


Channel 5250 MHz, 160MHz BW, USA Bin 4 Radar Statistical Performance

Trial	Frequency	Pulses	PW (uS)	PRI (uS)	1=Detection 0=No Detection	Detection Percentage	Limit
1	5175	13	11.5	393	1	76.7%	60.0%
2	5175	14	16.9	258	1		
3	5175	13	16.6	484	1		
4	5175	13	17.1	424	1		
5	5175	13	12.1	396	0		
6	5180	15	11.7	429	0		
7	5180	16	15.4	398	1		
8	5180	16	14.1	205	1		
9	5180	16	17.6	207	1		
10	5180	15	19	487	1		
11	5200	13	18.9	429	0		
12	5200	16	19.4	491	1		
13	5200	12	12.8	334	0		
14	5200	14	14.8	437	1		
15	5200	13	13.7	229	1		
16	5220	15	14	409	1		
17	5220	15	15.7	312	1		
18	5220	12	12	245	1		
19	5220	14	11.8	251	1		
20	5220	15	12	473	1		
21	5240	15	13.9	229	1		
22	5240	16	19.9	326	0		
23	5240	16	17.4	435	0		
24	5240	13	19.1	444	1		
25	5240	12	18.5	410	1		
26	5250	15	12.5	237	0		
27	5250	15	14.5	368	1		
28	5250	13	15	438	1		
29	5250	14	15	271	1		
30	5250	13	17.3	412	1		

In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is required and is calculated as follows:

$$\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (96.7\% + 93.3\% + 93.3\% + 73.3\% + 76.7\%) / 5 = 86.7\% (>80\%)$$



*See the Bin5 Radar Characteristics at the end of this report.

Channel 5250 MHz, 160MHz BW, USA Bin 5 Radar Statistical Performance

Trial #	Name	1=Detection 0=No Detection	Detection Percentage	Limit
1	USA Bin 5 Radar Test 1	1	100.0%	80.0%
2	USA Bin 5 Radar Test 2	1		
3	USA Bin 5 Radar Test 3	1		
4	USA Bin 5 Radar Test 4	1		
5	USA Bin 5 Radar Test 5	1		
6	USA Bin 5 Radar Test 6	1		
7	USA Bin 5 Radar Test 7	1		
8	USA Bin 5 Radar Test 8	1		
9	USA Bin 5 Radar Test 9	1		
10	USA Bin 5 Radar Test 10	1		
11	USA Bin 5 Radar Test 11	1		
12	USA Bin 5 Radar Test 12	1		
13	USA Bin 5 Radar Test 13	1		
14	USA Bin 5 Radar Test 14	1		
15	USA Bin 5 Radar Test 15	1		
16	USA Bin 5 Radar Test 16	1		
17	USA Bin 5 Radar Test 17	1		
18	USA Bin 5 Radar Test 18	1		
19	USA Bin 5 Radar Test 19	1		
20	USA Bin 5 Radar Test 20	1		
21	USA Bin 5 Radar Test 21	1		
22	USA Bin 5 Radar Test 22	1		
23	USA Bin 5 Radar Test 23	1		
24	USA Bin 5 Radar Test 24	1		
25	USA Bin 5 Radar Test 25	1		
26	USA Bin 5 Radar Test 26	1		
27	USA Bin 5 Radar Test 27	1		
28	USA Bin 5 Radar Test 28	1		
29	USA Bin 5 Radar Test 29	1		
30	USA Bin 5 Radar Test 30	1		



USA Bin 5 Trial #1

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5179.6	19	90	1111		0.488498
2	1	5179.6	19	60			0.990362
3	2	5179.6	19	70	1647		1.733624
4	2	5179.6	19	70	1731		2.888155
5	1	5179.6	19	50			3.687412
6	2	5179.6	19	65	1260		4.405492
7	3	5179.6	19	70	1916	1973	5.26623
8	3	5179.6	19	85	1511	1067	6.793592
9	2	5179.6	19	65	1238		7.632965
10	2	5179.6	19	65	1128		7.960971
11	2	5179.6	19	80	1045		8.668059
12	2	5179.6	19	70	1713		9.64584
13	2	5179.6	19	55	1853		11.0744
14	3	5179.6	19	55	1922	1006	11.979835

USA Bin 5 Trial #2

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5178.4	16	75	1812		0.540924
2	1	5178.4	16	55			0.962008
3	2	5178.4	16	65	1631		1.283869
4	3	5178.4	16	85	1863	1621	1.968847
5	3	5178.4	16	70	1167	1616	2.699618
6	1	5178.4	16	50			3.202342
7	3	5178.4	16	75	1356	1934	3.994134
8	3	5178.4	16	100	1558	1509	4.641502
9	2	5178.4	16	75	1915		5.201333
10	2	5178.4	16	90	1344		6.240013
11	3	5178.4	16	60	1832	1062	6.720357
12	2	5178.4	16	70	1025		7.032754
13	2	5178.4	16	60	1841		7.877086
14	1	5178.4	16	50			8.30752
15	2	5178.4	16	55	1277		9.220462
16	2	5178.4	16	60	1816		9.747728
17	2	5178.4	16	70	1025		10.504149
18	1	5178.4	16	50			10.990848
19	1	5178.4	16	50			11.941855

