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Subject: Cisco

Mike,

2. The following is an explanation for the different graphical results at different resolution bandwidths:

VOFDM is a very complex waveform. Cisco uses 16QAM on up to 512 orthogonal carriers. The 2-4 watt output level challenges even the best state of the art measuring equipment. At these levels, and for a display good to -60 dBc, the dynamic range of even the best spectrum analyzer is limited by the input level. Less attenuation results in spectral regrowth in the analyzer, more attenuation does not allow -60 dBc to be displayed without the analyzer becoming non-linear.

By choosing different RES BW for the -25/-40/-60 dBc measurements, each segment of the mask can be accurately compared to the limit for the range in which the analyzer is linear, and if "over limit" readings disappear at different bandwidths with new or different "over limit" readings replacing them, it can be assumed that this is caused by the limits of the instrumentation.