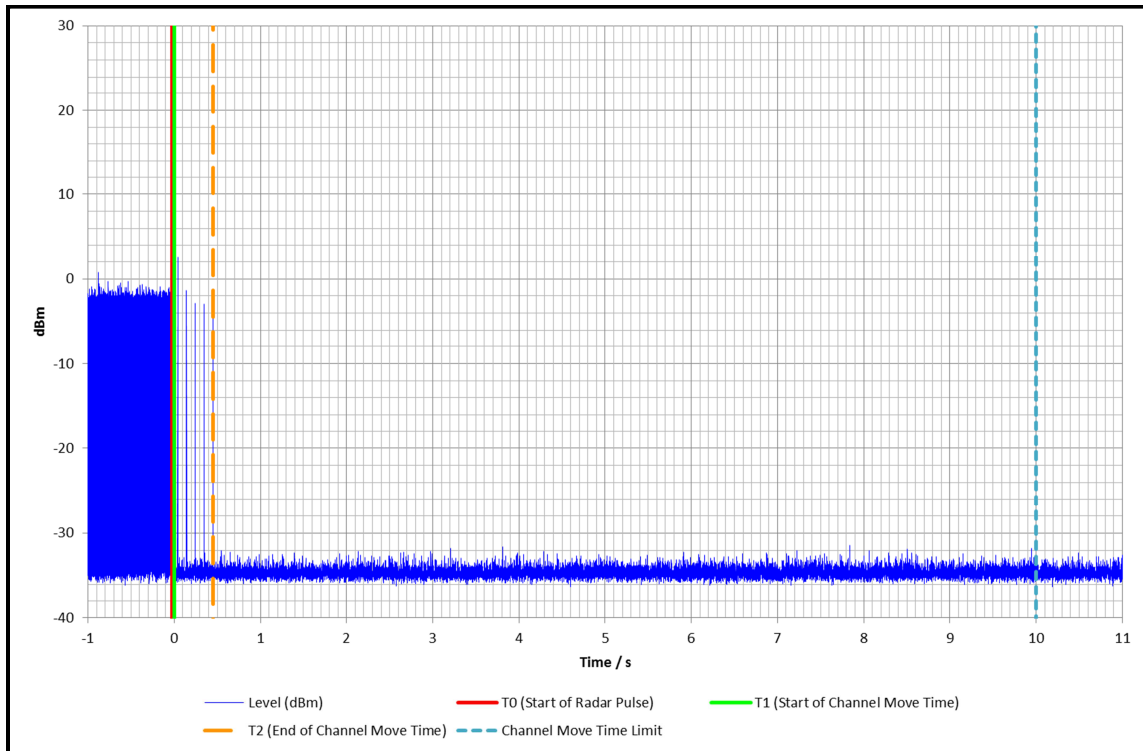
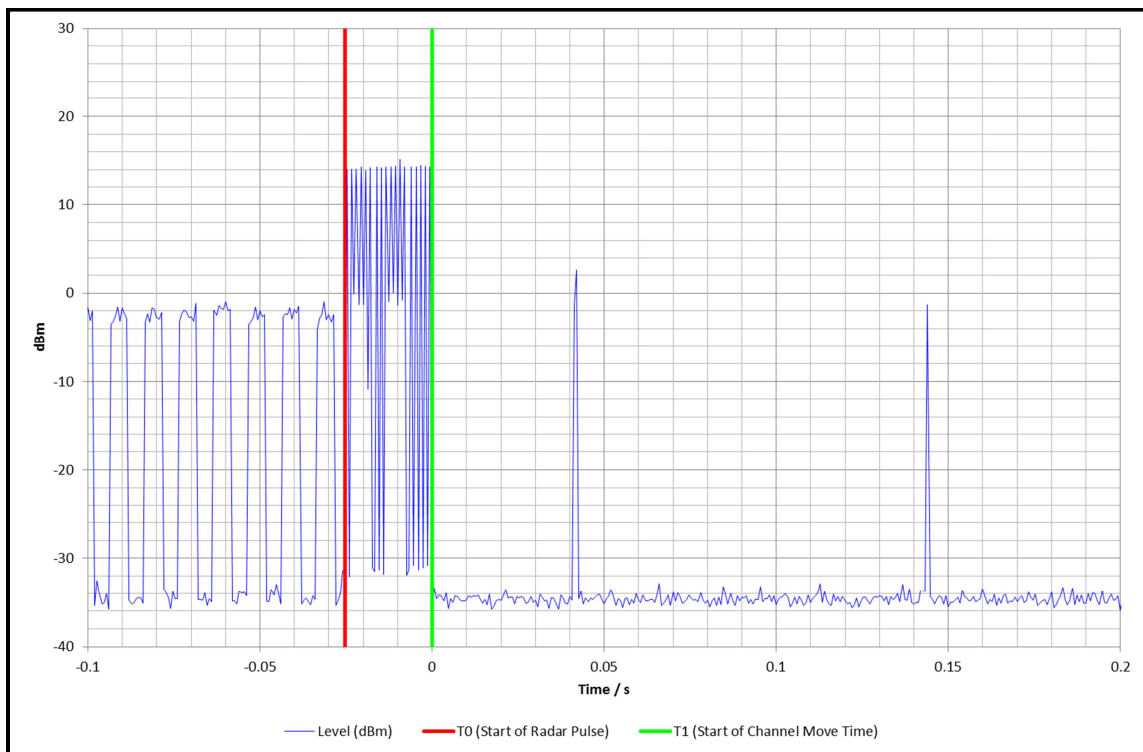


