Product Brochure

ADIVIC

RF Test & Measurement

MP7200
MP7300
MP7600

ADIVIC RF Recorder/Player Overview

MP7 series is a specific RF measurement instrument which is able to capture signals off the air and faithfully playback. To carry out field testing and performance testing, MP7 series are excellent assistance with fast signal analysis for all existing communication standards and modulation schemes regardless digital and analogue. In addition, it also allows users to precisely record and investigate the wanted signals, adjacent channel signals, noise/fading signals and any other distortion signals accordingly by means of excellent performance against spurious signals.

MP7200 is basic version for spectrum analysis within 25 MHz bandwidth.
MP7300 is specialized for the requirement of simultaneous two-channel recording/playback.
MP7600 is the most powerful version with wider bandwidth and compact housing for contemporary wireless communication standards.

Benefits

1. Shorten design-in schedule because of evitable time-wasting virtual field testing
2. Flexible bandwidth extension with the availability of interconnection between instruments
3. Passive and active input ports enable receiving different power signals
4. Recording fluctuated spectrum is feasible via MAGC function
5. High spectrum sensitivity performance because of low noise floor (< -165 dBm/Hz)
6. Precise measurement in accordance with excellent spurious response.
7. High resolution in order to avoiding unnecessary distortion as recording and playback
8. Diminish space limitation during recording via remote control with 10 MHz sync. port
9. Swapable SSD enables prolonged recording
10. In support of various worldwide communication standards
11. Instinctive control by user-friendly GUI

MP7200 Features

1. Adjustable bandwidth from 1 MHz to 25 MHz
2. Frequency coverage from 25 MHz to 2.7 GHz
3. Active and passive RF input port
4. 100 MS/s sampling rate in recording and playback path respectively
5. 14-bit resolution
6. In support of GPS NMEA data logging recording
7. Remote control available
8. Data formats compatible to MATLAB analyzer
9. Software utility support including I/Q data extractor and File segment

MP7200/MP7300/MP7600

RF RECORDER & PLAYER

Specification

MP7200 2.7 GHz RF Signal Analyzer Specifications

Frequency

Frequency range .....25 MHz to 2.7 GHz
Low Frequency Extend - option.....300 KHz to 25 MHz
Real-time bandwidth.....1 to 20 MHz(20 MHz Guaranty BW)
Frequency resolution.....1 KHz step minimum
Resolution bandwidth (RBW).....Fully adjustable (100 Hz to 3 MHz)
Warm-up time (typical).....30 minutes
Temperature stability .....±20 ppb maximum
Initial achievable accuracy.....±50 ppb maximum
Aging
Per year.....±100 ppb maximum
Per day.....±1 ppb maximum
Initial achievable accuracy.....±50 ppb maximum

Spectral purity

Phase Noise @ 1 KHz offset, 1 GHz.....< -80 dBc/Hz

RF input Spurious Response.....< -90 dBm

Noise Density

Passive Port (Gain : 40 dB / 100 MHz).....< -165 dBm/Hz
Active Port (Gain : 20 dB / 100 MHz).....< -145 dBm/Hz

Amplitude(Passive Port)

Input level Accuracy (15 to 35°C).....< ±1 dB
Input signal range@CW mode.....-145 dBm to -30 dBm
Gain Range.....0 to +40 dB @ 5 dB step
Input level resolution.....0.01 dB
Maximum DC input.....±25 VDC
Group delay.....30 ns Typical

Amplitude (Active Port)

Input level Accuracy (15 to 35 °C).....< ±1dB
Input signal range @ CW mode.....-135 dBm to +10 dBm
Gain Range.....-5 to +20 dB @ 5 dB step
Input level resolution.....0.01 dB
DC Voltage Output Range.....0 to +10 V @ 0.1 V/step
Group delay.....30 ns Typical

RF input

Passive RF input .....50 Ω , AC-coupled N female
Active RF input .....50 Ω , DC-coupled N female

IF Band

Resolution.....14-bit
Sample rate.....100 MS/s

Storage

Storage.....640 GB

Calibration

Calibration .....1 year

Environment

Operating temperature .....0 to +50 °C
Relative humidity.....10 to 90%
Storage temperature .....-20 to 70 °C
Relative humidity.....5 to 95%

MP7200 2.7 GHz RF Signal generator Specifications

Frequency Characteristics

Frequency range .....25 MHz to 2.7 GHz
Real-time bandwidth (Digital vector modulation bandwidth) .....20 MHz maximum
Frequency resolution.....1 KHz / step minimum
Warm-up time (typical) .....30 minutes
Temperature stability.....±20 ppb maximum
Per year.....±100 ppb maximum
Per day .....±1 ppb maximum
Initial achievable accuracy.....±50 ppb maximum

Spectral purity

Phase Noise @ 1 KHz offset, 1 GHz.....< -80 dBc/Hz

Spurious Responses

Second harmonic.....< –40 dBc
Output third-order distortion (IMD)
(two -13 dBm tones, > 200 KHz apart).....-70 dBc Typical
LO leakage.....< -80 dBm

RF Output Characteristics

Output power range .....-145 dBm to -10 dBm
Amplitude resolution.....0.1 dB step minimum
Amplitude Accuracy.....< ±1 dB -100 dBm to -10 dBm
< ±2 dB < -100 dBm
Output Impedance.....50 Ω

Overload protection on RF output

Maximum reverse RF power .....1 Watt maximum
Maximum DC input.....±25 VDC

Noise Floor@1GHz

-40 dBm output power .....< -150 dBm/Hz Typical
-50 dBm output power.....< -165 dBm/Hz Typical

Flatness

IF Band(20MHz) flatness..... 1 dB Typical
Group delay.....30 ns Typical

RF Output

RF Output..... .....50 Ω , AC-coupled N female

IF Band

Resolution.....14-bit
Sample rate.....100 MS/s

Calibration

Calibration .....1 year

Operating Environment

Operating temperature .....0 to +50 °C
Relative humidity.....10 to 90%
Storage temperature .....-20 to 70 °C
Relative humidity.....5 to 95%

Power

AC.....100 V to 240 V

Mechanical

Dimensions..... 350 mm x 300 mm x 230 mm
Weight.....approx. 14.3 kg

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