

Electric field strength measurement by reference level offset function

◇Electric field strength can be read directly by converting the antenna factor with the reference level offset function of MSA series.

[~*Application*~]

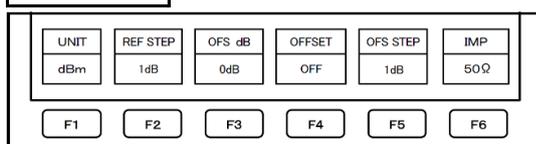
When you connect an antenna to a spectrum analyzer / signal analyzer to measure the electric field strength, the electric field strength can be converted by simply adding the antenna factor to the measured voltage in notation of decibels (dB).

This note shows the method of measuring electric field strength with the MSA500/400 series using the reference level offset function (measurement with an input impedance of 50 Ω).

[~*Solution*~]

Use the reference level offset function of the MSA500/400 series.

(1) REFER Switch to the following function menu.



(2) F1 (UNIT) Select "dB μV" (the unit of electric field strength is dB μV / m).

(3) F4 (OFFSET) Select "ON" to activate the reference level offset.

(4) F5 (OFS STEP) The reference level offset step amount can be switched with "0.1 dB", "1 dB", "10 dB".

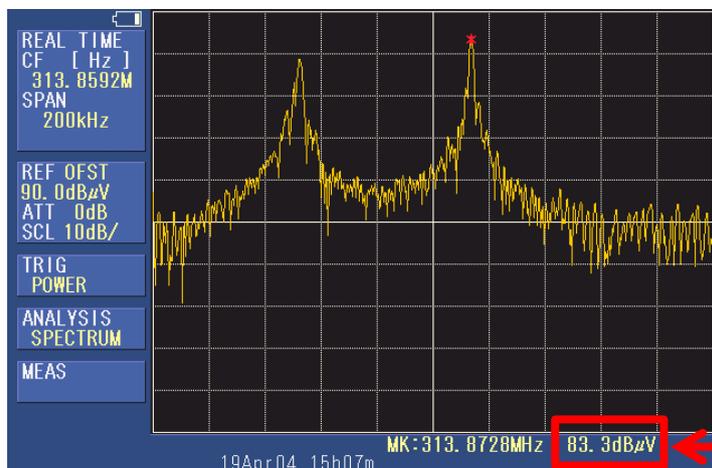
(5) F3 (OFS dB) Set the reference level offset value with the rotary encoder.

For example, when the antenna factor is "22.0 dB / m", the reference level offset value is "22.0 dB".

The function menu after setting is as follows.



(6) MKR The electric field strength can be read directly by displaying the marker.



Electric field strength 83.3dB μV/m

※ The antenna factor depends on frequency, so use the antenna factor that corresponds to the frequency of the marker.

[~*System constitution*~]

- Handheld signal analyzer MSA500 series
- Handheld spectrum analyzer MSA400 series

※MICRONIX Corporation reserves the right to make changes in design, specification and other information without prior notice.

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