UR0GT Wideband Antenna for 27- 30- MHz

The publication is devoted to the memory UR0GT.

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It is simple vertical antenna that has low SWR at the 27- 30- MHz. The antenna has 50- Ohm input impedance. Center frequency with low SWR may be adjusted with help of variable capacitor in 20- 30- pF. Distance between the coupling loop and the radiator may be in 2- 3- cm, it is not critical.

As well it is not critical the diameter of the vertical antenna and diameter of the wire in coupling loop because the variable capacitor dopes the main match the coaxial cable with the antenna. At the feeding end of the coaxial cable should be installed several ferrite ring – it is needs to isolate the coupling loop from the influence of the coaxial cable.

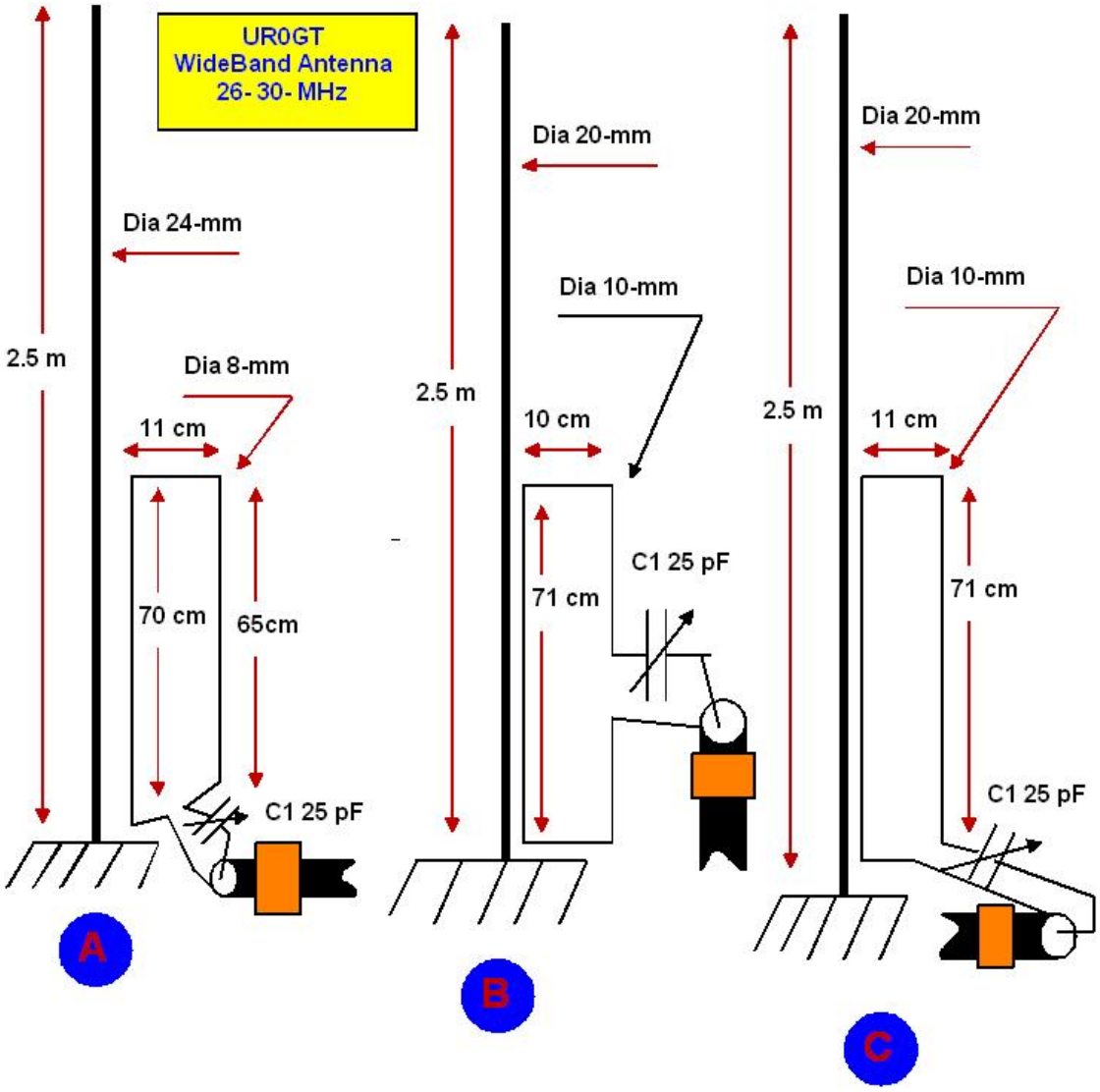


Figure 1 Design of UR0GT Wideband Antenna for 27- 30- MHz

As well it is not critical the diameter of the vertical antenna and diameter of the wire in coupling loop because the variable capacitor dopes the main match the coaxial cable with the antenna. At the feeding end of the coaxial cable should be installed several ferrite ring – it is needs to isolate the coupling loop from the influence of the coaxial cable.

