

Rubidium™ MG362x1A Clean CW Source for Testing Transceivers

Introduction

Today, most communication systems such as WLAN, 5G, and broadcast standards have adopted wideband complex digital modulation such as OFDM and higher order QAMs for achieving better spectral efficiencies. OFDM has been the most common modulation format adopted in several communication standards for their robustness against frequency selective fading and spectral efficiency.

Communication standards are also moving to higher frequencies in millimeter-wave (mmWave) bands where much larger channel bandwidths are possible. In many test setups, a signal generator is used as an LO source for up/down conversion of OFDM modulated signals to and from mmWave frequencies. Phase noise of such an LO source needs to be as low as possible since it affects orthogonality of OFDM carriers and contributes to inter-carrier interference (ICI), thus degrading SNR.

The Rubidium signal generator offers the lowest phase noise performance in the market. When used as an LO source to test up/down converters, phase noise at spot offsets, as well as integrated phase noise up to 100 MHz offsets are important. The Rubidium signal generator, with its very low integrated phase noise is an ideal choice as LO source for testing communication transceivers.

