

TX station: EXAMPLE

Site name: TEST22

### General data of antenna system

|   |                |
|---|----------------|
| TX station  | EXAMPLE        |
| Site name   | TEST22         |
| Site longitude (+ddd°pp'ss")                      |                |
| Site latitude (+dd°pp'ss")                        |                |
| Ground level a.s.l. (m)                           | 100            |
| Antenna system height a.g.l. (m)                  | 50.0           |
| Transmitter power (Watt)                          | 1000.0         |
| Carrier wave frequency (MHz)                      | 98.00          |
| Antenna system central frequency (MHz)            | 98.00          |
| Filename of antenna base diagrams type 1          | LABEL_AKK2.ANT |
| Filename of antenna base diagrams type 2          |                |
| Antenna system polarization (H, V, C)             | V              |
| Transmitting cable attenuation (dB)               | 0.0            |
| Additional attenuations (dB)                      | 0.0            |
| Base diagrams sectors (A = all, F = front)        | A              |
| Velocity factor of cables to antennas (0÷1)       | 0.88           |
| Coordinate system (C = cartesian, P = polar)      | P              |
| Mast side/diameter (cm):                          | 250.0          |
| Mast cross section (Triangular, Square, Circular) | S              |
| Mast rotation w.r.t. North (°)                    | 0              |
| Project picture filename (*.bmp)                  |                |

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### Information about antennas used in the project

#### *Antenna of type 1*

|                          |                     |
|--------------------------|---------------------|
| Manufacturer             | LABEL ITALY         |
| Antenna model            | AKK/2 - PANEL FM WB |
| Band start (MHz)         | 87.5                |
| Band stop (MHz)          | 108                 |
| Diagrams frequency (MHz) | 98                  |
| Polariz. (H, V, C)       | V                   |
| Vertical dist. (cm)      | 280                 |
| Height (cm)              | 170                 |
| Width (cm)               | 250                 |
| Thickness (cm)           | 80                  |
| Weight (Kg)              | 45                  |
| Maximum power (KW)       | 5                   |
| Gain (dBd)               | 8.56                |
| North E.C. (cm)          | 0                   |
| East E.C. (cm)           | 0                   |
| Return loss (dB)         | -20                 |
| R.C. phase (°)           | 0                   |

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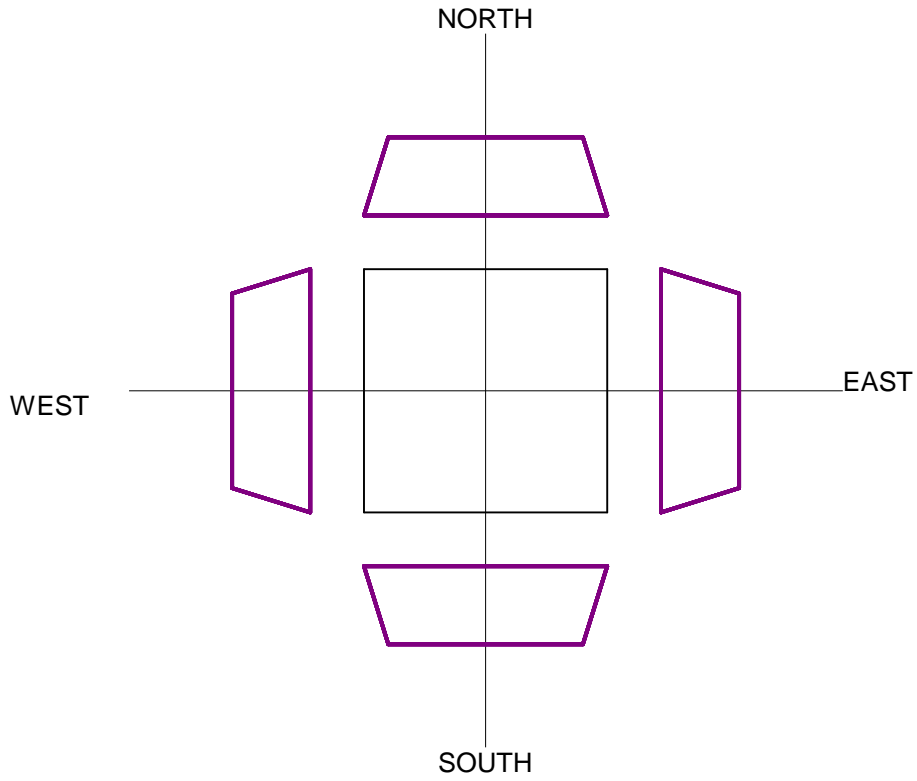
**Geometr. and electrical data of antenna system**

