



## ATTACHMENT J: RFID TEST RESULTS

This section presents the partially reduced data resulting from the tests. The definition of the test configurations is given in Figure 4-9 (parts A and B).

Section J.1 presents the (b)(4) test results for most test configurations.

Section J.2 presents the (b)(4) test results for the extended run test configurations.

Section J.3 presents the (b)(4) test results for most test configurations.

Section J.4 presents the (b)(4) test results for the extended run test configurations.



## Attachment J: RFID Test Results – Data

This section presents the partially reduced data resulting from the tests. The definition of the test configurations is given in Figure 3-9 (parts A and B). The full set of data from the tests exists in a database that is available for further analysis. Each row in the tables presented below represents the results of one test configuration. The statistics reported are for all runs of the configuration, for all tags carried in all of the vehicles during the test.

Figure J-1 contains reduced test results for the (b)(4) non-extended run test configurations.

**Figure J-1 (b)(4) Test Results by Test Configuration ID - Non-Extended Test Configuration Cases.**

Configuration ID	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1			0.02	0.04	0.50	0.07
2			0.82	0.04	0.78	0.08
3			0.02	0.04	0.46	0.05
4			0.74	0.13	0.84	0.11
5			0.06	0.05	0.46	0.05
6			0.74	0.05	0.68	0.08
7			0.00	0.00	0.60	0.22
8			0.10	0.22	1.00	0.00
9			0.10	0.14	0.80	0.11
10			0.20	0.21	0.90	0.14
11			0.24	0.05	0.80	0.11
12			0.12	0.08	0.52	0.11
13			0.30	0.00	0.32	0.04
14			0.26	0.05	0.28	0.04
15			0.16	0.09	0.80	0.14
16			0.92	0.11	0.72	0.23
17			0.08	0.11	0.36	0.09
18			0.56	0.17	0.80	0.14
19			0.00	0.00	0.66	0.09
20			0.62	0.08	0.86	0.11
21			0.04	0.05	0.66	0.11
22			0.54	0.05	0.78	0.08
23			0.02	0.04	0.82	0.08
24			0.56	0.11	0.80	0.00



**Smart Border Alliance  
RFID Feasibility Study Final Report**

Configuration ID	Part 15		Overhead Part 90		Side Fire Part 90	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
25			0.24	0.11	0.54	0.05
26			0.10	0.00	0.14	0.05
27			0.32	0.04	0.68	0.22
28			0.00	0.00	0.04	0.05
29			0.16	0.09	0.14	0.09
30			0.42	0.04	0.50	0.07
31			0.44	0.05	0.56	0.05
32			0.38	0.11	0.50	0.07
33			0.38	0.04	0.50	0.10
34			0.00	0.00	0.64	0.10
35			0.56	0.11	0.64	0.32
36			0.30	0.07	0.80	0.07
37			0.20	0.00	0.16	0.09
38			0.18	0.04	0.88	0.15
39			0.76	0.09	0.78	0.06
40			0.64	0.04	0.72	0.07
41			0.36	0.07	0.63	0.06
42			0.37	0.01	0.57	0.11
43			0.00	0.00	0.86	0.09
44			0.72	0.09	0.92	0.04
45			0.00	0.00	0.79	0.07
46			0.66	0.08	0.85	0.09
47			0.00	0.00	0.34	0.05
48			0.36	0.11	0.54	0.09
49			0.00	0.00	0.84	0.05
50			0.04	0.05	0.50	0.10
51			0.56	0.05	0.76	0.09
52			0.44	0.11	0.48	0.12
55	0.50	0.00				
56	0.80	0.27				
57	0.33	0.13				
58	0.80	0.27				
59	0.33	0.52				



Smart Border Alliance  
RFID Feasibility Study Final Report

Configuration ID	Part 15		Overhead Part 90		Side Fire Part 90	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
60	1.00	0.00				
61	0.20	0.27				
62	1.00	0.00				
63	0.20	0.27				
64	0.60	0.22				
65	0.76	0.05				
66	0.58	0.22				
67	0.15	0.22				
68	0.70	0.21				
69	0.52	0.12				
70	0.82	0.18				
71	0.44	0.15				
72	0.52	0.16				
73	0.38	0.18				
74	0.54	0.18				
75	0.48	0.13				
76	0.54	0.05				
77	0.08	0.08				
78	0.06	0.05				
79	0.00	0.00				
80	0.26	0.05				
81	0.12	0.08				
82	0.16	0.05				
83	0.04	0.05				
84	0.13	0.10				
85	0.20	0.14				
86	0.38	0.13				
87	0.32	0.13				
88	0.18	0.05				
89	0.14	0.11				
90	0.08	0.08				
91	0.60	0.12				
92	0.14	0.09				



Configuration ID	Part 15		Overhead Part 90		Side Fire Part 90	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
93	0.58	0.18				
94	0.06	0.09				
95	0.40	0.16				
96	0.18	0.13				
97	0.46	0.13				
98	0.20	0.06				
113	0.30	0.				
114	0.35	0.07				
117			0.80	0.		
118			0.48	0.28	0.56	0.32

Figure J-1 (b)(4) Test Results by Test Configuration ID - Non-Extended Test Configuration Cases.

