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**GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS**

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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](mailto: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.



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**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).

### **2. 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.

### 3. 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**

| <b>Column A</b><br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | <b>Column B</b><br>Equipment Category | <b>Column C</b><br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | <b>Column D</b><br>Relevant Standards | <b>Column E</b><br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements) | <b>Column F</b><br>References |
|---|---------------------------------------|---|---------------------------------------|--|-------------------------------|
| 9 – 59.75K  | Inductive Devices <sup>1</sup>        | 72 dB $\mu$ A/m @ 10m.  | EN 300 330                            |  | CEPT/ERC/REC 70-03            |
| 59.75 – 60.25K  | Inductive Devices,                    | 42 dB $\mu$ A/m @ 10m.  | EN 300 330                            |  | CEPT/ERC/REC 70-03            |
| 60.25 – 65.85K  | Inductive Devices                     | 72 dB $\mu$ A/m @ 10m   | EN 300 330                            |  | CEPT/ERC/REC 70-03            |
| 65.85 – 67.35K  | Inductive Devices                     | 42 dB $\mu$ A/m @ 10m   | EN 300 330                            |  | CEPT/ERC/REC 70-03            |

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|--|--------------------------------|--|--------------------------------|---|------------------------|
| 67.35 - 74.75K   | Inductive Devices              | 72 dB $\mu$ A/m @ 10m.   | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 74.75 – 75.25K   | Inductive Devices              | 42 dB $\mu$ A/m @ 10m  | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 75.25 – 77.25K   | Inductive Devices              | 72 dB $\mu$ A/m @ 10m.   | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 77.25 – 77.75K   | Inductive Devices              | 42 dB $\mu$ A/m @ 10m  | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 77.75 – 90K  | Inductive Devices              | 72 dB $\mu$ A/m @ 10m  | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 90 – 119K  | Inductive Devices              | 42 dB $\mu$ A/m @ 10m.   | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 119 – 128.6K   | Inductive Devices              | 66 dB $\mu$ A/m @ 10m.   | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 128.6 – 129.6K   | Inductive Devices              | 42 dB $\mu$ A/m @ 10m  | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 128.6 – 135K   | Inductive Devices              | 66 dB $\mu$ A/m @ 10m  | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 135-140K   | Inductive Devices              | 42 dB $\mu$ A/m @ 10m  | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 140-148.5K   | Inductive Devices              | 37.7 dB $\mu$ A/m @ 10m  | EN 300 330                     |   | CEPT/ERC/REC 70-03     |
| 9 – 315K   | ULP-AMI Devices                | 30 dB $\mu$ A /m at 10 m   | EN 302 19 5                    | Duty Cycle $\leq$ 10%   | CEPT/ERC/REC 70-03     |
| 315 - 600K   | ULP-AIDs and Peripherals       | -5 dB $\mu$ A /m at 10 m   | EN 302 53 6                    | Duty Cycle $\leq$ 10%   | CEPT/ERC/REC 70-03     |



| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)  | Column F<br>References |
|--|--------------------------------|--|--------------------------------|--|------------------------|
| 400 - 600 kHz  | RFID only                      | -8 dB $\mu$ A/m at 10 m  | EN 300 330                     | In case of external antennas only loop coil antennas may be employed.<br><i>max field strength = 5dB<math>\mu</math>A/m at 10 m for systems operating at BW &gt; 10 kHz measured at <math>f_c</math> whilst keeping the density limit (-8dB<math>\mu</math>A/m in a bandwidth of 10 kHz.)</i><br>minimum operating BW = 30 kHz | CEPT/ERC/REC 70-03     |
| 148.5-5000K  | Inductive Devices              | -15 dB $\mu$ A/m @10 m   | EN 300 330                     | The total field strength is – 5 dB $\mu$ A/m at 10 m for systems operating at bandwidths larger than 10 kHz  | CEPT/ERC/REC 70-03     |
| 5000K-30M  | Inductive Devices              | -20 dB $\mu$ A/m @ 10 m  | EN 300 330                     | The total field strength is – 5 dB $\mu$ A/m at 10 m for systems operating at bandwidths larger than 10 kHz  | CEPT/ERC/REC 70-03     |
| 3155 – 3400K   | Low Power Wireless Hearing Aid | 13.5 dB $\mu$ A/m @ 10m  | EN 300 330                     | In case of external  | NRFP18                 |

