



FZ-Fix, 22.11.2006

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# Microwave Antennas

## Demand on technical specifications

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- a) The technical data of a microwave antenna shall meet minimum the requirements as laid out in the corresponding "Radio Interface Regulation" (RIR0302-....).
- b) Basis for the assignment of an operating frequency are the interference power calculations performed by OFCOM.
- c) These interference power calculations are based on technical data (typical values) of real microwave systems and microwave antennas according ECC/REC/(01)05. These technical data and characteristics are already stored in OFCOM's data base at the time of the interference power calculation.
- d) Data necessary for an antenna to get adopted into the OFCOM data base:
  - d.1) Radiation Pattern Envelope (RPE)  
in electronic form according NSMA Rec. WG16.99.050  
(Antenna Systems – standard format for digitized antenna patterns,  
[http://nsma.org/wp-content/uploads/2016/05/wg16\\_99\\_050.pdf](http://nsma.org/wp-content/uploads/2016/05/wg16_99_050.pdf))  
as well as ETSI EN 301126-3-1,
    - down main lobe value in [dB] within angle sector  $-180^\circ \dots 0^\circ \dots +180^\circ$ ,
    - for the polarization combinations H/H, H/V, V/V and V/H,
    - release date of the issue (not older than 5 years),
    - revision notes
  - d.2) Technical Data Sheet which should contain minimum the following information:
    - frequency band,
    - gain in [dBi] of main direction of the band at low-end, mid-band and high-end,
    - front-to-back ratio [dB],
    - XPD [dB] of dual polarized antennas (preferred XPD  $\geq 32$  dB),
    - dimensions,
    - release date of the issue,
    - revision notes (ideally the same as for d.1)These technical data have to match the information given in the RPE data.
- e) OEM-Data  
Are two or more antenna manufacturers foreseen for the same antenna type resulting in
  - collective name / type (deviating from manufacturers name / type) and
  - collective characteristic of the specific RPE's (according d.1), respectively data sheets (according d.2),for further processing of these data the following is preferred:
  - e.1) Translation list of the OEM name / type to manufacturers name / type
  - e.2) Technical information for each antenna manufacturer (as d.1 and d.2)

- e.3) Preferably shall the antenna type of the main supplier be used by the operator for the Request for Frequency Allocation (part of Network Description which is the Technical Appendix of the concerning Licence). If during the realisation phase it makes it necessary to change the product to another, secondary antenna supplier, this fact has to be reported as mutation to OFCOM. OFCOM will eventually repeat the interference power calculation for both antenna types at the time of the mutation (before / after mutation), but minimum will adapt the Network Description accordingly.
  
- f) Modification of Antenna (data change or end-of-life)  
It is in the interest of the operator, respectively its supplier to inform OFCOM in time