USA Bin 5 Trial #3



Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5178	15	55	1032		0.288226
2	3	5178	15	90	1207	1697	1.572654
3	3	5178	15	75	1350	1229	2.271257
4	3	5178	15	90	1768	1384	2.934554
5	1	5178	15	75			4.165818
6	2	5178	15	100	1266		5.314674
7	1	5178	15	50			5.925966
8	1	5178	15	50			7.360985
9	2	5178	15	70	1799		8.142509
10	1	5178	15	85			9.221812
11	1	5178	15	60			9.649985
12	1	5178	15	95			10.76063
13	2	5178	15	60	1265		11.433715

USA Bin 5 Trial #4

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5174.8	7	70			0.955327
2	3	5174.8	7	65	1907	1049	1.621377
3	2	5174.8	7	75	1241		2.575671
4	3	5174.8	7	70	1629	1664	3.428093
5	1	5174.8	7	90			4.017482
6	1	5174.8	7	85			5.527872
7	3	5174.8	7	50	1970	1974	6.705402
8	1	5174.8	7	50			7.617271
9	3	5174.8	7	60	1604	1869	8.03711
10	2	5174.8	7	65	1787		9.962783
11	3	5174.8	7	100	1693	1631	10.824396
12	3	5174.8	7	90	1538	1008	11.468676

USA Bin 5 Trial #5

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5174	5	50	1912	1105	0.171666
2	2	5174	5	80	1589		0.962556
3	1	5174	5	85			1.578746
4	2	5174	5	95	1032		2.548848
5	1	5174	5	75			2.909878
6	2	5174	5	95	1681		4.058564
7	1	5174	5	55			4.502155
8	1	5174	5	55			5.129935



9	3	5174	5	80	1764	1627	6.189098
10	3	5174	5	80	1667	1274	6.364031
11	2	5174	5	65	1023		7.240612
12	2	5174	5	55	1098		7.94746
13	3	5174	5	50	1598	1249	8.61555
14	1	5174	5	70			9.752528
15	1	5174	5	50			10.095124
16	1	5174	5	60			10.939552
17	1	5174	5	60			11.76152

USA Bin 5 Trial #6

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5175.2	8	50			0.072282
2	2	5175.2	8	95	1921		0.991294
3	1	5175.2	8	85			1.644761
4	2	5175.2	8	100	1306		3.001638
5	1	5175.2	8	55			3.719017
6	2	5175.2	8	85	1673		4.263166
7	1	5175.2	8	75			5.363928
8	2	5175.2	8	95	1028		6.005765
9	3	5175.2	8	85	1678	1104	7.169851
10	3	5175.2	8	60	1094	1246	7.807093
11	2	5175.2	8	80	1974		8.710083
12	2	5175.2	8	90	1734		9.272179
13	1	5175.2	8	50			10.164137
14	2	5175.2	8	55	1419		10.922085
15	3	5175.2	8	70	1446	1260	11.668291

USA Bin 5 Trial #7

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5179.2	18	75			0.616785
2	1	5179.2	18	95			1.089861
3	3	5179.2	18	70	1570	1355	1.454352
4	2	5179.2	18	65	1037		2.039994
5	3	5179.2	18	65	1312	1208	2.824581
6	1	5179.2	18	70			3.858882
7	2	5179.2	18	90	1289		4.069796
8	3	5179.2	18	95	1077	1196	4.692681
9	2	5179.2	18	60	1073		5.515652
10	3	5179.2	18	65	1267	1061	6.370809
11	2	5179.2	18	95	1893		7.330909
12	3	5179.2	18	85	1766	1184	7.44133



13	3	5179.2	18	70	1671	1503	8.186591
14	3	5179.2	18	100	1542	1819	8.866913
15	2	5179.2	18	100	1968		9.579248
16	1	5179.2	18	80			10.109021
17	1	5179.2	18	60			10.860352
18	1	5179.2	18	80			11.774232

USA Bin 5 Trial #8

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5176.4	11	75			0.071113
2	2	5176.4	11	95	1669		1.566906
3	2	5176.4	11	90	1896		2.035419
4	2	5176.4	11	55	1285		3.774798
5	2	5176.4	11	85	1571		4.484246
6	3	5176.4	11	100	1427	1760	5.9719
7	2	5176.4	11	85	1647		6.955621
8	2	5176.4	11	75	1907		7.997392
9	1	5176.4	11	95			8.324156
10	3	5176.4	11	70	1599	1616	9.727086
11	3	5176.4	11	50	1848	1143	10.889118
12	3	5176.4	11	65	1813	1590	11.021475

