

SA1000 SERIES



NEW

Feature

- . Max.3.2GHz frequency measurement range.
- . Display average noise level can be as low as -161 dBm/Hz (typical value)
- . Phase noise <-98 dBc/Hz (Offset 10 kHz, typical value)
- . Full amplitude accuracy <0.7 dB
- . Up to 10001 scanning points
- . Minimum resolution bandwidth (RBW) 1 Hz
- . Advanced function one key measurement (optional)
- . EMI Pre-compliance analysis function (optional)
- . Support analog demodulation analysis (optional)
- . Support digital demodulation analysis (optional)
- . 10.1 inch 1280 × 800 HD capacitive touch screen
- . Provide USB/LAN interface, support SCPI protocol



SA1032

Technical data		SA1015/SA1015D	SA1032/SA1032D
Frequency range		9kHz~1.5GHz	9kHz~3.2GHz
Frequency resolution		1Hz	
Internal frequency reference		10MHz	
Frequency span (FFT and swept mode)	Sweep range	0 Hz , 100 Hz to 1.5 GHz	0 Hz , 100 Hz to 3.2 GHz
	Sweep accuracy	± Span/ (Sweep point-1)	
Sweep time and triggering	Sweep time	1 ms to 4000 s (span≠0)	1 us to 4000s (span=0)
	Sweep type rule	Accuracy, Normal	
	Sweep mode	Swept(1 kHz ~ 1 MHz), FFT(1 Hz ~ 30 kHz)	
	Sweep rule	Single, Continuous	
	Trigger Type	Free Run, External, Video	
	External trigger input	TTL, Rising/Falling	
Resolution bandwidth (RBW)	Range (-3dB bandwidth)	1 Hz to 1 MHz , 1-3-10 steps	
	Selectivity (-60 dB/-3 dB)	<4.8:1 (nominal) -60 dB :-3 dB	
	Bandwidth accuracy (-3dB)	<5% (nominal)	
Video bandwidth (VBW)	Range	1 Hz ~1 MHz, 1-3-10 steps	
	Uncertainty of video bandwidth	<5%	
Amplitude	Range	10 MHz to maximum frequency:(DANL) to +30 dBm	
	Reference level	- 100 dBm to +30 dBm, steps 1 dB	
	Preamp	20 dB, Nominal, 9 kHz~1.5 GHz (3.2 GHz)	
	Input attenuator range	0~51 dB, 1 dB Steps	
Display range	Log scale	1 dB to 200 dB	
	Linear scale	0 to Reference level	
	Scale units	dBm, dBmV, dBμV, V, W	
	Sweep (trace) point range	10001	
	Number of traces	4	
	Detector	Sample, Peak, Negative, Normal, Average	
Frequency response	Preamp Off	10MHz~1.5GHz, ±0.4 dB; ±0.3 dB, Typical	
		10MHz~3.2GHz, ±1.3 dB; ±0.8 dB, Typical	
	Preamp On	10MHz~1.5GHz, ±1.0 dB; ±0.8 dB, Typical	
		10MHz~3.2GHz, ±1.5 dB; ±1.0 dB, Typical	
Absolute amplitude accuracy		±0.4 dB, Input signal level-20 dBm, Preamp Off	
Total absolute amplitude accuracy		±0.5 dB, Input signal level-40 dBm, Preamp On	
Input voltage standing wave ratio (VSWR)		± (0.4 dB+ Frequency response)	
		≤1.8, (Nominal)	

