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**INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA**

**NO. 1003 23 JULY 2019**

### THE INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

**NOTICE OF INTENTION TO AMEND ANNEXURE B OF THE RADIO FREQUENCY SPECTRUM REGULATIONS, 2015**

The Independent Communications Authority of South Africa ("the Authority"), in terms of section 4(1) and (4) and section 34(7) (a) and (b) and 34(8) of the Electronic Communications Act, 2005 (Act No 36 of 2005) read with section 4(3)(j) of the Independent Communications Authority of South Africa Act, 2000 (Act No 13 of 2000) (“ICASA Act”), hereby intends to amend Annexure B of the Radio Frequency Spectrum Regulations, 2015 published in Notice No. 279 under Government Gazette No. 38641 of 30 March 2015, to the extent indicated in the schedule.

Interested persons are hereby invited to submit written representations about the proposed Regulations to the Authority within thirty (30) working days from the date of the publication of this notice. Written submissions can be submitted by post or hand delivery or email to:

### Independent Communications Authority of South Africa

Bethuel Nkgadime

350 Witch-Hazel Avenue, Eco Point Office Park, Eco Park, **CENTURION**,

Gauteng

E-mail: BNkgadime@icasa.org.za, Tel: 012 568 3993

At the request of any person who submits written representations pursuant to this notice, the Authority will determine whether such representations or any portion thereof is confidential in terms of section 4D of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000). If the request for confidentiality is refused, the person making the request will be allowed to withdraw such representations or portion thereof.



### Dr Keabetswe Modimoeng ACTING CHAIRPERSON

**Date: 19/07/2019**

**SCHEDULE**

1. **Definitions**

In these Regulations “the Regulations” means the Radio Frequency Spectrum Regulations, 2015 as published under Government Notice No. 279 of 30 March 2015 (Government Gazette No. 38641), as amended in Notice No. 386 of 30 April 2015 (Government Gazette No. 38754), Notice No. 351 of 17 June 2016

(Government Gazette No. 40078) and Notice No. 781 of 22 November 2016 (Government Gazette No. 40436).

### Short Title and Commencement

These Regulations are called the Amended Radio Frequency Spectrum Amendment Regulations, 2019 and will come into force on the date of publication in the Government Gazette.

### Substitution of Annexure B of the Regulations (Apparatus exempt from Radio Frequency Spectrum Licenses)

The following annexure is hereby substituted for Annexure B of the Regulations:

# “Annexure B

**Apparatus exempt from radio frequency spectrum licences**

## The use or possession of the Radio Apparatus listed in Column B below, in accordance with all specifications listed in Columns, A, C, D, E and F of the Table below shall not require a radio frequency spectrum licence:

### Table of radio frequency spectrum licence Exemptions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 9 –59.75K | Inductive Devicesi | 72dBµA/m@ 10m. | EN 300330 |  | CEPT/ERC/REC 70-03 |
| 59.75 –60.25K | Inductive Devices, | 42dBµA/m@ 10m. | EN 300330 |  | CEPT/ERC/REC 70-03 |
| 60.25 –65.85K | Inductive Devices | 72dBµA/m@ 10m | EN300 330 |  | CEPT/ERC/REC 70-03 |
| 65.85 –67.35K | Inductive Devices | 42dBµA/m@ 10m | EN300 330 |  | CEPT/ERC/REC 70-03 |

|  |  |  |  |  |  |
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| **Column A****Frequen cy Bands K=kHz M=MHz G=GHz** | **Column B****Equipment Category** | **Column C****Maximu m Transmit Power, Field Strength or Sensitivit y Limits & Channel spacing** | **Column D****Relevan t Standar ds** | **Column E****Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)** | **Column F References** |
| 67.35 - 74.75K | Inductive Devices | 72dBµA/m@ 10m. | EN 300330 |  | CEPT/ERC/REC 70-03 |
| 74.75 –75.25K | Inductive Devices | 42dBµA/m@ 10m | EN300 330 |  | CEPT/ERC/REC 70-03 |
| 75.25 –77.25K | Inductive Devices | 72dBµA/m@ 10m. | EN300 330 |  | CEPT/ERC/REC 70-03 |
| 77.25 –77.75K | Inductive Devices | 42dBµA/m@ 10m | EN300 330 |  | CEPT/ERC/REC 70-03 |
| 77.75 –90K | Inductive Devices | 72dBµA/m@ 10m | EN300 330 |  | CEPT/ERC/REC 70-03 |
| 90 –119K | Inductive Devices | 42dBµA/m@ 10m. | EN 300330 |  | CEPT/ERC/REC 70-03 |
| 119 –128.6K | Inductive Devices | 66dBµA/m@ 10m. | EN 300330 |  | CEPT/ERC/REC 70-03 |
| 128.6 –129.6K | Inductive Devices | 42dBµA/m@ 10m | EN300 330 |  | CEPT/ERC/REC 70-03 |
| 128.6 –135K | Inductive Devices | 66dBµA/m@ 10m | EN300 330 |  | CEPT/ERC/REC 70-03 |
| 135-140K | Inductive Devices | 42dBμA/m@ 10m | EN 300330 |  | CEPT/ERC/REC 70-03 |
| 140-148.5K | Inductive Devices | 37.7dBμA/m@ 10m | EN 300330 |  | CEPT/ERC/REC 70-03 |
| 9 – 315K | ULP-AMIDevices | 30 dBμA/m at 10 m | EN 302 195 | Duty Cycle ≤10% | CEPT/ERC/REC 70-03 |
| 315 -600K | ULP-AIDs and Peripherals | -5 dBμA/m at 10 m | EN 302 536 | Duty Cycle ≤10% | CEPT/ERC/REC 70-03 |

