

◇ How to prevent erroneous measurement due to the higher power input signal out of measurement band.

[~*Application*~]

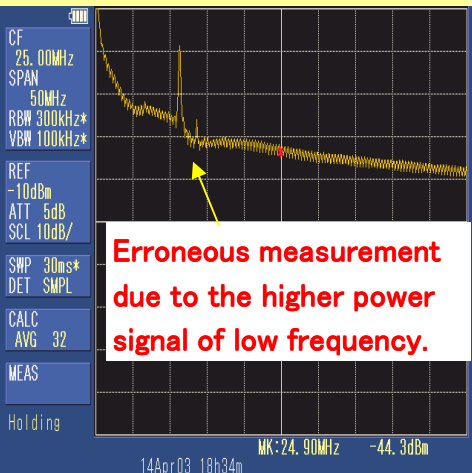
When the input signal power is higher than the proper level for 1st mixer, harmonics distortion and spurious are generated. Even if the higher power input signal is out of measurement band, it becomes erroneous measurements.

[~*Solution*~]

The saturation of 1st mixer can be prevented by inserting a coaxial attenuator or a filter in the input of a spectrum analyzer.

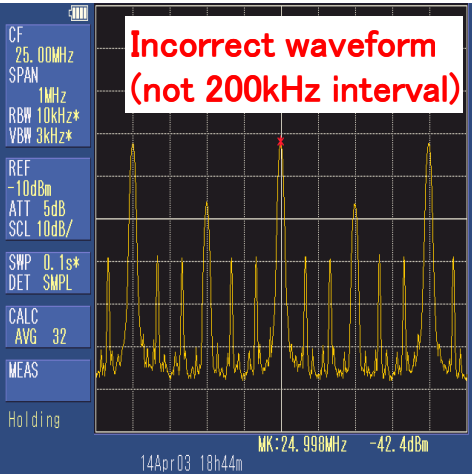
These are the results of measuring the 200kHz interval signal of comb generator with or without a coaxial attenuator.

Without a coaxial attenuator

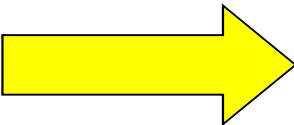


Erroneous measurement due to the higher power signal of low frequency.

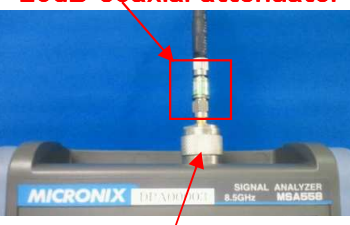
Incorrect waveform (not 200kHz interval)



Coaxial attenuator addition




20dB coaxial attenuator



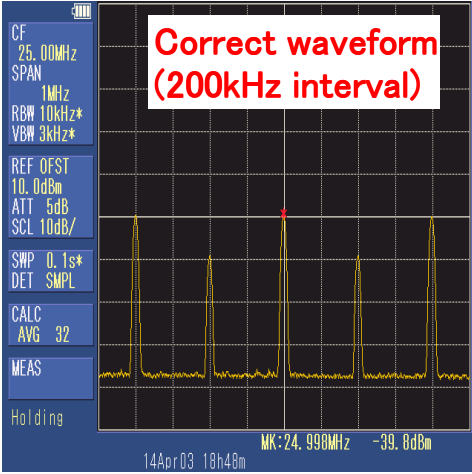
Input connector of spectrum analyzer

With a coaxial attenuator (20dB)



Correct measurement

Correct waveform (200kHz interval)



※The same result is obtained with a high-pass filter instead of a coaxial attenuator.

[~*System constitution & Price*~]

- Signal analyzer (MSA500 series), Spectrum analyzer (MSA300 series, MSA400 series) × 1
- Coaxial attenuator, Filter × 1

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