Channel Closing Transmission Time and Channel Move Time (continued)**Results: 40 MHz Master**

Plot showing the full 10 second shutdown limit



Zoomed plot showing the first 200 ms after the end of the type 0 radar burst

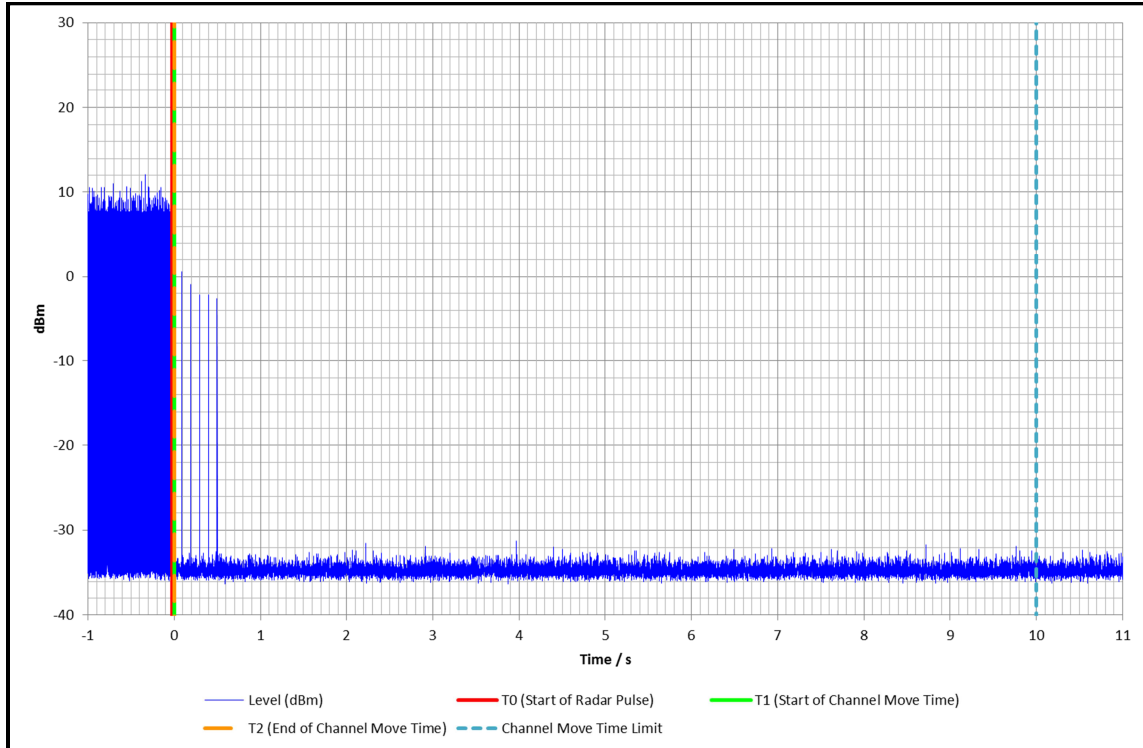
Channel Closing Transmission Time and Channel Move Time (continued)**Results: 40 MHz Client, Radar at Master – Channel Move Time**