Design of the Wideband Antenna for 27- 30- MHz is shown in **Figure 1**. There are three variant of the antenna, A- feeding to the center bottom of the coupling loop, B- feeding to the center side of the coupling loop and C- feeding to the corner of the coupling loop. All of the variant may be suitable for certain installation of the antenna.

Figure 2 shows Z of the UR0GT Wideband Antenna for 27- 30- MHz with feeding to the center bottom of the coupling loop. **Figure 3** shows SWR of the UR0GT Wideband Antenna for 27- 30- MHz with feeding to the center bottom of the coupling loop.

Figure 4 shows DD of the UR0GT Wideband Antenna for 27- 30- MHz with feeding to the center bottom of the coupling loop. **Figure 5** shows SWR of the UR0GT Wideband Antenna for 27- 30- MHz with feeding to the center side of the coupling loop. **Figure 6** shows SWR of the UR0GT Wideband Antenna for 27- 30- MHz with feeding to the corner of the coupling loop. DD of all of the three antennas almost the same.

Vertical radiator needs good grounding. It may be several counterpoises of different length or metal plate under the antenna. The antenna may be scale for other band, for example for 50- MHz.

73! De UR0GT

The MMANA filel of the UR0GT Wideband Antenna for 27- 30- MHz may be loaded: http: // www.antentop.org/024/UR0GT_wb_27-30_024.htm