|    | <i>Power</i><br>(%) | <i>Tilt</i><br>(°) | <i>Az.</i><br>(°N) | <i>Phase</i><br>(°) | <i>V dist.</i><br>(m) | <i>Scr-D</i><br>(cm) | <i>Scr-Az</i><br>(°N) | <i>Rot.</i><br>(1÷4) | <i>Type</i><br>(1÷2) | <i>L cables</i><br>(cm) | <i>Car. phase</i><br>(°) |
|----|---------------------|--------------------|--------------------|---------------------|-----------------------|----------------------|-----------------------|----------------------|----------------------|-------------------------|--------------------------|
| 1  | 3.125               | 0                  | 0                  | 0 + 0               | 9.80                  | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 2  | 3.125               | 0                  | 0                  | 0 + 0               | 7.00                  | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 3  | 3.125               | 0                  | 0                  | 0 + 0               | 4.20                  | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 4  | 3.125               | 0                  | 0                  | 0 + 0               | 1.40                  | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 5  | 3.125               | 0                  | 0                  | 0 + 0               | -1.40                 | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 6  | 3.125               | 0                  | 0                  | 0 + 0               | -4.20                 | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 7  | 3.125               | 0                  | 0                  | 0 + 0               | -7.00                 | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 8  | 3.125               | 0                  | 0                  | 0 + 0               | -9.80                 | 180.0                | 0.0                   | 1                    | 1                    | 0.0                     | 0.0                      |
| 9  | 3.125               | 0                  | 90                 | 0 + 0               | 9.80                  | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 10 | 3.125               | 0                  | 90                 | 0 + 0               | 7.00                  | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 11 | 3.125               | 0                  | 90                 | 0 + 0               | 4.20                  | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 12 | 3.125               | 0                  | 90                 | 0 + 0               | 1.40                  | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 13 | 3.125               | 0                  | 90                 | 0 + 0               | -1.40                 | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 14 | 3.125               | 0                  | 90                 | 0 + 0               | -4.20                 | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 15 | 3.125               | 0                  | 90                 | 0 + 0               | -7.00                 | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 16 | 3.125               | 0                  | 90                 | 0 + 0               | -9.80                 | 180.0                | 90.0                  | 1                    | 1                    | 0.0                     | 0.0                      |
| 17 | 3.125               | 0                  | 180                | 0 + 0               | 9.80                  | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 18 | 3.125               | 0                  | 180                | 0 + 0               | 7.00                  | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 19 | 3.125               | 0                  | 180                | 0 + 0               | 4.20                  | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 20 | 3.125               | 0                  | 180                | 0 + 0               | 1.40                  | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 21 | 3.125               | 0                  | 180                | 0 + 0               | -1.40                 | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 22 | 3.125               | 0                  | 180                | 0 + 0               | -4.20                 | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 23 | 3.125               | 0                  | 180                | 0 + 0               | -7.00                 | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 24 | 3.125               | 0                  | 180                | 0 + 0               | -9.80                 | 180.0                | 180.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 25 | 3.125               | 0                  | 270                | 0 + 0               | 9.80                  | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 26 | 3.125               | 0                  | 270                | 0 + 0               | 7.00                  | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 27 | 3.125               | 0                  | 270                | 0 + 0               | 4.20                  | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 28 | 3.125               | 0                  | 270                | 0 + 0               | 1.40                  | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 29 | 3.125               | 0                  | 270                | 0 + 0               | -1.40                 | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 30 | 3.125               | 0                  | 270                | 0 + 0               | -4.20                 | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 31 | 3.125               | 0                  | 270                | 0 + 0               | -7.00                 | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |
| 32 | 3.125               | 0                  | 270                | 0 + 0               | -9.80                 | 180.0                | 270.0                 | 1                    | 1                    | 0.0                     | 0.0                      |

