

## Annex E (informative): Application form for testing

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The form contained in this annex may be used by the supplier to comply with the requirement contained in clause 5.3.1 to provide the necessary information about the equipment to the test laboratory prior to the testing. It contains product information as well as other information which might be required to define which configurations are to be tested, which tests are to be performed as well the test conditions.

This application form should form an integral part of the test report.

### E.1 Information as required by EN 300 328 V1.8.1, clause 5.3.1

In accordance with EN 300 328, clause 5.3.1, the following information is provided by the supplier.

**a) The type of modulation used by the equipment:**

- FHSS  
 other forms of modulation

**b) In case of FHSS modulation:**

- In case of non-Adaptive Frequency Hopping equipment:  
     The number of Hopping Frequencies: .....
- In case of Adaptive Frequency Hopping Equipment:  
     The maximum number of Hopping Frequencies: .....  
     The minimum number of Hopping Frequencies: .....
- The Dwell Time: .....
- The Minimum Channel Occupation Time: .....

**c) Adaptive / non-adaptive equipment:**

- non-adaptive Equipment  
 adaptive Equipment without the possibility to switch to a non-adaptive mode  
 adaptive Equipment which can also operate in a non-adaptive mode

**d) In case of adaptive equipment:**

The Channel Occupancy Time implemented by the equipment: ..... ms

- The equipment has implemented an LBT based DAA mechanism
- In case of equipment using modulation different from FHSS:
    - The equipment is Frame Based equipment
    - The equipment is Load Based equipment

The equipment can switch dynamically between Frame Based and Load Based equipment

The CCA time implemented by the equipment: .....  $\mu$ s

The value q as referred to in clause 4.3.2.5.2.2.2 .....

The equipment has implemented an non-LBT based DAA mechanism

The equipment can operate in more than one adaptive mode

**e) In case of non-adaptive Equipment:**

The maximum RF Output Power (e.i.r.p.): ...<sup>4</sup>..... dBm

The maximum (corresponding) Duty Cycle: ....<sup>10</sup>.. %

Equipment with dynamic behaviour, that behaviour is described here. (e.g. the different combinations of duty cycle and corresponding power levels to be declared):

.....  
 .....  
 .....

**f) The worst case operational mode for each of the following tests:**

- RF Output Power  
     <sup>4</sup> dBm.....
- Power Spectral Density  
     Not applicable.....
- Duty cycle, Tx-Sequence, Tx-gap  
     Not applicable.....
- Dwell time, Minimum Frequency Occupation & Hopping Sequence (only for FHSS equipment)  
     Not applicable.....
- Hopping Frequency Separation (only for FHSS equipment)  
     Not applicable.....
- Medium Utilisation  
     Not applicable.....
- Adaptivity & Receiver Blocking  
     Not applicable.....
- Occupied Channel Bandwidth  
     1 MHz.....
- Transmitter unwanted emissions in the OOB domain  
     < -30 dBm,.....
- Transmitter unwanted emissions in the spurious domain  
     < -30dBm.....

- Receiver spurious emissions  
 $< -47 \text{ dBm}$   
 .....

**g) The different transmit operating modes (tick all that apply):**

- Operating mode 1: Single Antenna Equipment
  - Equipment with only 1 antenna
  - Equipment with 2 diversity antennas but only 1 antenna active at any moment in time
  - Smart Antenna Systems with 2 or more antennas, but operating in a (legacy) mode where only 1 antenna is used. (e.g. IEEE 802.11™ [i.3] legacy mode in smart antenna systems)
- Operating mode 2: Smart Antenna Systems - Multiple Antennas without beam forming
  - Single spatial stream / Standard throughput / (e.g. IEEE 802.11™ [i.3] legacy mode)
  - High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 1
  - High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 2

NOTE: Add more lines if more channel bandwidths are supported.

- Operating mode 3: Smart Antenna Systems - Multiple Antennas with beam forming
  - Single spatial stream / Standard throughput (e.g. IEEE 802.11™ [i.3] legacy mode)
  - High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 1
  - High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 2

NOTE: Add more lines if more channel bandwidths are supported.

**h) In case of Smart Antenna Systems:**

- The number of Receive chains: .....
- The number of Transmit chains: .....
  - symmetrical power distribution
  - asymmetrical power distribution

In case of beam forming, the maximum beam forming gain: .....

NOTE: Beam forming gain does not include the basic gain of a single antenna.

**i) Operating Frequency Range(s) of the equipment:**

- Operating Frequency Range 1: ..~~2402~~ MHz to ~~2480~~ MHz
- Operating Frequency Range 2: ..... MHz to ..... MHz

NOTE: Add more lines if more Frequency Ranges are supported.

**j) Occupied Channel Bandwidth(s):**

- Occupied Channel Bandwidth 1: .....<sup>1</sup> MHz
- Occupied Channel Bandwidth 2: ..... MHz

NOTE: Add more lines if more channel bandwidths are supported.

**k) Type of Equipment (stand-alone, combined, plug-in radio device, etc.):**

- Stand-alone

- Combined Equipment (Equipment where the radio part is fully integrated within another type of equipment)
- Plug-in radio device (Equipment intended for a variety of host systems)
- Other .....

