



# GOVERNMENT GAZETTE

## OF THE

# REPUBLIC OF NAMIBIA

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WINDHOEK - 3 April 2023

No. 8060

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## General Notices

### COMMUNICATIONS REGULATORY AUTHORITY OF NAMIBIA

No. 158

2023

#### NOTICE IN TERMS OF THE REGULATIONS REGARDING THE SUBMISSIONS OF INTERCONNECTION AGREEMENTS AND TARIFFS

The Communications Regulatory Authority of Namibia, in terms of Section 53(10) of the Communications Act, 2009 (Act No. 8 of 2009) read with regulation 8(1) of the “Regulations Regarding the Submission of Interconnection Agreements and Tariffs”, in Government Gazette No. 4714, General Notice No. 126, dated 18 May 2011, herewith gives notice that **Blue Telecommunications (Pty) Ltd** has filed a tariff with the Authority as set out in Schedule 1.

Any person may examine copies of the tariffs submitted at the head offices of the Authority during normal business hours and copies may be made on payment of a fee determined by the Authority. Copies are also available at [www.cran.na](http://www.cran.na) where copies may be downloaded free of charge.

The public may submit in writing to the Authority written comments within fourteen (14) days from the date of publication of this notice in the *Gazette*.

**Blue Telecommunications (Pty) Ltd** may submit, in writing to the Authority, a response to any written comments within fourteen (14) days from the lapsing of the time to submit written submissions.

All written submissions must contain the name and contact details of the person making the written submissions and the name and contact details of the person for whom the written submissions is made, if different and be clear and concise.

All written submissions and reply comments must be made either physically or electronically –

- (1) By hand to the head offices of the Authority, namely Communication House, 56 Robert Mugabe Avenue, Windhoek;
- (2) By post to the head offices of the Authority, namely Private Bag 13309, Windhoek, 9000; and
- (3) By electronic mail to the following address: [legal@cran.na](mailto:legal@cran.na).

**E. NGHIKEMBUA  
CHIEF EXECUTIVE OFFICER  
COMMUNICATIONS REGULATORY AUTHORITY**

### SCHEDULE 1

#### SUBMISSION OF PROPOSED TARIFFS BY BLUE TELECOMMUNICATIONS (PTY) LTD: COMMUNICATIONS ACT, 2009

The following are the proposed tariffs as submitted by Blue Telecommunications (Pty) Ltd:

<b>AirFibre Services more than 30km outside of Windhoek, Swakopmund, Walvis Bay</b>	<b>Prices excl. VAT</b>	<b>Multicast Services</b>	<b>Prices excl. VAT</b>
Up to 10Mbps upload / 4Mbps download	N\$ 900.00	Multicast Satelio Stream Monthly - 12month contract	N\$ 769.00
Up to 15Mbps upload / 7Mbps download	N\$ 1,140.00	Multicast Satelio Stream Annually	N\$ 8,459.00
Up to 20Mbps upload / 10Mbps download	N\$ 1,194.00	Multicast Satelio Stream Month to Month	N\$ 995.00
Up to 25Mbps upload / 15Mbps download	N\$ 1,308.00	Multicast Satelio Stream Social Monthly - 12month contract	N\$ 549.00
Up to 50Mbps upload / 20Mbps download	N\$ 3,000.00	Multicast Satelio Stream Second Subscription Monthly	N\$ 469.00

<b>AirFibre Services within 30km of Windhoek, Swakopmund, Walvis Bay</b>	<b>Prices excl. VAT</b>	Multicast Satelio Stream Second Subscription Annually	N\$ 5,159.00
Up to 5Mbps upload / 2Mbps download	N\$ 450.00	Multicast Sport Stream Annually	N\$ 2,699.00
Up to 10Mbps upload / 4Mbps download	N\$ 750.00	Multicast Sport Stream Monthly - 12month contract	N\$ 229.00
Up to 15Mbps upload / 7Mbps download	N\$ 950.00	<b>Multicast Services - Promotion. as from 14 March 2023 - 31 May 2023</b>	<b>Prices excl. VAT</b>
Up to 20Mbps upload / 10Mbps download	N\$ 995.00	Multicast Satelio Stream Monthly - 12month contract	N\$ 725.00
Up to 25Mbps upload / 15Mbps download	N\$ 1,090.00	Multicast Satelio Stream Annually	N\$ 7,975.00
Up to 50Mbps upload / 20Mbps download	N\$ 2,500.00	Multicast Satelio Stream Month to Month	N\$ 945.00
<b>FTTx Packages</b>	<b>Prices excl. VAT</b>	Multicast Satelio Stream Social Monthly - 12month contract	N\$ 519.00
Up to 25Mbps upload and download	N\$ 1,100.00	Multicast Satelio Stream Second Subscription Monthly	N\$ 469.00
Up to 35Mbps upload and download	N\$ 1,500.00	Multicast Satelio Stream Second Subscription Annually	N\$ 5,159.00
Up to 50Mbps upload and download	N\$ 2,100.00	Multicast Sport Stream Annually	N\$ 1,419.00
		Multicast Sport Stream Monthly - 12month contract	N\$ 129.00