SPECTRUM ANALYZER

Technical data		SA1015/SA1015D	SA1032/SA1032D	
Displayed average noise level (DANL)	Preamp off	9 kHz~500 kHz	-130 dBm(Nominal)	-105 dBm(Nominal)
		500 kHz~1 MHz	-143 dBm, -145 dBm (Typical)	-115 dBm, -120 dBm (Typical)
		1 MHz~10 MHz	-142 dBm, -144 dBm (Typical)	-127 dBm, -130 dBm (Typical)
	Preamp on	10 MHz~200 MHz	-142 dBm, -143 dBm (Typical)	-142 dBm, -145 dBm (Typical)
		200 MHz~1.5 GHz	-140 dBm, -142 dBm (Typical)	-143 dBm, -146 dBm (Typical)
		1.5 GHz~3.2 GHz	N/A	-140 dBm, -143 dBm (Typical)
Phase noise	10kHz	9 kHz~500 kHz	-145 dBm(Nominal)	-125 dBm(Nominal)
		500 kHz~1 MHz	-155 dBm, -157 dBm (Typical)	-130 dBm, -135 dBm (Typical)
		1 MHz~10 MHz	-155 dBm, -158 dBm (Typical)	-145 dBm, -147 dBm (Typical)
	100kHz	10 MHz~200 MHz	-158 dBm, -160 dBm (Typical)	-158 dBm, -160 dBm (Typical)
		200 MHz~1.5 GHz	-159 dBm, -161 dBm (Typical)	-161 dBm, -164 dBm (Typical)
		1.5 GHz~3.2 GHz	N/A	-159 dBm, -161 dBm (Typical)
Demodulation	10kHz	-95 dBc/Hz, -98 dBc/Hz (Typical)	-95 dBc/Hz, -98 dBc/Hz (Typical)	
	100kHz	-96 dBc/Hz, -98 dBc/Hz (Typical)	-100 dBc/Hz (Typical)	
	1MHz	-115 dBc/Hz, -120 dBc/Hz (Typical)	-115 dBc/Hz, -120 dBc/Hz (Typical)	
	Frequency range	2 MHz to 1.5 GHz	2 MHz to 3.2 GHz	
AM measurement (option)	Carrier power accuracy	± 2 dB		
	Input power	-30 dB to +20 dBm	Automatic attenuation	
	Carrier power display resolution	0.01 dBm		
	Modulation rate	20 Hz to 100 kHz	20 Hz to 100 kHz	
FM measurement (option)	Accuracy	1 Hz (Nominal)	Modulation rate <1 kHz	
	Depth	<0.1% Modulation rate (Nominal)	Modulation rate ≥1 kHz	
	Accuracy	5 to 95%		
	Modulation rate	±4%(Nominal)		
Digital demodulation (option)	Modulation rate	20 Hz to 100 kHz	20 Hz to 100 kHz	
	Accuracy	1 Hz (Nominal)	Modulation rate <1 kHz	
	Frequency offset	<0.1% Modulation rate (Nominal)	Modulation rate ≥1 kHz	
	Accuracy	1 kHz to 400 kHz		
Tracking source function (D model only)	Type	±4%(Nominal)		
	Measure symbol length	ASK(2ASK), FSK:2, 4, 8, 16 level, MSK(GMSK); PSK: BPSK, QPSK, OQPSK, 8PSK; DPSK: DBPSK, DQPSK, D8PSK, π/4 -DQPSK, π/8 -D8PSK; QAM: 16, 32, 64, 128, 256		
	Number of sign points oversampling rate	16 to 4096		
	Symbol rate	4, 6, 8, 10, 12, 14, 16		
Frequency	Range	1 ksps to 2.5 Msps, Number of symbol points * symbol rate ≤ 10 Msps		
	Counter resolution	100 kHz to 1.5 GHz	100 kHz to 3.2 GHz	
Output power level	Range	10Hz		
	Resolution	- 40 dBm to 0 dBm		
	Flatness output	0.5 dB		
Maximum safe reverse input level	Average total power	be relative to 50 MHz		
	AC coupling	±3 dB		
interface	RF Input, Front panel trace source output, 10MHz Ext Ref In, 10 MHz out			
	External trigger input, HDMI display, USB-Host, USB-Device, LAN			
Display	Type	10.1 inch capacitive multi-touch panel		
	Resolution	1280×800, RGB Vertical pixel		
Power supply	100 to 240 VAC ± 10%, 50/60 Hz			
Dimensions	378mm×218mm×120mm (W×H×D)			
Weight	4.55kg			