Channel (MHz)	Move Time (ms)	Limit (ms)	Margin (ms)	Detected
5510	0	10000	10000	Yes

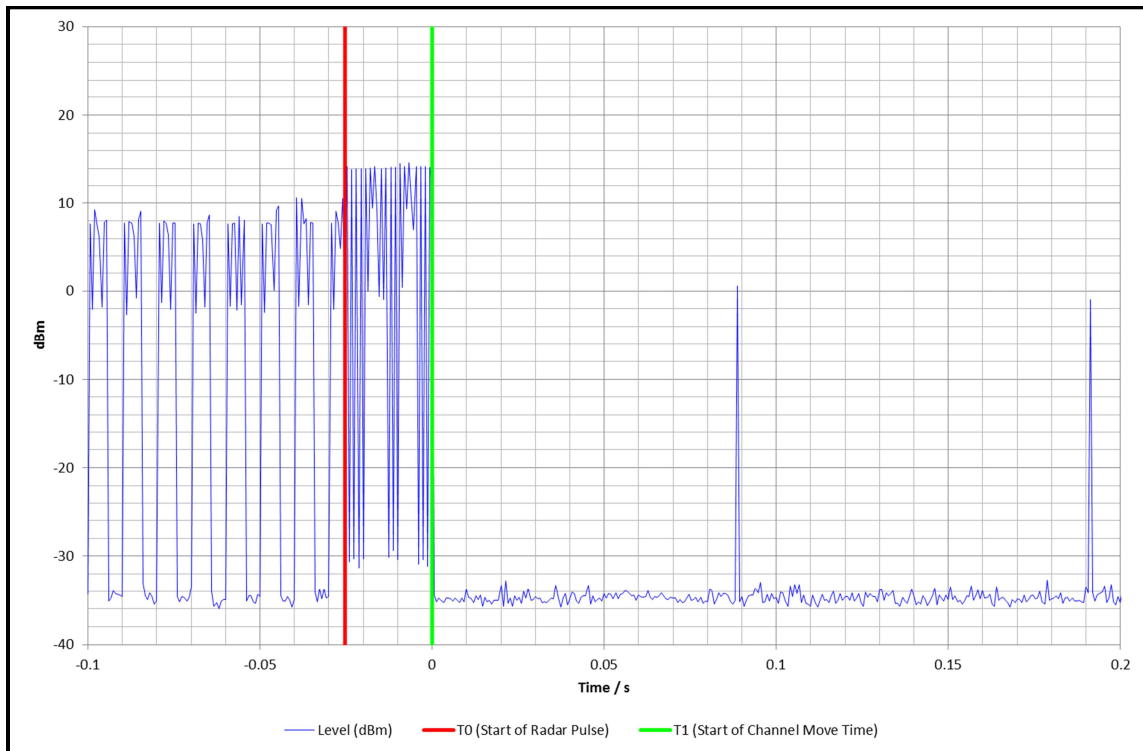
Results: 40 MHz Client, Radar at Master – Channel Closing Transmission Time

Channel (MHz)	Total Aggregate Tx Time (ms)	Limit (ms)	Margin (ms)	Tx Time >200 ms after end of radar (ms)	Limit (ms)	Margin (ms)
5510	0	260	260	0	60	60

NOTE: A channel move or closing transmission time of zero occurs when the EUT shuts down before the end of the radar burst.