USA Bin 5 Trial #9

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5180	20	75	1303	1789	0.579918
2	2	5180	20	100	1891		1.430384
3	3	5180	20	65	1415	1543	1.751431
4	1	5180	20	100			2.486387
5	3	5180	20	100	1559	1053	3.703599
6	2	5180	20	90	1334		4.612622
7	2	5180	20	50	1799		5.5323
8	3	5180	20	85	1736	1710	5.758875
9	1	5180	20	100			6.734921
10	1	5180	20	70			7.604482
11	3	5180	20	70	1414	1292	8.150293
12	3	5180	20	60	1666	1764	8.802946
13	1	5180	20	50			9.967237
14	2	5180	20	50	1368		10.885101
15	1	5180	20	80			11.513163

USA Bin 5 Trial #10



Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5175.2	8	50			0.977045
2	2	5175.2	8	65	1222		1.570673
3	1	5175.2	8	65			2.520707
4	2	5175.2	8	85	1226		3.185168
5	3	5175.2	8	70	1923	1451	4.870808
6	3	5175.2	8	60	1635	1479	5.840309
7	1	5175.2	8	65			6.443025
8	1	5175.2	8	70			7.267657
9	2	5175.2	8	65	1246		8.133852
10	1	5175.2	8	70			9.014082
11	1	5175.2	8	55			10.929023
12	2	5175.2	8	70	1386		11.34719

USA Bin 5 Trial #11

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5250	15	65			0.026756
2	3	5250	15	90	1383	1493	1.336279
3	3	5250	15	85	1792	1244	1.803025
4	2	5250	15	90	1545		2.539837
5	2	5250	15	95	1897		3.223839
6	2	5250	15	65	1449		3.870989
7	2	5250	15	50	1722		4.680252
8	2	5250	15	100	1485		4.943152
9	2	5250	15	75	1001		5.72145
10	2	5250	15	65	1115		6.729325
11	2	5250	15	70	1446		7.127675
12	3	5250	15	65	1715	1334	8.416715
13	2	5250	15	85	1785		9.161506
14	2	5250	15	80	1924		9.371203
15	2	5250	15	70	1418		9.969299
16	3	5250	15	50	1212	1260	11.173716
17	3	5250	15	80	1561	1981	11.570885

USA Bin 5 Trial #12

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5250	9	50	1186		0.151339
2	1	5250	9	80			1.439762
3	1	5250	9	95			2.486213
4	1	5250	9	55			4.032053



5	1	5250	9	85			5.399648
6	2	5250	9	95	1842		6.012371
7	2	5250	9	70	1924		7.486252
8	3	5250	9	70	1745	1552	9.541623
9	3	5250	9	80	1690	1344	10.184157
10	1	5250	9	55			11.542681

USA Bin 5 Trial #13

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5250	13	55	1574	1691	0.094955
2	1	5250	13	95			1.461347
3	2	5250	13	75	1384		2.120512
4	3	5250	13	75	1698	1115	3.110197
5	2	5250	13	80	1423		3.62191
6	1	5250	13	95			5.141788
7	2	5250	13	50	1675		5.565176
8	3	5250	13	55	1577	1331	6.457855
9	1	5250	13	55			7.077441
10	3	5250	13	70	1082	1033	8.335115
11	3	5250	13	65	1255	1247	8.580648
12	1	5250	13	55			10.150211
13	3	5250	13	65	1820	1374	10.84321
14	3	5250	13	50	1701	1445	11.145854

USA Bin 5 Trial #14

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5250	17	50	1581	1863	0.875986
2	1	5250	17	85			1.736301
3	1	5250	17	55			2.525495
4	3	5250	17	70	1250	1953	4.344243
5	2	5250	17	85	1924		5.118768
6	3	5250	17	90	1905	1436	6.390378
7	3	5250	17	60	1928	1499	7.180415
8	2	5250	17	95	1957		8.39012
9	1	5250	17	50			9.411181
10	1	5250	17	70			10.852703
11	1	5250	17	80			11.858417

USA Bin 5 Trial #15

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5250	16	90			1.107284



2	3	5250	16	80	1013	1132	2.381389
3	2	5250	16	100	1499		3.315963
4	3	5250	16	75	1838	1107	3.852853
5	1	5250	16	85			5.880355
6	1	5250	16	80			6.771547
7	2	5250	16	80	1743		7.489552
8	3	5250	16	65	1534	1491	9.540118
9	3	5250	16	65	1474	1089	10.354678
10	2	5250	16	95	1310		11.389401

USA Bin 5 Trial #16

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5250	12	95			0.591744
2	2	5250	12	75	1421		0.898396
3	1	5250	12	80			1.247202
4	2	5250	12	50	1606		1.891313
5	3	5250	12	90	1566	1804	2.968879
6	2	5250	12	60	1469		3.024923
7	2	5250	12	90	1706		3.72603
8	1	5250	12	70			4.336473
9	2	5250	12	55	1147		5.37638
10	3	5250	12	90	1617	1058	5.995282
11	1	5250	12	55			6.368684
12	1	5250	12	100			6.718599
13	2	5250	12	55	1892		7.324576
14	3	5250	12	85	1470	1954	8.03237
15	1	5250	12	60			8.798291
16	2	5250	12	65	1160		9.301133
17	3	5250	12	65	1148	1987	10.158465
18	1	5250	12	100			10.66348
19	2	5250	12	85	1011		11.30566
20	1	5250	12	50			11.884302