**Notes:**

1. Terms and conditions apply to all packages.

Please note that the full tariff submission including the terms and conditions and the remedies available to the consumers can be obtained from the Authority.

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**COMMUNICATIONS REGULATORY AUTHORITY OF NAMIBIA**

No. 159

2023

**NOTICE IN TERMS OF THE REGULATIONS REGARDING THE SUBMISSIONS OF INTERCONNECTION AGREEMENTS AND TARIFFS**

The Communications Regulatory Authority of Namibia, in terms of Section 53(10) of the Communications Act, 2009 (Act No. 8 of 2009) read with regulation 8(1) of the “Regulations Regarding the Submission of Interconnection Agreements and Tariffs”, in Government Gazette No. 4714, General Notice No. 126, dated 18 May 2011, herewith gives notice that **Mobile Telecommunications Limited** has filed a tariff with the Authority as set out in Schedule 1.

Any person may examine copies of the tariffs submitted at the head offices of the Authority during normal business hours and copies may be made on payment of a fee determined by the Authority. Copies are also available at [www.cran.na](http://www.cran.na) where copies may be downloaded free of charge.

The public may submit in writing to the Authority written comments within fourteen (14) days from the date of publication of this notice in the *Gazette*.

**Mobile Telecommunications Limited** may submit, in writing to the Authority, a response to any written comments within fourteen (14) days from the lapsing of the time to submit written submissions.

All written submissions must contain the name and contact details of the person making the written submissions and the name and contact details of the person for whom the written submissions is made, if different and be clear and concise.

All written submissions and reply comments must be made either physically or electronically –

- (1) By hand to the head offices of the Authority, namely Communication House, 56 Robert Mugabe Avenue, Windhoek;
- (2) By post to the head offices of the Authority, namely Private Bag 13309, Windhoek, 9000; and
- (3) By electronic mail to the following address: [legal@cran.na](mailto:legal@cran.na).

**E. NGHIKEMBUA  
CHIEF EXECUTIVE OFFICER  
COMMUNICATIONS REGULATORY AUTHORITY**

### SCHEDULE 1

#### SUBMISSION OF PROPOSED TARIFF BY MOBILE TELECOMMUNICATIONS LIMITED: COMMUNICATIONS ACT, 2009

Boost Bundle

Price	85
Minutes	100
SMS	50
Data MB	4096
Social media MB	2048
Streaming MB	2048

The tariffs are applicable to MTC postpaid Customers.

Please note that the full tariff submission including the terms and conditions and the remedies available to the consumers can be obtained from the Authority.

**COMMUNICATIONS REGULATORY AUTHORITY OF NAMIBIA**

No. 160

2023

NOTICE IN TERMS OF REGULATION 34(1) OF THE REGULATIONS PRESCRIBING  
PROCEDURES REGARDING APPLICATION FOR, AND AMENDMENT, RENEWAL,  
TRANSFER AND CANCELLATION OF SPECTRUM LICENSES:  
COMMUNICATIONS ACT, 2009

The Communications Regulatory Authority of Namibia, in terms of regulation 34(1) of the Regulations Prescribing Procedures Regarding Application for, and Amendment, Renewal, Transfer and Cancellation of Spectrum Licenses, published as General Notice No. 104, Government Gazette No. 6888, on 29 April 2019, hereby gives notice of the following decisions:

1. The Authority awarded Spectrum Licences to The Free Press of Namibia (Pty) Ltd for the provision of analogue FM sound broadcasting services as set out hereunder –