Figure J-2 contains reduced test results for the (b)(4) extended run test configurations.

Configuration ID	Part 15		Overhead Part 90		Side Fire Part 90	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
53			0.65	0.13	0.88	0.13
54			0.78	0.23	0.80	0.14

Figure J-2 (b)(4) Test Results by Test Configuration ID - Extended Test Configuration Cases.



Figure J-3 contains reduced test results for the (b)(4) extended run test configurations.

**Figure J-3 (b)(4) Test Results by Test Configuration ID - Extended Test Configuration Cases.**

Configuration ID					Mean	Standard Deviation
1			0.92	0.11	1.00	0.00
2			1.00	0.00	1.00	0.00
3			0.84	0.17	0.96	0.09
4			1.00	0.00	1.00	0.00
5			0.94	0.05	1.00	0.00
6			1.00	0.00	1.00	0.00
7			0.90	0.07	1.00	0.00
8			0.98	0.04	0.99	0.03
9			0.90	0.08	0.99	0.03
10			0.98	0.04	1.00	0.00
11			0.81	0.03	0.97	0.05
12			0.94	0.07	0.99	0.03
13			1.00	0.00	0.80	0.27
14			1.00	0.00	1.00	0.00
15			0.90	0.14	0.90	0.14
16			1.00	0.00	1.00	0.00
17			0.94	0.09	0.98	0.04
18			0.74	0.13	0.96	0.09
19			1.00	0.00	1.00	0.00
20			1.00	0.00	1.00	0.00
21			0.90	0.12	1.00	0.00
22			0.66	0.11	0.88	0.08
23			0.76	0.15	0.90	0.00
24			0.70	0.07	0.80	0.00
25			0.66	0.09	0.76	0.05
26			0.48	0.04	0.78	0.08
27			0.50	0.00	0.84	0.05
28			0.81	0.06	0.89	0.02
29			0.84	0.12	0.80	0.10
30			0.82	0.07	0.85	0.09
31			0.83	0.09	0.81	0.06



**Smart Border Alliance  
RFID Feasibility Study Final Report**

Configuration ID	Part 15		Overhead Part 90		Side Fire Part 90	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
32			0.86	0.09	0.98	0.04
33			0.96	0.05	1.00	0.00
34			0.81	0.09	0.94	0.05
35			0.93	0.08	1.00	0.00
36			0.78	0.15	0.93	0.05
37			0.92	0.06	1.00	0.00
38			0.77	0.09	0.94	0.07
39			0.94	0.05	0.97	0.05
40			0.75	0.10	1.00	0.00
41			1.00	0.00	1.00	0.00
43			0.72	0.13	0.94	0.09
44			0.68	0.13	1.00	0.00
45			0.92	0.08	1.00	0.00
46			0.96	0.05	1.00	0.00
47			0.90	0.12	1.00	0.00
48			0.72	0.13	0.98	0.04
49			0.80	0.14	1.00	0.00
50			0.66	0.09	0.80	0.00
51			0.66	0.05	0.78	0.04
54			0.42	0.08	0.78	0.04
55			0.00	0.00	0.00	0.00
56	0.50	0.00				
57	0.90	0.22				
58	0.10	0.14				
59	1.00	0.00				
60	0.10	0.22				
61	0.90	0.22				
62	0.20	0.27				
63	1.00	0.00				
64	0.40	0.22				
65	0.80	0.27				
66	0.45	0.11				
67	0.40	0.14				



Smart Border Alliance  
RFID Feasibility Study Final Report

Configuration ID	Part 15		Overhead Part 90		Side Fire Part 90	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
68	0.38	0.13				
69	0.77	0.13				
70	0.26	0.15				
71	0.72	0.08				
72	0.44	0.05				
73	0.83	0.12				
74	0.56	0.09				
75	0.58	0.08				
76	0.42	0.04				
77	0.70	0.14				
78	0.42	0.15				
79	0.16	0.05				
80	0.56	0.11				
81	0.24	0.05				
82	0.20	0.07				
83	0.42	0.08				
84	0.46	0.05				
85	0.48	0.04				
86	0.50	0.00				
87	0.52	0.18				
88	0.98	0.04				
89	0.50	0.20				
90	1.00	0.00				
91	0.48	0.13				
92	0.96	0.05				
93	0.52	0.08				
94	0.96	0.05				
95	0.50	0.07				
96	0.96	0.05				
97	0.52	0.04				
98	0.26	0.11				
99	0.92	0.08				
100	0.36	0.13				





	Part 15		Overhead Part 90		Side Fire Part 90	
Configuration ID	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
101	0.14	0.13				

Figure J-3 (b)(4) Test Results by Test Configuration ID - Extended Test Configuration Cases.

Figure J-4 contains reduced test results for the (b)(4) extended run test configurations.

	Part 15		Overhead Part 90		Side Fire Part 90	
Configuration ID	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
52			0.98	0.05	1.00	0.00
53			0.88	0.05	1.00	0.00

Figure J-4 (b)(4) Test Results by Test Configuration ID - Extended Test Configuration Cases.