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| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 400 - 600 | RFID only | -8 | EN | In case of | CEPT/ERC/REC 70-03 |
| kHz |  | dBμA/m | 300 330 | external |  |
|  |  | at 10 m |  | antennas only |  |
|  |  |  |  | loop coil |  |
|  |  |  |  | antennas may be |  |
|  |  |  |  | employed. |  |
|  |  |  |  | *max field* |  |
|  |  |  |  | *strength =* |  |
|  |  |  |  | *5dBμA/m at 10* |  |
|  |  |  |  | *m for systems* |  |
|  |  |  |  | *operating at* |  |
|  |  |  |  | *BW> 10 kHz* |  |
|  |  |  |  | *measured at* |  |
|  |  |  |  | *fc whilst keeping* |  |
|  |  |  |  | *the density limit* |  |
|  |  |  |  | *(-8dBμA/m in a* |  |
|  |  |  |  | *bandwidth of 10* |  |
|  |  |  |  | *kHz.)* |  |
|  |  |  |  | minimum |  |
|  |  |  |  | operating BW = |  |
|  |  |  |  | 30 kHz |  |
| 148.5-5000K | Inductive Devices | -15dBμA/m@10 m | EN 300330 | The total field strength is – 5 dBμA/m at 10 | CEPT/ERC/REC 70-03 |
|  |  |  |  | m for systems |  |
|  |  |  |  | operating at |  |
|  |  |  |  | bandwidths |  |
|  |  |  |  | larger than 10 |  |
|  |  |  |  | kHz |  |
| 5000K-30M | Inductive Devices | -20dBμA/m@ 10 m | EN 300330 | The total field strength is – 5 dBμA/m at 10 | CEPT/ERC/REC 70-03 |
|  |  |  |  | m for systems |  |
|  |  |  |  | operating at |  |
|  |  |  |  | bandwidths |  |
|  |  |  |  | larger than 10 |  |
|  |  |  |  | kHz |  |
| 3155 –3400K | Low Power Wireless Hearing Aid | 13.5dBµA/m@ 10m | EN 300330 | In case of external | NRFP18 |

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| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  |  |  | antennas only loop coil |  |
| 6.765- | Inductive | 42 | EN 300 | The |  |
| 6.795M | Devices | dBµA/m | 330 | transmission |
|  |  | @ 10m |  | mask and |
|  |  |  |  | antenna |
|  |  |  |  | requirements for |
|  |  |  |  | all combined |
|  |  |  |  | frequency |
|  |  |  |  | segments have |
|  |  |  |  | to provide at |
|  |  |  |  | least equivalent |
|  |  |  |  | performance to |
|  |  |  |  | the techniques |
|  |  |  |  | described in the |
|  |  |  |  | standard |
| 7400 –8800K | Inductive Devices | 9 dBµA/m@ 10m | EN 300330 |  |  |
| 10200 – | Inductive | 9 dBµA/m | EN 300 |  |  |
| 11000K | Devices | @ 10m | 330 |
| 13.553-13.567M | Non-Specific SRD | 42dBµA/m@ 10m | EN 300330 |  |  |
|  |  |  |  | The |  |
|  |  |  |  | transmission |
|  |  |  |  | mask and |
|  |  |  |  | antenna |
|  |  |  |  | requirements for |
| 13.553-13.567M | RFID (incl. NFC) and EAS applications only | 60dBµA/m@ 10m | EN 300330 | all combined frequency segments have to provide at least equivalent |
|  |  |  |  | performance to |
|  |  |  |  | the techniques |
|  |  |  |  | described in |
|  |  |  |  | harmonised |
|  |  |  |  | standards |