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### Plan of antenna system



### Side of antenna system

| Az. 0° | Az. 90° | Az. 180° | Az. 270° |
|--------|---------|----------|----------|
| 1      | 9       | 17       | 25       |
| 2      | 10      | 18       | 26       |
| 3      | 11      | 19       | 27       |
| 4      | 12      | 20       | 28       |
| 5      | 13      | 21       | 29       |
| 6      | 14      | 22       | 30       |
| 7      | 15      | 23       | 31       |
| 8      | 16      | 24       | 32       |

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**Antennas arrays data**

|                                   |         |         |         |         |
|-----------------------------------|---------|---------|---------|---------|
| A. Antennas array azimuth (°/N)   | 0       | 90      | 180     | 270     |
| B. Number of antennas             | 8       | 8       | 8       | 8       |
| C. Nominal power supply (W)       | 250.00  | 250.00  | 250.00  | 250.00  |
| D. Losses (addit. + cables) (dB)  | 0.0     | 0.0     | 0.0     | 0.0     |
| E. Effective power supply (W)     | 250.00  | 250.00  | 250.00  | 250.00  |
| F. Theor. maximum gain (dBd)      | 17.59   | 17.59   | 17.59   | 17.59   |
| G. Distribution losses (dB)       | 0.00    | 0.00    | 0.00    | 0.00    |
| H. Nominal max gain [F - G] (dBd) | 17.59   | 17.59   | 17.59   | 17.59   |
| I. Compensation losses (dB)       | 0.00    | 0.00    | 0.00    | 0.00    |
| J. Effec. max gain [H - I] (dBd)  | 17.59   | 17.59   | 17.59   | 17.59   |
| K. Effec. max gain (times)        | 57.42   | 57.42   | 57.42   | 57.42   |
| L. Effec. max power [E * K] (KW)  | 14.3559 | 14.3559 | 14.3559 | 14.3559 |
| M. Max power depr. angle (°)      | 0.0     | 0.0     | 0.0     | 0.0     |