USA Bin 5 Trial #17

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5250	19	95	1403	1398	0.34563
2	2	5250	19	60	1655		2.524636
3	3	5250	19	100	1146	1811	3.615885
4	2	5250	19	95	1686		5.658091
5	2	5250	19	75	1628		6.100346
6	1	5250	19	80			8.336532
7	3	5250	19	55	1298	1547	10.445168



8 1 5250 19 80 10.674183
USA Bin 5 Trial #18

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5250	15	60	1532	1012	0.175325
2	1	5250	15	85			0.767905
3	3	5250	15	65	1771	1658	1.427373
4	2	5250	15	100	1647		2.266139
5	1	5250	15	80			2.944485
6	3	5250	15	55	1060	1648	3.43175
7	2	5250	15	70	1246		3.879441
8	1	5250	15	100			4.817621
9	1	5250	15	75			5.611848
10	2	5250	15	85	1083		5.936252
11	2	5250	15	75	1476		6.462656
12	3	5250	15	50	1419	1234	7.094769
13	2	5250	15	75	1194		7.676612
14	2	5250	15	100	1931		8.50053
15	2	5250	15	70	1503		9.349801
16	2	5250	15	75	1382		9.518151
17	3	5250	15	60	1394	1055	10.413373
18	3	5250	15	75	1505	1124	10.80199
19	3	5250	15	95	1296	1610	11.652498

USA Bin 5 Trial #19

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5250	8	90	1058	1038	0.995625
2	2	5250	8	80	1193		1.310666
3	3	5250	8	85	1609	1162	2.265271
4	1	5250	8	95			3.888121
5	1	5250	8	75			4.70008
6	1	5250	8	100			5.759294
7	2	5250	8	65	1468		6.747967
8	3	5250	8	95	1621	1019	7.231499
9	1	5250	8	60			8.68201
10	2	5250	8	75	1616		9.34082
11	1	5250	8	80			10.585791
12	3	5250	8	100	1575	1809	11.519397

USA Bin 5 Trial #20

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
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1	1	5250	16	90			0.049448
2	3	5250	16	70	1121	1038	1.111479
3	2	5250	16	60	1100		2.744555
4	2	5250	16	50	1608		3.40322
5	2	5250	16	70	1069		4.682519
6	3	5250	16	100	1455	1456	5.166794
7	3	5250	16	65	1342	1616	6.256525
8	3	5250	16	75	1204	1463	7.131374
9	2	5250	16	75	1171		8.217003
10	3	5250	16	65	1459	1708	9.803119
11	1	5250	16	65			10.302004
12	1	5250	16	75			11.117167

USA Bin 5 Trial #21

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5325.2	7	70			0.368906
2	1	5325.2	7	70			0.857462
3	1	5325.2	7	90			2.077583
4	3	5325.2	7	65	1288	1895	3.30345
5	2	5325.2	7	60	1016		3.958869
6	1	5325.2	7	100			4.453773
7	3	5325.2	7	95	1831	1878	5.579471
8	3	5325.2	7	80	1720	1387	6.636093
9	3	5325.2	7	65	1893	1218	7.191053
10	3	5325.2	7	90	1309	1794	8.021097
11	2	5325.2	7	65	1741		8.748841
12	2	5325.2	7	90	1662		10.056998
13	2	5325.2	7	60	1888		11.123736
14	1	5325.2	7	60			11.367172

USA Bin 5 Trial #22

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5324	10	80	1789	1578	0.675049
2	2	5324	10	90	1057		2.714393
3	3	5324	10	50	1515	1403	3.874527
4	3	5324	10	80	1050	1338	5.358453
5	2	5324	10	90	1368		7.463608
6	3	5324	10	65	1781	1600	8.087153
7	3	5324	10	70	1269	1158	10.220196
8	1	5324	10	55			11.719779

USA Bin 5 Trial #23



Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5320	20	90			1.245059
2	1	5320	20	75			1.668779
3	2	5320	20	70	1031		3.333745
4	3	5320	20	85	1891	1495	5.545053
5	2	5320	20	50	1971		6.173135
6	2	5320	20	55	1311		7.810822
7	1	5320	20	95			10.03467
8	2	5320	20	75	1703		10.73672

USA Bin 5 Trial #24

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5320.8	18	65	1192		0.319219
2	1	5320.8	18	55			1.203847
3	2	5320.8	18	85	1991		1.513407
4	3	5320.8	18	80	1954	1233	2.395267
5	2	5320.8	18	80	1886		3.496221
6	2	5320.8	18	100	1934		4.416069
7	2	5320.8	18	90	1577		4.820061
8	3	5320.8	18	50	1588	1067	5.760233
9	2	5320.8	18	70	1365		6.427642
10	3	5320.8	18	80	1879	1389	6.953292
11	3	5320.8	18	85	1594	1680	7.696478
12	2	5320.8	18	75	1924		8.428616
13	1	5320.8	18	65			9.100712
14	3	5320.8	18	95	1718	1386	9.75172
15	1	5320.8	18	70			10.958963
16	3	5320.8	18	75	1878	1712	11.259349