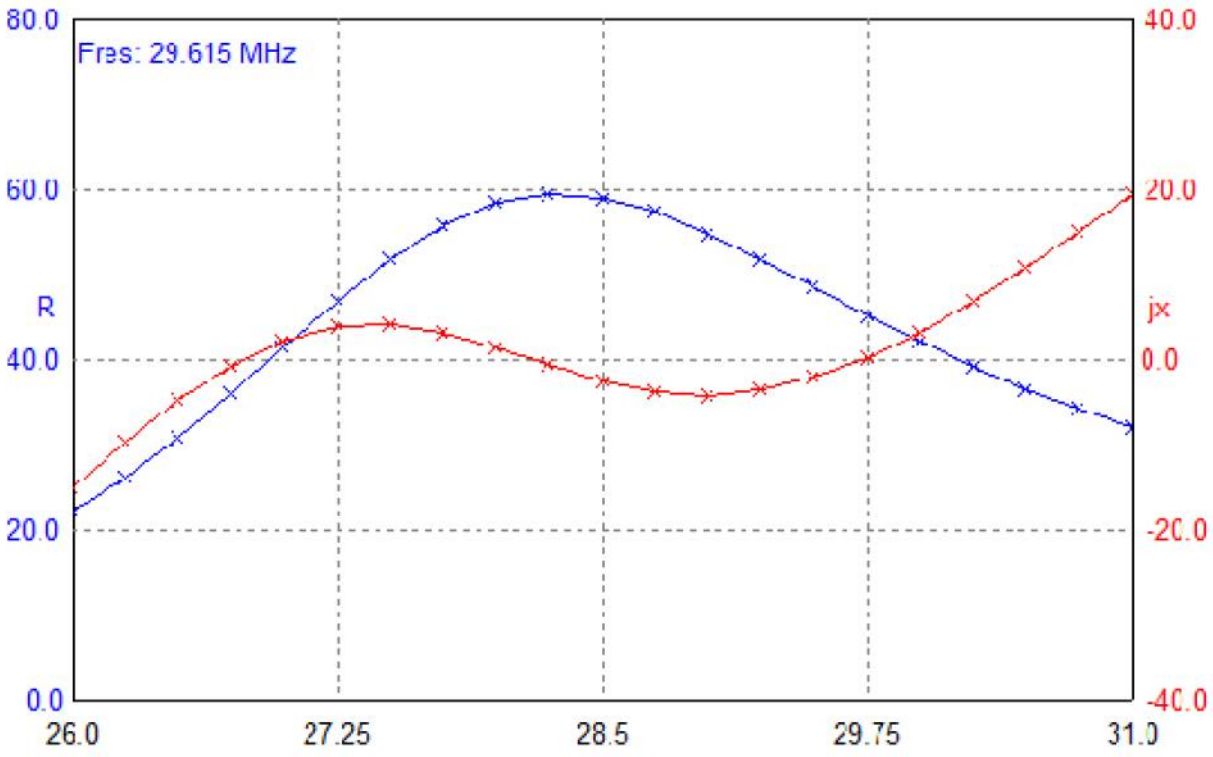


Figure 2

Z of UR0GT Wideband Antenna for 27- 30- MHz with Feeding to the