**3GPP TSG-RAN WG4 Meeting # 116 R4-2511434**

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**Source:** Ericsson, Sony

**Title:** A-IoT device requirement overview

**Agenda item:** 7.22.3.2

**Document for:** Discussion

# Introduction

In this paper, the TP for backscatter power loss is proposed.

# TP proposal

6.2 Transmitter power

### 6.2.1 Device backscatter power

Backscatter power is the amount of power reflected back from the device when the incident CW signal is modulated by the device. The backscatter power is defined as mean filtered power measured over the duration of the D2R signal. Among the spectral components of the D2R signal, only the 1st lower sideband and 1st upper sideband are included, but not the carrier itself. The backscatter loss is defined as the difference between the input CW power at the device antenna in dB scale to the backscatter power at the device antenna in dB scale.

The backscatter power is measured with the test metric of EIRP as specified in clause 8.2.1. The minimum requirement on basckscatter loss in Table 6.2.1.1-1 shall be met with the test parameters defined in Annex X, at the peak antenna gain direction declared by the device vendor.

Table 6.2.1.1-1: Maximum allowable backscatter loss

|  |  |  |  |
| --- | --- | --- | --- |
| Operating band | Maximum backscatter loss (dB) | | CW power at the device antenna (dBm) |
| n8 | OOK | 10 | -27 |
| BPSK | 6 |
| OOK | 15 | -10 |
| BPSK | 11 |

Annex X (normative):

The test configuration for backscattering loss

The test configuration in Table X.1-1 is defined to be used for testing the backscattering loss requirement defined in section 6.2.1