

EMC Requirement V1.3 Telematics and Broadcast Performance Protection

MQ-7012

The following test requirement is to assist JLR in the assessment of radiated emissions in additional bands to those detailed in the JLR component EMC specification or using different measurement bandwidths.

The requirement relates to the RE310 (Radiated Emissions) and is in addition to those covered by EMC-CS-2010-JLR V1.2 or any earlier or different EMC specification to which you as a supplier are contracted.

The requirement is to **provide test results** in accordance with the test method detailed in EMC-CS-2010-JLR V1.2 RE310 using the test parameters detailed in Table 1 and Table 2. The limits should be included on test results for illustration purposes only. Upon completion of testing the results will be assessed against the limits detailed in Table 1 by JLR and further work may be requested on a case-by-case basis subject to agreement between JLR and the supplier.

Table 1: Additional frequency range coverage for RE310 radiated emissions measurements

| Service | Frequency (MHz) | BW (kHz) | QP | PK | AV |
|--------------------------------------|-----------------|----------|----|----|----|
| SW ¹ | 1.7-30 | 9 | 24 | | 12 |
| DAB III and TV Band III ² | 172-242 | 1000 | | 32 | 22 |
| TV Band IV/V ² | 470-890 | 1000 | | 44 | 29 |
| DAB L Band ² | 1447-1494 | 1000 | | 46 | 36 |
| SDARS ² | 2320-2345 | 1000 | | 46 | 36 |
| 4G ¹ | 703-803 | 1000 | | 46 | 36 |
| 4G ¹ | 791-821 | 1000 | | 46 | 36 |
| GSM 850 ¹ | 859-895 | 120 | | 32 | 12 |
| GSM 900 ¹ | 915-960 | 120 | | 32 | 12 |
| GLONAS GPS ¹ | 1585-1616 | 9 | | | 10 |
| GSM 1800 ¹ | 1805-1880 | 120 | | 34 | 14 |
| GSM 1900 ¹ | 1930-1995 | 120 | | 34 | 14 |
| 3G ¹ | 1900-2170 | 1000 | | 46 | 36 |
| WiFi ² | 2400-2500 | 1000 | | 46 | 36 |
| 4G ¹ | 2500-2690 | 1000 | | 46 | 36 |
| WiFi ¹ | 4915-5825 | 1000 | | 56 | 46 |

Note: Ambient measurements may not meet the '6dB below limit' criteria detailed in RE310 test method but shall be below the limit.

Table 2: Step sizes and measurement times for ranges detailed in Table 1

| BW (kHz) | PK | | AV | | QP | |
|----------|------------------------|-------------------------------|------------------------|-------------------------------|------------------------|-------------------------------|
| | Maximum Frequency Step | Minimum Measurement Time (ms) | Maximum Frequency Step | Minimum Measurement Time (ms) | Maximum Frequency Step | Minimum Measurement Time (ms) |
| 1 | ≤ 0.5 x BW | 50 | ≤ 0.5 x BW | 50 | - | - |
| 9 | ≤ 0.5 x BW | 50 | ≤ 0.5 x BW | 50 | ≤ 5 x BW | 1 |
| 120 | ≤ 0.5 x BW | 5 | ≤ 0.5 x BW | 5 | - | - |
| 1000 | ≤ 0.5 x BW | 50 | ≤ 0.5 x BW | 50 | - | - |

¹ Frequency bands not currently covered. New test coverage required.

² Frequency bands currently covered. Additional testing required using 1000 kHz bandwidth