
STATUTORY INSTRUMENTS

2015 No. 591

**The Wireless Telegraphy (Ultra-Wideband
Equipment) (Exemption) Regulations 2015**

PART 7

**USE OF ULTRA-WIDEBAND EQUIPMENT
FOR BUILDING MATERIAL ANALYSIS**

Transmission limits

31. The condition referred to in regulation 30(4)(b) is that the ultra-wideband equipment only emits transmissions which—

- (a) in the frequencies up to 1.215 GHz when measured in any direction have—
 - (i) a maximum mean power spectral density no greater than -85.0 dBm/MHz; and
 - (ii) a maximum peak power no greater than -45.0 dBm or the equivalent transmission level;
 - (iii) a total radiated power spectral density of -90.0 dBm/MHz;
- (b) in the frequency band 1.215 GHz to 1.73 GHz when measured in any direction—
 - (i) have a maximum mean power spectral density —
 - (aa) no greater than -85.0 dBm/MHz; or
 - (bb) no greater than -70.0 dBm/MHz provided that a listen before talk mechanism described in harmonised standard EN 302 435-1 is used to mitigate interference to other users of the electromagnetic spectrum.
 - (ii) have a maximum peak power no greater than -45.0 dBm or the equivalent transmission level; and
 - (iii) have a total radiated power spectral density of -90.0 dBm/MHz;
- (c) in the frequency band 1.73 GHz to 2.2 GHz when measured in any direction have—
 - (i) a maximum mean power spectral density no greater than -65.0 dBm/MHz;
 - (ii) a maximum peak power no greater than -25.0 dBm or the equivalent transmission level; and
 - (iii) a total radiated power spectral density of -70 dBm/MHz;
- (d) in the frequency band 2.2 GHz to 2.5 GHz when measured in any direction have—
 - (i) a maximum mean power spectral density no greater than -50.0 dBm/MHz;
 - (ii) a maximum peak power no greater than -10.0 dBm or the equivalent transmission level; and
 - (iii) a total radiated power spectral density of -55 dBm/MHz;
- (e) in the frequency band 2.5 GHz to 2.69 GHz when measured in any direction—

- (i) have a maximum mean power spectral density —
 - (aa) no greater than -65.0 dBm/MHz; or
 - (bb) no greater than -50.0 dBm/MHz provided that a listen before talk mechanism described in harmonised standard EN 302 435-1 is used to mitigate interference to other users of the electromagnetic spectrum;
 - (ii) have a maximum peak power spectral density no greater than -25.0 dBm or the equivalent transmission level; and
 - (iii) have a total radiated power spectral density of -70.0 dBm/MHz;
- (f) in the frequency band 2.69 GHz to 2.7 GHz when measured in any direction have—
- (i) a maximum mean power spectral density no greater than -55.0 dBm/MHz;
 - (ii) a maximum peak power no greater than -15.0 dBm or the equivalent transmission level; and
 - (iii) a total radiated power spectral density below -65.0 dBm/MHz;
- (g) in the frequency band 2.7 GHz to 3.4 GHz when measured in any direction—
- (i) have a maximum mean power spectral density —
 - (aa) no greater than -70.0 dBm/MHz; or
 - (bb) no greater than -50.0 dBm/MHz provided that a listen before talk mechanism described in EN 302 435-1 is used to mitigate interference to other users of the electromagnetic spectrum;
 - (ii) have a maximum peak power no greater than -30.0 dBm or the equivalent transmission level; and
 - (iii) have a total radiated power spectral density of -75.0 dBm/MHz;
- (h) in the frequency band 3.4 GHz to 4.8 GHz when measured in any direction have—
- (i) a maximum mean power spectral density no greater than -50.0 dBm/MHz;
 - (ii) a maximum peak power no greater than -10.0 dBm or the equivalent transmission level; and
 - (iii) a total radiated power spectral density of -55.0 dBm/MHz;
- (i) in the frequency band 4.8 GHz to 5.0 GHz when measured in any direction have—
- (i) a maximum mean power spectral density no greater than -55.0 dBm/MHz;
 - (ii) a maximum peak power no greater than -15.0 dBm or the equivalent transmission level; and
 - (iii) a total radiated power spectral density below -65.0 dBm/MHz;
- (j) in the frequency band 5.0 GHz to 8.5 GHz when measured in any direction have—
- (i) a maximum mean power spectral density no greater than -50.0 dBm/MHz;
 - (ii) a maximum peak power no greater than -10.0 dBm or the equivalent transmission level; and
 - (iii) a total radiated power spectral density of -55.0 dBm/MHz; and
- (k) in the frequency bands above 8.5 GHz when measured in any direction have—
- (i) a maximum mean power spectral density no greater than -85.0 dBm/MHz;
 - (ii) a maximum peak power no greater than -45.0 dBm or the equivalent transmission level; and
 - (iii) a total radiated power spectral density of -90.0 dBm/MHz.