



IMQ S.p.A. – Società con Socio Unico  
Via Quintiliano, 43 I-20138 MILANO  
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# COVER LETTER

## Request For Transmitter Module Equipment Authorization

### No. ARSP00054

performed in accordance with  
FCC Rules: Code of Federal Regulations (CFR) no. 47  
Part 15 Subpart C Section 15.212

|                        |                    |
|------------------------|--------------------|
| <b>PRODUCT</b>         | RF Module          |
| <b>MODEL(s) TESTED</b> | SPBTLE-RF          |
| <b>FCC ID</b>          | S9NSPBTLERF        |
| <b>TRADE MARK(s)</b>   | STMicroelectronics |

|                  |  |
|------------------|--|
| <b>APPLICANT</b> | STMicroelectronics S.r.l. – Centro Direzionale Colleoni - Palazzo Andromeda 3<br>I-20864 Agrate Brianza (MB) |
|------------------|--|

|             |   |  |
|-------------|---|--|
| Tested by   | Emanuela Franchina                          |  |
| Approved by | Roberto Colombo <i>[Laboratory manager]</i> |  |

#### Revision Sheet

| Release No. | Date       | Revision Description |
|-------------|------------|----------------------|
| Rev. 0      | 2015-05-05 | First edition        |

The results of tests and checks reported in this Test Report refer exclusively to the samples tested and described in the Report itself.  
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## 1. REFERENCE DOCUMENT

|                                     | DOCUMENT                      | DATE | TITLE  |
|-------------------------------------|-------------------------------|------|--|
| <input checked="" type="checkbox"/> | 47 CFR Part 15                | 2014 | Radio Frequency Device                           |
| <input checked="" type="checkbox"/> | Publication Number:<br>996369 | 2013 | Transmitter Module Equipment Authorization Guide |
| <input checked="" type="checkbox"/> | PUBLIC NOTE<br>DA 00-1407     | 2000 | Part 15 Unlicensed Modular Transmitter Approval  |

## 2. MODULE-TYPE DEVICE APPROVAL OPTIONS

|                                     |   |   |
|-------------------------------------|---|---|
| <input checked="" type="checkbox"/> | <b>Single-modular transmitter</b>         | complete RF transmission sub-assembly, designed to be incorporated into another device, that must demonstrate compliance with FCC rules and policies independent of any host  |
| <input type="checkbox"/>            | <b>Limited single-modular transmitter</b> | single-modular transmitter that complies with the Section 15.212(a)(1) modular rules, only when constrained to specific operating host(s) and/or associated grants condition(s)   |
| <input type="checkbox"/>            | <b>Limited single-modular transmitter</b> | RF transmission system that complies with the requirements for a single-modular transmitter, that is separated into a radio front-end section and a control element section, and can demonstrate compliance for a range of similar type hosts |
| <input type="checkbox"/>            | <b>Limited split-modular transmitter</b>  | split-modular transmitter that complies with the definition and technical rules for split modules only when constrained to specific operating host(s), and/or associated grant condition(s)   |



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### 3. REQUIREMENTS

| POSSIBLE TEST CASE VERDICTS                 |      |
|---|------|
| Test object does meet the requirement       | PASS |
| Test object does not meet the requirement   | FAIL |
| Test case does not apply to the test object | N/A  |

|       | Requirement   | Description  | Result |
|-------|---|--|--------|
| (i)   | The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.   | The radio module elements have their own shielding.  | PASS   |
| (ii)  | The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15 requirements under conditions of excessive data rates or over-modulation.  | The radio transmitter has buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15 requirements under conditions of excessive data rates or over-modulation. | PASS   |
| (iii) | The modular transmitter must have its own power supply regulation.  | The radio module contains an own voltage regulation  | PASS   |
| (iv)  | The modular transmitter must comply with the antenna and transmission system requirements of §15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a “unique” antenna coupler (at all connections between the module and the antenna, including the cable). The “professional installation” provision of §15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section. | The module complies with the antenna and transmission system requirements of §15.203, 15.204(b) and 15.204(c).<br>Permanently attached antenna.  | PASS   |



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|        |   |  |      |
|--------|---|--|------|
| (v)    | <p>The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in §15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see §15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see §15.31(i)).</p> | <p>The radio module meet the requirements under the operating conditions in which the transmitter will be use.<br/>The modular transmitter was tested in a stand-alone configuration (the module was not inside another device during testing for compliance with part 15 requirements, DC power lines and data input/output lines connected to the module not contain ferrites, no coupling was present between the case of the module and supporting equipment). Any accessories, peripherals, or support equipment connected to the module during testing were unmodified and commercially available.</p> | PASS |
| (vi)   | <p>The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.</p>  | <p>The radio module is labeled with its own FCC ID number.<br/>When the radio module is installed inside the end-product, the label is not visible. The end-user/integrator is instructed how to apply the exterior label.</p>   | PASS |
| (vii)  | <p>The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.</p>  | <p>The radio module is compliant with all applicable specific FCC rules or operating requirements that ordinarily apply to a complete transmitter.<br/>Detailed instruction are provided with the module to explain any such requirements.</p>   | PASS |
| (viii) | <p>The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.</p>   | <p>The modular transmitter comply with any applicable RF exposure requirements in its final configuration.</p>   | PASS |