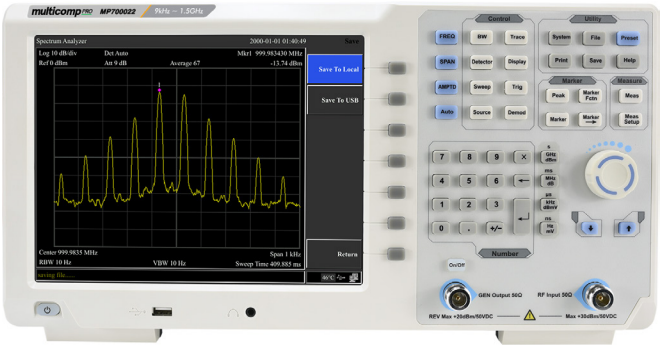
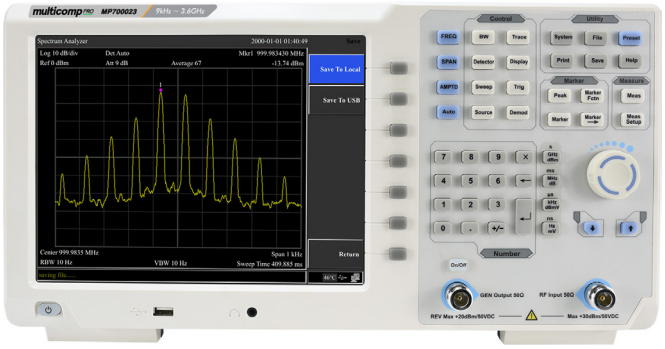
Spectrum Analyzer





Features

- Frequency Range from 9KHz up to 1.5GHz, 9KHz up to 3.6GHz
- 150dBm Displayed Average Noise Level
- Phase Noise -82dBc/Hz @ 1Gz and offset at 10KHz
- Total Amplitude Accuracy <1.5dB
- 10Hz Minimum Resolution Bandwidth (RBW)
- EMI Pre-compliance Test Kit
- Up to 1.5 GHz Tracking Generator Kit
- 10.4″ TFT LCD display

Performance Specifications

Parameters	MP700022 US	MP700023 US
Frequency Range	9KHz - 1.5GHz	9KHz - 3.6GHz
Frequency Resolution	1Hz	
Frequency span		
Range	0Hz, 100Hz to maximum frequency of device	
Accuracy	± span / (swept points -1)	
Internal Reference		
Reference Frequency	10 MHz	
Reference Frequency Accuracy	±[(days from last calibrate × freq. aging rate) + temperature stability +initial accuracy]	
Temperature Stability	<2.5ppm (15°C to 35°C)	
Aging Rate	<1ppm/year	
Readout		
Marker Frequency Resolution	span/ (the number of sweep points -1)	
Uncertainty	±(freq indication × freq reference uncertainty +1%× span +10%× resolution bandwidth + Marker Frequency Resolution)	
Frequency Counter		
Resolution	1Hz,10Hz,100Hz, 1kHz	
Accuracy	±(marker freq × freq reference uncertainty + counter resolution)	

