

Bandwidth Calculation

The occupied bandwidth of the CDMA transmission signal from the type accepted base station was determined by measuring the 99% power bandwidth per 47CFR Section 2.02. This measurement supports the experimental license application for the Verizon Wireless Southlake Lab. The nominal bandwidth of a CDMA signal is 1.25 MHz (+/- 625 KHz.) around the center frequency of the transmitted signal. The measurement resulted in an occupied bandwidth with the expected bandwidth. These channels will be operated at very low power within an RF shielded room on a non-interfering basis.

Test Setup

The spectral plot was taken with an Agilent E7495B Base Station Test Set which was located within the RF shielded enclosure. The test equipment input was cabled to the RF shield room bulkhead connector which is directly cabled to the base station through a RF switch box. The signal level presented to the test set was approximately -68 dBm, which is the same as normally presented to an antenna within the RF shield room. The test set was programmed to calculate the power bandwidth with a 99% power setting.

Test Results

The resulting bandwidth calculated by the base station test set was 1.196 MHz. This is less than the nominal bandwidth of 1.2288 MHz of a Cellular CDMA signal. The following screen capture from the test set spectral plot shows the measurement results.

