

LTE-Advanced FDD and TDD Signal Generation and Analysis

Gain greater insight into LTE-Advanced signals

Test components and receivers utilizing LTE-Advanced signals. Agilent's Signal Studio and 89600B vector signal analysis (VSA) software for LTE-Advanced offers leading-edge signal generation and analysis for FDD and TDD modes, providing carrier aggregation and clustered SC-FDMA support.

**Flexible
Carrier
Aggregation**

Together they provide greater insight and confidence for creating and analyzing LTE-Advanced signals.

See through the complexity with the 89600B VSA's advanced troubleshooting tools

- Analyze up to five CCs simultaneously – an industry first!
- Set up measurement parameters for each CC independently
- Troubleshoot each CC using EVM, IQ error, and frequency error measurements provided by the 89600B VSA
- Gain 20:20 insight viewing up to 20 traces simultaneously, each with 20 markers



Fully characterize up to 5 CCs -- simultaneously. Set up the measurement parameters and view different measurements on each.



Spectrum of LTE-Advanced configuration with four 20 MHz component carriers

Generate multiple component carriers across a wide bandwidth with Signal Studio

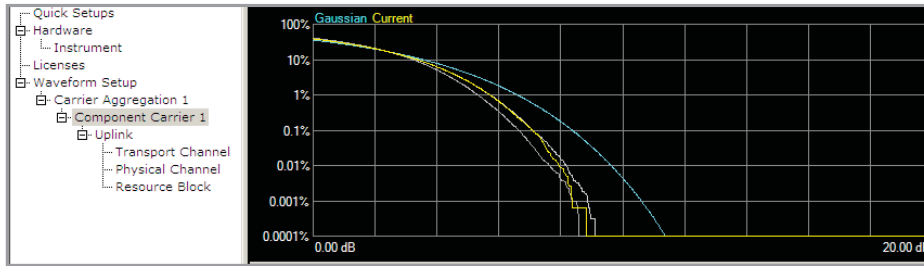
- Generate up to five component carriers (CCs) simultaneously
- Independent setup parameters for each CC, including any LTE-Advanced specified bandwidth or modulation type
- Develop contiguous or non-contiguous carrier configurations for signal output within the I/Q bandwidth of supported Agilent signal generators—up to 100 MHz using MXG vector signal generators
- Examine expected CCDF plot and spectral characteristics of generated signals before applying to the DUT



Agilent Technologies

Generate enhanced uplink signals to stress your device using Signal Studio

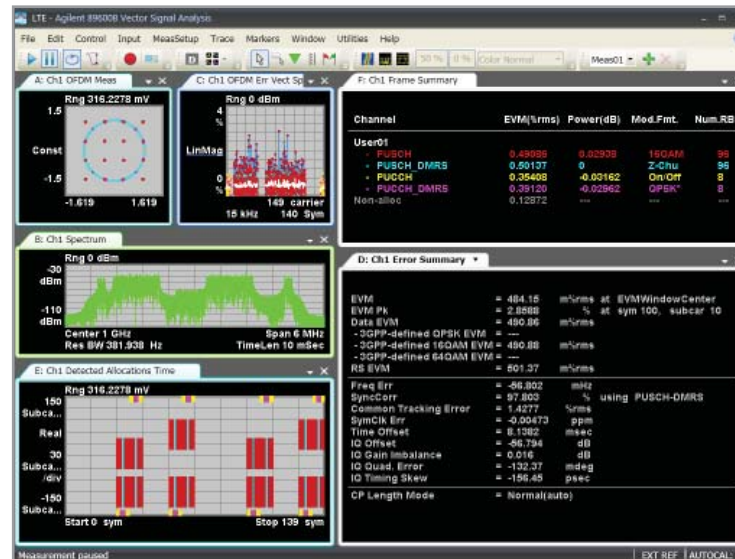
- Generate clustered SC-FDMA signals with type 1 resource allocation configurations for any bandwidth uplink signal
- Allocate resource blocks with simultaneous control and data (PUCCH and PUSCH) channels
- Vary resource block allocations and generate expected spectrum and CCDF plots to find optimal or corner-case signal configurations for the DUT



CCDF plot of 10 MHz enhanced uplink LTE-Advanced carrier

Use 89600B VSA's wide range of measurements to troubleshoot UL signals

- Define multiple SC-FDMA allocations per slot and configure PUCCH and PUSCH channels for simultaneous analysis
- Understand signal performance with quality measurements such as EVM, I/Q errors, and frequency errors
- Investigate the behavior of clustered SC-FDMA signals with numerical tables and visual traces, including display formats optimized for viewing transient error behavior
- Use statistical measurements such as CCDF to provide information on the power profile of unformatted signals for component characterization



Use Option BHG to complete characterization of the LTE-Advanced FDD uplink clustered SC-FDMA signal

Uplink Clustered SC-FDMA Support



Agilent LTE Design and Test – Greater insight. Greater confidence. Now in LTE-Advanced

For more information about LTE-Advanced FDD and TDD for signal generation and analysis, go to: www.agilent.com/find/lte-advanced-software

www.agilent.com

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Printed in USA, February 3, 2011
5990-7247EN