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|--|--|--|--------------------------------|--|------------------------|
|  |  |  |                                | antennas only<br>loop coil   |                        |
| 6.765-6.795M   | Inductive Devices                          | 42 dB $\mu$ A/m @ 10m  | EN 300 330                     | The transmission 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 dB $\mu$ A/m @ 10m   | EN 300 330                     |  |                        |
| 10200 – 11000K   | Inductive Devices                          | 9 dB $\mu$ A/m @ 10m   | EN 300 330                     |  |                        |
| 13.553-13.567M   | Non-Specific SRD                           | 42 dB $\mu$ A/m @ 10m  | EN 300 330                     |  |                        |
| 13.553-13.567M   | RFID (incl. NFC) and EAS applications only | 60 dB $\mu$ A/m @ 10m  | EN 300 330                     | The transmission mask and antenna requirements for all combined frequency segments have to provide at least equivalent performance to the techniques described in harmonised standards |                        |

| <b>Column A</b><br><b>Frequency Bands</b><br><b>K=kHz</b><br><b>M=MHz</b><br><b>G=GHz</b> | <b>Column B</b><br><b>Equipment Category</b> | <b>Column C</b><br><b>Maximum Transmit Power, Field Strength or Sensitivity Limits &amp; Channel spacing</b> | <b>Column D</b><br><b>Relevant Standards</b> | <b>Column E</b><br><b>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)</b> | <b>Column F</b><br><b>References</b>                  |
|---|--|--|--|---|---|
| 26.957-27.283M  | Inductive Devices                            | 42 dB $\mu$ A/m @ 10m  | EN 300 330                                   |   |   |
| 26.957-27.283M  | Non-specific SRD <sup>ii</sup>               | 10 mW E.R.P.   | EN 300 220                                   |   |   |
| 26.995M ;<br>27.045M ;<br>27.095M ;<br>27,145M ;<br>27.195M                               | Surface Model Control                        | 100 mW E.R.P.  | EN 300 220                                   |   |   |
| 35.00-35.25M  | Aircraft Model Control                       | 100 mW E.R.P.<br>10 kHz channel spacing  | EN 300 220                                   |   | CEPT/ERC/REC 70-03                                    |
| 36.65-36.75M  | Wireless Microphones.                        | 100 mW E.R.P.  | EN 300 422                                   |   | CEPT/ERC/REC 70-03                                    |
| 40.65-40.70M  | Wireless Microphones.                        | 100 mW E.R.P.  | EN 300 422                                   |   | CEPT/ERC/REC 70-03                                    |
| 40.665,<br>40.675,<br>40.685,<br>40.695   | Surface Model Control.                       | 100mW E.R.P.<br>10 kHz channel spacing.  | EN 300 220                                   |   | CEPT/ERC/REC 70-03                                    |
| 40.66-40.7M   | Non-specific SRD.                            | 10 mW E.R.P.   | EN 300 220                                   |   | CEPT/ERC/REC 70-03                                    |
| 46.61-46.97M<br>49.67-49.97M  | CT0 Cordless phones.                         | 10 mW E.I.R.P.   | The Authority TE-013                         |   | Government Gazette 22443 of 4 <sup>th</sup> July 2001 |
| 53-54M  | Wireless Microphones.                        | 10 mW E.R.P.   | EN 300 422                                   | For ALD the limit power is 100 mW   | CEPT/ERC/REC 70-03                                    |

