

Agenda Item: 8.7
Source: Nokia
Title: Proposal for Receiver spurious response measurement
Document for: Approval

1. Introduction

TS25.141 BS Radio transmission and Reception document clause 7.8 gives requirements for the receiver spurious response. Nokia has proposed Spurious response measurement method for this requirement in this document.

2. Text proposal

7.8 Spurious Emissions

7.8.1 Definition and applicability

The spurious emissions power is the power of emissions generated or amplified in a receiver that appears at the BS antenna connector. The requirements and this test apply to all types of UTRA for the BS. The conditions for measurement: TX off, RX on, functionality of the Base station should be maintained during the test.

7.8.2 Conformance requirements

The spurious emission shall be:

- (a) Less than -78 dBm/3.84 MHz at the BS antenna connector, for frequencies within the BS receive band.
- (b) Less than -57 dBm/100 kHz at the BS antenna connector, for frequencies band from 9 kHz to 1 GHz.
- (c) Less than -47 dBm/100 kHz at the BS antenna connector, for frequencies band from 1 GHz to 12.75 GHz.

The reference for this requirement is TS 25.104 clause 7.8.1.

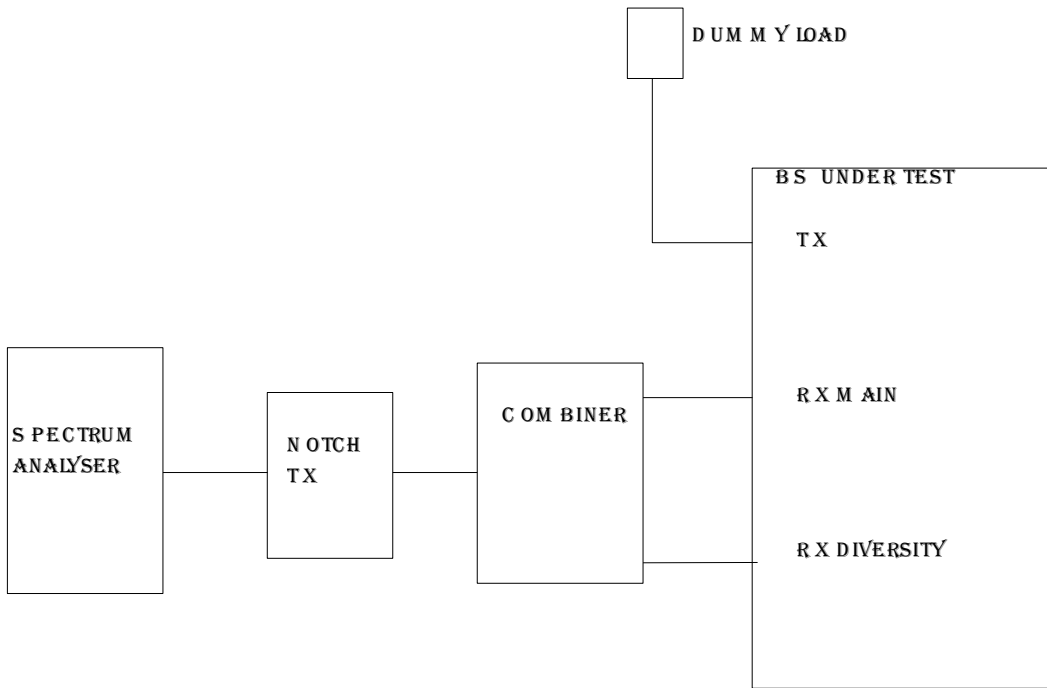
7.8.3 Test purpose

To verify that the BS spurious emission meets the specifications described in clause 7.8.2.

7.8.4 Method of test

7.8.4.1 Initial conditions

- (1) Connect a spectrum analyzer (or other suitable test equipment) to the BS antenna connector as shown in Figure 7.8.1
- (2) Enable the BS receiver and set Control channel on (The Channel(s) TBD) .



7.8.4.2 Procedure

- (1) Set measurement equipment parameters as specified in table 7.8.4.2
- (2) Sweep the spectrum analyzer (or other suitable test equipment) over a frequency range from the lowest intermediate frequency or lowest oscillator frequency used in the receiver or 1 MHz, whichever is lowest to at least 3 times the carrier frequency.

Table 7.8.4.2

<u>RBW</u>	<u>3.84 MHz / 100 kHz¹</u>
<u>VBW</u>	<u>3.84 MHz / 100 kHz</u>
<u>Sweep time</u>	<u>TBD</u>
<u>Sweep frequency range</u>	<u>9 kHz – 3*Carrier frequency</u>
<u>Detection</u>	<u>True RMS</u>

¹ See the section 7.8.2, where suitable BW's are defined

7.8.5 Test requirements

The all measured spurious emissions, derived in step (2), shall be within requirement limits as specified in clause 7.8.2

3. Conclusion

Receiver spurious response measurement has been proposed to be used in TS25.141.