USA Bin 5 Trial #25

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5324	10	60	1702		0.070752
2	3	5324	10	100	1897	1761	1.156211
3	1	5324	10	75			1.550664
4	1	5324	10	75			2.349033
5	2	5324	10	80	1925		3.379354
6	2	5324	10	50	1218		3.872938
7	2	5324	10	65	1717		4.878679
8	1	5324	10	75			5.205937
9	1	5324	10	70			6.150066



10	2	5324	10	65	1465		6.409527
11	3	5324	10	75	1733	1088	7.373834
12	2	5324	10	75	1562		7.987106
13	2	5324	10	95	1026		8.849197
14	3	5324	10	90	1821	1420	9.837289
15	2	5324	10	85	1049		10.418327
16	1	5324	10	100			10.780922
17	3	5324	10	95	1531	1117	11.93581

USA Bin 5 Trial #26

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5323.2	12	65	1459		0.925052
2	1	5323.2	12	75			2.25541
3	2	5323.2	12	100	1604		3.276762
4	1	5323.2	12	75			3.641044
5	2	5323.2	12	75	1676		5.690406
6	3	5323.2	12	85	1388	1704	6.013593
7	2	5323.2	12	55	1504		7.799907
8	1	5323.2	12	95			9.552142
9	3	5323.2	12	80	1854	1722	10.253471
10	2	5323.2	12	100	1921		11.396514

USA Bin 5 Trial #27

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5324	10	85	1738		0.012548
2	3	5324	10	75	1941	1788	2.548972
3	2	5324	10	100	1088		2.752574
4	3	5324	10	60	1103	1029	5.036676
5	3	5324	10	70	1532	1458	6.369204
6	2	5324	10	80	1533		6.674099
7	2	5324	10	80	1306		8.873557
8	2	5324	10	85	1266		9.541204
9	2	5324	10	70	1562		11.929124

USA Bin 5 Trial #28

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	1	5320.4	19	85			0.918248
2	1	5320.4	19	90			2.136787
3	3	5320.4	19	50	1272	1239	2.57547
4	3	5320.4	19	55	1517	1029	3.659848
5	1	5320.4	19	55			5.195497



6	2	5320.4	19	55	1405		5.998541
7	1	5320.4	19	70			6.548463
8	1	5320.4	19	90			7.896002
9	3	5320.4	19	70	1565	1234	9.660454
10	2	5320.4	19	70	1587		10.522562
11	2	5320.4	19	55	1451		11.700124

USA Bin 5 Trial #29

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	3	5324	10	80	1150	1261	0.365097
2	2	5324	10	95	1650		0.901103
3	3	5324	10	70	1600	1181	1.693943
4	2	5324	10	65	1135		2.741642
5	2	5324	10	60	1282		3.646035
6	2	5324	10	100	1598		4.230191
7	1	5324	10	60			5.215449
8	1	5324	10	100			5.686304
9	2	5324	10	100	1107		6.494687
10	1	5324	10	95			7.712624
11	1	5324	10	85			8.119899
12	3	5324	10	85	1770	1479	9.063431
13	3	5324	10	50	1006	1241	9.911984
14	3	5324	10	95	1226	1772	10.91324
15	1	5324	10	75			11.803319

USA Bin 5 Trial #30

Burst #	Pulses	Frequency (MHz)	Chirp (MHz)	PW (uS)	Inter-pulse spacing (uS)	Inter-pulse spacing (uS)	Pulse Start (S)
1	2	5322.4	14	50	1834		0.390901
2	2	5322.4	14	70	1424		2.219756
3	1	5322.4	14	60			3.557229
4	1	5322.4	14	100			4.621698
5	1	5322.4	14	60			6.269339
6	1	5322.4	14	100			6.694964
7	2	5322.4	14	95	1805		8.596771
8	1	5322.4	14	85			10.552567
9	1	5322.4	14	50			11.538163

*See the Bin6 Radar Characteristics at the end of this report.

Channel 5250 MHz, 160MHz BW, USA Frequency Hopping Radar Statistical Performance

Trial	Hop #	Freq (GHz)	Pulse Start (mS)	1=Detection 0=No Detection	Detection Percentage	Limit
1	0	5296	0	1	73.3%	70.0%
2	2	5302	6	1		
3	1	5255	3	1		
4	10	5279	30	1		
5	0	5264	0	1		
6	6	5275	18	1		
7	1	5327	3	0		
8	1	5321	3	1		
9	5	5259	15	1		
10	2	5326	6	0		
11	0	5272	0	0		
12	0	5262	0	0		
13	14	5262	42	1		
14	7	5262	21	1		
15	1	5310	3	0		
16	3	5299	9	1		
17	16	5309	48	0		
18	4	5303	12	1		
19	1	5250	3	1		
20	1	5303	3	1		
21	3	5289	9	0		
22	1	5278	3	1		
23	5	5253	15	0		
24	1	5300	3	1		
25	0	5274	0	1		
26	19	5263	57	1		
27	2	5280	6	1		
28	5	5308	15	1		
29	17	5263	51	1		
30	6	5298	18	1		

