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Licence exempt bands in South Africa which may be used for outdoor wireless access systems

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The table below is intended to provide an authoritative overview of the bands which are commonly used for licence-exempt service provision in South Africa. All usage of these bands is on a "no-protection-no-interference-basis" and is secondary to the primary allocations in the band.

Users are required to:

- Not use frequency falling outside of these bands unless they have a radio frequency spectrum licence.
- Use the frequency falling inside these bands in accordance with the technical restrictions set out in the Radio Regulations 2015 (Annexure B)[1].

Failing to honour this commitment is an offence under the Electronic Communications Act of 2005 and the Radio Regulations 2015. Illegal usage creates interference with lawful users such as the SANDF and other operators which results in enforcement action and damage to the reputation of the industry.

Sources:

- Radio Regulations 2015
- National Radio Frequency Plan 2013[2]

[1] ICASA Radio Frequency Spectrum Regulations 2015, GG 38641, General Notice 279, 30 March 2015. Available from http://www.ellipsis.co.za/wp-content/uploads/2014/12/Radio-Frequency-Spectrum-Regulations-2015.pdf

[2] http://www.ellipsis.co.za/licensing/frequency-licensing/national-radio-frequency-plan/

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Frequency Band	Type of Device	Maximum Radiated Power or Field Strength Limits and Channel Spacing	Relevant Standard	Additional Requirements	Comments
2400 – 2483.5 MHz	Wideband wireless systems WLAN Wideband data transmission applications (WBDTS) Model control	100 mW eirp. No duty cycle. No channel spacing For wide band modulations other than FHSS, the maximum e.i.r.p is limited to 10mW/MHz. Adequate spectrum sharing mechanisms shall be implemented by the equipment (e.g. Listen-before-Talk, Detect-and-Avoid)	EN 300 328 EN 301 489 – 1,3 EN 60950	CEPT/ERC/REC 70-03 For wide band modulations other than FHSS, the maximum e.i.r.p. is limited to 10mW/MHz.	Note the 20dBm EIRP Point To Point Point To Multi-Point
5150 – 5350 MHz	INDOOR USE ONLY				
5470 – 5725 MHz	Wireless access systems & radio local access networks (WAS & RLAN)	1 W e.i.r.p	EN 301 893 EN 301 489-1,17 EN 60950	ITU-R M.1625	Note the 30dBm EIRP Point To Multi-Point The previous (incorrect) restriction on outdoor use was removed effective 30 March 2015. Effective 30 March 2015 there is no longer a requirement to use

					DFS and TPC in this band.
5725 – 5850 MHz	Wireless access systems and radio local access networks (WAS & RLAN)	A maximum of 4 watts e.i.r.p. A maximum of 1 watt transmitter output power A maximum transmitter output spectral density of 8dBmW in any 3kHz band. Digital modulation only Nominal bandwidth of transmissions must not be less than 1 MHz	FCC 15.247 FCC 15.249	Fixed point-to-multipoint systems and point-to-point links. In any 100kHz outside the band, the e.i.r.p. shall be at least 30dB below the 100kHZ within the band that contains the highest level of desired power.	*Note 1* Transmission towards the common node of a point-to-multipoint is regarded as point-to-point node.
5725 – 5850 MHz	BFWA	A maximum of 200 watts e.i.r.p. A maximum of 1 watt transmitter output power A maximum transmitter output spectral density of 8dBm in an 3kHz band Digital modulation only Nominal bandwidth of transmissions must not be less than 1 MHz	FCC 15.247 FCC 15.249	Fixed point-to-point links only Point-to-multipoint systems, omnidirectional applications, and multiple co-located transmitters transmitting the same information are not permitted (see *Note 1*). In any 100kHz outside the band, the e.i.r.p. shall be at least 30dB below the 100kHZ within the band that contains the highest level of desired power.	*Note 1:* Transmission towards the common node of a point-to-multipoint is regarded as point-to-point node.
17.1 – 17.3 GHz	HiperLAN Network	100 mW e.i.r.p.	EN 301 489-1,3 EN 60950		

24.00 – 24.25 GHz	Non-specific Short Range Devices (SRDs)	100 mW e.i.r.p No duty cycle restriction No channel spacing	EN 300 440 EN 301 489-1,3 EN 60950	CEPT/ERC/REC 70-03	ICASA's view is that this band is not currently available for PtP links or WAS/RLANs. This flows from the definition of SRD and has practical effect in ICASA not type approving equipment intended for creating data links in this band.
57.00 – 64 GHz	Point-to-point links	55 dBm e.i.r.p	EN 305 550	The maximum transmitter output power is 10dBm. The minimum antenna gain is 30 dBi.	Please note that this allocation does not appear in the NRFP 2013. ICASA is the process of revising management of this band.
57.00 – 66 GHz	Multi-gigabit-wireless-systems (MGWS)	40 dBm e.i.r.p	EN 302 567	The use of these systems is as described in ITU-R Report ITU-R M.2227 and Recommendation ITU-R M.2003. Fixed outdoor installations are not allowed.	This allocations is of limited utility given the prohibition on outdoor use. This allocation does not appear in the NRFP 2013. ICASA is the process of revising management of this band.