

**Per Product Test – Application Form**

In order to apply to use the Digital Radio Tick Mark, applicants must complete (fill in) this form.

This form should be completed whilst referencing the ETSI specification - ETSI TS 103 461 V1.2.2.

For products based on Core Technology certified to ETSI TS 103 461 V1.2.2, Parts 1, 2 and 4 must be completed.

For products based on Core Technology certified to ETSI TS 103 461 V1.1.1, Part 3 must also be completed.

Name and address of the test facility

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Are you an accredited test house? Y / N (Please circle as appropriate)

UKAS accreditation number (if applicable) ……………………………………………………………..

Please note: If you are not accredited Digital Radio UK will be in touch with further questions.

Tolerances (examples for calculating measurement uncertainty are given in ETSI TS 103 461v1.2.2 Annex C, table C.1 (conducted) and table C.2 (radiated)):

* ……………………………
* ……………………………

|  |  |
| --- | --- |
| Company name: |  |
| Company address: |  |
| Tester name: |  |
| Email: |  |
| Phone number: |  |
| Date: |  |
| Time: |  |
| Location of test |  |
| Type of chamber used: |  |
| Make and model of receiver: |  |
| Serial number of receiver: |  |
| Any other information on the receiver: |  |

**Part 1: Product test for the user interface responses**

|  |  |  |
| --- | --- | --- |
| **TEST** | **Please circle as appropriate** | **DESCRIPTION OF RESULTS** |
| TS 103 461v1.2.2 clause 8.3.3  Test 1: Scan add new services | PASS / FAIL |  |
| TS 103 461v1.2.2 clause 8.3.4  Test 2: Play audio and view label for audio service | PASS / FAIL |  |
| TS 103 461v1.2.2 clause 8.3.5  Test 3: Dynamic label is displayed correctly  (Not applicable to in-vehicle products) | PASS / FAIL / N.A. |  |
| TS 103 461v1.2.2 clause 8.3.6  Test 4: Scan and add another ensemble | PASS / FAIL |  |
| TS 103 461v1.2.2 clause 8.3.7  Test 5: Select and play FM services | PASS / FAIL |  |
| TS 103 461v1.2.2 clause 8.3.8  Test 6: Switch to an alarm announcement | PASS / FAIL |  |
| TS 103 461v1.2.2 clause 8.3.9  Test 7 - Scan and add another ensemble with All Europe regional profile characters  (Only applicable to products under E.E.C.C ) | PASS / FAIL / N.A. |  |

**Part 2: Product test for radio performance**

Provide results for *either* conducted *or* radiated testing.

|  |  |  |
| --- | --- | --- |
| **TEST** | **Please circle as appropriate** | **DESCRIPTION OF RESULTS** |
| TS 103 461v1.2.2 clause 8.4.4.2  Conducted sensitivity test using Empirical method - 1 kHz tone, DAB+ audio, EEP-3A | PASS / FAIL | Provide detailed results using table C.3 – see below |
| TS 103 461v1.2.2 clause 8.4.4.3  Conducted sensitivity test using Empirical method - music stream, DAB audio, UEP-3 | PASS / FAIL | Provide detailed results using table C.3 – see below |
| TS 103 461v1.2.2 clause 8.4.5.2  Radiated sensitivity test using Empirical method - 1 kHz tone, DAB+ audio, EEP-3A | PASS / FAIL | Provide detailed results using table C.4 – see below |
| TS 103 461v1.2.2 clause 8.4.5.3  Radiated sensitivity test using Empirical method - music stream, DAB audio, UEP-3 | PASS / FAIL | Provide detailed results using table C.4 – see below |