USA Frequency Hopping Trial #1

Hop #	Freq (GHz)	Pulse Start (mS)
0	5296	0
2	5297	6
9	5300	27
10	5294	30
17	5254	51
20	5306	60
32	5260	96
34	5325	102
44	5261	132
56	5270	168
74	5310	222
86	5321	258
90	5259	270

USA Frequency Hopping Trial #2

Hop #	Freq (GHz)	Pulse Start (mS)
2	5302	6
5	5277	15
19	5256	57
26	5317	78
27	5298	81
34	5289	102
35	5258	105
39	5316	117
44	5303	132
56	5291	168
59	5278	177
63	5279	189
64	5252	192
74	5296	222
85	5327	255
86	5319	258
90	5295	270
94	5276	282
97	5268	291

USA Frequency Hopping Trial #3

Hop #	Freq (GHz)	Pulse Start (mS)
1	5255	3
13	5296	39



30	5276	90
35	5267	105
44	5323	132
51	5306	153
61	5251	183
64	5308	192
66	5293	198
70	5309	210
79	5273	237
82	5263	246
91	5302	273

USA Frequency Hopping Trial #4

Hop #	Freq (GHz)	Pulse Start (mS)
10	5279	30
14	5310	42
17	5250	51
21	5315	63
27	5287	81
35	5273	105
38	5326	114
49	5252	147
56	5278	168
60	5266	180
67	5253	201
68	5297	204
75	5299	225
83	5307	249
93	5288	279
95	5259	285

USA Frequency Hopping Trial #5

Hop #	Freq (GHz)	Pulse Start (mS)
0	5264	0
2	5267	6
16	5302	48
20	5252	60
23	5289	69
25	5297	75
29	5325	87
41	5295	123
50	5268	150
51	5285	153
55	5314	165



80	5280	240
82	5319	246
89	5277	267
92	5299	276

USA Frequency Hopping Trial #6

Hop #	Freq (GHz)	Pulse Start (mS)
6	5275	18
14	5320	42
22	5317	66
35	5307	105
40	5297	120
42	5316	126
46	5310	138
50	5303	150
53	5255	159
54	5326	162
65	5264	195
66	5323	198
72	5257	216
73	5281	219
76	5276	228
97	5327	291
99	5268	297

USA Frequency Hopping Trial #7

Hop #	Freq (GHz)	Pulse Start (mS)
1	5327	3
7	5293	21
28	5277	84
33	5255	99
39	5272	117
40	5263	120
51	5258	153
52	5257	156
60	5251	180
73	5312	219
77	5321	231
80	5319	240
85	5302	255
88	5326	264
92	5250	276

USA Frequency Hopping Trial #8



Hop #	Freq (GHz)	Pulse Start (mS)
1	5321	3
3	5294	9
11	5250	33
14	5286	42
16	5288	48
19	5295	57
27	5318	81
38	5320	114
41	5314	123
58	5262	174
64	5266	192
85	5293	255
86	5258	258
93	5305	279

USA Frequency Hopping Trial #9

Hop #	Freq (GHz)	Pulse Start (mS)
5	5259	15
6	5324	18
7	5262	21
12	5272	36
14	5328	42
19	5285	57
22	5279	66
27	5306	81
34	5261	102
52	5269	156
66	5255	198
75	5281	225
77	5318	231
82	5258	246
89	5286	267
93	5254	279
96	5284	288
97	5290	291

USA Frequency Hopping Trial #10

Hop #	Freq (GHz)	Pulse Start (mS)
2	5326	6
17	5272	51
19	5276	57
29	5265	87



38	5302	114
39	5310	117
43	5318	129
47	5328	141
60	5319	180
65	5306	195
71	5270	213
74	5252	222
81	5282	243
98	5309	294
99	5278	297

USA Frequency Hopping Trial #11

Hop #	Freq (GHz)	Pulse Start (mS)
0	5272	0
17	5313	51
25	5328	75
37	5327	111
44	5271	132
45	5287	135
49	5289	147
50	5267	150
51	5293	153
66	5290	198
74	5322	222
80	5282	240
89	5309	267
91	5292	273
94	5300	282
99	5251	297

USA Frequency Hopping Trial #12

Hop #	Freq (GHz)	Pulse Start (mS)
0	5262	0
24	5304	72
37	5306	111
42	5280	126
45	5264	135
64	5277	192
74	5295	222
75	5253	225
77	5255	231
78	5276	234
99	5317	297

USA Frequency Hopping Trial #13

Hop #	Freq (GHz)	Pulse Start (mS)
14	5262	42
27	5270	81
29	5283	87
34	5250	102
42	5266	126
57	5257	171
59	5263	177
60	5256	180
68	5280	204
72	5290	216
74	5326	222
83	5300	249
86	5272	258
98	5274	294
99	5304	297

