

RWC2020A

Interference Generator

RWC2020A is an interference generator being able to be used for the purpose of various tests or measurements, e.g. the Listen Before Talk (LBT) test, the Gateway Non-regression tests, the Intermodulation Immunity test and so on. It can generate up to eight multi-tone signals with different output levels per each tone for the LBT test and two tones of up to 20MHz distant for the Intermodulation Immunity test. It also can generate a single tone with phase noise of high performance for the Gateway Non-regression tests. RWC2020A shall be connected to RWC50-20A via RS-232C for control and setup of the full automation tests.



LBT Test

Listen Before Talk (LBT) is a technique that device enters RX mode and senses the interference signal level before it starts a transmission. It is used to prevent interference or collision between devices that use common frequency bands.

RWC2020A provides a perfect solution to verify LBT functionality of DUT, gateways or end-devices, as a supplementary equipment synchronized with RWC5020A. It generates up to eight interference signals to occupy frequency bands. The interference signal level, the number of channels, and channel frequencies are editable through RWC5020A LoRaWAN tester GUI or PC software.



CW Interferer Immunity Test

The CW Interferer Immunity Test and Intermodulation Immunity Test which are ones of the Gateway Non-regression tests require CW interference signals with high performance phase noise. RWC2020A generates a single-tone or dual-tone interference signal for those tests.



Specifications

Frequency	Range : 400MHz ~ 1000MHz Resolution : 100Hz Accuracy : $\pm 2\text{ppm/year@operating temperature}$
Output Level	Range : -10dBm ~ -100dBm Resolution : 0.1dB Accuracy : $\pm 1\text{dB}$
RF Characteristics	Phase Noise (Single tone mode) : -103dBc@1kHz / -110dBc@10kHz / -110dBc@100kHz / -138dBc@1MHz VSWR : Better than 1:1.5 Impedance : 50 Ω
Remote Interface	RS-232C
Miscellaneous	Operating temperature : 5 ~ 40 $^{\circ}\text{C}$ Input : DC 12V, 3A Dimension : 166(w) x 50(h) x 194(d) mm Weight : 950g