Description of geographic coverage areas		Radio frequencies	Maximum output power	Services to be provided
Region	Town			
Oshana	Oshakati	105.6 MHz	1000 W	BROADCASTING
Kavango	Rundu	107.2 MHz	500 W	BROADCASTING
Otjozondjupa	Otjiwarongo	105.9 MHz	100 W	BROADCASTING
Erongo	Swakopmund Walvis Bay	103.3 MHz	1000 W	BROADCASTING

2. The Authority approved the site re-location of **Shipi FM's** transmitter as set out hereunder –

Spectrum License amended	Amendment	Geographic coverage area	Services to be provided
88.9 MHz	Relocation of transmitter from Tamariskia Tower to Erongo Mountain Tower.	Swakopmund Erongo Region	BROADCASTING

The above decisions are effective from the date of this Notice.

The reasons for the decisions can be requested from the Authority. In terms of section 31 of the Communications Act, 2009 (Act No. 8 of 2009), the Authority may, on its own motion or on a petition filed by an aggrieved party to any proceedings, reconsider any order or decision that it has made, within 90 days from the date of this notice.

**H. M. GAOMAB II**  
**CHAIRPERSON OF THE BOARD OF DIRECTORS**  
**COMMUNICATIONS REGULATORY AUTHORITY OF NAMIBIA**

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**COMMUNICATIONS REGULATORY AUTHORITY OF NAMIBIA**

No. 161

2023

**AMENDMENT OF THE REGULATIONS PRESCRIBING PROCEDURES  
REGARDING APPLICATION FOR, AND AMENDMENT, RENEWAL,  
TRANSFER AND CANCELLATION OF SPECTRUM LICENCES**

The Communications Regulatory Authority of Namibia, under section 129 read with section 101(16) of the Communications Act, 2009 (Act No. 8 of 2009) and in accordance with the Regulations Regarding Rule-Making Procedures published under General Notice No. 334 of 17 December 2010, has amended the Regulations Prescribing Procedures Regarding Application for, and Amendment, Renewal, Transfer and Cancellation of Spectrum Licences published in the Government Gazette No. 6888, General Notice No. 104 dated 29 April 2019 and as amended by General Notice No. 446 as published in Government Gazette No. 7613 of 30 August 2021.

**H. M. GAOMAB II**  
**CHAIRPERSON OF THE BOARD OF DIRECTORS**  
**COMMUNICATIONS REGULATORY AUTHORITY OF NAMIBIA**

**SCHEDULE****Definitions**

1. In these regulations the “Regulations” means the Regulations Prescribing Procedures Regarding Application for, and Amendment, Renewal, Transfer and Cancellation of Spectrum Licences published in the Government Gazette No. 6888, General Notice No. 104 dated 29 April 2019 and as amended by General Notice No. 446 as published in Government Gazette No. 7613 of 30 August 2021.

**Substitution of Annexure B**

2. The Regulations is amended by the substitution for Annexure B of the following Annexure.

**ANNEXURE B**  
**RADIO APPARATUS EXEMPT FROM SPECTRUM LICENSE****Explanation:**

1. The use or possession of the radio apparatus listed in Column B below, in accordance with the specifications listed in Columns A, C, D and E of the Table below does not require a spectrum license.
2. Use and possession of all radio apparatus exempt in terms of the above table must comply with the following:
  - 2.1 All radio apparatus must be type-approved by the Authority or by the Independent Communications Authority of South Africa or, upon request to the Authority, by any other regulatory authority in a country other than Namibia or South Africa.

- 2.2 The frequencies, transmitting power and external high-gain antenna of the radio apparatus must not be altered without a new type-approved certificate issued by the Authority or any other regulatory authority referred to in paragraph 2.1.
- 2.3 The radio apparatus must be operated within, and not exceed, the technical parameters set out in each of the applicable Column's C and D of the Table with respect to the frequency band, maximum radiated power or field strength limits and channel spacing, relevant standards and duty cycles and antennas to be used and contained in Column E.
- 2.4 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.
- 2.5 The radio apparatus may not cause interference with any licensed radio frequency spectrum.
- 2.6 The user of the radio apparatus in the license-exempt frequency spectrum operates on a non-interference and zero protection basis from interference.