USA Frequency Hopping Trial #14

Hop #	Freq (GHz)	Pulse Start (mS)
7	5262	21
11	5265	33
14	5266	42
17	5296	51
19	5293	57
28	5261	84
50	5287	150
57	5318	171
68	5326	204
75	5259	225
85	5304	255
86	5298	258
89	5299	267

USA Frequency Hopping Trial #15

Hop #	Freq (GHz)	Pulse Start (mS)
1	5310	3
8	5324	24
12	5302	36
18	5274	54
22	5269	66
26	5280	78
28	5309	84

37	5305	111
42	5287	126
50	5326	150
55	5312	165
67	5304	201
69	5286	207
83	5291	249
84	5318	252
87	5313	261
88	5259	264
91	5308	273
96	5268	288
97	5250	291

USA Frequency Hopping Trial #16

Hop #	Freq (GHz)	Pulse Start (mS)
3	5299	9
9	5250	27
10	5306	30
16	5284	48
31	5268	93
35	5314	105
39	5290	117
40	5286	120
44	5291	132
56	5296	168
58	5305	174
59	5304	177
63	5326	189
65	5266	195
67	5293	201
78	5282	234
80	5327	240
83	5272	249

USA Frequency Hopping Trial #17

Hop #	Freq (GHz)	Pulse Start (mS)
16	5309	48
34	5298	102
37	5319	111
39	5277	117
40	5263	120
43	5267	129
53	5257	159



54	5314	162
55	5303	165
62	5265	186
68	5285	204
69	5292	207
79	5308	237
83	5284	249
87	5288	261
91	5280	273
93	5260	279

USA Frequency Hopping Trial #18

Hop #	Freq (GHz)	Pulse Start (mS)
4	5303	12
6	5292	18
25	5283	75
26	5272	78
35	5312	105
41	5325	123
62	5305	186
92	5308	276
98	5296	294

USA Frequency Hopping Trial #19

Hop #	Freq (GHz)	Pulse Start (mS)
1	5250	3
12	5277	36
16	5279	48
17	5287	51
18	5261	54
40	5271	120
42	5290	126
45	5303	135
54	5312	162
65	5294	195
68	5259	204
71	5306	213
77	5319	231
80	5301	240
86	5257	258
89	5283	267
95	5315	285

USA Frequency Hopping Trial #20

Hop #	Freq (GHz)	Pulse Start (mS)
1	5303	3
6	5264	18
9	5299	27
25	5280	75
49	5297	147
59	5285	177
64	5314	192
76	5288	228
78	5305	234
80	5298	240
90	5275	270
92	5306	276
94	5261	282
99	5257	297

USA Frequency Hopping Trial #21

Hop #	Freq (GHz)	Pulse Start (mS)
3	5289	9
32	5322	96
37	5301	111
40	5264	120
65	5281	195
70	5310	210
83	5296	249
91	5256	273
94	5269	282
95	5260	285
97	5308	291

USA Frequency Hopping Trial #22

Hop #	Freq (GHz)	Pulse Start (mS)
1	5278	3
2	5292	6
3	5302	9
11	5289	33
16	5274	48
19	5295	57
29	5273	87
35	5311	105
42	5313	126
43	5252	129
48	5288	144



52	5297	156
55	5294	165
68	5298	204
70	5296	210
81	5261	243
85	5314	255
86	5326	258
92	5305	276

USA Frequency Hopping Trial #23

Hop #	Freq (GHz)	Pulse Start (mS)
5	5253	15
19	5323	57
21	5286	63
23	5307	69
27	5325	81
31	5314	93
36	5251	108
43	5311	129
58	5288	174
60	5306	180
68	5322	204
69	5300	207
75	5272	225
83	5279	249
85	5262	255
92	5252	276
93	5281	279
94	5308	282

USA Frequency Hopping Trial #24

Hop #	Freq (GHz)	Pulse Start (mS)
1	5300	3
8	5328	24
13	5310	39
14	5288	42
15	5269	45
29	5320	87
33	5258	99
46	5316	138
47	5291	141
49	5294	147
55	5319	165
58	5308	174

59	5305	177
73	5324	219
74	5268	222
88	5278	264
91	5256	273
96	5262	288

USA Frequency Hopping Trial #25

Hop #	Freq (GHz)	Pulse Start (mS)
0	5274	0
13	5262	39
22	5293	66
27	5296	81
30	5268	90
32	5271	96
48	5319	144
61	5272	183
62	5317	186
66	5297	198
69	5291	207
73	5261	219
75	5255	225
76	5288	228
80	5260	240
85	5290	255
87	5253	261
96	5324	288

USA Frequency Hopping Trial #26

Hop #	Freq (GHz)	Pulse Start (mS)
19	5263	57
24	5316	72
33	5251	99
34	5257	102
39	5328	117
42	5283	126
49	5322	147
82	5323	246
89	5256	267