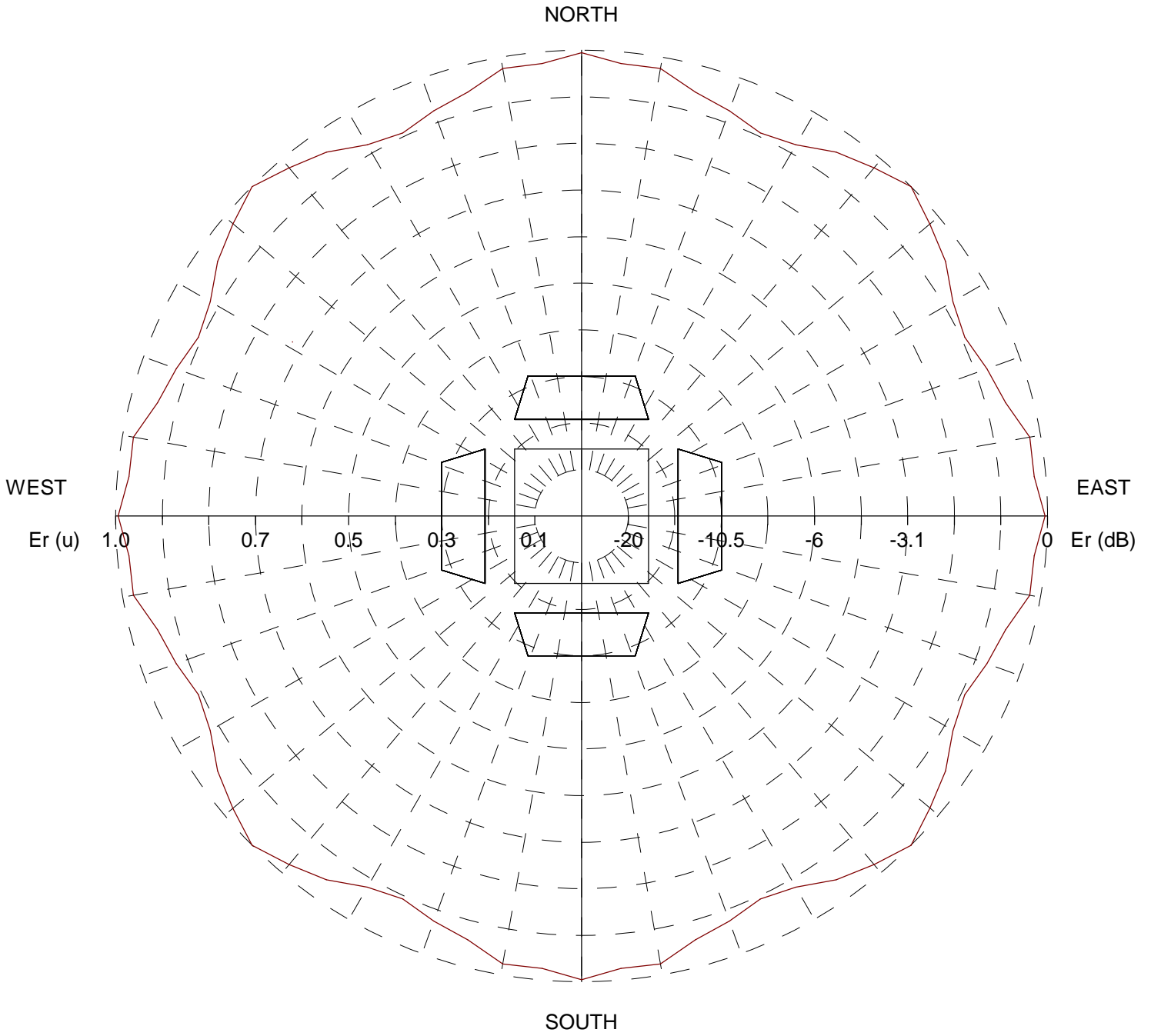
**Diagram in dBK calculated at horizon**

| Az. (°/N) | dBK  | Az. (°/N) | dBK  | Az. (°/N) | dBK  | Az. (°/N) | dBK  |
|-----------|------|-----------|------|-----------|------|-----------|------|
| 0         | 10.4 | 90        | 10.4 | 180       | 10.4 | 270       | 10.4 |
| 10        | 10.2 | 100       | 10.2 | 190       | 10.2 | 280       | 10.2 |
| 20        | 9.8  | 110       | 9.8  | 200       | 9.8  | 290       | 9.8  |
| 30        | 9.7  | 120       | 9.7  | 210       | 9.7  | 300       | 9.7  |
| 40        | 10.2 | 130       | 10.2 | 220       | 10.2 | 310       | 10.2 |
| 50        | 10.2 | 140       | 10.2 | 230       | 10.2 | 320       | 10.2 |
| 60        | 9.7  | 150       | 9.7  | 240       | 9.7  | 330       | 9.7  |
| 70        | 9.8  | 160       | 9.8  | 250       | 9.8  | 340       | 9.8  |
| 80        | 10.2 | 170       | 10.2 | 260       | 10.2 | 350       | 10.2 |

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### Horizontal diagram



— 0.0° depres. (Total antenna), Gain (dBd): 10.5 ERP T.max (KW): 11.096 ERP E.max (KW): 11.096

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### Vertical diagram