| <b>Column A</b><br><b>Frequency Bands</b><br><b>K=kHz</b><br><b>M=MHz</b><br><b>G=GHz</b>                                | <b>Column B</b><br><b>Equipment Category</b> | <b>Column C</b><br><b>Maximum Transmit Power, Field Strength or Sensitivity Limits &amp; Channel spacing</b> | <b>Column D</b><br><b>Relevant Standards</b> | <b>Column E</b><br><b>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)</b> | <b>Column F</b><br><b>References</b> |
|--|--|--|--|---|--------------------------------------|
| 54.4500 M;<br>54.4625 M;<br>54.4750 M;<br>54.4875 M;<br>54.500M ;<br>54.5125 M;<br>54.5250 M;<br>54.5375 M;<br>54.5500 M | Model Control                                | 5W E.R.P.<br>12.5 kHz channel spacing  | EN 300 220                                   |   | CEPT/ERC/REC 70-03                   |
| 141-142M   | Remote Control Industrial Apparatus          | 100 mW E.R.P.  | EN 300 220                                   |   |                                      |
| 148-152M   | Wildlife telemetry Tracking                  | 25 mW E.R.P.   | EN 300 220                                   | The use of this band is restricted to National Game Parks.  |                                      |
| 169.4-169.475 M  | Meter Reading                                | 500 mW E.R.P.<br>50 kHz channel spacing  | EN 300 220                                   | < 10% duty cycle  | CEPT/ERC/REC 70-03<br>ECC/DEC (05)02 |
| 173.2125 - 173.2375 M  | Non-specific SRD – telecommand only          | 10 mW E.R.P.<br>25 kHz channel spacing   | EN 300 220                                   |   |                                      |
| 173.2375 - 173.2875 M  | Non-specific SRD                             | 10 mW E.R.P.<br>25 kHz channel   | EN 300 220                                   |   |                                      |

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

| <b>Column A</b><br><b>Frequency Bands</b><br><b>K=kHz</b><br><b>M=MHz</b><br><b>G=GHz</b> | <b>Column B</b><br><b>Equipment Category</b> | <b>Column C</b><br><b>Maximum Transmit Power, Field Strength or Sensitivity Limits &amp; Channel spacing</b> | <b>Column D</b><br><b>Relevant Standards</b> | <b>Column E</b><br><b>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)</b> | <b>Column F</b><br><b>References</b>          |
|---|--|--|--|---|---|
| 464.5375 M  | Security systems                             | 1 W<br>25 kHz<br>channel<br>spacing  | EN 300<br>296                                |   |   |
| 464.500 –<br>464.5875 M   | Non-specific SRD                             | 100 mW   | EN 300<br>220                                |   |   |
| 463.975 M;<br>464.125 M;<br>464.175 M;<br>464.325 M;<br>464.375 M;                        | Low Power Radio                              | 500 mW<br>12.5 kHz<br>channel<br>spacing   | EN 300<br>296                                |   | CEPT/ERC/REC 70-03                            |
| 863-865M  | Wireless Audio Systems                       | 10 mW<br>E.R.P.  | EN 300<br>357                                |   | CEPT/ERC/REC 70-03<br>CEPT/ERC/DEC (01)<br>18 |
| 863-865M  | Wireless Microphones                         | 10 mW<br>E.R.P.  | EN 300<br>422                                |   | CEPT/ERC/REC 70-03                            |
| 865-868 M   | RFID   | 100 mW<br>E.R.P.<br>200 kHz<br>Channel<br>spacing  | EN 302<br>208-2                              | Channels 1, 2<br>and 3<br><br>Listen Before<br>Talk (LBT) is<br>mandatory<br>FHSS or Other<br>Spread<br>Spectrum<br>Techniques<br>shall not be used     | CEPT/ERC/REC 70-03                            |
| 865-868 M   | RFID   | 2 W<br>E.R.P.  | EN 302<br>208                                | Channels 4,7,10<br>and 13<br><br>Listen Before<br>Talk (LBT) is<br>mandatory  | CEPT/ERC/REC 70-03                            |

