

## Schedule B

### Schedule of Class Licensed Devices

Class Licence Category Type of Devices:

1. Type 1 – End-user devices or customer premise equipment.
2. Type 2 – Base Stations.
3. Type 3 – Fixed Stations.

Type of Radiocommunication Device	Class Licence Category Type for Device	Registration Required (Yes/No)	Frequency Range of Operation (MHz)	Maximum Transmitter Output RF Power (dBm)	Maximum Antenna Gain (dB)	ITU Class of Emission	Other Specific Technical Operating Parameters
Cellular Mobile Handset and Cellular Subscriber Unit	Type 1	No	824 – 960; 1710 – 1990	33	0	200KD9W 200KG7D 1M25D9W	For every 1 dB increase in Maximum Antenna Gain above 0 dB, there shall be a 1 dB decrease in Maximum Transmitter Output RF Power. The Equivalent Isotropic Radiated Power (EIRP) shall not exceed 33 dBm.

Type of Radiocommunication Device	Class Licence Category Type for Device	Registration Required (Yes/No)	Frequency Range of Operation (MHz)	Maximum Transmitter Output RF Power (dBm)	Maximum Antenna Gain (dB)	ITU Class of Emission	Other Specific Technical Operating Parameters
Family Radio Service (FRS) / General Mobile Radio Service (GMRS)	Type 1	No	462.525 – 462.750; 467.525 – 467.750	33	0	16K0F3E	N/A
Broadband Wireless Access / Wireless Fidelity (WiFi) / Bluetooth	Type 1	No	2400 – 2483.5	23	4	22M0D7W 3M50D7W	See Schedule B.1
Broadband Wireless Access / Wireless Fidelity (WiFi)	Type 2 (Private indoor use)	No	2400 – 2483.5	23	4	22M0D7W 3M50D7W	See Schedule B.1
Broadband Wireless Access / Wireless Fidelity (WiFi)	Type 2 (Public indoor and outdoor use)	Yes	2400 – 2483.5	30	6	22M0D7W 3M50D7W	See Schedule B.1
Broadband Wireless Access / Wireless Fidelity (WiFi)	Type 3	Yes	2400 – 2483.5	30	6	22M0D7W 3M50D7W	See Schedule B.1

Type of Radiocommunication Device	Class Licence Category Type for Device	Registration Required (Yes/No)	Frequency Range of Operation (MHz)	Maximum Transmitter Output RF Power (dBm)	Maximum Antenna Gain (dB)	ITU Class of Emission	Other Specific Technical Operating Parameters
Broadband Wireless Access / Wireless Fidelity (WiFi) / HiperLAN / Worldwide Interoperability for Microwave Access (WiMAX)	Type 1	No	5150 – 5250 5470 – 5725; 5725 – 5850	23 23	4 4	10M0D7W 22M0D7W 3M50D7W	See Schedule B.2
Broadband Wireless Access / Wireless Fidelity (WiFi) / HiperLAN / Worldwide Interoperability for Microwave Access (WiMAX)	Type 2 (Private indoor use)	No	5150 – 5250 5470 – 5725; 5725 – 5850	23 23	4 4	10M0D7W 22M0D7W 3M50D7W	See Schedule B.2
Broadband Wireless Access / Wireless Fidelity (WiFi) / HiperLAN / HiperMAN / Worldwide Interoperability for Microwave Access (WiMAX)	Type 2 (Public indoor and outdoor use)	Yes	5150 – 5250 5470 – 5725; 5725 – 5850	23 30	4 6	10M0D7W 22M0D7W 3M50D7W	See Schedule B.2

Type of Radiocommunication Device	Class Licence Category Type for Device	Registration Required (Yes/No)	Frequency Range of Operation (MHz)	Maximum Transmitter Output RF Power (dBm)	Maximum Antenna Gain (dB)	ITU Class of Emission	Other Specific Technical Operating Parameters
Broadband Wireless Access / Wireless Fidelity (WiFi) / HiperLAN / HiperMAN / Worldwide Interoperability for Microwave Access (WiMAX)	Type 3	Yes	5150 – 5250 5470 – 5725; 5725 – 5850	23 30	4 6	10M0D7W 22M0D7W 3M50D7W	See Schedule B.2
Remote Keyless Entry	Type 1	No	312.150; 314.350 433.920; 434.320	10 10	0 0	16K0F3D 16K0F3D	N/A N/A
Personal Satellite Tracker	Type 1	No	1611.25 – 1618.75	20	0	2M31G1D	N/A
RFID Reader	Type 1	No	903.14 – 927.26	30	3	500KD7D	N/A
Automobile Distance Sensor	Type 1	No	22000 – 29000	-41.9	0	865MD7D	Ultra wide-band radar radiocommunications device
Automatic Meter Reader (Electricity )	Type 1	No	902 – 928	21	0	200KL1D	N/A
Automatic Meter Reader ( Water)	Type 1	No	424.775 902 – 928	10 24	2 2	16K0F3D 200KL1D	N/A N/A
Automatic Meter Reader Repeater Unit ( Electricity & Water)	Type 3	Yes	902 – 928	28	5.15	200KL1D	N/A

Medical Telemetry	Type 1	No	1395-1400	25	< 1	14K8F1D 24K4F1D	N/A
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## Schedule B.1

