Updated Frequency Uncertainty Calculations (SSA, SSA Plus, SVA)

September 18, 2020

Currently listed datasheet calculation for SSA Frequency Uncertainty is being updated, but as of 08/26/2020, it has not.

Here is the new calculation:

We can use below new specification:

± (frequency indication × frequency reference uncertainty + 1/2(span/(sweep points-1)) + 10% × resolution bandwidth + marker resolution)

For example:

The frequency indication is 500 MHz;

Frequency reference uncertainty is 1 ppm;

The SPAN is 1000 MHz;

The sweep points are 751;

The resolution bandwidth is 100 kHz;

The marker resolution is 1Hz;

So the uncertainty = ± (500 MHz*1 ppm + 0.5*(1000/(751-1))+10%*100 kHz + 1Hz) = ± (500 Hz + 666 Hz + 10 kHz + 1Hz) = ± 11.167 kHz

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