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
8.3-9kHz	Inductive applications	82 dB $\mu$ A/m at 10m	None	None	EN 300 330	Antenna size of < 1/20 $\lambda$ (see note 1)
9-90 kHz		72 dB $\mu$ A/m at 10m				
90-119 kHz		42 dB $\mu$ A/m at 10m				
119-135 kHz		66 dB $\mu$ A/m at 10m				
135-140 kHz		42 dB $\mu$ A/m at 10m				
140-148.5 kHz		37.7 dB $\mu$ A/m at 10m				
9-315 kHz		Active medical implants				
400-600 kHz	Inductive applications	-8 dB $\mu$ A/m at 10 m				For RFID only
442.2-450 kHz	Tracking, Tracing and Data Acquisition	7 dB $\mu$ A/m at 10m	None	Continuous wave (CW) - no modulation, channel spacing $\geq$ 150 Hz		



Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
456.9-457.1 kHz	Tracking, Tracing and Data Acquisition	7 dB $\mu$ A/m at 10 m	None	Continuous wave (CW) at 457 kHz - no modulation		
3 155-3 400 kHz	Inductive applications	13.5 dB $\mu$ A/m at 10m	None	None	EN 300 330	ITU-R M.1076 applies RR No. <b>5.116</b> applies
6 765-6 795 kHz	- Inductive applications - Non-specific SRDs	42 dB $\mu$ A/m at 10m	None	None	EN 300 330	ISM band (RR No. <b>5.138</b> )
7 400-8 800 kHz	Inductive applications	9 dB $\mu$ A/m at 10m	None	None	EN 300 330	
10200-11000kHz	Inductive applications	9 dB $\mu$ A/m at 10m	None	None	EN 300 330	
13553-13567 kHz	Inductive applications	42 dB $\mu$ A/m at 10m 60 dB $\mu$ A/m at 10m (for RFID and EAS only)	None	None	EN 302 291	ISM band (RR No. <b>5.150</b> )
	Non-specific SRDs	10 mW e.r.p	None	None	EN 300 330	ISM band (RR No. <b>5.150</b> )

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
26957-27283 kHz	Inductive applications	42 dB $\mu$ A/m at 10m	None	None	EN 300 220	ISM band (RR No. 5.150) ERC/DEC/(01)16
	Model control (26990-27200 kHz)	100 mW e.r.p	None	10 kHz	EN 300 220	ERC/DEC/(01)10 (26.995 MHz, 27.045 MHz, 27.095 MHz, 27.145 MHz, 27.195 MHz)
	Non-specific SRDs	10 mW e.r.p.	None	None	EN 300 220 EN 300 330	ERC/DEC/(01)02
26990-27200 kHz	Non-specific SRDs	100 mW e.r.p	$\leq 0.1\%$	None		
29.7-47 MHz	Radio Microphones	10 mW e.r.p.	None	$\leq 50$ kHz		
30-37.5 MHz	Active Medical Implants	1 mW e.r.p.	$\leq 10\%$	None		
34.995-35.225 MHz	Model Control	100 mW e.r.p	None	10 kHz		Only flying models
	Non-specific SRDs	10 mW e.r.p.	None	None	EN 300 220	ISM band (RR No. 5.150) ERC/DEC/(01)03
40.66-40.7 MHz	Model control	100 mW e.r.p	None	10 kHz	EN 300 220	ERC/DEC/(01)12 (40.665 MHz, 40.675 MHz, 40.685 MHz, 40.695 MHz)
	Non-specific SRDs	10 mW e.r.p.	$\leq 1\%$	None		
138.2-138.45 MHz	Radio Microphones	10 mW e.r.p.	None	$\leq 50$ kHz		

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
169.4-169.5875MHz	Assistive listening devices	500 mW e.r.p.	None	≤ 50 kHz		
169.4-169.475 MHz	Tracking, Tracing and Data Acquisition	500 mW e.r.p.	≤ 10%	≤ 50 kHz		
169.4-169.4875 MHz	Non-specific SRDs (169.4-169.475 MHz)	500 mW e.r.p.	≤ 1%	≤ 50 kHz		
	Non-specific SRDs (169.4-169.4875 MHz)	10 mW e.r.p.	≤ 1%			
169.4875-169.5875 MHz	Non-specific SRDs	10 mW e.r.p.	≤ 0.001% duty cycle except for 00:00 h to 06:00 h local time where the duty cycle limit is ≤ 0.1%			
169.5875-169.8125 MHz	Non-specific SRDs	10 mW e.r.p.	≤ 0.1%			
173.965-216 MHz	Assistive listening devices	10 mW e.r.p.	None	≤ 50 kHz		
174-216 MHz	Radio Microphones	50 mW e.r.p.	None	None		

