

GNSS Signal Simulator



GNSS SIGNAL SIMULATOR MODEL 49003

Chroma 49003 is a single channel GPS signal simulator designed specifically for mass production test applications of GPS receivers. The 49003 supports 1.023MHz C/A code modulated onto 1575.42MHz (L1 band). It also provides accurate and repeatable / versatile laboratory tests for GPS receivers.

The 49003 GNSS signal simulator can generate PRN and Navigation data from SV1 to SV32 within 60dB control range (Power level is within the range of 60dB). It can be applied to laboratory or production line for function tests of s GPS receiver. The following diagram shows the connection structure of a GPS simulator and Device Under Test (DUT).

The Chroma 49003 space is greatly condensed and the measurement functions are highly diversified, its flexible structure and high performance/low cost advantages are most applicable for the frequently upgrade electronic products with short life cycle. Nowadays, the simulators have been successfully and extensively applied to the tests for the mobile devices 、automotive 、aviation and military applications.

MODEL 49003

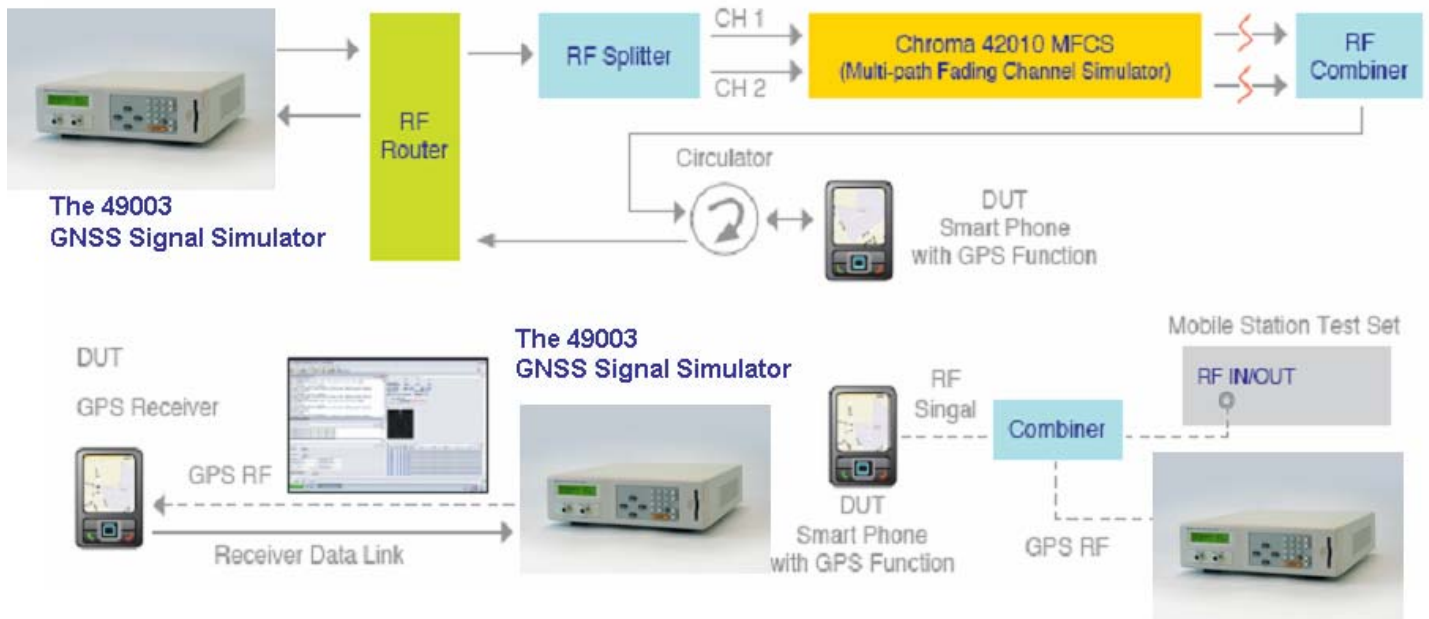
System Features:

- Single channel GPS L1 C/A code
- Selectable Satellite Vehicle (SV) 1 to 32 and Navigation Data
- Adjustable RF levels from -85dBm to -145dBm in 0.1dB steps
- Provided calibration output level from -25dBm to -85dBm
- Embedded OCXO for accurate clock
- Embedded Doppler function
- Industry-leading stability, quality and reliability
- Verify operational integrity of GPS receivers quickly
- Small size, easy to operation

Application:

- Evaluation of GPS products quality / accuracy
- Evaluation of GPS receiver sensitivity
- Mobile phone GPS function test
- Performance evaluation of receiver and module design
- Verify operational integrity of GPS receivers and module

Configuration proposed for multi-mode handset measurement



SPECIFICATIONS

Model	49003
RF Signal	
Output Frequency	1575.42MHz (L1 band)
RF output level	-85 to -145dBm
Calibration RF output level	-25 to -85dBm
Resolution	0.1dB
RF Output impedance	50Ω
Spurious(in GPS band)	Less than -30dBc
Carrier phase noise	0.1 rad RMS@10 to 10KHz
Baseband Signal	
Modulation method	BPSK
Oven crystal oscillator frequency accuracy	Less than 5×10^{-10} per day
OCXO Stability	Less than 5×10^{-9} -20 to +70°C
C/A Code	1.023 MHz (1023 bit gold code)
Channels	SV1~SV32
Navigation Data	50BPS
RF Output Connectors	N-Type female RF out & Cal. out
Other Signals available	LCD keypad RS-232
General	
Power supply	AC Input Voltage: 90V to 265V, 47 to 63 Hz; Input line Current: 0.2A Max.
Weight	5.5 Kg
Dimensions	318mm (W) x 320mm (D) x 100mm (H)
Operating Temperature	0 to 55°C
Operating Humidity	20 to 90%

All specifications are subject to change without notice.

Developed and Manufactured by:

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