# UL – Wireless in the UK

## Supporting you Beyond Product Safety

With more and more products needing wireless capability to compete in a rapidly changing market place, UL can bring our experience of many wireless technologies to assist with your wireless testing requirements.

Not only do we provide approvals and certification testing for traditional markets such as the US, Canada and Europe but we have a dedicated Global Market Access team to help with your Global needs. UL provides the experience, facilities, and expertise to assist you in getting to market as smoothly as possible, avoiding costly mistakes close to product launch.





#### Who We Are

UL has over 20 years' of experience providing wireless and EMC approval testing in consumer electronics, IT equipment, household appliances, radio and telecommunications equipment, alarms and sensors, and vehicle components and systems. With in-depth expertise plus office facilities in over 60 countries, UL is strongly positioned to help you ensure compliance to your chosen market and country requirements.

#### **Rapid and Responsive Service**

With our highly responsive service, UL gives you the competitive turnaround time and comprehensive support you need to navigate your path over the regulatory hurdles for speedy market approval in your target markets. Knowing that your market success depends on timely acceptance, we respond to your inquiries within 24 hours.

UL's full-service RADIO labs are accredited and recognized by numerous regulatory agencies and governments in major markets including the United States, Europe, and Canada. UL is registered as a TCB/FCB for the US and Canada and is also a Notified Body for the EMC & R&TTE Directives (2004/108/EC & 1999/5/EC) for Europe. UL's RADIO testing facilities are accredited to allow us to test and certify to a wide range of markets.