### Other Specific Technical Operating Parameters

Parameter	Maximum Value	Comments
Maximum Effective Radiated Power ERP (from RF transmitter)		For frequency hopping systems employing less than 75 hopping channels ERP shall be no greater than 20.97 dBm
Antenna Gain		For every dB gain above 6 dBi, ERP of RF transmitter shall be reduced by 1 dBm.
Modulation scheme	Digital	Any digital modulation technique e.g. BPSK, QPSK
Multiple Access technique	Frequency Hopping Spread Spectrum (FHSS) Direct Sequence Spread Spectrum (DSSS)	Any other multiple access technology that can co-exist with FHSS and DSSS systems can be employed.
Minimum Channel Bandwidth	FHSS (20dB) – 25kHz  DSSS (6dB) – 500kHz	FHSS shall use at least 15 well-defined, non-overlapping channels separated by the channel bandwidth. The dwell time per channel shall not exceed 0.4s within a period of 0.4n, where n is the number of channels employed
Frequency Range	2.4 – 2.4835 GHz	This frequency range can be used for either indoor or outdoor operation.
Narrowband Transmitter spurious emission limits	<b>Operating</b> 30MHz – 1GHz = -36dBm 1GHz to 12.75GHz = -30dBm  <b>Standby</b> 30MHz – 1GHz = -57dBm 1GHz to 12.75GHz = -47dBm	
Narrowband Receiver spurious emission limits	30MHz – 1GHz = -57dBm 1GHz to 12.75GHz = -47dBm	

Parameter	Maximum Value	Comments
Wideband Transmitter spurious emission limits	<p><b>Operating</b>  30MHz – 1GHz = -86dBm/Hz  1GHz to 12.75GHz = -80dBm/Hz</p> <p><b>Standby</b>  30MHz – 1GHz = -107dBm/Hz  1GHz to 12.75GHz = -97dBm/Hz</p>	
Wideband Receiver spurious emission limits	30MHz – 1GHz = -107dBm/Hz 1GHz to 12.75GHz = -97dBm/Hz	
Maximum Spectral Power density	FHSS – 100mW/100kHz DSSS – 10mW/1MHz	
Standardization	FCC	

## Schedule B.2

### Other Specific Technical Operating Parameters

Parameter	Maximum Value	Comments
Maximum Effective Radiated Power ERP (from RF transmitter)		For frequency hopping systems employing less than 75 hopping channels ERP shall be no greater than 20.97 dBm.
Antenna Gain		For every dB gain above 6 dBi, ERP of RF transmitter shall be reduced by 1 dBm.
Modulation scheme	Digital	Any digital modulation technique e.g. BPSK, QPSK
Multiple Access technique (WiFi and WiMAX Technology)	Frequency Hopping Spread Spectrum (FHSS) Direct Sequence Spread Spectrum (DSSS) Orthogonal Frequency Division Multiplexing (OFDM)	Any other multiple access technology that can co-exist with FHSS, DSSS and OFDM systems can be employed.
Minimum Channel Bandwidth (WiFi and WiMAX Technology)	FHSS (20dB) – 25kHz DSSS (6dB) – 500kHz OFDM (20dB) – 1.25 MHz	FHSS shall use at least 75 well-defined, non-overlapping channels separated by channel bandwidth. The dwell time per channel shall not exceed 0.4s within a period of 30s
Operating Frequency Range (WiFi and WiMAX Technology)	5150 – 5250 MHz 5250 – 5350 MHz 5470 – 5725 MHz 5725 – 5850 MHz	Frequency ranges 5150 – 5250 MHz and 5250 – 5350 MHz shall be for indoor use only. Frequency ranges 5470 – 5725 MHz and 5725 – 5850 MHz can be used for wither indoor or outdoor operation.

Parameter	Maximum Value	Comments
Narrowband Transmitter mask (WiFi technology)	<p><b>Un-modulated</b>  <math>F_{tx} \pm 3</math> to 14MHz = -49dBm</p> <p><b>Modulated</b>  <math>F_{tx} \pm 3</math> to 8MHz = -32dBm  <math>F_{tx} \pm 2</math> to 14MHz = -35dBm</p>	
Transmitter Spectral Mask (WiMAX technology)	<p><b>20 MHz Channelization:</b>  <math>F_{tx} \pm 9.5</math> MHz = 0dBm  <math>F_{tx} \pm 10.9</math> MHz = -25dBm  <math>F_{tx} \pm 19.5</math>MHz = -32dBm  <math>F_{tx} \pm 29.5</math>MHz = -50dBm</p> <p><b>10 MHz Channelization:</b>  <math>F_{tx} \pm 4.75</math> MHz = 0dBm  <math>F_{tx} \pm 5.45</math> MHz = -25dBm  <math>F_{tx} \pm 9.75</math>MHz = -32dBm  <math>F_{tx} \pm 14.75</math>MHz = -50dBm</p>	
Transmitter spurious emission limits (WiFi Technology)	<p><b>Operating</b>  25MHz – 1GHz = -69dBm  1GHz to 40GHz = -63dBm</p> <p><b>Standby</b>  25MHz – 1GHz = -90dBm  1GHz to 40GHz = -80dBm</p>	
Receiver spurious emission limits (WiFi Technology)	25MHz – 1GHz = -90dBm 1GHz to 40GHz = -80dBm	
Maximum Spectral Power density (WiFi Technology)	FHSS – 1W/100kHz DSSS – 10mW/3kHz	
Standardization	FCC ETSI	