| <b>Column A</b><br><b>Frequency Bands</b><br><b>K=kHz</b><br><b>M=MHz</b><br><b>G=GHz</b> | <b>Column B</b><br><b>Equipment Category</b> | <b>Column C</b><br><b>Maximum Transmit Power, Field Strength or Sensitivity Limits &amp; Channel spacing</b> | <b>Column D</b><br><b>Relevant Standards</b> | <b>Column E</b><br><b>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)</b> | <b>Column F</b><br><b>References</b>       |
|---|--|--|--|---|--|
|   |  | 200 kHz Channel spacing  |  | FHSS or Other Spread Spectrum Techniques shall not be used  |  |
| 865-868 M   | RFID   | 500 mW E.R.P.<br>200 kHz Channel spacing   | EN 302 208                                   | Channels 5,6,8,9,11,12,14 and 15<br>Listen Before Talk (LBT) is mandatory<br>FHSS or Other Spread Spectrum Techniques shall not be used                 | CEPT/ERC/REC 70-03                         |
| 864.1-868.1M  | CT2 cordless phones                          | 10 mW E.I.R.P.   | EN 301 797<br>TE – 012                       |   | CEPT/ERC/REC 70-03                         |
| 868-868.6M  | Non-specific SRD                             | 25 mW E.R.P.   | EN 300 220                                   | Duty Cycle < 1% or LBT  | CEPT/ERC/REC 70-03<br>ERC/DEC/(01)04       |
| 868.6-868.7M  | Alarms                                       | 10 mW E.R.P.<br>25 kHz channel spacing   | EN 300 220                                   | Duty Cycle < 1% or LBT  | CEPT/ERC/REC 70-03<br>CEPT/ERC/REC (01) 09 |
| 868.7-869.2M  | Non-specific SRD                             | 25 mW E.R.P.   | EN 300 220                                   | Duty Cycle < 1% or LBT  | CEPT/ERC/REC 70-03<br>ERC/DEC/(01)04       |
| 869.25-869.3M   | Alarms                                       | 10 mW E.R.P.<br>25 kHz channel spacing.  | EN 300 220                                   | <0.1 % duty cycle   | CEPT/ERC/REC 70-03                         |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category    | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)                 | Column F<br>References               |
|--|-----------------------------------|--|--------------------------------|---|--------------------------------------|
| 869.4-869.65M  | Non-specific SRD Including RFID   | 500mW E.R.P.<br>25 kHz channel spacing.  | EN 300 220                     | Narrow / wide-band modulation. The whole stated frequency band may be used as 1 channel for high speed data transmission.<br><10% duty cycle or LBT & AFA | CEPT/ERC/REC 70-03<br>ERC/DEC/(01)04 |
| 869.65-869.7M  | Alarms                            | 25 mW E.R.P.<br>25 kHz channel spacing.  | EN 300 220                     | 10 % duty cycle.  | CEPT/ERC/REC 70-03                   |
| 869.7-870 M  | Non-specific SRD                  | 5 mW E.R.P.  | EN 300 220                     |   | CEPT/ERC/REC 70-03                   |
| 915.1-915.2 M  | Real Time Location Systems (RTLS) | 25 mW E.R.P.   | EN 300 086                     |   |                                      |
| 915.2-915.4 M  | Passive Tags                      | 100 mW E.R.P.<br>10 x 20 kHz wide channels   | EN 300 208                     |   | ECC Report 200                       |
| 915.4-919.2 M  | Modulating RFID Systems (FHSS)    | 4 W E.I.R.P.<br>200 kHz channel spacing  | EN 300 208                     |   | ECC Report 200                       |
| 919-919.2 M  | Tag Backscatter Guard Band        |  | EN 300 208                     | DAA   | ECC Report 200                       |
| 919.2-921 M  | Non-Modulating                    | 4 W EIRP   | EN 302 208                     | Spectral Masks;<br>CW only @ 920 MHz ( $\pm$ 1.5 kHz)   | ECC Report 200                       |



