step number per cluster	0~10 step continuously adjustable
	Step offset	±1div continuously adjustable
Collector sweep supply	Sweep voltage and current peak	QT4828-A: 10V (10A), 50V(2A), 100V(0.5A), 500V(0.1A) QT4828-B: 10V (20A), 50V(5A), 100V(1A), 500V(0.1A) QT4828-C: 10V (50A), 50V(10A), 100V(1A), 500V(0.1A)
	Diode reversed voltage and current peak	5000V(5mA)
Interface	USB	
Power source	110~127VAC±10%/220~240VAC±10%, 50Hz±2Hz/60Hz±2Hz	
Dimensions(W×H×D)	320×210×400mm	
Weight	20kg	

ELD8600 SERIES CE

Features

.Four working functions: CV/CC/CR/CP
.Nine working modes: CVH/CVL/CCH/CCL/ CRH/CRM/CRL/CPV/CPC
.Voltage and current test function
.Four parameters display
.Complete protection
.Two type terminals

ELD8630-I

Technical Data	ELD8615-I	ELD8630-I	ELD8630-II	ELD8630-III
Rated Value				
Power	150W	300W	300W	300W
Voltage	0~150V	0~150V	0~150V	0~500V
Current	0~30A	0~30A	0~60A	0~15A
Mov	0.5V	0.82V	1.2V	3.8V
CV Model				
Lower range		0～30V		
Resolution		10mV		
Accuracy		±(0.05%+0.02%FS)		
Higher range	0～150V	0～150V	0～150V	0～500V
Resolution		100mV		
Accuracy		±(0.05%+0.025%FS)		
CC Model				
Lower range	0～3A	0～3A	0～6A	0～1.5A
Resolution		10mA		
Accuracy		±(0.1%+0.1%FS)		
Higher range	0～30A	0～30A	0～60A	0～15A
Resolution		100mA		
Accuracy		±(0.1%+0.15%FS)		
CR Model	(Input voltage and current≥5% full range)			
Lower range(VH CRL)	≈0.06～9Ω	≈0.06～6Ω	≈0.04～6Ω	≈0.03～36Ω
Resolution	150μΩ	100μΩ	100μΩ	600μΩ
Accuracy(Z)		±(0.5%+0.5%FS)		
Middle range(VH CRM)	≈9～900Ω	≈6～600Ω	≈6～600Ω	≈36～3600Ω
Resolution	1.8μs	2.7μs	2.7μs	0.45μs
Accuracy(Y)		±(1%+1%FS)		
Higher range(VH CRH)	≈90～4000Ω	≈60～4000Ω	≈60～4000Ω	≈360～4000Ω
Resolution	0.20μs	0.30μs	0.30μs	0.051μs
Accuracy(Y)		±(1.5%+1.5%FS)		
Lower range(VL CRL)	≈0.06～1.8Ω	≈0.06～1.12Ω	≈0.04～1.12Ω	≈0.3～2.4Ω
Resolution	29μΩ	18μΩ	18μΩ	38μΩ
Accuracy(Z)		±(0.5%+0.5%FS)		
Middle range(VL CRM)	≈1.8～180Ω	≈1.12～112Ω	≈1.12～112Ω	≈2.4～240Ω
Resolution	9.0μs	15μs	15μs	6.8μs
Accuracy(Y)		±(1%+1%FS)		
Higher range(VL CRH)	≈18～2000Ω	≈11.2～2000Ω	≈11.2～2000Ω	≈24～2000Ω
Resolution	1.0μs	1.6μs	1.6μs	0.78μs
Accuracy(Y)		±(1.5%+1.5%FS)		

Technical Data	ELD8615-I	ELD8630-I	ELD8630-II	ELD8630-III
CP Model	(Input voltage and current≥5% full range)			
Lower range		0～100W		
Resolution		10mW		
Accuracy		±(1%+0.1%FS)		
Higher range	100～150W	100～300W	100～300W	100～300W
Resolution		100mW		
Accuracy		±(1%+0.1%FS)		
Current Measure				
Lower range	0～3A	0～3A	0～6A	0～1.5A
Resolution		10mA		
Accuracy		±(0.1%+0.1%FS)		
Higher range	0～30A	0～30A	0～60A	0～15A
Resolution		10mA		
Accuracy		±(0.1%+0.15%FS)		
Voltage Measure				
Lower range		0～30V		
Resolution		10mA		
Accuracy		±(0.05%+0.02%FS)		
Higher range	0～150V	0～150V	0～150V	0～500V
Resolution		100mV		
Accuracy		±(0.05%+0.025%FS)		
Power Measure	(Input voltage and current≥10% full range)			
Lower range		0～100W		
Resolution		10mW		
Accuracy		1%+0.1%FS		
Higher range	100～150W	100～300W	100～300W	100～300W
Resolution		100mW		
Accuracy		1%+0.1%FS		
Power Source		AC115V/AC230V±10%,48~63Hz		
Weight	5.2kg	6.7kg	6.7kg	6.7kg
Dimension (W×H×D)		215mm×89mm×412mm		

