

**RoHS
Compliant**

Features



- Frequency Range from 9kHz up to 1.6GHz/3.6GHz
- -160dBm Displayed Average Noise Level
- Phase Noise <-80dBc/Hz @1Gz and at 10kHz offset
- Total Amplitude Accuracy <1.5dB
- 10Hz Minimum Resolution Bandwidth (RBW)
- Provide EMI Pre-compliance Test function, optional EMC test software
- Up to 1.6/3.6GHz Tracking Generator, 3.6GHz have signal generator
- Standard GPS receiver, antenna, the latitude/longitude information and test information can be recorded
- 8 inches (1024 x 768) IPS LCD touchscreen, wider viewing angle, built-in light sensor to adjust the screen backlight according to the environmental light

Specification Table

Characteristics	Part Number	
	MP700506	MP700507
Frequency		
Range	9kHz ~ 1.6GHz	9kHz ~ 3.6GHz
Resolution	1Hz	
Frequency span		
Range	0Hz, 100Hz to maximum frequency of device	
Accuracy	± span / (swept points -1)	
Internal reference		
Reference frequency	10.000000 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)	
Bandwidth		
Resolution bandwidth (-3 dB)	10Hz to 500kHz (1-10 steps by sequence), 1MHz, 3MHz	
Resolution Filter Shape Factor (60dB : 3dB)	<5: 1 typical (digital and close to Gaussian shape)	
Accuracy	<5%, typical (RBW ≤ 1MHz)	
Video bandwidth (-3dB)	10Hz to 3MHz	

Characteristics	Part Number	
	MP700506	MP700507
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	
Preamp	20dB, nominal, 9kHz to 3.6GHz	
Input attenuated range	0 to 40dB, in 1dB step	0 to 50dB, in 1dB step
Max input DC voltage	50V DC	
Max continuous power	+30dBm, average continuous power	
Displayed average noise level (DANL)	(Input Attenuation= 0dB, Sample Detector ,Trace Average ≥20, 20°C to 30°C, Input Impedance=50Ω ,RBW normalizes to 1Hz)	
Preamp off	1MHz ~ 1GHz -140dBm (Typical), <-130dBm	
	MP700506: 1 GHz ~ 1.6 GHz -138 dBm(Typical), <-128dBm MP700507: 1 GHz ~ 3.6 GHz -138 dBm(Typical), <-128dBm	
Preamp on	1MHz ~ 1GHz -160 dBm (Typical), <-150 dBm	
	MP700506: 1 GHz ~ 1.6 GHz -158 dBm (Typical), <-148 dBm MP700507: 1 GHz ~ 3.6 GHz -158 dBm (Typical), <-148 dBm	
SSB Phase Noise (20°C to 30°C, fc=1 GHz, RBW=1kHz, VBW=1kHz)		
Phase Noise	<-80 dBc/Hz @10kHz offset	
	<-100 dBc/Hz @100kHz offset	
	<-107 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, AVG, Qual Peak	
Trace functions	Clear write, Max Hold, Min Hold, View, Blank, Average	
Frequency response (20°C to 30°C, 30% to 70% relative humidity, input attenuation=21 dB, reference frequency=50 MHz)		
Preamp Off (fc≥100K)	±0.8dB; ±0.4dB (Typical)	
Preamp On (fc≥1 MHz)	±0.9dB; ±0.5dB (Typical)	
Difference and Accuracy		
RBW Switch Difference	RBW=10kHz, Log resolution=±0.2dB, Lin resolution=±0.01. Nominal	
	MP700506: 20°C ~30°C, fc=50 MHz, Pre-amplifier Off, 10 dB RF attenuation, input signal 1~40dB ±0.5 dB	
	MP700507: 20°C ~30°C, fc=50 MHz, Pre-amplifier Off, 20 dB RF attenuation, input signal 1~50dB ±0.5 dB	

Characteristics	Part Number	
	MP700506	MP700507
Absolute Amplitude Uncertainty	20°C to 30°C, fc=50 MHz, Span=200 kHz, RBW=10kHz, VBW=10kHz, peak detector, 10 dB RF attenuation, 95% confidence level Preamp Off ± 0.4 dB, input signal level -20 dBm Preamp On ± 0.5 dB, input signal level -40 dBm	
Uncertainty	input signal range 0 dbm ~ -50dbm	
	± 1.5 dB	
VSWR	input 10 dB RF attenuation, 1MHz ~ 1.5GHz	
	<1.5 nominal	
Distortion and spurious response		
Second harmonic distortion	fc \geq 50MHz, Pre-amp off, signal input -30dBm, 0dB RF attenuation, 20°C to 30°C	
	-65dbc	
Third-order inter modulation	fc \geq 50MHz	
	+10dBm	
1 dB Gain Compression	fc \geq 50MHz, 0dB RF attenuation, Preamp off, 20°C to 30°C	
	>+2dBm, nominal	
Residual response	Connect 50 Ω load at input port, 0 dB input attenuation, 20°C to 30°C	
	<-85dBm, typical	
Input related spurious	-30dBm signal at input mixer, 20°C to 30°C	
	<-60dBc	
Sweep time and triggering		
Sweep Time	100Hz \leq SPAN \leq 3GHz 10ms to 3000s zero sweep width 10ms to 3000s	
Mode	Continue, Single	
Tracking Generator		
Output frequency range	100kHz ~ 1.6GHz	100kHz ~ 3.6GHz (Tracking generator) 35MHz ~ 3.6GHz (Source generator)
Output power level range	-30dBm ~ 0dBm	-40dBm ~ 0dBm
Output power level resolution	1dB	
Output flatness	± 3 dB	
Maximum safe reverse level	Average total power: ± 30 dBm, DC : ± 50 V DC	
Audio Demodulation		
Frequency Range	100kHz to 1.6GHz	100kHz to 3.6GHz
Demodulation Type	FM/AM	
AM Measurement		
Frequency Range	100kHz to 1.6GHz	100kHz to 3.6GHz
Modulation rate	20Hz to 100kHz	
Modulation Rate Accuracy	1 Hz, nominal (Modulation rate <1kHz) <0.1% modulation rate, nominal (Modulation rate \geq 1 kHz)	

Characteristics	Part Number	
	MP700506	MP700507
Depth	5% to 95%	
Depth Accuracy	±4%, nominal	
FM Measurement		
Frequency Range	100kHz to 1.6GHz	100kHz to 3.6GHz
Modulation rate	20Hz to 100kHz	
Modulation Rate Accuracy	1 Hz, nominal (Modulation rate < 1kHz) <0.1% modulation rate, nominal (Modulation rate ≥1kHz)	
Deviation	20Hz to 200kHz	
Deviation Accuracy	±4%, nominal	
Inputs and Outputs		
RF input connector	50Ω N-type female	
track generator output	50Ω N-type female	
External trigger in	BNC female	
10 M reference input/output	50Ω BNC	
Interface	USB HOST, USB DEVICE, LAN, earphone port, GPS & BDS	
General technical specification		
Display	8 inches touch screen LCD	
Weight (without package)	About 2.5 kg	
Dimension (W × H × D)	265mm x 190mm x 58mm	
Working temperature	0 ~ 40°C	
Storage temperature	-20°C to +60°C	
Power	100V ~ 240V 50/60Hz	
Battery	7.4V 9100mAh	
Warranty	03 years	

Diagram



Part Number Table

Description	Part Number
Spectrum Analyzers, Handheld, 9kHz to 1.6GHz	MP700506
Spectrum Analyzers, Handheld, 9kHz to 3.6GHz	MP700507

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