Parameters	MP700022 US	MP700023 US
Bandwidth		
Resolution Bandwidth (-3 dB)	10Hz to 500kHz (in 1 to 10 sequence), 1MHz, 3MHz	
Resolution Filter Shape factor	<5:1 nominal (Digital implement, similar to Gauss Pattern)	
Accuracy	<5% nominal	
Video Bandwidth (-3 dB)	10Hz to 3MHz	
Amplitude Specification		
Amplitude and Electric Level		
Amplitude Measurement Range	DANL to +20 dBm, close the preamplifier	
Reference Electric Level	-80 dBm to +30 dBm, 0.1dBm steps	
Preamplifier	20dB, nominal, 9kHz~1.5GHz	
Input Attenuator Range	0~39 dB, 3 dB steps	
Max. Input DC Voltage	50V DC	
Max. Continuous Power	30dBm, average continuous power	
Displayed average noise level (DANL)		
	Input attenuation 0 dB, 1Hz resolution bandwidth	
Preamp Off	1MHz~10MHz -130dBm (nominated)	
	10MHz~1GHz -130dBm (nominated)	
	1GHz~1.5GHz -128 dBm (nominated)	1GHz~3.6 GHz -128 dBm (nominated)
Preamp On	1MHz~10MHz -150dBm (nominated)	
	10MHz~1GHz -150dBm (nominated)	
	1GHz~1.5GHz -148 dBm (nominated)	1GHz~3.6 GHz -148 dBm (nominated)
Phase noise		
	20°C ~30°C, fc = 1GHz	
Phase noise	<-82 dBc/Hz @10kHz offset	
	<-100 dBc/Hz @100kHz offset	
	<-110 dBc/Hz @1MHz offset	
Level Display Range		
Log Scale Coordinate	1dB ~255dB	
Linear Scale Coordinate	0 to reference level	
Level Unit	dBm, dBuW, dBpW, dBmV, dBuV, W,V	
Points	201~1001	
Number of Traces	5	
Detectors	Positive-peak, negative-peak, sample, normal, RMS	
Trace Functions	Clear write, Max Hold, Min Hold, View, Blank, Average	
Frequency response		
	20°C~30°C, 30%~70% relative humidity, 20dB input attenuation, reference 50MHz	
Preamp off	±0.8 dB	
Preamp on	±0.9 dB	

Parameters	MP700022 US	MP700023 US
Accuracy		
Input Attenuation Switching Uncertainty	20°C~30°C, fc=50 MHz, Preamplifier Off, 20dB RF attenuation, input signal 0~39 dB ±0.5 dB	
Absolute Amplitude Uncertainty	20°C~30°C fc=50 MHz, RBW=1 kHz, VBW=1 kHz, peak detector, 20dB RF attenuation Preamplifier Off ±0.4dB, input signal= -20dBm Preamplifier On ±0.5 dB, input signal= -40dBm	
Uncertainty	input signal range 0dbm ~ -50dbm	
	±1.5dB	
VSWR	Input 10dB RF attenuation, 1MHz~1.5GHz	
	<1.5, nominal	
Distortion and Spurious Response		
Second Harmonic Distortion	fc ≥ 50 MHz, Preamp off, signal input -30 dBm, 0 dB RF attenuation, 20°C~30°C	
	-65dbc	
Third-order Intermodulation	fc ≥50MHz	
	+10 dBm	
1 dB Gain Compression	fc ≥ 50 MHz, 0 dB RF attenuation, Preamp off , 20°C~30°C	
	+2 dBm, nominal	
Residual Response	Connect 50Ω load at input port, 0 dB input attenuation, 20°C~30°C	
	<-85dBm, Nominated	
Input Related Spurious	-30 dBm signal at input mixer, 20°C~30°C	
	<-60 dBc	
Sweep Time and Triggering		
Span Range	100Hz≤SPAN≤3GHz 10ms to 3000s zero sweep width 1ms to 3000s	
Mode	Continue, Single	
Trigger	Free run, Video, External	
Tracking Generator		
Output frequency range	100 kHz~1.5GHz	
Output power level range	-30 dBm~0 dBm	
Output power level resolution	1DB	
Output flatness	±3 dB	
Maximum safe reverse level	Average total power: 30 dBm, DC : ±50V DC	
Inputs and Outputs		
Front panel RF input connector	50Ω, N-type female	
Front panel track generator output	50Ω, N-type female	
10 M reference input	50Ω, N-type female	
Communication Port	USB HOST, USB DEVICE, LAN, earphone port, REF and VGA	

Parameters	MP700022 US	MP700023 US
General Technical Specification		
Display	TFT LCD,10.4 inches	
Weight (without package)	5 kg	
Dimension (W × H × D)	421mm × 221mm × 115mm	
Working temperature	0 to +40°C	
Storage temperature	-20°C to +60°C	
Power	100V AC to 240V AC 50/60Hz	
Standard Accessories Included	Power cord, USB cable, CD-Rom.Manual	
Power Cord Plug Type	US	
Warranty	12 months	

Part Number Table

Description	Part Number
Spectrum Analyser, 9KHz - 1.5GHz	MP700022 US
Spectrum Analyser, 9KHz - 3.6GHz	MP700023 US