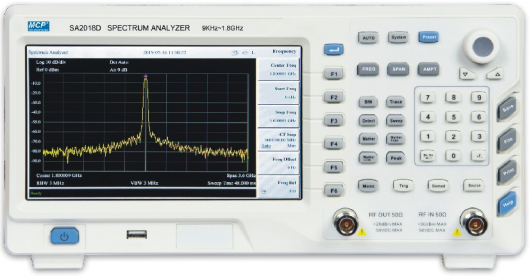
Technical Data	ELD8660-I	ELD8660-II	ELD8660-III
Rated Value			
Power		600W	
Voltage	0~150V	0~150V	0~500V
Current	0~60A	0~120A	0~30A
Mov	0.9V	1.6V	4.2V
CV Model			
Lower range		0～30V	
Resolution		10mV	
Accuracy		±(0.05%+0.02%FS)	
Higher range	0～150V	0～150V	0～500V
Resolution		100mV	
Accuracy		±(0.05%+0.025%FS)	
CC Model			
Lower range	0～6A	0～12A	0～3A
Resolution		10mA	
Accuracy		±(0.1%+0.1%FS)	
Higher range	0～60A	0～120A	0～30A
Resolution		100mA	
Accuracy		±(0.1%+0.15%FS)	

Technical Data	ELD8660-I	ELD8660-II	ELD8660-III
CR Model			
Lower range(VH CRL)	≈0.02～3Ω	≈0.015～1.5Ω	≈0.15～18Ω
Resolution	50μΩ	25μΩ	300μΩ
Accuracy(Z)		±(0.5%+0.5%FS)	
Middle range(VH CRM)	≈3～300Ω	≈1.5～150Ω	≈18～1800Ω
Resolution	5.4μs	10μs	0.90μs
Accuracy(Y)		±(1%+1%FS)	
Higher range(VH CRH)	≈30～4000Ω	≈150～4000Ω	≈180～4000Ω
Resolution	0.20μs	1.2μs	0.10μs
Accuracy(Y)		±(1.5%+1.5%FS)	
Lower range(VL CRL)	≈0.02～1.6Ω	≈0.015～0.3Ω	≈0.15～1.2Ω
Resolution	9.6μΩ	4.8μΩ	19μΩ
Accuracy(Z)		±(0.5%+0.5%FS)	
Middle range(VL CRM)	≈0.6～60Ω	≈0.3～30Ω	≈1.2～120Ω
Resolution	27μs	54μs	14μs
Accuracy(Y)		±(1%+1%FS)	
Higher range(VL CRH)	≈6.0～2000Ω	≈3.0～2000Ω	≈12～2000Ω
Resolution	3.0μs	6.1μs	1.5μs
Accuracy(Y)		±(1.5%+1.5%FS)	
CP Model			
Lower range		0～100W	
Resolution		10mW	
Accuracy		±(1%+0.1%FS)	
Higher range		100～600W	
Resolution		100mW	
Accuracy		±(1%+0.1%FS)	
Current Measure			
Lower range	0～6A	0～12A	0～3A
Resolution		10mA	
Accuracy		±(0.1%+0.1%FS)	
Higher range	0～60A	0～120A	0～30A
Resolution		100mA	
Accuracy		±(0.1%+0.15%FS)	
Voltage Measure			
Lower range		0～30V	
Resolution		10mV	
Accuracy		±(0.05%+0.02%FS)	
Higher range	0～150V	0～150V	0～500V
Resolution		100mV	
Accuracy		±(0.05%+0.025%FS)	
Power Measure			
Lower range		0～100W	
Resolution		10mW	
Accuracy		1%+0.1%FS	
Higher range		100～600W	
Resolution		1000mW	
Accuracy		1%+0.1%FS	
Power Source		AC115V/AC230V±10%,48~63Hz	
Weight		9kg	
Dimension (W×H×D)		215mm×89mm×507mm	

SA2000 SERIES CE NEW

Feature

.Frequency range 9kHz~1.8GHz/3.0GHz
.Resolution bandwidth 1Hz~3MHz, sensitivity better than -158dBm
.Double source function, tracking/independence
.Acquisition of fast transient signals with application-specific transient detector
.Waterfall curve, modulation quality analysis, audio demodulation function
.Field strength, demodulation measure, S11 / S21 parameter and signal channel measure
.Pass-fail and others field test warning abilities
.8" color TFT-LCD display, multitracking operational measurement