### UL Basingstoke UKAS Accreditation - RADIO

| TEST  | STANDARD                        | TEST  | STANDARD                           |
|---|---------------------------------|---|------------------------------------|
|   | EN 300 390-1:V1.2.1:2001        |   | TB 94-046:1994                     |
|   | EN 300 390-2:V1.1.1:2000        |   | EN 302 291-1 V1.1.1 (2005-07)      |
|   | EN 300 440-2:V1.3.1:2009        |   | EN 302 291-2 V1.1.1 (2005-07)      |
| Accuracy and Stability of<br>Timing Parameters Adjacent<br>Channel Power to 90 dBc                                      | EN 300 440-1:V1.6.1:2010        |   | EN 302 326-1:V1.2.2:2007           |
|   | EN 300 440-2:V1.4.1:2010        |   | EN 302 326-2:V1.2.2:2007           |
| Adjacent Channel Selectivity<br>100 kHz to 40 GHz   | EN 300 086-1: V1.3.1:2008       |   | EN 302 502:V1.2.1 (2008-07)        |
|   | EN 300 086-2: V1.2.1:2008       |   | EN 302 625:V1.1.1 (2009-07)        |
| AF Response of Modulation<br>Frequencies > 50 Hz  | EN 300 113-1:V1.3.1:2001        |   | Annex 11 to the Ministerial        |
|   | EN 300 113-1:V1.6.2:2010        |   | Decree of 19th October 1979        |
| Amplitude Characteristics of<br>Receiver 9 kHz to 40 GHz<br>Bit Error Rate Measurements<br>Blocking and Desensitisation | EN 300 113-1:V1.6.2:2009        |   | relating to private                |
|   | EN 300 113-2:V1.4.2:2009        | Permitted Range of Operation  | radio-communications: Dec 1990     |
|   | EN 300 135-1:V1.2.1:2008        | Frequencies 9 Hz to 110 GHz   | TS 101 087:V8.9.0:2003             |
|   | EN 300 135-2:V1.2.1:2008        | Power Pice and /or Fall Time  | TS 151 021:V5.3.0:2003             |
|   | EN 300 219-1:V1.2.1:2001        | (transients) 30 MHz to 1 GHz  | FCC 47CFR2                         |
|   | EN 300 219-2:V1.1.1:2001        | Receiver Desensitisation 100  | FCC 47CFR15                        |
| Co-Channel Rejection  | EN 300 220-1:V2.4.1: 2012       | kHz to 110 GHz  | FCC 47CFR18                        |
|   | EN 300 220-2:V2.4.1:2012        | Reference (Receiver) Sensitivity  | FCC 47CFR22                        |
| Code Squelch 30 MHz to 1 GHz  | EN 300 224-1:V1.3.1:2001        | 9 kHz to 40 GHz   | FCC 47CFR24                        |
| Effective Receiver Sensitivity<br>100 kHz to 75 GHz   | EN 300 234:V1.3.2:2002          | Relative Humidity 20% to 75%<br>Selectivity 90 dB<br>Spurious Emissions<br>20 Hz to 170 GHz | FCC 47CFR25                        |
|   | EN 300 296-1:V1.3.1:2010-07     |   | FCC 47CFR27                        |
| Emissions - Conducted<br>100 Hz to 110 GHz  | EN 300 296-2:V1.3.1:2010-07     |   | FCC 47CFR90                        |
|   | EN 300 328:V1.8.1:2012          |   | FCC 47CFR101                       |
| Emissions - Effective Radiated<br>Power 9 kHz to 110 GHz  | EN 300 330-1:V1.7.1:2010        | Spurious Response Rejection<br>9 kHz to 110 GHz   | RSS-Gen Issue 3, Dec. 2010         |
|   | EN 300 330-2:V1.5.1:2010        |   | RSS-111 Issue 4, January 2012      |
| Frequency Error   | EN 300 422-1:V1.3.2:2008        | Temperature - 45 °C to 75 °C  | RSS-118 Issue 2, August 1990       |
| 9 KHZ to 110 GHZ  | EN 300 422-2:V1.2.2:2008        |   | RSS-119 Issue 10, April 2010       |
| Frequency Range   | EN 300 674:V1.1.1:1999          | 30 MHz to 1 GHz   | RSS-125 Issue 2, Rev 1, March 2000 |
| 9 KHZ to 170 GHZ  | EN 301 087:V8.2.0:2000          | Transmitter Carrier Power<br>10 µW to 2 kW  | RSS-130 Issue 1, October 2013      |
| Frequency Stability<br>9 kHz to 110 GHz   | EN 301 126-1 V1.1.2 (1999-09)   |   | RSS-131 Issue 2, July 2003         |
|   | EN 301 357-1:V1.4.1:2008        |   | RSS-132 Issue 3, January 2013      |
| Intermodulation Attenuation   | EN 301 357-2:V1.4.1:2008        | 30 MHz to 40 GHz  | RSS-133 Issue 6, January 2013      |
|   | EN 301 502:V8.1.2:2001          | Control & Monitoring  | RSS-137 Issue 2, February 2009     |
| Intermodulation Response  | EN 301 893:V1.6.1 (2011-11)     | Functions   | RSS-139 Issue 2, June 2009         |
| 9 kHz to 26.5 GHz   | EN 301 893:V1.7.1 (2012-06)     | Dynamic Frequency Selection (DFS).  | RSS-142 Issue 5, April 2013        |
| Maximum Frequency Deviation<br>9 kHz to 100 kHz   | EN 301 908-1:V5.2.1(2011-05)    |   | RSS-170 Issue 2, March 2011        |
|   | 3GPP TS 51.010-1 (12.2.x)       |   | RSS-191 Issue 3, April 2008        |
| Maximum Useable Sensitivity<br>9 kHz to 40 GHz  | EN 301 511 V9.0.2 (2003-03)     |   | RSS-199 Issue 1, January 2010      |
|   | EN 302 208-1 V1.1.1 (2004-09)   |   | RSS-195 Issue 1, January 1, 2004   |
| Modulation Distortion (SINAD)<br>30 MHz to 1 GHz  | EN 302 208-2 V1.1.1 (2004-09)   |   | RSS-210 Issue 8, December 2010     |
|   | EN 302 217-2-2 V2.1.1 (2013-07) |   | RSS-220 Issue 1, March 2009        |
| Modulation Frequency<br>Characteristics 50 Hz to 20 kHz   | EN 302 217-3:V1.3.1:(2009-07)   |   | ANSI C63.4:2009                    |
|   | EN 302 217-3 V2.1.1: (2013-07)  |   | ANSI C63.10:2009                   |
| Out of Band Power<br>9 Hz to 110 GHz  | Draft EN 302 217-3:V1.1.1:2003  |   | ANSI C63.17-2006                   |
|   | GSM 11.21:1995                  |   | ANSI/TIA-603-C:2004 excluding      |
|   | AS/NZS 4268:2003                |   | 2.3 & 2.4                          |
|   | AS/NZS 4281:1995                |   | SRSP-305.9 Issue 5                 |
|   | AS 4295:1995                    |   | SRSP-317.8 Issue 2                 |

Note: Details above are subject to change

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