# C.3 Conducted test result template

Table C.3: Conducted test result template

| Receiver Make Model and type and serial number  ………………………………………………………………………….. | | | | | | Mains voltage / Frequency  ……………………………………………. | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Date and time of test  ……………………………………………. | | | | Test personnel names:  ……………………………………………. | | Box Y. Measurement uncertainty value, (U.V.) Ytf in dB for 95% confidence:  ……………………………………………. | |
| List attached files / diagrams / Photos / video clips:  ……………………………………………. | | | | | | Other Calibration data / test equipment  ……………………………………………. | |
| Use Column C and D OR Column E and F | | | | | | | |
|  | A | B | C | | D | E | F |
| Test No. | Channel | Frequency (MHz) | Input power (dBm) using U.V. in Box X | | PASS / FAIL | Input power (dBm) using maximum allowed limit | PASS / FAIL |
| "Sine+", AAC, EEP-3A | | | | | | | |
| 1 | 5A | 174,928 | (-98,8+Ytf) | |  | -98,4 |  |
| 2 | 5B | 176,640 | (-98,8+Ytf) | |  | -98,4 |  |
| 3 | 5C | 178,352 | (-98,8+Ytf) | |  | -98,4 |  |
| 4 | 5D | 180,064 | (-98,8+Ytf) | |  | -98,4 |  |
| 5 | 6A | 181,936 | (-98,8+Ytf) | |  | -98,4 |  |
| 6 | 6B | 183,648 | (-98,8+Ytf) | |  | -98,4 |  |
| 7 | 6C | 185,360 | (-98,8+Ytf) | |  | -98,4 |  |
| 8 | 6D | 187,072 | (-98,8+Ytf) | |  | -98,4 |  |
| 9 | 7A | 188,928 | (-98,8+Ytf) | |  | -98,4 |  |
| 10 | 7B | 190,640 | (-98,8+Ytf) | |  | -98,4 |  |
| 11 | 7C | 192,352 | (-98,8+Ytf) | |  | -98,4 |  |
| 12 | 7D | 194,064 | (-98,8+Ytf) | |  | -98,4 |  |
| 13 | 8A | 195,936 | (-98,8+Ytf) | |  | -98,4 |  |
| 14 | 8B | 197,648 | (-98,8+Ytf) | |  | -98,4 |  |
| 15 | 8C | 199,360 | (-98,8+Ytf) | |  | -98,4 |  |
| 16 | 8D | 201,072 | (-98,8+Ytf) | |  | -98,4 |  |
| 17 | 9A | 202,928 | (-98,8+Ytf) | |  | -98,4 |  |
| 18 | 9B | 204,640 | (-98,8+Ytf) | |  | -98,4 |  |
| 19 | 9C | 206,352 | (-98,8+Ytf) | |  | -98,4 |  |
| 20 | 9D | 208,064 | (-98,8+Ytf) | |  | -98,4 |  |
| 21 | 10A | 209,936 | (-98,8+Ytf) | |  | -98,4 |  |
| 22 | 10B | 211,648 | (-98,8+Ytf) | |  | -98,4 |  |
| 23 | 10C | 213,360 | (-98,8+Ytf) | |  | -98,4 |  |
| 24 | 10D | 215,072 | (-98,8+Ytf) | |  | -98,4 |  |
| 25 | 11A | 216,928 | (-98,8+Ytf) | |  | -98,4 |  |
| 26 | 11B | 218,640 | (-98,8+Ytf) | |  | -98,4 |  |
| 27 | 11C | 220,352 | (-98,8+Ytf) | |  | -98,4 |  |
| 28 | 11D | 222,064 | (-98,8+Ytf) | |  | -98,4 |  |
| 29 | 12A | 223,936 | (-98,8+Ytf) | |  | -98,4 |  |
| 30 | 12B | 225,648 | (-98,8+Ytf) | |  | -98,4 |  |
| 31 | 12C | 227,360 | (-98,8+Ytf) | |  | -98,4 |  |
| 32 | 12D | 229,072 | (-98,8+Ytf) | |  | -98,4 |  |
| 33 | 13A | 230,784 | (-98,8+Ytf) | |  | -98,4 |  |
| 34 | 13B | 232,496 | (-98,8+Ytf) | |  | -98,4 |  |
| 35 | 13C | 234,208 | (-98,8+Ytf) | |  | -98,4 |  |
| 36 | 13D | 235,776 | (-98,8+Ytf) | |  | -98,4 |  |
| 37 | 13E | 237,488 | (-98,8+Ytf) | |  | -98,4 |  |
| 38 | 13F | 239,200 | (-98,8+Ytf) | |  | -98,4 |  |
| "OOI Music", MP2, UEP-3 | | | | | | | |
| 39 | 11C | 220,352 | (-97,7+Ytf) | |  | -97,3 |  |