Channel Closing Transmission Time and Channel Move Time (continued)

Plot showing the full 10 second shutdown limit



Zoomed plot showing the first 200 ms after the end of the type 0 radar burst

Channel Closing Transmission Time and Channel Move Time (continued)**Limits:****Part 15.407(h)(2)(iii)**

After a radar's presence is detected, all transmissions shall cease on the operating channel within 10 seconds. Transmissions during this period shall consist of normal traffic for a maximum of 200 ms after detection of the radar signal. In addition, intermittent management and control signals can be sent during the remaining time to facilitate vacating the operating channel.

KDB 905462 D02 Table 4: DFS Response Requirement Values

Parameter	Value
<i>Channel Move Time</i>	10 seconds See Note 1.
<i>Channel Closing Transmission Time</i>	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
Note 1: <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.	
Note 2: The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.	

5.2.6. Non-occupancy Period**Test Summary:**

Test Engineer:	Georgios Vrezas	Test Date:	08 December 2015
Test Sample Serial Number:	VPE7129190		

FCC Reference:	Part 15.407(h)(iv)
Test Method Used:	KDB 905462 D02 Section 7.8.3

Environmental Conditions:

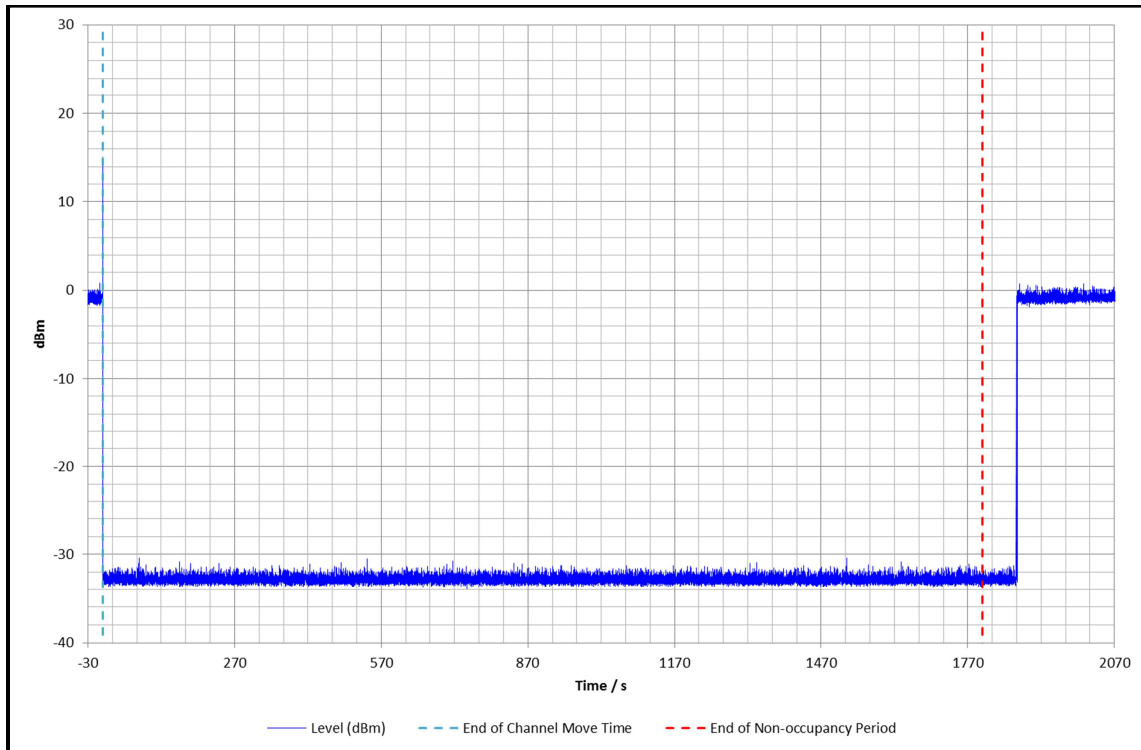
Temperature (°C):	23
Relative Humidity (%):	48