USA Frequency Hopping Trial #27

Hop #	Freq (GHz)	Pulse Start (mS)
2	5280	6
17	5286	51

20	5311	60
26	5296	78
33	5300	99
36	5290	108
37	5254	111
45	5279	135
47	5301	141
65	5261	195
67	5259	201
70	5275	210
71	5288	213
72	5326	216
75	5306	225
81	5314	243
85	5250	255
90	5284	270
93	5318	279

USA Frequency Hopping Trial #28

Hop #	Freq (GHz)	Pulse Start (mS)
5	5308	15
8	5302	24
9	5290	27
20	5278	60
30	5265	90
31	5313	93
37	5299	111
49	5318	147
51	5285	153
52	5321	156
63	5293	189
72	5257	216
76	5276	228
78	5289	234
79	5306	237
81	5309	243
86	5320	258
93	5266	279
94	5255	282
98	5296	294

USA Frequency Hopping Trial #29

Hop #	Freq (GHz)	Pulse Start (mS)
17	5263	51



22	5327	66
26	5323	78
39	5273	117
44	5308	132
54	5286	162
70	5288	210
72	5317	216
79	5255	237
86	5303	258
89	5285	267
91	5254	273
93	5294	279
97	5292	291

USA Frequency Hopping Trial #30

Hop #	Freq (GHz)	Pulse Start (mS)
6	5298	18
14	5327	42
20	5277	60
24	5303	72
30	5276	90
32	5271	96
34	5302	102
39	5253	117
48	5251	144
60	5301	180
68	5300	204
84	5320	252
89	5285	267

Appendix C: List of Test Equipment Used to perform the test

Equip#	Manufacturer/ Model	Description	Last Cal	Next Due
55107	Keysight (Agilent/HP) / N5182B	MXG X-Series RF Vector Signal Generator	7-Sep-17	7-Sep-18
55109	Keysight (Agilent/HP) / N9030A-550	PXA Signal Analyzer, 3Hz to 50GHz	29-Sep-17	29-Sep-18
54668	Megaphase / RA08-S1S1-18	SMA Cable	03 Aug 2017	03 Aug 2018
56123	Pasternack / PE6072	SMA 50 Ohm Termination	01 Dec 2017	01 Dec 2018
54696	DITOM / D3C2060	Splitter	16-Nov-17	16-Nov-18
41993	Mini-Circuits / ZFSC-2-9G+	Splitter	17-Aug-17	17-Aug-18
55561	Megaphase / F120-S1S1-48	SMA Cable	17-Aug-17	17-Aug-18
55096	National Instruments / PXI-1042	Chassis, PXI	Cal not Req'd	Cal not Req'd
55578	Aeroflex / BWS20-W2	20dB SMA Attenuator	17-Aug-17	17-Aug-18
55847	Dynawave / SMSM-A2PH-012	SMA Cable, 12 IN	17 Aug 2017	17 Aug 2018
54635	Megaphase / F120-S1S1-48	SMA Cable	17-Aug-17	17-Aug-18
55873	Dynawave / SMSM-A2PH-024	SMA Cable, 24 IN	23-Oct-17	23-Oct-18
55868	Dynawave / SMSM-A2PH-024	SMA Cable, 24 IN	23-Oct-17	23-Oct-18

55588	Aeroflex / BWS30-W2	30dB SMA Attenuator	20-Jul-17	20-Jul-18
42003	Mini-Circuits / BWS30W2+	SMA 30dB Attenuator	21-Sep-17	21-Sep-18
55167	RF Lambda / RFLT4WDC40GK	4 Way Power Divider 40GHz	25-Jan-18	25-Jan-19
55915	Dynawave / SMSM-A2PH-012	SMA Cable, 12 IN	23-Oct-17	23-Oct-18
55931	Dynawave / SMSM-A2PH-012	SMA Cable, 12 IN	23-Oct-17	23-Oct-18
55912	Dynawave / SMSM-A2PH-012	SMA Cable, 12 IN	23-Oct-17	23-Oct-18
55913	Dynawave / SMSM-A2PH-012	SMA Cable, 12 IN	23-Oct-17	23-Oct-18
55358	Mini-Circuits / ZFSC-2-10G	SPLITTER, 2-10GHZ	11-Apr-18	11-Apr-19
54659	Pulsar / PS4-09-452/4S	Splitter	21 Sep 2017	21 Sep 2018
55895	Dynawave / SMSM-A2PH-018	SMA Cable, 18 IN	23-Oct-17	23-Oct-18
55886	Dynawave / SMSM-A2PH-018	SMA Cable, 18 IN	23-Oct-17	23-Oct-18
55888	Dynawave / SMSM-A2PH-018	SMA Cable, 18 IN	23-Oct-17	23-Oct-18
55898	Dynawave / SMSM-A2PH-018	SMA Cable, 18 IN	23-Oct-17	23-Oct-18
56328	Pasternack / PE5019-1	Torque Wrench	28-Feb-18	28-Feb-19

End