Center Bottom of the Coupling Loop

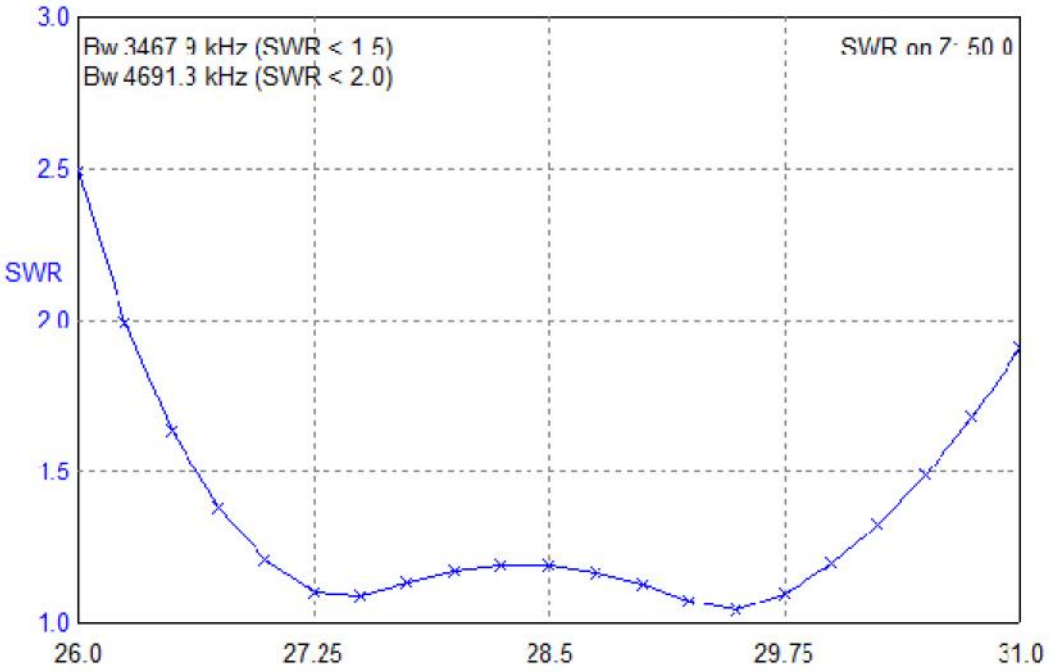
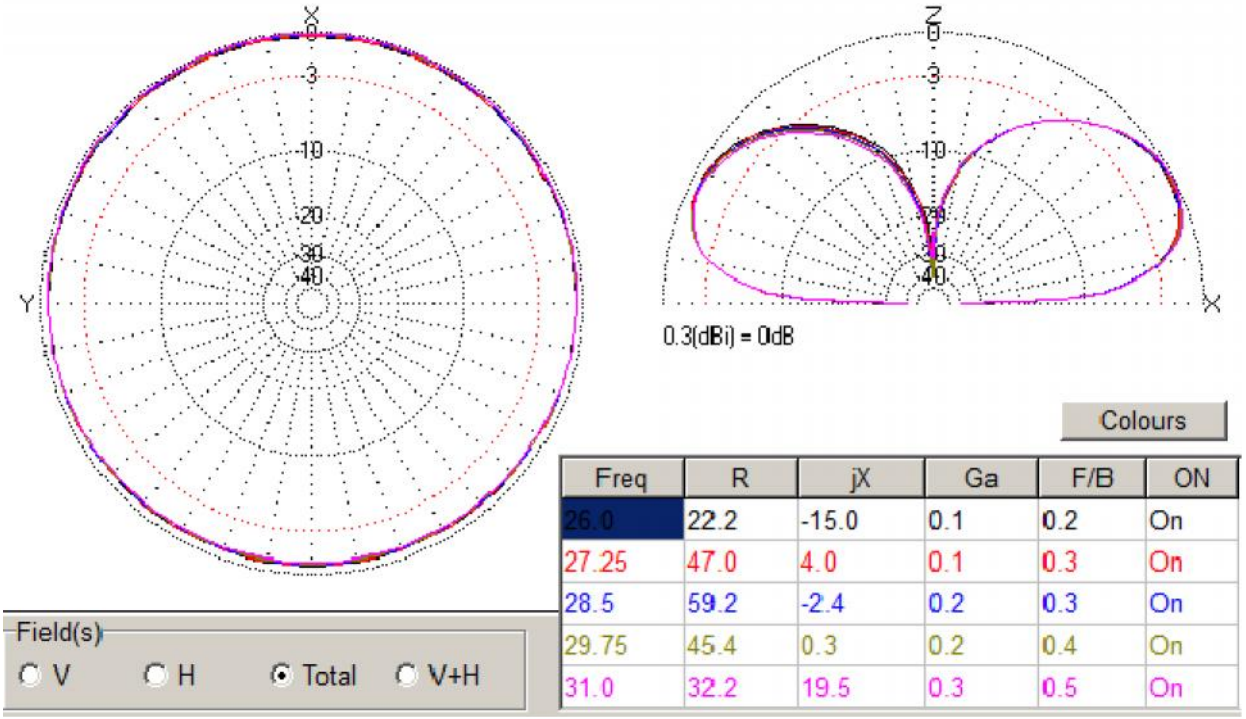