Notes:

1. In accordance with KDB 905462 D02 Table 2, the Initial Channel Availability Check test was performed on any single bandwidth. It was therefore tested only on a 40 MHz channel bandwidth.
2. UDP test data was streamed from the Master to the Client device using iPerf3 bandwidth testing tool. The channel loading was 24.2% with a 30 Mbit/s data rate. This therefore met the channel loading requirement of >17% in KDB 905462 D02 Section 7.7(c).
3. Tests were performed using a type 0 radar and the radar detection threshold calculated in Section 4.2 of this test report.
4. Radar burst type 0 was detected and the channel was vacated for >1800 seconds, meeting the 30 minute (1800 second) non-occupancy period. During this period all emissions remained below the -27 dBm/MHz spurious limit. Channel move occurred within the channel move and channel closing time limits. Therefore the EUT complied.

Non-occupancy Period (continued)**Results: 40 MHz Master**

Channel (MHz)	Trial	Non-Occ (min)	Limit (min)	Margin (min)	Result
5510	1	31.2	30	1.2	Complied

**Limits:****Part 15.407(h)(2)(iv)**

A channel that has been flagged as containing a radar system, either by a channel availability check or in-service monitoring, is subject to a non-occupancy period of at least 30 minutes. The non-occupancy period starts at the time when the radar system is detected.

KDB 905462 D02 Table 4: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes

5.2.7. Statistical Performance Check – Short Pulse Radar Types 1 – 4**Test Summary:**

Test Engineer:	Georgios Vrezas	Test Dates:	24 November 2015 & 25 November 2015
Test Sample Serial Number:	VPE7129190		

FCC Reference:	Part 15.407(h)(2)
Test Method Used:	KDB 905462 D02 Section 7.8.4.1 and Notes below

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	31 to 34

Notes:

1. In accordance with KDB 905462 D02 Table 2, the Statistical Performance Check test was performed on all supported channel bandwidths and frequencies selected within the radar detection bandwidth.
2. UDP test data was streamed from the Master to the Client device using iPerf3 bandwidth testing tool. This was set to 15 Mbit/s and 30 Mbit/s throughput rate for the 20 MHz and 40 MHz channels respectively. The channel loading was measured as 26.3% for 20 MHz operation and 24.2% for 40 MHz. This therefore met the channel loading requirement of >17% in KDB 905462 D02 Section 7.7(c).
3. Tests were performed using the radar detection threshold calculated in Section 4.2 of this report.
4. Parameters used for the short radar types 1, 2, 3, and 4 may be found in this test report Appendices 5, 6, 7, and 8 respectively.
5. The EUT met the required detection probability, and therefore complied with the *Statistical Performance Check – Short Pulse Radar Types 1 – 4* test.