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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
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| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 26.957-27.283M | Inductive Devices | 42dBµA/m@ 10m | EN 300330 |  |  |
| 26.957- | Non-specific | 10 mW | EN 300 |  |  |
| 27.283M | SRDii | E.R.P. | 220 |
| 26.995M | Surface Model | 100 mW | EN 300 |  |  |
| ; 27.045M | Control | E.R.P. | 220 |
| ; |  |  |  |
| 27.095M |  |  |  |
| ; |  |  |  |
| 27,145M |  |  |  |
| ; |  |  |  |
| 27.195M |  |  |  |
|  |  | 100 mW |  |  |  |
| 35.00-35.25M | Aircraft Model Control | E.R.P.10 kHz channel | EN 300220 | CEPT/ERC/REC 70-03 |
|  |  | spacing |  |  |
| 36.65- | Wireless | 100 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 36.75M | Microphones. | E.R.P. | 422 |  |
| 40.65- | Wireless | 100 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 40.70M | Microphones. | E.R.P. | 422 |  |
| 40.665, | Surface Model | 100mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 40.675, | Control. | E.R.P. | 220 |  |
| 40.685, |  | 10 kHz |  |  |
| 40.695 |  | channel |  |  |
|  |  | spacing. |  |  |
| 40.66-40.7M | Non-specific SRD. | 10 mW E.R.P. | EN 300220 |  | CEPT/ERC/REC 70-03 |
| 46.61- | CT0 Cordless | 10 mW | The |  | Government Gazette |
| 46.97M49.67- | phones. | E.I.R.P. | Authorit y | 22443 of 4th July 2001 |
| 49.97M |  |  | TE-013 |  |
| 53-54M | Wireless Microphones. | 10 mW E.R.P. | EN 300422 | For ALD the limit power is 100 mW | CEPT/ERC/REC 70-03 |

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| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 54.4500 | Model Control | 5W E.R.P. | EN 300 |  | CEPT/ERC/REC 70-03 |
| M; 54.4625 M;54.4750 |  | 12.5 kHz channel spacing | 220 |  |
| M; |  |  |  |  |
| 54.4875 |  |  |  |  |
| M; |  |  |  |  |
| 54.500M |  |  |  |  |
| ; |  |  |  |  |
| 54.5125 |  |  |  |  |
| M; |  |  |  |  |
| 54.5250 |  |  |  |  |
| M; |  |  |  |  |
| 54.5375 |  |  |  |  |
| M; |  |  |  |  |
| 54.5500 |  |  |  |  |
| M |  |  |  |  |
| 141-142M | Remote Control Industrial Apparatus | 100 mW E.R.P. | EN 300220 |  |  |
| 148- | Wildlife | 25 mW | EN 300 | The use of this |  |
| 152M | telemetry | E.R.P. | 220 | band is |
|  | Tracking |  |  | restricted to National Game |
|  |  |  |  | Parks. |
| 169.4- | Meter Reading | 500 mW | EN 300 | < 10% duty | CEPT/ERC/REC 70-03 |
| 169.475M |  | E.R.P.50 kHz | 220 | cycle | ECC/DEC (05)02 |
|  |  | channel |  |  |  |
|  |  | spacing |  |  |  |
| 173.2125 | Non-specific | 10 mW | EN 300 |  |  |
| - | SRD – | E.R.P. | 220 |
| 173.2375M | telecommand only | 25 kHz channel |  |
|  |  | spacing |  |
| 173.2375 | Non-specific | 10 mW | EN 300 |  |  |
| - | SRD | E.R.P. | 220 |
| 173.2875M |  | 25 kHz channel |  |

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| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
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| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  | spacing. |  |  |  |
| 173.7 – | Wireless | 10 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 175.1M | Microphones | E.I.R.P. | 220 |  |
|  | and assistive |  |  |  |
|  | listening |  |  |  |
|  | devices. |  |  |  |
| 402- | Medical | 25 µW (- | EN 300 | No duty cycle |  |
| 405M | Implants. | 16 dBm) | 839 | restriction for |
|  |  | E.R.P. |  | devices with |
|  |  | 25 kHz |  | LBT, otherwise |
|  |  | channel |  |  |
|  |  | spacing |  |  |
| 402- | Doppler shift | 10 mW | EN 300 |  |  |
| 406M | movement | E.R.P. | 422 |
|  | detectors, |  |  |
|  | wireless |  |  |
|  | microphones, |  |  |
|  | garage door |  |  |
|  | openers and |  |  |
|  | motor car alarm |  |  |
|  | systems. |  |  |
| 433.04- | Non-specific | 1 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 434.79M | SRD Including | E.R.P. | 220 |  |
|  | RFID |  |  |  |
| 433.04 – | Non-specific | 10mW | EN 300 | Duty Cycle < | CEPT/ERC/REC 70-03 |
| 434.79M | SRD Including | E.R.P. | 220 | 10% |  |
|  | RFID |  |  |  |  |
| 433.04- | Non-specific | 10 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 434.79M | SRD | ERP | 220 |  |
|  |  | Up to 25 |  |  |
|  |  | kHz |  |  |
|  |  | channel |  |  |
|  |  | spacing |  |  |
| 433.04- | Non-specific | 100 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 434.79M | SRD | E.R.P. | 220 |  |
| 446- | Public Mobile | 500mW | EN 303 | For analogue | ECC/DEC(98)25 |
| 446.2 M | Radio (PMR). Analogue and | E.R.P. | 405 | and digital PMR 446 applications | replaced by ECC/DEC(15)05 |
|  | Digital |  |  |  |  |