SA2018D

Technical data	SA2018/SA2018D	SA2030/SA2030D
Frequency range	9kHz~1.8GHz	9kHz~3.0GHz
Frequency resolution	1Hz	
Frequency readout accuracy	±(frequency indication×frequendy accuracy+1%span +10%RBW+0.5×[span/(sweep dot-1)]+1Hz)	
Aging rate	＜2ppm/year	
Temperature drift	＜1ppm, 15℃~35℃	
Bandwidth resolution	10Hz~500kHz(1~10kHz step),1MHz, 3MHz	
Resolution filter shape factor	＜5:19 (typical value, RBW≤500kHz)	
Resolution bandwidth accuracy	＜5%(typical value)	
Video bandwidth	10Hz~3MHz, in 1-3-10 sequence	
DANL (preamplifier off/on) 1Hz RBW	100kHz~1MHz ＜-100dBm-3x(f/100kHz)dB/＜-120dBm-3x(f/100kHz)dB 1MHz~10MHz ＜-130dBm/＜-150dBm 10MHz~1GHz ＜-135dBm/＜-155dBm 1GHz~1.8GHz ＜-134dBm/＜-153dBm 1GHz~3GHz ＜-130dBm/＜-148dBm	
Phase noise	-90dBc/Hz (offset: 30kHz) -100dBc/Hz (offset: 10kHz) -115dBc/Hz (offset: 1MHz)	
Sweep time range	3ms~ 3000s (span≠0) 1ms~ 3000s (span=0)	
Sweep mode	continuous, single	
Frequency counter resolution	1Hz, 10Hz, 100Hz, 1kHz	
Frequency counter accuracy	frequency indication×frequency reference accuracy +frequency counter resolution	
Amplitude accuracy	±1.5dB (input signal 0dBm~-50dBm)	
Amplitude	Display average noise level (test range fc≧10MHz)	+20dBm (SA2018/SA2018D) +27dBm (SA2030/SA2030D)
	Max. Input level (average continuous power)	+23dBm (SA2018/SA2018D) +27dBm (SA2030/SA2030D)
	Max. DC Input voltage	50V
	P1dB	+7dB
Spurious & residual response	IP3(>30MHz)	+13dB
	IP2	+30dB
	Input spurious	＜-60dBm
	Residual response	＜-90dBm (SA2018/SA2018D) ＜-85dBm (SA2030/SA2030D)
Tracking source (SA2018D/SA2030D)	Frequency range	100kHz~1.8GHz (SA2018D) 100kHz~3.0GHz (SA2030D)
	Output power	-30dBm~0dBm, 1dB step
	Output flatness	±3dB

Technical data		SA2018/SA2018D	SA2030/SA2030D
Input & output	RF input	N female, 50Ω	
	USB	USB2.0 (H), USB2.0 (D)	
	LAN	10/100 Base-T, RJ-45	
	RS232	9 pin, D-SUB femail	
	Time base in/out	10MHz, BNC female, input power 0dBm~10dBm, output power 0dBm±2dB	
	VGA	800×460,60Hz, 15 pin, D-SUB female	
	Trigger input	BNC female, 5V TTL level (max.±10V,100mA)	
	AM/FM demodulation	3.5 jack female	
Display screen		8 " TFT-LCD	
Weight		4kg	
Dimensions (W×H×D)		335×162×116 mm	
Power source		100V~240V, 40Hz~60Hz, 20W	

BR5810/BR5812 CE

Features

.100Hz~10kHz, four typical test frequency points (BR5810)
.100Hz~100kHz, eight typical test frequency points (BR5812)
.Special large white back light LCD display screen
.0.1V,0.3V,1.0V three typical test level
.30Ω,100Ω two signal source output impedance,
.4 bins comparator and bin counter
.RS232C and HANDLE interfaces

BR5810

Technical Data	BR5810	BR5812
Test parameters	L/Q, C/D, R/Q, |Z|/θ, C/R, L/R	
Accuracy	0.1%	
Test frequency	100Hz, 120Hz, 1kHz, 10kHz	100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 30kHz, 60kHz, 100kHz
Test level	0.1Vrms, 0.3Vrms and 1 Vrms	
Output impedance	30Ω or 100Ω	
Measurement range	|Z|, R, X 0.0001Ω~99.999MΩ C 0.001pF~99999μF L 0.001μH~99999H D 0.0001~9.9999 Q 0.0001~9999.9 Δ% -99.99%~99.99%	
Measurement speed (times/sec.)	Slow: 2 Medium: 5 Fast: 12	Slow: 2 Medium: 8 Fast: 16
Equivalent circuit	Series/parallel	
Ranging mode	Auto/hold	
Trigger mode	Internal/external, manual	
Correction functions	Open/short and sweep corrections	
Display mode	Direct, ΔABS, Δ%	
Display digits	Primary and secondary display: 5 digits	
Comparator functions	NG, P1, P2, P3, 4 bins	
Interface	RS232C, HANDLER	
LCD	Special large white back light LCD display screen	
Power supply	110~127VAC±10%/220~240VAC±10%, 50Hz±2Hz/60Hz±2Hz	
Dimensions (W×H×D)	320×140×360mm	
Weight	3.5kg	

