



AUBURN

UNIVERSITY

TAGGED CATEGORY PERFORMANCE SPECIFICATION

CATEGORY D

VERSION 1

Copyright © 2010-2014 ARC

Contact information:

RFID Lab
Auburn University
Auburn, AL 36849
rfidlab@auburn.edu



TABLE OF CONTENTS

1. Test specification	3
1.1 Test Overview.....	3
1.2 Inlay Performance Specification.....	4
1.2.1 Standard Test - Single Inlay on Cardstock	5
1.2.2 Standard Test - Multi Inlay Proximity Test with 2.54 cm Spacing	6
Appendix A: Test Material Used In Test Configurations	7



1. TEST SPECIFICATION

1.1 Test Overview

Equipment	ARC Benchmarking Equipment Document
Test process	ARC Benchmarking Methodology Document
Frequency	902 Mhz to 928 MHz in steps of 1 MHz
Distance between antennas and inlay	Antenna 1: 1.5 meter Antenna 2: 1.5 meter Antenna 3: 1.5 meter Antenna 4: 1.5 meter
Sensitivity at Receiver	-70 dBm
Standard test configurations	Single Inlay on Cardstock Multi Inlay Proximity Test with 2.54cm Spacing (Please refer ARC Benchmarking Methodology)



1.2 Inlay Performance Specification

The inlay should meet the following read sensitivity requirements in the following test configurations through the frequency range. All of 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 during transmission. For all the measurements, the sensitivity at the receiver was -80 dBm.



1.2.1 Standard Test - Single Inlay on Cardstock

Position 0 Ant 1	Position 0: Ant 2	Position 0: Ant 3	Position 0: Ant 4
-11	-11	-11	-11
Position 30: Ant 1	Position 30: Ant 2	Position 30: Ant 3	Position 30: Ant 4
-9	-9	-8.5	-8
Position 60: Ant 1	Position 60: Ant 2	Position 60: Ant 3	Position 60: Ant 4
-2.5	-2.5	-1	3.5
Position 120: Ant 1	Position 120: Ant 2	Position 120: Ant 3	Position 120: Ant 4
-2.5	-2.5	-1	3.5
Position 150: Ant 1	Position 150: Ant 2	Position 150: Ant 3	Position 150: Ant 4
-9	-9	-8.5	-8
Position 180: Ant 1	Position 180: Ant 2	Position 180: Ant 3	Position 180: Ant 4
-11	-11	-11	-11
Position 210: Ant 1	Position 210: Ant 2	Position 210: Ant 3	Position 210: Ant 4
-9	-9	-8.5	-8
Position 240: Ant 1	Position 240: Ant 2	Position 240: Ant 3	Position 240: Ant 4
-2.5	-2.5	-1	3.5
Position 300: Ant 1	Position 300: Ant 2	Position 300: Ant 3	Position 300: Ant 4
-2.5	-2.5	-1	3.5
Position 330 Ant 1	Position 330: Ant 2	Position 330: Ant 3	Position 330: Ant 4
-9	-9	-8.5	-8

Confidentiality: This document is intended solely for the individual or entity to whom it was directly provided by ARC.



1.2.2 Standard Test - Multi Inlay Proximity Test with 2.54 cm Spacing

Position 0 Ant 1	Position 0: Ant 2	Position 0: Ant 3	Position 0: Ant 4
1	-4	-6	-1
Position 30: Ant 1	Position 30: Ant 2	Position 30: Ant 3	Position 30: Ant 4
5	-2	-4	2
Position 150: Ant 1	Position 150: Ant 2	Position 150: Ant 3	Position 150: Ant 4
5	-2	-4	2
Position 180: Ant 1	Position 180: Ant 2	Position 180: Ant 3	Position 180: Ant 4
1	-4	-6	-1
Position 210: Ant 1	Position 210: Ant 2	Position 210: Ant 3	Position 210: Ant 4
5	-2	-4	2
Position 330 Ant 1	Position 330: Ant 2	Position 330: Ant 3	Position 330: Ant 4
5	-2	-4	2

Confidentiality: This document is intended solely for the individual or entity to whom it was directly provided by ARC.



APPENDIX A: TEST MATERIAL USED IN TEST CONFIGURATIONS

Cardstock

Size: 27.94 cm x 21.59 cm (11 inch x 8.5 inch)

http://www.staples.com/product_490887

