GNSS Simulator

MP6220

MP6230C

Overview

ADIVIC MP6230C with single channel GPS / GLONASS are simulators designed specifically for various test applications. Accurate measurement turns demanding analysis for GPS / GLONASS signals into extremely simple and efficient way. By means of operational flexibility, it is capable of applying to either laboratory or production line for functional tests of GPS / GLONASS receivers. In addition, it is highly performance with versatile functionality creates the most economic approach to increase test reliability as well as stability.

MP6230C
GNSS Signal Simulator

Features

1. Selectable Satellite Vehicle (SV) 1 to 32 and Navigation Data for GPS
2. Selectable (SV) 1 to 24 and for GLONASS
3. Adjustable RF levels from -85 dBm to -145 dBm in 0.1 dB steps
4. Embedded OCXO for accurate clock
5. Embedded Doppler function
6. Compact housing, easy to operation
7. Industry-leading test stability, quality and reliability
8. Verification for operational integrity of GPS / GLONASS receivers and module

SPECIFICATIONS	
Model	**MP6230C**
RF Signal	
Output Center Frequency	GPS Signal Module : 1575.42 MHz (L1 band), optional GLONASS Signal Module : 1598.0625 MHz-1605.375 MHz (L1 band), optional
RF output level	-85 to -145 dBm
Calibration RF output level	-25 to -85 dBm
Resolution	0.1 dB
RF Output impedance	50 Ω
Spurious (in GPS/GLONASS band)	Less than -30 dBc
Carrier phase noise	0.1 rad RMS @ 10 to 10 KHz
Baseband Signal	
Modulation method	BPSK
Oven crystal oscillator frequency accuracy	Less than $5X10^{-10}$ per day
OCXO Stability	Less than $5X10^{-9}$ -20 to +70 ˚C
C/A Code	GPS Signal Module : 1.023 MHz (1023 bit gold code), optional GLONASS Signal Module : 0.511 MHz (3135.029354 cycles/chip), optional
Channels	GPS Signal Module : SV1~SV32, optional GLONASS Signal Module : SV1~SV24, optional
Navigation Data	50 bps
RF Output Connector	N-Type female RF out & CW(CAL.) out
Other signals available	LCD keypad
General	
Power supply	AC Input Voltage: 90 V to 265 V, 47 to 63 Hz Input line Current: 0.2A Max. Max. Output Rating: 250 W
Weight	5.5 Kg
Dimensions	318mm (W) x 320mm (D) x 100mm (H)
Operating Temperature	0 to 55 ˚C
Operating Humidity	20 to 90%

MP6230C
GPS & GLONASS Signal Simulator

Specifications

Frequency Characteristics
•Frequency Range : 1575.42 MHz
•Warm-up time (typical) : 30 minutes
•Frequency Accuracy : ±100 ppb maximum
•Temperature stability : ±100 ppb maximum
•Aging (Per year) : ±100ppb maximum
(Per day) : ±1 ppb maximum

Channels
•Number : 1 CH, 8 CH
•Navigation data : GPS C/A @ 1.023 MHz with 50 bps
•Modulation : BPSK

Spectral purity
•Phase Noise @ 1 KHz offset : < -80 dBc/Hz
•Harmonic : < -70 dBc

RF Output Characteristics
•High power normal output level : -55 dBm to -90 dBm
•Low power normal output level : -90 dBm to -160 dBm
•Channel Attenuation range
(refer normal output level : -31.5 dB to 0 dB)
•Power level ranged from -55 dBm to -145 dBm in 1 dB step,
-145 dBm to -160 dBm in 0.5 dB step.
•Amplitude Resolution : 1 dB step
•Amplitude Accuracy : < ±1 dB
•Output Impedance : 50 Ω
•Doppler Shift : ±30 KHz (1 CH option)

Voltage Standing Wave Ratio
•1575.42 MHz : < 1.2

Overload protection on RF output
•Maximum reverse RF power : 1 Watt maximum
•Maximum DC input : ±25 VDC

Calibration
•Calibration : 1 year

Environmental
•Operating temperature 0 to 50 ℃
•Relative Humidity : 10% to 90%
•Storage temperature : -20 to 70 ℃
•Relative Humidity : 5% to 95%

Overview

ADIVIC MP6220 GPS simulator is a cutting-edge design for the purpose of various GPS receiver testing. In multi-channels mode, users are able to scrutinize position fix sensitivity, signal tracking sensitivity, TTFF (time to first fix), position deviation, and position accuracy of GPS receiver. Single channel mode enables users to test sensitivity, S/N ratio, and ATE test in laboratory and production line. Capitalizing on flexible usage, availability of switching between the single-channel and multi-channel modes provides users quick and effective testing to generate the best profit.

Features

1. Doppler control 30 KHz to -30 KHz in 1 Hz step
2. Almanac data upgradeable
3. Built-in ultra high precise OCXO
4. RF input range from -55 dBm to -160 dBm
5. Control by RS232 interface
6. Sensitivity testing

MP6220
Single & Multi-Channel GPS Simulator

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