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
433.05-434.79 MHz	Non-specific SRDs	10 mW e.r.p. (433.05-434.79 MHz)	<10% (Note 1)	None	EN 300 220	(Note 2)
		1 mW e.r.p. -13 dBm/10 kHz (433.05-434.79 MHz)	None	None	EN 300 220	Power density limited to -13 dBm/10 kHz for wideband modulation with a bandwidth greater than 250 kHz (Note 5)
		10 mW e.r.p. (434.04-434.79 MHz)	None	Up to 25 kHz	EN 300 220	(Note 5)
401-402 MHz	Active medical implants and associated peripherals	25 µW e.r.p.	LBT or duty cycle ≤0.1% (Note 3), p21	25 kHz	EN 302 537	ITU-R RS.1346 <sup>1</sup> Max occupied BW = 100 kHz
402-405 MHz		25 µW e.r.p.	(Note 4), p21	25 kHz	EN 301 839	ITU-R RS.1346 Max occupied BW = 300 kHz ERC/DEC/(01)17
405-406 MHz		25 µW e.r.p.	LBT or duty cycle ≤0.1% (Note 4), p21)	25 kHz	EN 302 537	ITU-R RS.1346 Max occupied BW = 100 kHz
446 – 446.2 MHz	PMR446	500 mW		12.5 kHz	EN 300 296	

1 Sharing between the meteorological aids service and medical implant communication systems (MICS) operating in the mobile service in the frequency band 401-406 MHz.

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
470-694 MHz	Radio Microphones	50 mW e.r.p.	None	None		
862-863 MHz	Non-specific SRDs	25 mW e.r.p.	≤ 0.1%	≤ 350 kHz		
863-865 MHz	Wireless Audio applications	10 mW e.r.p.	None	None	EN 301 357	
	Non-specific SRDs	25 mW e.r.p.	≤ 0.1% duty cycle or LBT+AFA			
864.8-865 MHz	Wireless Audio applications	10 mW e.r.p.	None	50 kHz	EN 300 220	Narrow band analogue voice devices (only this band)
865-868 MHz	Non-specific SRDs	25 mW e.r.p.	≤ 1% duty cycle or LBT +AFA			

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
	Tracking, Tracing and Data Acquisition	500 mW e.r.p.	Adaptive Power Control (APC) required for spectrum sharing (note 1) and the following duty cycle restrictions also apply: $\leq 10\%$ duty cycle for network access points; $\leq 2.5\%$ duty cycle otherwise	$\leq 200$ kHz		
865.0-865.6 MHz	RFID	100 mW e.r.p.	None	200 kHz	EN 302 208	(Note 13)
865.6-867.6 MHz		2 W e.r.p.	None	200 kHz	EN 302 208	
867.6-868.0 MHz		500 mW e.r.p.	None	200 kHz	EN 302 208	

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
863-870 MHz	Non-specific SRDs	≤ 25 mW e.r.p.	≤ 0.1% or LBT (notes 1 and 5)	≤ 100 kHz for 47 or more channels (note 3)	EN 300 220	FHSS modulation Note 4, Note 2, Note 7 and Note 9 Note (TZA)
863-870 MHz	Non-specific SRDs	≤ 25 mW e.r.p. (note 7) Power density : - 4.5 dBm/100 kHz (note 8)	≤ 0.1% or LBT+AFA (notes 1, 6 and 7)	No spacing	EN 300 220	DSSS and other wideband modulation other than FHSS (Notes 2, 4, 7 and 9) Note (TZA)
868-868.6 MHz	Non-specific SRDs	≤ 25 mW e.r.p.	≤ 0.1% or LBT+AFA (notes 1 and note 6)	≤ 100 kHz, for 1 or more channels. Modulation bandwidth ≤ 300 kHz (note 3)		Narrow/wide-band modulation (Notes 2, 4, 7 and 9) Note (TZA)
868.6-868.7 MHz	Alarms	10 mW e.r.p.	≤ 1% or LBT+AFA (note 1)	No spacing, for 1 or more channels (note 3)	EN 300 220	Narrow / wide-band modulation. No channel spacing, however the whole stated frequency band may be used (Note 2)
868.7-869.2 MHz	Non-specific SRDs	≤ 25 mW e.r.p.	≤ 0.1% or LBT+AFA (note 1)	25 kHz	EN 300 220	Or whole band may be used as 1 channel
				No spacing, for 1 or more channels (note 3)	EN 300 220	Narrow / wide-band modulation. No channel spacing, however the whole stated frequency band may be used (Note (TZA))