Figure 3

SWR of the UR0GT Wideband Antenna for 27- 30- MHz with Feeding to the Center Bottom of the Coupling Loop



Freq	R	jX	Ga	F/B	ON
26.0	22.2	-15.0	0.1	0.2	On
27.25	47.0	4.0	0.1	0.3	On
28.5	59.2	-2.4	0.2	0.3	On
29.75	45.4	0.3	0.2	0.4	On
31.0	32.2	19.5	0.3	0.5	On

Figure 4

DD of the UR0GT Wideband Antenna for 27- 30- MHz with Feeding to the Center Bottom of the Coupling Loop

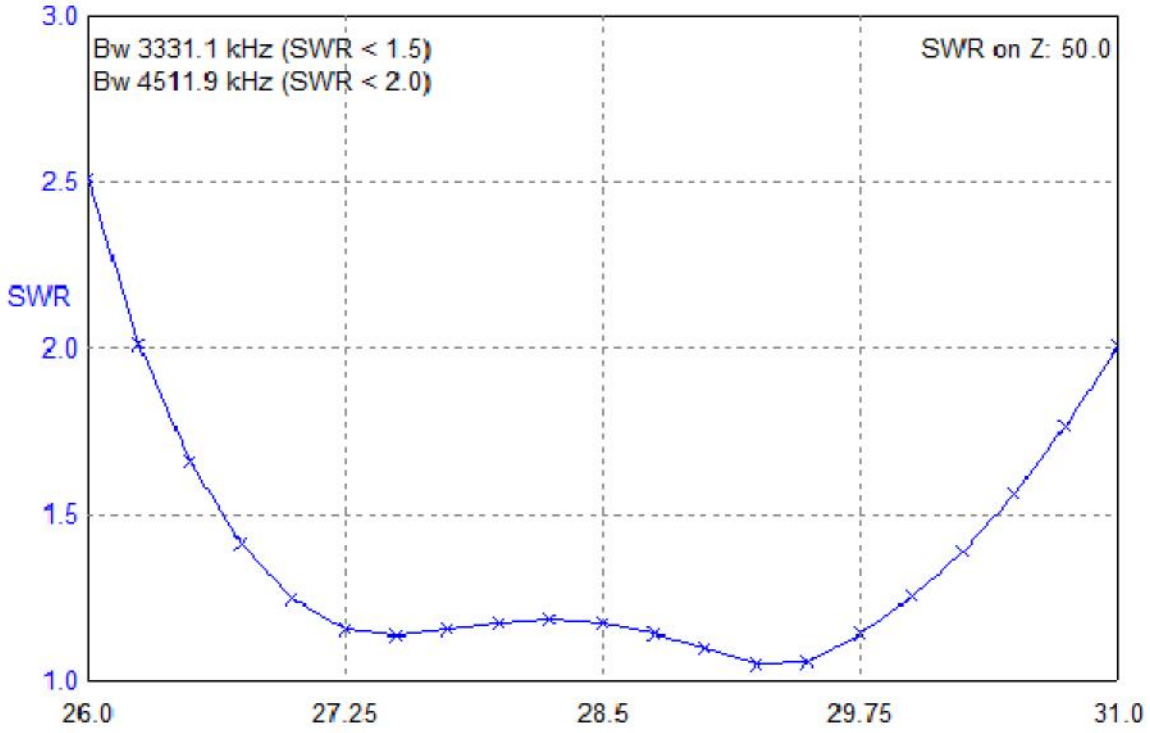


Figure 5

SWR of the UR0GT Wideband Antenna for 27- 30- MHz with Feeding to the Center Side of the Coupling Loop

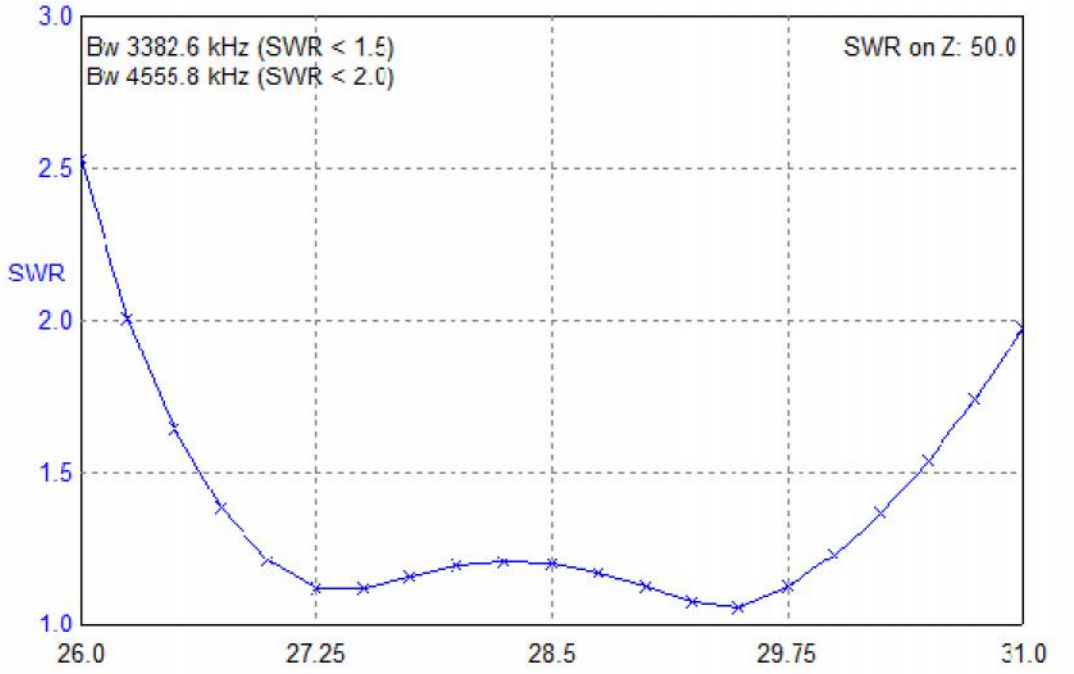


Figure 6

SWR of the UR0GT Wideband Antenna for 27- 30- MHz with Feeding to the Corner of the Coupling Loop.