Model	GSP-8000 Series	
FREQUENCY		
FREQUENCY		
Range	GSP-8180	9 kHz ~ 1.8 GHz
	GSP-8380	9 kHz ~ 3.8 GHz
	GSP-8800	9 kHz ~ 8.0 GHz
Resolution	1 Hz	
FREQUENCY SPAN		
Span Range	0 Hz, 100 Hz to max. frequency of instrument	
Span Uncertainty	±span / (sweep points-1)	
INTERNAL FREQUENCY REFERENCE		
Frequency Range	10.000000 MHz	
Reference Frequency Accuracy	±[(days from last calibrate × freq aging rate) + temperature stability + initial accuracy]	
Temperature stability	<1ppm (15°C ~ 35°C)	
Aging rate	<1ppm/year	
Initial Accuracy	< 1ppm	
SSB PHASE NOISE		
Offset from Carrier	fc = 1 GHz, RBW = 1 kHz, VBW = 1kHz, 20°C ~ 30°C, average ≥ 40	
	10 kHz	< -104 dBc/Hz
	100 kHz	< -106 dBc/Hz (Typical)
	1 MHz	< -115 dBc/Hz (Typical)
BANDWIDTH		
Resolution Bandwidth	1Hz to 1MHz (1-3-5-10 steps by sequence)	
	200Hz, 9kHz, 120kHz, 1MHz, EMI Filter(6dB), Optional	
RBW Uncertainty	< 5%, Typical, RBW ≤ 1 MHz	
Resolution Filter Shape Factor (60dB: 3dB)	< 5: 1, Typical, digital and close to Gaussian shape	
Video Bandwidth (VBW)	10 Hz ~ 3 MHz	
AMPLITUDE		
AMPLITUDE AND LEVEL		
Amplitude measurement range	GSP-8180	DANL ~ +10 dBm, 100 kHz ~ 1 MHz, Preamp Off
		DANL ~ +20 dBm, 1 MHz ~ 1.8 GHz, Preamp Off
	GSP-8380	DANL ~ +10 dBm, 100 kHz ~ 1 MHz, Preamp Off
		DANL ~ +20 dBm, 1 MHz ~ 3.8 GHz, Preamp Off
	GSP-8800	DANL ~ +10 dBm, 100 kHz ~ 10 MHz, Preamp Off
		DANL ~ +20 dBm, 10 MHz ~ 8 GHz, Preamp Off
Reference Level	-80 dBm ~ +30 dBm, 0.01dB by step	
Preamp	20 dB, 100 kHz ~ Max. Frequency Range	
Input Attenuation	0 ~ 40 dB, in 1 dB step	
Max Input DC Voltage	50 VDC	
Max continuous power	+30dBm, Average continuous power	
Displayed Average Noise Level (DANL)		
Preamp Off	Input Attenuation = 0 dB, ref. level ≥ -60dBm, trace average ≥ 40, RBW normalizes to 1Hz, DETECTOR = SAMPLE, RBW = 100Hz, VBW = 100Hz	
	GSP-8180	9 kHz ~ 1MHz, <-95 dBm (typical), <-88dBm
		1 MHz ~ 1 GHz, <-140dBm (typical), <-130 dBm
		1 GHz ~ 1.8 GHz, <-138dBm (typical), <-128 dBm
	GSP-8380	9 kHz ~ 1MHz, <-95 dBm (typical), <-88dBm
		1 MHz ~ 1 GHz, <-140dBm (typical), <-130 dBm
		1 GHz ~ 3.8 GHz, <-138dBm (typical), <-128 dBm
	GSP-8800	9 kHz ~ 1MHz, <-95dBm (typical), <-88 dBm
		1 MHz ~ 500MHz, <-140dBm (typical), <-130 dBm
		500MHz ~ 3GHz, <-138dBm (typical), <-128 dBm
		3GHz ~ 6GHz, <-134dBm (typical), <-124 dBm
		6GHz ~ 8GHz, <-129dBm (typical), <-119dBm
Preamp on	Input Attenuation = 0 dB, ref. level ≥ -60dBm, trace average ≥ 40, RBW normalizes to 1Hz, DETECTOR = SAMPLE, RBW = 100Hz, VBW = 100Hz	
	GSP-8180	100 kHz ~ 1MHz, <-135 dBm (typical), <-128dBm
		1 MHz ~ 1 GHz, <-160dBm (typical), <-150 dBm
		1 GHz ~ 1.8 GHz, <-160dBm (typical), <-150 dBm
	GSP-8380	100 kHz ~ 1MHz, <-135 dBm (typical), <-128dBm
		1 MHz ~ 1 GHz, <-160dBm (typical), <-150 dBm
		1 GHz ~ 3.8 GHz, <-160dBm (typical), <-150 dBm
	GSP-8800	100 kHz ~ 1MHz, <-135dBm (typical), <-128 dBm
		1 MHz ~ 500MHz, <-160dBm (typical), <-150 dBm
		500MHz ~ 3GHz, <-160dBm (typical), <-150 dBm
		3GHz ~ 6GHz, <-154dBm (typical), <144 dBm
		6GHz ~ 8GHz, <-149dBm (typical), <-139dBm
FREQUENCY RESPONSE		
Filter Bandwidth	20°C to 30°C, 30% to 70% relative humidity, input attenuation = 10 dB, reference frequency = 50 MHz, SPAN = 200KHz, RBW = 10KHz, VBW = 10KHz	