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| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
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| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 464.5375 | Security | 1 W | EN 300 |  |  |
| M | systems | 25 kHz | 296 |
|  |  | channel |  |
|  |  | spacing |  |
| 464.500 | Non-specific | 100 mW | EN 300 |  |  |
| – | SRD |  | 220 |
| 464.5875 |  |  |  |
| M |  |  |  |
| 463.975 | Low Power | 500 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| M; | Radio | 12.5 kHz | 296 |  |
| 464.125 |  | channel |  |  |
| M; |  | spacing |  |  |
| 464.175 |  |  |  |  |
| M; |  |  |  |  |
| 464.325 |  |  |  |  |
| M; |  |  |  |  |
| 464.375 |  |  |  |  |
| M; |  |  |  |  |
| 863-865M | Wireless Audio Systems | 10 mW E.R.P. | EN 300357 |  | CEPT/ERC/REC 70-03CEPT/ERC/DEC (01)18 |
| 863-865M | Wireless Microphones | 10 mW E.R.P. | EN 300422 |  | CEPT/ERC/REC 70-03 |
| 865-868M | RFID | 100 mW E.R.P. | EN 302208-2 | Channels 1, 2and 3 | CEPT/ERC/REC 70-03 |
|  |  | 200 kHz Channel spacing |  | Listen Before Talk (LBT) is mandatory |  |
|  |  |  |  | FHSS or Other |  |
|  |  |  |  | Spread |  |
|  |  |  |  | Spectrum |  |
|  |  |  |  | Techniques |  |
|  |  |  |  | shall not be used |  |
| 865-868 | RFID | 2 W | EN 302 | Channels 4,7,10 | CEPT/ERC/REC 70-03 |
| M |  | E.R.P. | 208 | and 13 |  |
|  |  |  |  | Listen Before |  |
|  |  |  |  | Talk (LBT) is |  |
|  |  |  |  | mandatory |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
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| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  | 200 kHz |  | FHSS or Other |  |
| Channel | Spread |
| spacing | Spectrum |
|  | Techniques |
|  | shall not be used |
| 865-868 | RFID | 500 mW | EN 302 | Channels | CEPT/ERC/REC 70-03 |
| M |  | E.R.P. | 208 | 5,6,8,9,11,12,14 |  |
|  |  | 200 kHz |  | and 15 |  |
|  |  | Channel |  | Listen Before |  |
|  |  | spacing |  | Talk (LBT) is |  |
|  |  |  |  | mandatory |  |
|  |  |  |  | FHSS or Other |  |
|  |  |  |  | Spread |  |
|  |  |  |  | Spectrum |  |
|  |  |  |  | Techniques |  |
|  |  |  |  | shall not be used |  |
| 864.1- | CT2 cordless | 10 mW | EN 301 |  | CEPT/ERC/REC 70-03 |
| 868.1M | phones | E.I.R.P. | 797 |  |
|  |  |  | TE – |  |
|  |  |  | 012 |  |
| 868- | Non-specific | 25 mW | EN | Duty Cycle < | CEPT/ERC/REC 70-03 |
| 868.6M | SRD | E.R.P. | 300 220 | 1% or LBT | ERC/DEC/(01)04 |
| 868.6- | Alarms | 10 mW | EN 300 | Duty Cycle < | CEPT/ERC/REC 70-03 |
| 868.7M |  | E.R.P. | 220 | 1% or | CEPT/ERC/REC (01) |
|  |  | 25 kHz |  | LBT | 09 |
|  |  | channel |  |  |  |
|  |  | spacing |  |  |  |
| 868.7- | Non-specific | 25 mW | EN 300 | Duty Cycle < | CEPT/ERC/REC 70-03 |
| 869.2M | SRD | E.R.P. | 220 | 1% or LBT | ERC/DEC/(01)04 |
| 869.25- | Alarms | 10 mW | EN 300 | <0.1 % duty | CEPT/ERC/REC 70-03 |
| 869.3M |  | E.R.P. | 220 | cycle |  |
|  |  | 25 kHz |  |  |  |
|  |  | channel |  |  |  |
|  |  | spacing. |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 869.4- | Non-specific | 500mW | EN 300 | Narrow / wide- | CEPT/ERC/REC 70-03 |
| 869.65M | SRD Including RFID | E.R.P.25 kHz channel spacing. | 220 | band modulation. The whole stated frequency band may be used as | ERC/DEC/(01)04 |
|  |  |  |  | 1 channel for |  |
|  |  |  |  | high speed data |  |
|  |  |  |  | transmission. |  |
|  |  |  |  | <10% duty |  |
|  |  |  |  | cycle or |  |
|  |  |  |  | LBT & AFA |  |
| 869.65- | Alarms | 25 mW | EN 300 | 10 % duty cycle. | CEPT/ERC/REC 70-03 |
| 869.7M |  | E.R.P. | 220 |  |  |
|  |  | 25 kHz |  |  |  |
|  |  | channel |  |  |  |
|  |  | spacing. |  |  |  |
| 869.7-870 M | Non-specific SRD | 5 mW E.R.P. | EN 300220 |  | CEPT/ERC/REC 70-03 |
| 915.1- | Real Time | 25 mW | EN 300 |  |  |
| 915.2 M | Location | E.R.P. | 086 |
|  | Systems |  |  |
|  | (RTLS) |  |  |
| 915.2- | Passive Tags | 100 mW | EN 300 |  | ECC Report 200 |
| 915.4 M |  | E.R.P. | 208 |  |
|  |  | 10 x 20 |  |  |
|  |  | kHz wide |  |  |
|  |  | channels |  |  |
| 915.4- | Modulating | 4 W | EN 300 |  | ECC Report 200 |
| 919.2 M | RFID Systems | E.I.R.P. | 208 |  |
|  | (FHSS) | 200 kHz |  |  |
|  |  | channel |  |  |
|  |  | spacing |  |  |
| 919- | Tag Backscatter |  | EN 300 | DAA | ECC Report 200 |
| 919.2 M | Guard Band | 208 |  |  |
| 919.2-921 M | Non- Modulating | 4 W EIRP | EN 302208 | Spectral Masks; CW only @ 920 MHz (± 1.5 kHz | ECC Report 200 |