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

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|--|---|--|--------------------------------|--|--|
| 2446-2454M   | RFID  | 500 mW   | EN 300 440                     | 4 W EIRP;<br>Duty Cycle $\leq$ 15%;<br>FHSS modulation techniques should be used   | CEPT/ERC/REC 70-03                       |
| 3100-3400M   | Ultra-Wide Band (UWB) communication devices | Maximum peak EIRP limit: -36 dBm @ 50MHz<br><br>EIRP                                       | EN 302 065                     | Generic UWB regulation<br>Radio channel model based upon IEEE 802.15.4a<br>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<br><br>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. | CEPT/ERC/REC 70-03<br><br>ECC/DEC/(06)04 |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category              | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)  | Column F<br>References                   |
|--|---|--|--------------------------------|--|--|
| 3400-3800M   | Ultra-Wide Band (UWB) communication devices | Maximum peak EIRP limit: -40 dBm @ 50MHz   | EN 302 065                     | <p>Generic UWB regulation<br/>Radio channel model based upon IEEE 802.15.4a<br/>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</p> <p>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</p> | CEPT/ERC/REC 70-03<br><br>ECC/DEC/(06)04 |
| 3800-4800M   | Ultra-Wide Band (UWB) communication devices | Maximum peak EIRP limit: -30 dBm @ 50MHz   | EN 302 065                     | Generic UWB regulation<br>Radio channel model based upon IEEE 802.15.4a  | CEPT/ERC/REC 70-03<br><br>ECC/DEC/(06)04 |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category  | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)   | Column F<br>References   |
|--|---|--|--------------------------------|---|--|
|  |   |  |                                | <p>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</p> <p>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</p> |  |
| 5150 - 5250M   | Wireless Access Systems / Radio Local Access Network (WAS & RLAN)<br>Indoor use only. | 20 dBm E.I.R.P.  | EN 300 893                     | Channel Access Mechanism (Frame Based Equipment / Load Based Equipment)   | ITU-R M.1652   |
| 5250 - 5350M   | Wireless Access Systems / Radio Local Access Network (WAS & RLAN)<br>Indoor use only. | 20 dBm E.I.R.P.  | EN 301 893                     | <p>Dynamic Frequency Selection (DFS) Obligatory.</p> <p>TPC is Obligatory for devices that operate at a</p>   | <p>CEPT/ERC/REC 70-03<br/>ECC/DEC/(04)08</p> <p>ITU-R M.1652</p> <p>ITU Res 229 (WRC-03)</p> |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category  | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)   | Column F<br>References   |
|--|---|--|--------------------------------|---|--|
|  |   |  |                                | <p>mean E.I.R.P. more than 20 dBm with a maximum mean E.I.R.P. limit of 23 dBm.</p> <p>Channel Access Mechanism (Frame Based Equipment / Load Based Equipment)</p>  |  |
| 5470 - 5725M   | Wireless Access Systems / Radio Local Access Network (WAS & RLAN)                 | 27 dBm E.I.R.P.  | EN 301 893                     | <p>Dynamic Frequency Selection (DFS) Obligatory.</p> <p>TPC is 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.</p> <p>Channel Access Mechanism (Frame Based Equipment / Load Based Equipment)</p> | <p>CEPT/ERC/REC 70-03<br/>ECC/DEC/(04)08</p> <p>ITU-R M.1652</p> <p>ITU Res 229 (WRC-03)</p> |
| 5725 – 5875 M  | Non-Specific SRD<br><br>(alarms, telecommand, telemetry, data transmission, etc). | 13.98 dBm E.I.R.P.   | EN 300 440                     | Spectrum Access Techniques (Listen Before Talk (LBT)/ Detect and Avoid (DAA))   | CEPT/ERC/REC 70-03   |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category   | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing    | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)  | Column F<br>References |
|--|--|---|--------------------------------|--|------------------------|
|  | <p>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.</p> <p>Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications</p> |   |                                |  |                        |
| 5725 – 5875 M  | <p>Wireless Industrial Automation Equipment<br/><i>(Tracking, Tracing &amp; Data Acquisition)</i></p>  | <p>26 dBm E.I.R.P. APC required Adequate spectrum sharing mechanisms shall be implemented</p> | EN 303 258                     | <p>DFS is required in the frequency range 5725-5850 MHz to ensure an appropriate protection to the radiolocation service (including frequency hopping radars)</p> <p>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</p> | CEPT/ERC/REC 70-03     |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category                                     | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements) | Column F<br>References |
|--|--|--|--------------------------------|---|------------------------|
|  |  |  |                                | the frequency range 5795-5815 MHz for the protection of TTT applications.   |                        |
| 5725-5875 M  | Broadband Fixed Wireless Access systems (BFWA) including WAS/RLAN. | E.I.R.P. 36 dBm for P-P/ P-MP<br>E.I.R.P. 33 dBm for Mesh/ AP-MP                           | EN 302 502                     | DFS and TPC are Obligatory.   | ECC/REC/(06)04         |
| 5795-5805M   | RTTT Devices   | 2 W EIRP   | EN 300 674                     |   |                        |
| 5805-5815M   | TTT Devices  | 2 W EIRP   | EN 300 674                     | Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques                    |                        |