**l) The extreme operating conditions that apply to the equipment:**

Operating temperature range: ..... °C to ..... °C

Operating voltage range: ..... V to ..... V  AC  DC

Details provided are for the:  stand-alone equipment

combined (or host) equipment

test jig

**m) The intended combination(s) of the radio equipment power settings and one or more antenna assemblies and their corresponding e.i.r.p levels:**

- Antenna Type:

Integral Antenna

Antenna Gain: ..... dBi

If applicable, additional beamforming gain (excluding basic antenna gain): ..... dB

Temporary RF connector provided

No temporary RF connector provided

Dedicated Antennas (equipment with antenna connector)

Single power level with corresponding antenna(s)

Multiple power settings and corresponding antenna(s)

Number of different Power Levels: .....

Power Level 1: ..... dBm

Power Level 2: ..... dBm

Power Level 3: ..... dBm

NOTE 1: Add more lines in case the equipment has more power levels.

NOTE 2: These power levels are conducted power levels (at antenna connector).

- For each of the Power Levels, provide the intended antenna assemblies, their corresponding gains (G) and the resulting e.i.r.p. levels also taking into account the beamforming gain (Y) if applicable

**Power Level 1:** ..... dBm

Number of antenna assemblies provided for this power level: .....

Assembly #	Gain (dBi)	e.i.r.p. (dBm)	Part number or model name
1			
2			
3			
4			

NOTE: Add more rows in case more antenna assemblies are supported for this power level.

**Power Level 2:** ..... dBm

Number of antenna assemblies provided for this power level: .....

Assembly #	Gain (dBi)	e.i.r.p. (dBm)	Part number or model name
1			
2			
3			
4			

NOTE: Add more rows in case more antenna assemblies are supported for this power level.

**Power Level 3:** ..... dBm

Number of antenna assemblies provided for this power level: .....

Assembly #	Gain (dBi)	e.i.r.p. (dBm)	Part number or model name
1			
2			
3			
4			

NOTE: Add more rows in case more antenna assemblies are supported for this power level.

**n) The nominal voltages of the stand-alone radio equipment or the nominal voltages of the combined (host) equipment or test jig in case of plug-in devices:**

Details provided are for the:  stand-alone equipment

combined (or host) equipment

test jig

Supply Voltage  AC mains State AC voltage ..... V

DC State DC voltage ..... V

In case of DC, indicate the type of power source

Internal Power Supply

External Power Supply or AC/DC adapter

Battery

Other: .....

o) Describe the test modes available which can facilitate testing:

.....  
 .....  
 .....

p) The equipment type (e.g. Bluetooth<sup>®</sup>, IEEE 802.11<sup>™</sup> [i.3], proprietary, etc.):

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## E.2 Combination for testing (see clause 5.1.3.3 of EN 300 328 V1.8.1)

From all combinations of conducted power settings and intended antenna assembly(ies) specified in clause 3.1 m), specify the combination resulting in the highest e.i.r.p. for the radio equipment.

Unless otherwise specified in EN 300 328, this power setting is to be used for testing against the requirements of EN 300 328. In case there is more than one such conducted power setting resulting in the same (highest) e.i.r.p. level, the highest power setting is to be used for testing. See also EN 300 328, clause 5.1.3.3.

Highest overall e.i.r.p. value:	.....	dBm	
Corresponding Antenna assembly gain:	.....	dBi	Antenna Assembly #: .....
Corresponding conducted power setting:	.....	dBm	Listed as Power Setting #: .....
(also the power level to be used for testing)			

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## E.3 Additional information provided by the applicant

### E.3.1 Modulation:

ITU Class(es) of emission: ...G1D....

Can the transmitter operate unmodulated?  yes  no

### E.3.2 Duty Cycle

The transmitter is intended for:  Continuous duty  
 Intermittent duty  
 Continuous operation possible for testing purposes

### E.3.3 About the UUT

- The equipment submitted are representative production models
- If not, the equipment submitted are pre-production models ?
- If pre-production equipment are submitted, the final production equipment will be identical in all respects with the equipment tested
- If not, supply full details  
.....  
.....
- The equipment submitted is CE marked
- In addition to the CE mark, the Class-II identifier (Alert Sign) is affixed.

### E.3.4 Additional items and/or supporting equipment provided

- Spare batteries (e.g. for portable equipment)
- Battery charging device
- External Power Supply or AC/DC adapter
- Test Jig or interface box
- RF test fixture (for equipment with integrated antennas)
- Host System           Manufacturer: .....
- Model #: .....
- Model name: .....
- Combined equipment   Manufacturer: .....
- Model #: .....
- Model name: .....
- User Manual
- Technical documentation (Handbook and circuit diagrams)

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Annex F (informative):  
Void



## History

<b>Document history</b>		
Edition 1	November 1994	Publication as ETS 300 328
Edition 2	November 1996	Publication as ETS 300 328
Amendment 1	July 1997	Amendment 1 to 2 <sup>nd</sup> Edition of ETS 300 328
V1.2.2	July 2000	Publication as EN 300 328-1
V1.1.1	July 2000	Publication as EN 300 328-2
V1.3.1	December 2001	Publication as EN 300 328-1
V1.2.1	December 2001	Publication as EN 300 328-2
V1.4.1	April 2003	Publication
V1.5.1	August 2004	Publication
V1.6.1	November 2004	Publication
V1.7.1	October 2006	Publication
V1.8.0	July 2011	Public Enquiry PE 20111124: 2011-07-27 to 2011-11-24
V1.8.1	April 2012	Vote V 20120603: 2012-04-04 to 2012-06-04