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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  | Backscatter RFID Systems |  |  | frequency stability) |  |
| 1880- | DECT cordless | 250 mW | EN 300 |  |  |
| 1900M | phones. | EIRP(peak). | 406The |
|  |  |  | Authorit |
|  |  | 1.728 | y |
|  |  | MHz |  |
|  |  | channel spacing. | TE 001 |
| 2400- | Non-specific | 10 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 2483.5M | SRD | EIRP | 440 |  |
| 2400- | Wideband | 100 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 2483.5M | Wireless | EIRP | 328 |  |
|  | Systems |  |  | ERC/DEC/(01)07 |
|  | WLAN |  |  |  |
|  | Wideband Data |  |  |  |
|  | Transmission |  |  |  |
|  | Applications |  |  |  |
|  | (WBDTS) |  |  |  |
|  | Model Control. |  |  |  |
| 2400- | FDDA | 25 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 2483.5M |  | EIRP | 440 |  |
|  |  | No duty |  |  |
|  |  | cycle. |  |  |
|  |  | No |  |  |
|  |  | channel |  |  |
|  |  | spacing. |  |  |
| 2400- | Low power | 100 mW | EN 300 |  | CEPT/ERC/REC 70-03 |
| 2483.5M | Video | EIRP | 440 |  |
|  | Surveillance |  |  |  |

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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 2446- | RFID | 500 mW | EN 300 | 4 W EIRP; | CEPT/ERC/REC 70-03 |
| 2454M |  |  | 440 | Duty Cycle ≤ |  |
|  |  |  |  | 15%; |  |
|  |  |  |  | FHSS |  |
|  |  |  |  | modulation |  |
|  |  |  |  | techniques |  |
|  |  |  |  | should be used |  |
| 3100- | Ultra-Wide | Maximum | EN 302 | Generic UWB | CEPT/ERC/REC 70-03 |
| 3400M | Band (UWB) | peak EIRP | 065 | regulation |  |
|  | communication devices | limit: -36 dBm @ 50MHz |  | Radio channel model based upon IEEE | ECC/DEC/(06)04 |
|  |  |  |  | 802.15.4a |  |
|  |  |  |  | Devices |  |
|  |  | EIRP |  | implementing Low Duty Cycle |  |
|  |  |  |  | (LDC) |  |
|  |  |  |  | mitigation |  |
|  |  |  |  | techniques are |  |
|  |  |  |  | permitted to |  |
|  |  |  |  | operate with a |  |
|  |  |  |  | maximum peak |  |
|  |  |  |  | e.i.r.p. of 0 dBm |  |
|  |  |  |  | defined in 50 |  |
|  |  |  |  | MHz |  |
|  |  |  |  | Devices |  |
|  |  |  |  | implementing |  |
|  |  |  |  | Detect And |  |
|  |  |  |  | Avoid |  |
|  |  |  |  | (DAA) |  |
|  |  |  |  | mitigation |  |
|  |  |  |  | techniques are |  |
|  |  |  |  | permitted to |  |
|  |  |  |  | operate with a |  |
|  |  |  |  | maximum peak |  |
|  |  |  |  | e.i.r.p. of 0 dBm |  |
|  |  |  |  | defined in 50 |  |
|  |  |  |  | MHz. |  |

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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 3400- | Ultra-Wide | Maximum | EN 302 | Generic UWB | CEPT/ERC/REC 70-03 |
| 3800M | Band (UWB) | peak EIRP | 065 | regulation |  |
|  | communication devices | limit: -40 dBm @ 50MHz |  | Radio channel model based upon IEEE | ECC/DEC/(06)04 |
|  |  |  |  | 802.15.4a |  |
|  |  |  |  | Devices |  |
|  |  |  |  | implementing |  |
|  |  |  |  | Low Duty Cycle |  |
|  |  |  |  | (LDC) |  |
|  |  |  |  | mitigation |  |
|  |  |  |  | techniques are |  |
|  |  |  |  | permitted to |  |
|  |  |  |  | operate with a |  |
|  |  |  |  | maximum peak |  |
|  |  |  |  | e.i.r.p. of 0 dBm |  |
|  |  |  |  | defined in 50 |  |
|  |  |  |  | MHz |  |
|  |  |  |  | Devices |  |
|  |  |  |  | implementing |  |
|  |  |  |  | Detect And |  |
|  |  |  |  | Avoid |  |
|  |  |  |  | (DAA) |  |
|  |  |  |  | mitigation |  |
|  |  |  |  | techniques are |  |
|  |  |  |  | permitted to |  |
|  |  |  |  | operate with a |  |
|  |  |  |  | maximum peak |  |
|  |  |  |  | e.i.r.p. of 0 dBm |  |
|  |  |  |  | defined in 50 |  |
|  |  |  |  | MHz |  |
| 3800- | Ultra-Wide | Maximum | EN 302 | Generic UWB | CEPT/ERC/REC 70-03 |
| 4800M | Band (UWB) | peak EIRP | 065 | regulation |  |
|  | communication devices | limit: -30 dBm @ 50MHz |  | Radio channel model based upon IEEE | ECC/DEC/(06)04 |
|  |  |  |  | 802.15.4a |  |