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
869.25-869.3 MHz	Alarms	10 mW e.r.p.	< 0.1%	25 kHz	EN 300 220	Note (TZA)
869.2-869.25 MHz	Alarms	10 mW e.r.p.	< 0.1%	25 kHz	EN 300 220	Social alarms Note (TZA)
869.3-869.4 MHz	Alarms	10 mW e.r.p.	< 1%	25 kHz	EN 300 220	Note (TZA)
869.400-869.650 MHz	Non-specific SRDs	≤ 500 mW e.r.p.	≤ 10% or LBT+AFA (note 1)	25 kHz (for 1 or more channels)	EN 300 220	Narrow / wide-band modulation The whole stated frequency band may be used as 1 channel for high speed data transmission Note (TZA)
869.65-869.7 MHz	Alarms	25 mW e.r.p.	< 10%	25 kHz	EN 300 220	Note (TZA)
869.700-870.000 MHz	Non-specific SRDs	≤ 5 mW e.r.p.	No requirement	No spacing (for 1 or more channels)	EN 300 220	Narrow / wide-band modulation. No channel spacing, however the whole stated frequency band may be used (Note 5) Note (TZA)
		≤ 25 mW e.r.p.	up to 1% or LBT+AFA (note 1)			



Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
870-874.4 MHz	Tracking, Tracing and Data Acquisition	500 mW e.r.p.	Adaptive Power Control (APC) required for spectrum sharing (note 1) and the following duty cycle restrictions also apply: $\leq 10\%$ duty cycle for network access points; $\leq 2.5\%$ duty cycle otherwise	$\leq 200$ kHz		

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
	Non-specific SRDs.	25 mW e.r.p.	≤ 1% duty cycle. For ER-GSM protection (873-876 MHz, where applicable): the duty cycle is limited to ≤ 0.01% and to a maximum transmit on time of 5ms/1s	≤ 600 kHz		
2 446-2 454 MHz	RFID	≤ 500 mW e.i.r.p.	None	None	EN 300 440	2 400-2 500 is a ISM band (RR No. 5.150) (Note 12)
2 446-2 454 MHz		> 500 mW – 4 W e.i.r.p.	≤ 15% FHSS techniques should be used	None	EN 300 440	2 400-2 500 is a ISM band (RR No. 5.150) Power levels above 500 mW are restricted to be used inside the boundaries of a building and the duty cycle of all transmissions shall in this case be ≤ 15 % in any 200 ms period (30 ms on / 170 ms off). (Note 12)

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
2 400-2 483.5 MHz	Non-specific SRDs	10 mW e.i.r.p.	None	None	EN 300 440	2 400-2 500 is a ISM band (RR No. 5.150)
	Wideband Data Transmission systems (WAS/RLANs)	100 mW e.i.r.p.	See Rec 70-03 note 1 (p9)	None	EN 300 328	2 400-2 500 is a ISM band (RR No. 5.150) ERC/DEC/(01)07
	Radiodetermination	25 mW e.i.r.p.	None	None	EN 300 440	2 400-2 500 is a ISM band (RR No. 5.150) ERC/DEC/(01)08
	Active Medical Implants	10 dBm e.i.r.p.	LBT+AFA and $\leq$ 10% duty cycle. The equipment shall implement a spectrum access mechanism as described in the applicable harmonised standard or an equivalent spectrum access mechanism	1 MHz		For Low Power Active Medical Implants and associated peripherals, covered by the applicable harmonised standard. Individual transmitters may combine adjacent channels on a dynamic basis for increased bandwidth higher than 1 MHz. Peripheral units are for indoor use only.