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 20 MHz Master – Radar Type 1**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
1	1	5491.045	Yes
	2	5491.642	Yes
	3	5492.239	Yes
	4	5492.836	Yes
	5	5493.433	Yes
	6	5494.030	Yes
	7	5494.627	Yes
	8	5495.224	Yes
	9	5495.821	Yes
	10	5496.418	Yes
	11	5497.015	Yes
	12	5497.612	Yes
	13	5498.209	Yes
	14	5498.806	Yes
	15	5499.403	Yes
	16	5500.000	Yes
	17	5500.597	Yes
	18	5501.194	Yes
	19	5501.791	Yes
	20	5502.388	Yes
	21	5502.985	Yes
	22	5503.582	Yes
	23	5504.179	Yes
	24	5504.776	Yes
	25	5505.373	Yes
	26	5505.970	Yes
	27	5506.567	Yes
	28	5507.164	Yes
	29	5507.761	Yes
	30	5508.358	Yes
EUT Test Frequency:		5500 MHz	
Detection Probability:		100 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 20 MHz Master – Radar Type 2**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
2	1	5491.045	Yes
	2	5491.642	No
	3	5492.239	Yes
	4	5492.836	Yes
	5	5493.433	Yes
	6	5494.030	Yes
	7	5494.627	Yes
	8	5495.224	Yes
	9	5495.821	Yes
	10	5496.418	No
	11	5497.015	Yes
	12	5497.612	Yes
	13	5498.209	Yes
	14	5498.806	Yes
	15	5499.403	Yes
	16	5500.000	Yes
	17	5500.597	Yes
	18	5501.194	No
	19	5501.791	Yes
	20	5502.388	Yes
	21	5502.985	Yes
	22	5503.582	Yes
	23	5504.179	Yes
	24	5504.776	Yes
	25	5505.373	Yes
	26	5505.970	Yes
	27	5506.567	Yes
	28	5507.164	Yes
	29	5507.761	Yes
	30	5508.358	Yes
EUT Test Frequency:		5500 MHz	
Detection Probability:		90 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 20 MHz Master – Radar Type 3**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
3	1	5491.045	No
	2	5491.642	Yes
	3	5492.239	Yes
	4	5492.836	No
	5	5493.433	Yes
	6	5494.030	Yes
	7	5494.627	No
	8	5495.224	No
	9	5495.821	Yes
	10	5496.418	No
	11	5497.015	Yes
	12	5497.612	Yes
	13	5498.209	No
	14	5498.806	Yes
	15	5499.403	Yes
	16	5500.000	Yes
	17	5500.597	Yes
	18	5501.194	Yes
	19	5501.791	Yes
	20	5502.388	Yes
	21	5502.985	No
	22	5503.582	Yes
	23	5504.179	Yes
	24	5504.776	Yes
	25	5505.373	Yes
	26	5505.970	Yes
	27	5506.567	Yes
	28	5507.164	Yes
	29	5507.761	Yes
	30	5508.358	Yes
EUT Test Frequency:		5500 MHz	
Detection Probability:		76.7 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 20 MHz Master – Radar Type 4**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
4	1	5491.045	Yes
	2	5491.642	Yes
	3	5492.239	No
	4	5492.836	No
	5	5493.433	Yes
	6	5494.030	Yes
	7	5494.627	Yes
	8	5495.224	Yes
	9	5495.821	Yes
	10	5496.418	Yes
	11	5497.015	Yes
	12	5497.612	No
	13	5498.209	Yes
	14	5498.806	Yes
	15	5499.403	Yes
	16	5500.000	Yes
	17	5500.597	No
	18	5501.194	Yes
	19	5501.791	Yes
	20	5502.388	Yes
	21	5502.985	Yes
	22	5503.582	Yes
	23	5504.179	Yes
	24	5504.776	Yes
	25	5505.373	Yes
	26	5505.970	Yes
	27	5506.567	Yes
	28	5507.164	Yes
	29	5507.761	Yes
	30	5508.358	No
EUT Test Frequency:		5500 MHz	