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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  |  |  | Devices implementing Low Duty Cycle (LDC)mitigation techniques are permitted tooperate with amaximum peake.i.r.p. of 0 dBm defined in 50 MHzDevices implementing Detect And Avoid(DAA)mitigation techniques are permitted to operate with a maximum peake.i.r.p. of 0 dBm defined in 50 MHz |  |
| 5150 -5250M | Wireless Access Systems / Radio | 20 dBm E.I.R.P. | EN 300893 | Channel Access Mechanism | ITU-R M.1652 |
|  | Local Access |  |  | (Frame Based |  |
|  | Network (WAS |  |  | Equipment / |  |
|  | & RLAN) |  |  | Load Based |  |
|  | Indoor use only. |  |  | Equipment) |  |
| 5250 - | Wireless Access | 20 dBm | EN 301 | Dynamic | CEPT/ERC/REC 70-03 |
| 5350M | Systems / Radio Local Access Network (WAS | E.I.R.P. | 893 | Frequency Selection (DFS) Obligatory. | ECC/DEC/(04)08ITU-R M.1652 |
|  | & RLAN)Indoor use only. |  |  | TPC is | ITU Res 229 (WRC-03) |
|  |  |  |  | Obligatory for |  |
|  |  |  |  | devices that |  |
|  |  |  |  | operate at a |  |

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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  |  |  | mean E.I.R.P. more than 20 dBm with a maximum meanE.I.R.P. limit of 23 dBm.Channel Access Mechanism (Frame Based Equipment / Load Based Equipment) |  |
| 5470 - | Wireless Access | 27 dBm | EN 301 | Dynamic | CEPT/ERC/REC 70-03 |
| 5725M | Systems / Radio Local Access Network (WAS | E.I.R.P. | 893 | Frequency Selection (DFS) Obligatory. | ECC/DEC/(04)08ITU-R M.1652 |
|  | & RLAN) |  |  | TPC is | ITU Res 229 (WRC-03) |
|  |  |  |  | Obligatory for |  |
|  |  |  |  | devices that |  |
|  |  |  |  | operate at a |  |
|  |  |  |  | mean E.I.R.P. |  |
|  |  |  |  | more than 27 |  |
|  |  |  |  | dBm with a |  |
|  |  |  |  | maximum mean |  |
|  |  |  |  | E.I.R.P. limit of |  |
|  |  |  |  | 30 dBm. |  |
|  |  |  |  | Channel Access |  |
|  |  |  |  | Mechanism |  |
|  |  |  |  | (Frame Based |  |
|  |  |  |  | Equipment / |  |
|  |  |  |  | Load Based |  |
|  |  |  |  | Equipment) |  |
| 5725 –5875 M | Non-Specific SRD | 13.98dBm | EN 300440 | Spectrum Access | CEPT/ERC/REC 70-03 |
|  | (alarms, | E.I.R.P. |  | Techniques (Listen Before |  |
|  | telecommand, telemetry, data transmission, |  |  | Talk (LBT)/ Detect and Avoid (DAA)) |  |
|  | etc). |  |  |  |  |

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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  | The non-specific short-range device category covers all kinds of radio devices, regardless of the application or the purpose, which fulfil the technical conditions as specified for a given frequency band.Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications |  |  |  |  |
| 5725 – | Wireless | 26 dBm | EN 303 | DFS is required | CEPT/ERC/REC 70-03 |
| 5875 M | Industrial | E.I.R.P. | 258 | in the frequency |  |
|  | Automation Equipment *(Tracking, Tracing & Data Acquisition)* | APCrequired Adequate spectrumsharingmechanis ms shall be implement ed |  | range 5725-5850 MHz to ensure an appropriate protection to the radiolocation service (including frequency hopping radars)DAA is required |  |
|  |  |  |  | in the frequency |  |
|  |  |  |  | range 5855- |  |
|  |  |  |  | 5875 MHz |  |
|  |  |  |  | for the |  |
|  |  |  |  | protection of |  |
|  |  |  |  | ITS, in the |  |
|  |  |  |  | frequency range |  |
|  |  |  |  | 5725-5875 MHz |  |
|  |  |  |  | for the |  |
|  |  |  |  | protection of |  |
|  |  |  |  | BFWA, and in |  |

