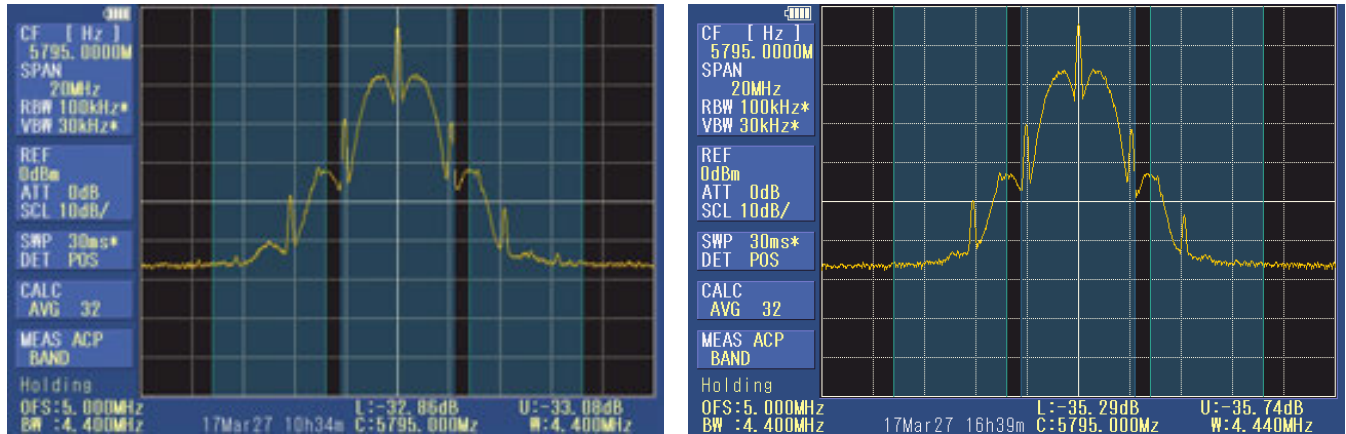


Distortion of RF transmission amplifier and adjacent channel characteristics

In high-frequency transmission amplifier, if the distortion is large, the waveform is distorted and unnecessary radio waves that leak into adjacent channels become bigger. In order to know the effect of improving the amplifier characteristics, it is necessary to check the influence on the adjacent channel numerically. Using the MSA 500 series, you can easily check it.

The power of the 5.8 GHz band transmitting antenna end is shown below.



In the ACP (Adjacent Channel Leakage Power) measurement mode, check the amount of leakage power to the adjacent channel. In the left figure, the ACP ratios between ± 2.2 MHz at -5 MHz and $+5$ MHz from the carrier frequency are -32.86 dBc and -33.08 dBc respectively, but in the right figure with improved amplifier characteristics, they are -35.29 dBc and -35.74 dBc. It's judged that the adjacent channel characteristics are improved.



In addition to the adjacent channel leakage power, the signal analyzer MSA500 series has various measurement modes such as channel power measurement, occupied frequency bandwidth measurement, electric field strength measurement, magnetic field strength measurement and noise measurement. The necessary function can be easily set and used.