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
5 150-5 350 MHz	Wideband Data Transmission systems (WAS/RLANs)	200 mW mean e.i.r.p. See note 4, p9	See notes 1 and 3 (p9)	None	EN 301 893	ECC/DEC/(04)08 Restricted to indoor use. The maximum mean e.i.r.p. density shall be limited to 10 mW/MHz in any 1 MHz band For RLANs Resolution 229 (WRC-19) applies.
5 470-5 725 MHz	Wideband Data Transmission systems (WAS/RLANs)	250 mW e.r.p	See notes 1 and 3 (p9)	None	EN 301 893	ECC/DEC/(04)08 Indoor as well as outdoor use allowed. The maximum mean e.i.r.p. density shall be limited to 50 mW/MHz in any 1 MHz band In MWI, TZA and ZMB this band is used for BFWA on a licensed basis.
5 725-5 875 MHz	Wideband data transmission BFWA is limited to 5725 - 5850 MHz (to protect satellite)	PTP/PTMP: max mean e.i.r.p = 4 W Mesh/AP-MP: max mean e.i.r.p = 2 W			EN 302 502	ISM band (RR No. 5.150) One of the main bands for wideband data transmission and BFWA (incl. Wi-Fi in laptops, cell phones, etc.) ECC/REC(06)04 refers In MWI this band is used for BFWA on a licensed basis. In AFS this band can be used up to 8W in specific circumstances (refer to national regulations) Footnote 5.453 (WRC-19) applies

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
5725-5875 MHz	Tracking, Tracing and Data Acquisition	400 mW e.i.r.p. Adaptive Power Control (APC) required	Adequate spectrum sharing mechanisms (e.g. DFS and DAA) shall be implemented	$\geq 1$ MHz and $\leq 20$ MHz		
5 725-5 875 MHz	Non-specific SRDs	25 mW e.i.r.p.	None	None	EN 300 440	
5 795-5 805 MHz	RTTT	2 W e.i.r.p. 8 W e.i.r.p.	None	None	EN 300 674	ECC/DEC/(02)01 Note 10
5 805-5 815 MHz			None	None	EN 300 674	ECC/DEC/(02)01 For this band an individual licence in required in EU Note 10
5925-6425 MHz	WAS RLAN	23 dBm (200mW) mean e.i.r.p	None	None	EN 303 687	Restricted to indoor use only. Low Power Indoor (LPI) use only including where metal coated windows or similar structure made of material with comparable attenuation characteristics Outdoor use (including in road vehicles) is not permitted Mean e.i.r.p density for in-band emissions = 10 dBm/MHz

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
5825-6425 MHz	WAS RLAN	14 dBm (25) e.i.r.p. mW	None	None	EN 303 687	Very Low Power (VLP) indoor outdoor use.
						Use on drones is prohibited Maximum mean e.i.r.p. for inband emissions = 1 dBm/MHz
24.00-24.25 GHz	Non-specific SRDs	100 mW e.i.r.p.	None	None	EN 300 440	ISM band (RR No. 5.150)
	Radiodetermination	100 mW e.i.r.p.	None	None	EN 300 440	
	RTTT (24.05-24.075 GHz)	100 mW e.i.r.p.	None		EN 300 440	For vehicle radars
	RTTT(24.075-24.15 GHz)	0.1mW e.i.r.p.	None		EN 300 440	For vehicle radars
24.15-24.25 GHz	RTTT	100 mW e.i.r.p.	None)		EN 300 440	For vehicle radars.
						The spectrum access and mitigation requirement is given for devices mounted behind a bumper. If mounted without a bumper, the requirement should be 3µs/40kHz maximum dwell time every 3ms
		100 mW e.i.r.p.	≤ 1ms/40kHz dwell time every 40ms (note 1)		EN 300 440	The spectrum access and mitigation requirement is given for devices mounted either behind a bumper or mounted without a bumper
						None

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
57-64 GHz	Non-Specific SRDs	100 mW e.i.r.p. 10 mW output power	None			
57-66 GHz	Non-specific SRD WAS RLAN	40 dBm (10W) mean e.i.r.p. 23 dBm/MHz e.i.r.p. density	None	None	EN 302 567	Indoor use only Fixed outdoor installations are prohibited
57-66 GHz	Non-specific SRD WAS	40 dBm (10W) mean e.i.r.p. 23 dBm/MHz e.i.r.p. density	None	None	EN 303 722	Maximum transmit power of 27 dBm at the antenna port or ports
57-66 GHz	Non-Specific SRD WAS	55 dBm (10W) mean e.i.r.p. 38 dBm/MHz e.i.r.p. density	None	None	EN 303 722	Mean e.i.r.p. density for inband emissions = 38 dBm/MHz. Transmit antenna gain $\geq$ 30 dBi Applies only to fixed outdoor installations
61.0-61.5 GHz	Non-specific SRDs	100 mW e.i.r.p.	None	None		ISM band (RR No. <b>5.138</b> )
76-77 GHz	RTTT	55 dBm peak e.i.r.p.	None	None	EN 301 091	ECC/DEC/(02)01 Power level 55 dBm peak power e.i.r.p. 50 dBm average power - 23.5 dBm average power for pulse radar only Vehicle and infrastructure radar systems
77-81 GHz	Automotive Short-Range Radars				EN 302 264	