|  |  |  |  |  |  |
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| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  |  |  | the frequency range 5795-5815 MHz for the protection of TTTapplications. |  |
| 5725-5875 M | Broadband Fixed Wireless Access systems (BFWA) | E.I.R.P.36 dBm for P-P/ P- MP | EN 302502 | DFS and TPC are Obligatory. | ECC/REC/(06)04 |
|  | including | E.I.R.P.33 dBm for Mesh/ AP-MP |  |  |  |
|  | WAS/RLAN. |  |  |  |
| 5795-5805M | RTTT Devices | 2 W EIRP | EN 300674 |  |  |
| 5805- | TTT Devices | 2 W EIRP | EN 300 | Techniques to |  |
| 5815M |  |  | 674 | access spectrum |
|  |  |  |  | and mitigate |
|  |  |  |  | interference that |
|  |  |  |  | provide at least |
|  |  |  |  | equivalent |
|  |  |  |  | performance to |
|  |  |  |  | the techniques |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  |  |  | described in the standards |  |
| 6000- | Ultra-Wide | Maximum | EN 302 |  |  |
| 8500M | Band (UWB) | Peak | 065 |
|  | communication | Power |  |
|  | devices | Limit: 0 |  |
|  |  | dBm and |  |
|  |  | mean |  |
|  |  | Power |  |
|  |  | Spectral |  |
|  |  | Density |  |
|  |  | Limit: |  |
|  |  | -41,3 |  |
|  |  | dBm/MHz |  |
|  |  | EIRP |  |
|  |  | Both with |  |
|  |  | and |  |
|  |  | without |  |
|  |  | mitigation |  |
|  |  | techniques |  |
|  |  | defined in |  |
|  |  | 50 MHz |  |
| 8500- | Ultra-Wide | Maximum | EN 302 | devices |  |
| 9000M | Band (UWB) | Peak | 065 | implementing |
|  | communication | Power |  | Detect And |
|  | devices | Limit: -25 |  | Avoid |
|  |  | dBm and mean Power Spectral Density Limit:-65.0 |  | (DAA)mitigation technique are permitted to operate with a maximum mean EIRP |
|  |  | dBm/MHz |  | spectral density |
|  |  | EIRP |  | of -41,3 |
|  |  | without |  | dBm/MHz and a |
|  |  | mitigation |  | maximum peak |
|  |  | techniques |  | EIRP of 0 dBm |
|  |  | defined in |  | defined in 50 |
|  |  | 50 MHz |  | MHz |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 9200-9500M | Radiodetermina tion Devices | 25 mW EIRP | EN 300440 |  |  |
| 9500-9975M | FDDA. | 25 mW EIRP | EN 300440 |  |  |
| 10.025- | Low power | 1W EIRP | EN 300 |  |  |
| 10.145 G | Video |  | 440 |
|  | Surveillance | 8 MHz |  |
|  |  | channel |  |
|  |  | spacing, |  |
|  |  | with first |  |
|  |  | channel |  |
|  |  | on 10.029 |  |
|  |  | GHz. |  |
| 10.5-10.6G | Radiodetermina tion Devices | 500 mW EIRP | EN 300440 |  |  |
| 13.4-14G | Radiodetermina tion Devices | 25 mW EIRP | EN 300440 |  |  |
| 17.1- | Radiodetermina | 26 dBm | EN 300 | For Ground |  |
| 17.3G | tion Devices | EIRP. | 440 | Based Synthetic |
|  |  |  |  | Aperture Radar |
|  |  |  |  | (GBSAR). |
|  |  |  |  | Specific |
|  |  |  |  | requirements for |
|  |  |  |  | the radar |
|  |  |  |  | antenna pattern |
|  |  |  |  | and for the |
|  |  |  |  | implementation |
|  |  |  |  | of |
|  |  |  |  | Detect And |
|  |  |  |  | Avoid (DAA) |
|  |  |  |  | technique apply |
|  |  |  |  | as |
|  |  |  |  | described in EN |
|  |  |  |  | 300 440 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
| 24.00- | Non-specific | 100 mW | EN 300 |  |  |
| 24.25G | SRD | EIRP | 440 |
| 24.05- | Radiodetermina | 100 mW | EN 300 | For automotive |  |
| 24.25G | tion | EIRP | 440 | radars |
| 57-64 | Tank Level | +43 dBm | EN | Applications are | EC Decision |
| GHz | Probing Radar (TLPR)equipment |  | 302 372 | based on pulse RF, FMCW orsimilar wideband | 2013/752/EU and CEPT/ERCRecommendation 70-03 |
|  |  |  |  | techniques |  |
|  |  |  |  | Maximum peak |  |
|  |  |  |  | power, as |  |
|  |  |  |  | measured in 50 |  |
|  |  |  |  | MHz |  |
|  |  |  |  | (within main |  |
|  |  |  |  | beam) |  |
| 57-64 | Level Probing | 35 dBm | EN 302 | Maximum value of mean power spectral density is applicable. |  |
| GHz | Radar (LPR) | (contained | 729 |
|  | equipment | in a 50 |  |
|  |  | MHz |  |
|  |  | bandwidth |  |
|  |  | ) |  |
| 57-64 | Non-Specific | 100 mW | EN 305 | Transmitter |  |
| GHz | SRD | EIRP | 550 | output power of |
|  |  | 13 |  | 10 mW. |
|  |  | dBm/MHz |  | The |
|  |  |  |  | implementation of |
|  |  |  |  | any mitigation |
|  |  |  |  | techniques, such |
|  |  |  |  | as duty cycle, |
|  |  |  |  | shall be provided |
|  |  |  |  | by the |
|  |  |  |  | manufacturer. |
| 57-64G | Point-to-Point FS | 55 dBm maximum EIRP | EN 302217 | The maximum transmitter output power is 10 dBm | CEPT/ECC/Recommen dation (09)01 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  |  |  | The minimum GANT is 30 dBi The emissionremains within the spectral power density mask limits. |  |
| 63-64GHz | Intelligent Transportation Systems |  | EN 302686 |  |  |
| 57-66G | Multi-Gigabit | 40 dBm | EN 302 | Adaptivity | ECC Report 113 |
|  | Wireless Access Systems (MGWS) | EIRP13 dBm / MHz | 567 | (medium access protocol), designed to facilitate | ECC Report 114 |
|  |  |  |  | spectrum |  |
|  |  |  |  | sharing |  |
|  |  |  |  | mechanism. |  |
|  |  |  |  | Also, LBT is |  |
|  |  |  |  | mandatory. |  |
| 76-77G | Railways. | 55dBm | EN 301 | Obstruction/Veh |  |
|  | Radar | peak EIRP | 091 | icle detection |
|  |  |  |  | via radar Sensor |
|  |  |  |  | at railway level |
|  |  |  |  | crossings. 50 |
|  |  |  |  | dBm average |
|  |  |  |  | power or 23.5 |
|  |  |  |  | dBm average |
|  |  |  |  | power for pulse |
|  |  |  |  | radar |
| 76-77G | TTT; | 55dBm | EN 301 | Fixed outdoor | ECC/REC/(05)02; |
|  |  | peak EIRP | 091 | installations are not allowed. | ECC/REC/(09)01 |
|  |  | The maximum mean EIRP |  | Point-to-point links of the FixedService are |  |
|  |  | density is |  | regulated by |  |
|  |  | limited to |  | ECC/REC/(05)0 |  |
|  |  |  |  | 2 and |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column** | **Column B** | **Column** | **Column** | **Column E** | **Column F** |
| **A****Frequen** | **Equipment Category** | **C****Maximu** | **D****Relevan** | **Additional Requirements** | **References** |
| **cy** |  | **m** | **t** | **(channelling** |  |
| **Bands** |  | **Transmit** | **Standar** | **and/or channel** |  |
| **K=kHz** |  | **Power,** | **ds** | **access and** |  |
| **M=MHz** |  | **Field** |  | **occupation** |  |
| **G=GHz** |  | **Strength** |  | **rules/ spectrum** |  |
|  |  | **or** |  | **access and** |  |
|  |  | **Sensitivit** |  | **mitigation** |  |
|  |  | **y Limits** |  | **requirements)** |  |
|  |  | **&** |  |  |  |
|  |  | **Channel** |  |  |  |
|  |  | **spacing** |  |  |  |
|  |  | 13 |  | ECC/REC/(09)0 |  |
| dBm/MHz | 1 |
| . | Fixed |
|  | transportation |
|  | infrastructure |
|  | radars have to |
|  | be of a scanning |
|  | nature in order |
|  | to limit the |
|  | illumination |
|  | time and ensure |
|  | a minimum |
|  | silent time to |
|  | achieve |
|  | coexistence with |
|  | automotive |
|  | radar systems. |