DTM4120/DTM4121 SERIES

CE

Features

.Auto range and distortion measurement
.Build in extremely low distortion oscillator (DTM4120)
.100%~0.01% Distortion range
.10Hz~109kHz (imbalance) Frequency range
.400Hz, 1kHz, 10kHz 3spot frequency

DTM4120

Technical Data		DTM4120/DTM4121		
Distortion measurement	Distortion range	20Hz~20kHz:	30%~0.01%	
		10kHz~109kHz:	30%~0.03%	
	Accuracy	300Hz~5kHz:	±7% full scale	
		20Hz~20kHz:	±10% full scale	
		10Hz~109kHz:	±15% full scale	
	Residual distortion	300Hz~5kHz:	0.015%	
		20Hz~20kHz:	0.025%	
		10Hz~109kHz:	0.035%	
	Input level	50mV~100V(DTM4120)		
		50mV~300V(DTM4121)		
AC voltage measurement	Voltage range	300μV~300V	(DTM4120 needs an attenuator for >100V)	
	Accuracy	±5% full scale		
	Residual noise	at 300V:		≤0.5dB
			5Hz~300kHz:	≤1dB
			20Hz~20kHz:	≤0.5dB
			10Hz~100kHz:	≤1dB
	Frequency range	5Hz~300kHz		
	Residual noise	50μV		
	Max. S/N	120dB		
	Input impedance	100kΩ//100pF		
Oscillator (DTM4120)	Frequency range	10Hz~109kHz		
	Accuracy	0.05%±1Hz		
	Distortion	300Hz~5kHz	0.005%	
		20Hz~20kHz	0.015%	
		10Hz~109kHz	0.07%	
	Output voltage	3Vrms (1MΩ load)		
	Output impedance	600Ω		
Power supply	110~127VAC±10%/220~240VAC±10%, 50Hz±2Hz/60Hz±2Hz			
Dimension (W×H×D)	350×120×340mm			
Weight	5kg			

DTM4137 SERIES

CE

Features
.Auto range and LED display
.100%~0.005% Distortion range
.10Hz~150kHz (imbalance), 10Hz~100kHz (balance) Frequency range
.Measurement function: distortion, S/N, SINAD, voltage$_{(RMS)}$, frequency

DTM4137

Technical Data		DTM4137	
Distortion measurement	Fundamental frequency range	Imbalance:	10Hz~150kHz
		Balance:	10Hz~100kHz
	Input level	50mV~300V	
	Distortion range	300mV~300V, 20Hz~100Hz:	100%~0.03%
		300mV~300V, 100Hz~100kHz:	100%~0.01%
		300mV~300V, 100kHz~150kHz:	100%~0.03%
	Accuracy	20Hz~20kHz:	±0.5dB
		10Hz~150kHz:	±1dB
		Distortion less than 0.03%:	±2dB
	Input impedance	100kΩ//100pF	
	Remains distortion and noise (Input level ≥1Vrms)	20Hz~20kHz:	≤0.0055%
		10Hz~50kHz:	≤0.0092%
		50kHz~110kHz:	≤0.0125%
		100kHz~150kHz:	≤0.016%
	Display accuracy (%)	10%~100%:	0.1%
		1%~9.99%:	0.01%
		0.1%~0.099%	0.001%
		<0.1%:	0.0001%
	Display accuracy (dB)	0.01dB	
AC voltage measurement	Voltage range	300μV~300V	
	Frequency range	10Hz~750kHz (imbalance), 10Hz~300kHz (balance)	
S/N measurement	S/N measurement range	0~99.99dB	
	Frequency range	10Hz~750kHz	
SINAD measurement	SINAD measurement range	0dB~80dB	
	Frequency range	10Hz~150kHz (imbalance), 10Hz~100kHz (balance)	
Power supply	110~127VAC±10%/220~240VAC±10%, 50Hz±2Hz/60Hz±2Hz		
Dimension (W×H×D)	350×120×340mm		
Weight	5kg		