Detection Probability:		83.3 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 40 MHz Master – Radar Type 1**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
1	1	5491.310	Yes
	2	5492.556	No
	3	5493.802	Yes
	4	5495.048	Yes
	5	5496.294	Yes
	6	5497.540	No
	7	5498.786	Yes
	8	5500.032	Yes
	9	5501.278	No
	10	5502.524	Yes
	11	5503.770	Yes
	12	5505.016	Yes
	13	5506.262	Yes
	14	5507.508	Yes
	15	5508.754	Yes
	16	5510.000	Yes
	17	5511.246	Yes
	18	5512.492	Yes
	19	5513.738	Yes
	20	5514.984	Yes
	21	5516.230	Yes
	22	5517.476	Yes
	23	5518.722	Yes
	24	5519.968	Yes
	25	5521.214	Yes
	26	5522.460	Yes
	27	5523.706	Yes
	28	5524.952	Yes
	29	5526.198	Yes
	30	5527.444	Yes
EUT Test Frequency:		5510 MHz	
Detection Probability:		90 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 40 MHz Master – Radar Type 2**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
2	1	5491.310	Yes
	2	5492.556	Yes
	3	5493.802	Yes
	4	5495.048	No
	5	5496.294	Yes
	6	5497.540	Yes
	7	5498.786	Yes
	8	5500.032	No
	9	5501.278	No
	10	5502.524	No
	11	5503.770	Yes
	12	5505.016	Yes
	13	5506.262	No
	14	5507.508	Yes
	15	5508.754	Yes
	16	5510.000	Yes
	17	5511.246	Yes
	18	5512.492	Yes
	19	5513.738	No
	20	5514.984	Yes
	21	5516.230	No
	22	5517.476	Yes
	23	5518.722	Yes
	24	5519.968	Yes
	25	5521.214	Yes
	26	5522.460	Yes
	27	5523.706	Yes
	28	5524.952	Yes
	29	5526.198	Yes
	30	5527.444	Yes
EUT Test Frequency:		5510 MHz	
Detection Probability:		76.7 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 40 MHz Master – Radar Type 3**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
3	1	5491.310	Yes
	2	5492.556	Yes
	3	5493.802	Yes
	4	5495.048	Yes
	5	5496.294	Yes
	6	5497.540	Yes
	7	5498.786	Yes
	8	5500.032	Yes
	9	5501.278	Yes
	10	5502.524	Yes
	11	5503.770	No
	12	5505.016	Yes
	13	5506.262	Yes
	14	5507.508	Yes
	15	5508.754	Yes
	16	5510.000	Yes
	17	5511.246	Yes
	18	5512.492	Yes
	19	5513.738	Yes
	20	5514.984	Yes
	21	5516.230	Yes
	22	5517.476	Yes
	23	5518.722	Yes
	24	5519.968	Yes
	25	5521.214	Yes
	26	5522.460	Yes
	27	5523.706	Yes
	28	5524.952	Yes
	29	5526.198	Yes
	30	5527.444	Yes
EUT Test Frequency:		5510 MHz	
Detection Probability:		96.7 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: 40 MHz Master – Radar Type 4**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
4	1	5491.310	No
	2	5492.556	Yes
	3	5493.802	Yes
	4	5495.048	Yes
	5	5496.294	Yes
	6	5497.540	Yes
	7	5498.786	No
	8	5500.032	Yes
	9	5501.278	Yes
	10	5502.524	No
	11	5503.770	Yes
	12	5505.016	Yes
	13	5506.262	Yes
	14	5507.508	Yes
	15	5508.754	Yes
	16	5510.000	Yes
	17	5511.246	Yes
	18	5512.492	Yes
	19	5513.738	Yes
	20	5514.984	No
	21	5516.230	No
	22	5517.476	Yes
	23	5518.722	No
	24	5519.968	Yes
	25	5521.214	No
	26	5522.460	Yes
	27	5523.706	Yes
	28	5524.952	Yes
	29	5526.198	Yes
	30	5527.444	Yes
EUT Test Frequency:		5510 MHz	
Detection Probability:		76.7 %	