## Use and possession of all radio apparatus exempt in terms of the above table must comply with the following:

* 1. All radio apparatus must be type-approved by the Authority in accordance with section 35 of the Act;
	2. The frequencies, transmitting power and external high-gain antenna of the radio apparatus must not be altered without a new type approval certificate being issued by the Authority;
	3. The Radio Apparatus must be operated within, and not exceed, the technical parameters set out in each of the applicable columns C and D of the Table with respect to the frequency band; maximum radiated power or field strength limits and channel

spacing; relevant standard; and duty cycles and antennas to be used as contained in Column E;

* 1. The antenna of the Radio Apparatus must not be higher or above average ground level than the lowest point of the place where the Radio Apparatus operates effectively;
	2. The Radio Apparatus must not cause interference with any licensed radio frequency spectrum; and
	3. The user of the Radio Apparatus in the licence-exempt frequency spectrum operates on non-interference and zero protection basis from interference.”

*i The inductive device category covers radio devices that use magnetic fields with inductive loop systems for*

*near field communications. Typical uses include devices for car immobilisation, animal identification, alarm systems, cable detection, waste management, personal identification, wireless voice links, access control, proximity sensors, anti-theft systems, including RF anti-theft induction systems, data transfer to hand-held devices, automatic article identification, wireless control systems and automatic road tolling.*

*ii The non-specific short-range device category covers all kinds of radio devices, regardless of the application or*

*the purpose, which fulfil the technical conditions as specified for a given frequency band. Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications.*