# C.4 Radiated test result template

Table C.4: Radiated test result template

| Receiver Make Model and type and serial number  ………………………………………………………………………….. | | | | | | Mains voltage / Frequency  ……………………………………………. | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Date and time of test  ……………………………………………. | | | | Test personnel names:  ……………………………………………. | | Box X. Measurement uncertainty value, (U.V.) Xtf in dB for 95% confidence:  ……………………………………………. | |
| List attached files / diagrams / Photos / video clips:  ……………………………………………. | | | | | | Other Calibration data / test equipment  ……………………………………………. | |
| Use Column C and D OR Column E and F | | | | | | | |
|  | A | B | C | | D | E | F |
| Test No. | Channel | Frequency (MHz) | Field strength (dBµV/m) using U.V. in Box X | | PASS / FAIL | Field strength (dBµV/m) using maximum allowed limit | PASS / FAIL |
| "Sine+", AAC, EEP-3A | | | | | | | |
| 1 | 5A | 174,928 | (31,3 + Xtf) | |  | 35,3 |  |
| 2 | 5B | 176,640 | (31,4 + Xtf) | |  | 35,4 |  |
| 3 | 5C | 178,352 | (31,5 + Xtf) | |  | 35,5 |  |
| 4 | 5D | 180,064 | (31,6 + Xtf) | |  | 35,6 |  |
| 5 | 6A | 181,936 | (31,6 + Xtf) | |  | 35,6 |  |
| 6 | 6B | 183,648 | (31,7 + Xtf) | |  | 35,7 |  |
| 7 | 6C | 185,360 | (31,8 + Xtf) | |  | 35,8 |  |
| 8 | 6D | 187,072 | (31,9 + Xtf) | |  | 35,9 |  |
| 9 | 7A | 188,928 | (32,0 + Xtf) | |  | 36,0 |  |
| 10 | 7B | 190,640 | (32,1 + Xtf) | |  | 36,1 |  |
| 11 | 7C | 192,352 | (32,1 + Xtf) | |  | 36,1 |  |
| 12 | 7D | 194,064 | (32,2 + Xtf) | |  | 36,2 |  |
| 13 | 8A | 195,936 | (32,3 + Xtf) | |  | 36,3 |  |
| 14 | 8B | 197,648 | (32,4 + Xtf) | |  | 36,4 |  |
| 15 | 8C | 199,360 | (32,4 + Xtf) | |  | 36,4 |  |
| 16 | 8D | 201,072 | (32,5 + Xtf) | |  | 36,5 |  |
| 17 | 9A | 202,928 | (32,6 + Xtf) | |  | 36,6 |  |
| 18 | 9B | 204,640 | (32,7 + Xtf) | |  | 36,7 |  |
| 19 | 9C | 206,352 | (32,7 + Xtf) | |  | 36,7 |  |
| 20 | 9D | 208,064 | (32,8 + Xtf) | |  | 36,8 |  |
| 21 | 10A | 209,936 | (32,9 + Xtf) | |  | 36,9 |  |
| 22 | 10B | 211,648 | (33,0 + Xtf) | |  | 37,0 |  |
| 23 | 10C | 213,360 | (33,0 + Xtf) | |  | 37,0 |  |
| 24 | 10D | 215,072 | (33,1 + Xtf) | |  | 37,1 |  |
| 25 | 11A | 216,928 | (33,2 + Xtf) | |  | 37,2 |  |
| 26 | 11B | 218,640 | (33,2 + Xtf) | |  | 37,2 |  |
| 27 | 11C | 220,352 | (33,3 + Xtf) | |  | 37,3 |  |
| 28 | 11D | 222,064 | (33,4 + Xtf) | |  | 37,4 |  |
| 29 | 12A | 223,936 | (33,5 + Xtf) | |  | 37,5 |  |
| 30 | 12B | 225,648 | (33,5 + Xtf) | |  | 37,5 |  |
| 31 | 12C | 227,360 | (33,6 + Xtf) | |  | 37,6 |  |
| 32 | 12D | 229,072 | (33,7 + Xtf) | |  | 37,7 |  |
| 33 | 13A | 230,784 | (33,7 + Xtf) | |  | 37,7 |  |
| 34 | 13B | 232,496 | (33,8 + Xtf) | |  | 37,8 |  |
| 35 | 13C | 234,208 | (33,8 + Xtf) | |  | 37,8 |  |
| 36 | 13D | 235,776 | (33,9 + Xtf) | |  | 37,9 |  |
| 37 | 13E | 237,488 | (34,0 + Xtf) | |  | 38,0 |  |
| 38 | 13F | 239,200 | (34,0 + Xtf) | |  | 38,0 |  |
| "OOI Music", MP2, UEP-3 | | | | | | | |
| 39 | 11C | 220,352 | (34,4 + Xtf) | |  | 38,4 |  |

**Part 3: Additional testing for products using V1 Core Technology**

|  |  |  |
| --- | --- | --- |
| **ALARM TESTS (ALL PRODUCTS)** TS 103 461v1.2.2 clause 7.10 | **Please circle as appropriate** | **DESCRIPTION OF RESULTS** |
| Test 10.1.1 | PASS / FAIL |  |
| Test 10.1.2 | PASS / FAIL |  |
| Test 10.1.3 | PASS / FAIL |  |
| Test 10.1.4  Applicable to in-vehicle products only | PASS / FAIL / N.A. |  |
| Test 10.1.5 | PASS / FAIL |  |

|  |  |  |
| --- | --- | --- |
| **SERVICE FOLLOWING TESTS (APPLICABLE TO IN-VEHICLE PRODUCTS ONLY)** TS 103 461v1.2.2 clause 7.9 | **Please circle as appropriate** | **DESCRIPTION OF RESULTS** |
| Test 9.1.4 | PASS / FAIL / N.A. |  |
| Test 9.1.5 | PASS / FAIL / N.A. |  |
| Test 9.2.5 | PASS / FAIL / N.A. |  |

**Part 4: Declaration of Conformity**

*I*

*................................ ................................*

*(Job title: ............................................................. )*

*Representing the organisation:*

*...................................................................................................................................................*

*Declare that the following product (make and model):*

*...................................................................................................................................................*

*Uses the following technology provider chipset and software:*

*...................................................................................................................................................*

*Has completed and passed the Digital Radio Per Product Test.*

*Signed .............................................................*

Date …………………………………………………………