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



| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)  | Column F<br>References |
|--|--------------------------------|--|--------------------------------|--|------------------------|
| 9200-9500M   | Radiodetermination Devices     | 25 mW EIRP   | EN 300 440                     |  |                        |
| 9500-9975M   | FDDA.                          | 25 mW EIRP   | EN 300 440                     |  |                        |
| 10.025-10.145 G  | Low power Video Surveillance   | 1W EIRP<br><br>8 MHz channel spacing, with first channel on 10.029 GHz.                    | EN 300 440                     |  |                        |
| 10.5-10.6G   | Radiodetermination Devices     | 500 mW EIRP  | EN 300 440                     |  |                        |
| 13.4-14G   | Radiodetermination Devices     | 25 mW EIRP   | EN 300 440                     |  |                        |
| 17.1-17.3G   | Radiodetermination Devices     | 26 dBm EIRP.   | EN 300 440                     | For Ground 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 |                        |

| <b>Column A</b><br><b>Frequency Bands</b><br><b>K=kHz</b><br><b>M=MHz</b><br><b>G=GHz</b> | <b>Column B</b><br><b>Equipment Category</b> | <b>Column C</b><br><b>Maximum Transmit Power, Field Strength or Sensitivity Limits &amp; Channel spacing</b> | <b>Column D</b><br><b>Relevant Standards</b> | <b>Column E</b><br><b>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)</b> | <b>Column F</b><br><b>References</b>                      |
|---|--|--|--|---|---|
| 24.00-24.25G  | Non-specific SRD                             | 100 mW EIRP  | EN 300 440                                   |   |   |
| 24.05-24.25G  | Radiodetermination                           | 100 mW EIRP  | EN 300 440                                   | For automotive radars   |   |
| 57-64 GHz   | Tank Level Probing Radar (TLPR) equipment    | +43 dBm  | EN 302 372                                   | Applications are based on pulse RF, FMCW or similar wideband techniques<br>Maximum peak power, as measured in 50 MHz (within main beam)                 | EC Decision 2013/752/EU and CEPT/ERC Recommendation 70-03 |
| 57-64 GHz   | Level Probing Radar (LPR) equipment          | 35 dBm (contained in a 50 MHz bandwidth)   | EN 302 729                                   | Maximum value of mean power spectral density is applicable.   |   |
| 57-64 GHz   | Non-Specific SRD                             | 100 mW EIRP<br>13 dBm/MHz  | EN 305 550                                   | Transmitter output power of 10 mW.<br>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 302 217                                   | The maximum transmitter output power is 10 dBm  | CEPT/ECC/Recommendation (09)01                            |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category               | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements) | Column F<br>References            |
|--|--|--|--------------------------------|---|-----------------------------------|
|  |  |  |                                | The minimum $G_{ANT}$ is 30 dBi<br>The emission remains within the spectral power density mask limits.                                    |                                   |
| 63-64 GHz  | Intelligent Transportation Systems           |  | EN 302 686                     |   |                                   |
| 57-66G   | Multi-Gigabit Wireless Access Systems (MGWS) | 40 dBm EIRP<br>13 dBm / MHz  | EN 302 567                     | Adaptivity (medium access protocol), designed to facilitate spectrum sharing mechanism. Also, LBT is mandatory.                           | ECC Report 113<br>ECC Report 114  |
| 76-77G   | Railways. Radar                              | 55dBm peak EIRP  | EN 301 091                     | Obstruction/Vehicle 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 peak EIRP<br><br>The maximum mean EIRP density is limited to                         | EN 301 091                     | Fixed outdoor installations are not allowed. Point-to-point links of the Fixed Service are regulated by ECC/REC/(05)02 and                | ECC/REC/(05)02;<br>ECC/REC/(09)01 |

| Column A<br>Frequency Bands<br>K=kHz<br>M=MHz<br>G=GHz | Column B<br>Equipment Category | Column C<br>Maximum Transmit Power, Field Strength or Sensitivity Limits & Channel spacing | Column D<br>Relevant Standards | Column E<br>Additional Requirements (channelling and/or channel access and occupation rules/ spectrum access and mitigation requirements)   | Column F<br>References |
|--|--------------------------------|--|--------------------------------|---|------------------------|
|  |                                | 13 dBm/MHz   |                                | ECC/REC/(09)01<br>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:

- (a) All radio apparatus must be type-approved by the Authority in accordance with section 35 of the Act;
- (b) 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;
- (c) 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;

- (d) 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;
- (e) The Radio Apparatus must not cause interference with any licensed radio frequency spectrum; and
- (f) The user of the Radio Apparatus in the licence-exempt frequency spectrum operates on non-interference and zero protection basis from interference.”

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<sup>i</sup> *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.*

<sup>ii</sup> *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.*