Frequency band	Typical Applications	Maximum power or magnetic field strength	Duty Cycle restriction	Prescribed Channel Spacing	Harmonised Standard	Notes (Additional information)
122-122.25 GHz	Non-Specific SRDs	10 dBm/250MHz e.i.r.p. -48 dBm/MHz at >30° elevation	None	None		
122.25-123 GHz	Non-Specific SRDs	100 mW e.i.r.p.	None	None		
244-246 GHz	Non-Specific SRDs	100 mW e.i.r.p.	None	None		



**Footnotes**

**Note 1:** When either duty cycle, Listen-Before-Talk (LBT) or equivalent technique applies then it shall not be user dependent/adjustable and shall be guaranteed by appropriate technical means. For LBT devices without Adaptive Frequency Agility (AFA), or equivalent techniques, the duty cycle limit applies. For any type of frequency agile device the duty cycle limit applies to the total transmission unless LBT or equivalent technique is used.

**Note 2:** Audio and video applications are allowed provided that a digital modulation method is used with a maximum bandwidth of 300 kHz. Analogue and digital voice applications are allowed with a maximum bandwidth  $\leq 25$  kHz.

**Note 3:** The preferred channel spacing is 100 kHz allowing for a subdivision into 50 kHz or 25 kHz.

**Note 4:** Sub-bands for alarms are excluded (see ERC/REC 70-03 Annex 7).

**Note 5:** Audio and video applications are excluded. Analogue or digital voice applications are allowed with a maximum bandwidth  $\leq 25$  kHz and with spectrum access technique such as LBT or equivalent. The transmitter shall include a power output sensor controlling the transmitter to a maximum transmit period of 1 minute for each transmission.

**Note 6:** Duty cycle may be increased to 1% if the band is limited to 865-868 MHz.

**Note 7:** For other wide-band modulation than FHSS and DSSS with a bandwidth of 200 kHz to 3 MHz, duty cycle can be increased to 1% if the band is limited to 865-868 MHz and power to  $\leq 10$  mW e.r.p.

**Note 8:** The power density can be increased to +6.2 dBm/100 kHz and -0.8 dBm/100 kHz, if the band of operation is limited to 865-868 MHz and 865-870 MHz respectively.

**Note 9:** Certain channels may be occupied by RFID operating at higher powers (See Annex 11 for further details). To minimise the risk of interference from RFID, SRDs should use LBT with AFA or observe suitable separation distances. (In the high power RFID channels typically these may vary from 918 m (indoor) to 3.6 km (rural outdoor). In the remaining 2.2 MHz, where tags at -20 dBm e.r.p. occupy the spectrum, this may vary from 24 m (indoor) to 58 m (rural outdoor)). The adjacent frequency bands below 862 MHz and above 870 MHz may be used by high power systems. Manufacturers should take this into account in the design of equipment and choice of power levels.

**Note 10:** The frequency band 5795-5805 MHz is intended for road to vehicle systems, particularly (but not exclusively) road toll systems. The frequency bands 5795-5805 MHz and 5805-5815 MHz are recommended for 5 MHz channel spacing systems with the frequencies: 5797.5 MHz, 5802.5 MHz, 5807.5 MHz and 5812.5 MHz. For 10 MHz channel spacing systems 5800 MHz and 5810 MHz. 5805 - 5815 MHz on a national basis for multi-lane road junctions, particularly, but not exclusively road toll systems. The use of 8 W e.i.r.p. allows for 1 Mbit/s in accordance with ETSI standard ES 200 674-1. 2W e.i.r.p. allows for 500 kbit/s downlink and 250 kbit/s uplink in accordance with EN 300 674-1 and for low data rates (31 kbit/s) in accordance with EN 300 674-2.

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