



AUBURN

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UNIVERSITY

RFID LAB

**TAGGED CATEGORY PERFORMANCE SPECIFICATION**

**E4**

**VERSION 0.5**

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## TABLE OF CONTENTS

|                                   |          |
|-----------------------------------|----------|
| <b>1 Test Overview .....</b>      | <b>3</b> |
| <b>2 Read Sensitivity .....</b>   | <b>4</b> |
| 2.1 Single Inlay on ARC_TM9 ..... | 5        |

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## 1 TEST OVERVIEW

|                                     |                                                                                              |
|-------------------------------------|----------------------------------------------------------------------------------------------|
| Prerequisite                        | ARC Quality certification of inlay manufacturer                                              |
| Equipment                           | ARC Benchmarking Equipment Document                                                          |
| Test process                        | ARC Benchmarking Methodology Document                                                        |
| Distance between antennas and inlay | Antenna 1: 1.5 meter<br>Antenna 2: 1.5 meter<br>Antenna 3: 1.5 meter<br>Antenna 4: 1.5 meter |
| Test configurations                 | Single Inlay on ARC_TM9                                                                      |



## 2 READ SENSITIVITY

The inlay should meet the following read sensitivity (dBm) requirements in the following test configurations through the frequency range. All the inlay samples tested should meet the minimum requirements. It is noted that the sensitivity is calculated at the tag by calibrating the measured power at the transmitter with the loss/gain during transmission.

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## 2.1 Single Inlay on ARC\_TM9

Frequency 865 MHz to 868 MHz in steps of 1 MHz

|                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|
| Position 0 Ant 1    | Position 0: Ant 2   | Position 0: Ant 3   | Position 0: Ant 4   |
| -5                  | -15                 | -15                 | -16.5               |
| Position 30: Ant 1  | Position 30: Ant 2  | Position 30: Ant 3  | Position 30: Ant 4  |
| NA                  | NA                  | NA                  | -12                 |
| Position 60: Ant 1  | Position 60: Ant 2  | Position 60: Ant 3  | Position 60: Ant 4  |
| NA                  | NA                  | NA                  | -8                  |
| Position 120: Ant 1 | Position 120: Ant 2 | Position 120: Ant 3 | Position 120: Ant 4 |
| NA                  | NA                  | NA                  | -8                  |
| Position 150: Ant 1 | Position 150: Ant 2 | Position 150: Ant 3 | Position 150: Ant 4 |
| NA                  | NA                  | NA                  | -11                 |
| Position 180: Ant 1 | Position 180: Ant 2 | Position 180: Ant 3 | Position 180: Ant 4 |
| -6                  | -15                 | -15                 | -16.5               |
| Position 210: Ant 1 | Position 210: Ant 2 | Position 210: Ant 3 | Position 210: Ant 4 |
| NA                  | NA                  | NA                  | -12                 |
| Position 240: Ant 1 | Position 240: Ant 2 | Position 240: Ant 3 | Position 240: Ant 4 |
| NA                  | NA                  | NA                  | -8                  |
| Position 300: Ant 1 | Position 300: Ant 2 | Position 300: Ant 3 | Position 300: Ant 4 |
| NA                  | NA                  | NA                  | -8                  |
| Position 330 Ant 1  | Position 330: Ant 2 | Position 330: Ant 3 | Position 330: Ant 4 |
| NA                  | NA                  | NA                  | -12                 |