Preamp Off, fc ≥100 kHz	±0.8 dB, 100K ~ Max. Frequency Range	
Preamp On, fc ≥1MHz	±0.9 dB, 100K ~ Max. Frequency Range	
UNCERTAINTY AND ACCURACY		
RBW Switch Uncertainty	Reference: 10 kHz RBW at Frequency Center is 50 MHz	
	±0.2 dB, Log resolution	
Input Attenuation Uncertainty	20°C ~30°C, fc=50 MHz, Preamplifier Off, 10 dB RF attenuation,RBW = 10K,	
	1 ~ 40 dB ±0.5 dB	
Absolute Amplitude Uncertainty	20°C to 30°C, fc = 50 MHz, Span = 200 kHz, RBW = 10 kHz, VBW=10 kHz, peak detector, 10 dB RF attenuation, average ≥ 20, 2db/div, 95% confidence level	
	Preamp Off	±0.4 dB, input signal level -20 dBm
	Preamp On	±0.5 dB, input signal level -40 dBm
Uncertainty	20°C to 30°C, fc ≥ 1MHz, signal input range 0 ~ -50dBm, Ref Level range 0 ~ -50dBm, 10 dB RF attenuation, RBW = 1kHz, VBW = 1kHz, Preamp Off	
	±1.5 dB(typical)	
VSWR	GSP-8180	<1.5, Nominal, Input 10 dB RF attenuation, 1MHz ~ 1.8GHz
	GSP-8380	<1.5, Nominal, Input 10 dB RF attenuation, 1MHz ~ 3.8GHz
	GSP-8800	<1.8, Nominal, Input 20 dB RF attenuation, 1MHz ~ 8.0GHz
DISTORTION AND SPURIOUS RESPONSE		
Second harmonic distortion	fc ≥ 50 MHz, Preamp off, signal input -20 dBm, 0 dB RF attenuation, 20°C ~ 30°C	
	-65 dBc	
Third-order intermodulation	fc ≥ 50 MHz, Input double tone level -20 dBm, frequency interval 100 kHz, input attenuation 0 dB, preamplifier off, 20°C ~ 30°C	
	+10 dBm	
1 dB Gain Compression	Nominal, fc ≥ 50 MHz, 0 dB RF attenuation, Preamp off , 20°C ~ 30°C	

1 dB Gain Compression	> -2 dBm	
Residual response	Connect 50 Ω load at input port, 0 dB input attenuation, 20°C to 30°C, average ≥ 40, RBW = 300Hz, VBW = 3kHz, SPAN = 2M	
	<-85 dBm, 1 MHz ~ Max. Frequency Range	
Input related spurious	<-60 dBc, -30 dBm signal at input mixer, 20°C ~ 30°C	
SWEEP		
SWEEP TIME		
Range	10 ms ~ 3000 s, None-zero Span	
	1 ms ~ 3000 s, Zero Span	
Sweep Mode	Continuous; Single	
TRACKING GENERATOR (OPTION 01)		
TRACKING GENERATOR OUTPUT		
Frequency Range	100 kHz ~ Max. Frequency Range	
Output power level range	-40 dBm ~ 0 dBm	
Output power level resolution	1 dB	
Output flatness	± 3 dB	
Maximum safe reverse level	Average total power: +30 dBm, DC : ±50 VDC	
Impedance	50 Ω, Nominal	
Connector	N Type Female	
FREQUENCY COUNTER		
FREQUENCY COUNTER		
Resolution	1Hz, 10Hz, 100Hz, 1kHz	
Accuracy	±(frequency indication × frequency reference accuracy) + counter resolution	
INPUTS AND OUTPUTS		
RF INPUT		
Impedance	50 Ω, Nominal	
Connector	N Type Female	
REFERENCE INPUT		
Connector	BNC Female	
10MHz Reference Amplitude	0 dBm to +10 dBm	
Trigger Input		
Impedance	1 kΩ	
10MHz Reference Amplitude	BNC Female	
USB		
USB Host	Connector	A Plug
	Protocol	USB 2.0 (Host End)
USB Device	Connector	B Plug
	Protocol	2.0 Version
GENERAL		
Display	Type	TFT LCD
	Resolution	1024*768
	Size	10.4 inches
	Color	65,536 colors
Remote Control	USB Device	B Plug, supports USB TMC
	LAN TCP/IP Interface	RJ-45, supports 10Base-T/100Base-Tx,
Mass Memory	Internal Memory	256M Bytes
Temperature	Operating Temperature	0 °C to 40°C
	Storage Temperature	-20°C to 70°C
Relative humidity	0℃ to 30℃	≤ 95%
	30℃ to 40℃	≤ 75%
Power consumption	28W	
Dimensions & Weight	421(W) × 221(H) × 115(D) mm; Approx. 5.0 kg (without package)	
AC Power Socket	100V ~ 240V, 50/60Hz	