Statistical Performance Check – Short Pulse Radar Types 1 – 4 (continued)**Results: Aggregate Percentage of Successful Detection**

Radar Type	Channel Bandwidth	
	20 MHz	40 MHz
Type 1	100.0 %	90.0 %
Type 2	90.0 %	76.7 %
Type 3	76.7 %	96.7 %
Type 4	83.3 %	76.7 %
Aggregate	87.5 %	85.0 %

Limits:**KDB 905462 D02 Table 5 – Short Pulse Radar Test Waveforms**

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a.	$\text{Roundup} \left\{ \left(\frac{1}{360} \right) \times \left(\frac{19 \times 10^6}{PRI_{\mu sec}} \right) \right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A.			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

5.2.8. Statistical Performance Check – Long Pulse Radar Type 5**Test Summary:**

Test Engineer:	Georgios Vrezas	Test Date:	24 November 2015
Test Sample Serial Number:	VPE7129190		

FCC Reference:	Part 15.407(h)(2)
Test Method Used:	KDB 905462 D02 Section 7.8.4.2 and Notes below

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	31

Notes:

1. In accordance with KDB 905462 D02 Table 2, the Statistical Performance Check test was performed on all supported channel bandwidths and frequencies selected within the radar detection bandwidth.
2. UDP test data was streamed from the Master to the Client device using iPerf3 bandwidth testing tool. This was set to 15 Mbit/s and 30 Mbit/s throughput rate for the 20 MHz and 40 MHz channels respectively. The channel loading was measured as 26.3% for 20 MHz operation and 24.2% for 40 MHz. This therefore met the channel loading requirement of >17% in KDB 905462 D02 Section 7.7(c).
3. Tests were performed using the radar detection threshold calculated in Section 4.2 of this test report.
4. Parameters used for the long radar type 5 can be found in Appendix 9 of this test report.
5. The centre frequency for each of the 30 trials of the Bin 5 radar, was randomly selected within 80% of the Occupied Bandwidth. See section 5.2.1 for occupied bandwidth measurements.
6. The EUT met the required detection probability, and therefore complied with the *Statistical Performance Check – Long Pulse Radar Type 5* test.

Statistical Performance Check – Long Pulse Radar Type 5 (continued)**Results: 20 MHz Master – Radar Type 5**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
5	1	5492.850	Yes
	2	5496.982	Yes
	3	5503.901	Yes
	4	5503.180	Yes
	5	5500.379	Yes
	6	5493.748	Yes
	7	5496.664	Yes
	8	5499.701	Yes
	9	5496.349	Yes
	10	5499.062	Yes
	11	5499.743	Yes
	12	5498.074	Yes
	13	5500.949	Yes
	14	5498.223	Yes
	15	5505.171	Yes
	16	5506.385	Yes
	17	5505.262	Yes
	18	5495.058	Yes
	19	5497.812	Yes
	20	5498.574	Yes
	21	5499.176	Yes
	22	5498.790	Yes
	23	5505.655	Yes
	24	5501.375	Yes
	25	5497.036	Yes
	26	5495.364	Yes
	27	5506.513	Yes
	28	5497.926	Yes
	29	5501.916	Yes
	30	5506.096	Yes
EUT Test Frequency:		5500 MHz	
Detection Probability:		100%	

Statistical Performance Check – Long Pulse Radar Type 5 (continued)**Results: 40 MHz Master – Radar Type 5**

Radar Type	Trial #	Radar frequency (MHz)	Detection
			Yes / No
5	1	5505.757	Yes
	2	5518.334	Yes
	3	5523.302	Yes
	4	5498.093	Yes
	5	5501.246	Yes
	6	5499.729	Yes
	7	5507.897	Yes
	8	5512.349	Yes
	9	5510.179	Yes
	10	5505.606	Yes
	11	5508.983	Yes
	12	5521.707	Yes
	13	5496.816	Yes
	14	5504.869	Yes
	15	5519.664	Yes
	16	5501.782	Yes
	17	5495.557	Yes
	18	5500.496	Yes
	19	5507.169	Yes
	20	5509.210	Yes
	21	5502.382	Yes
	22	5521.869	Yes
	23	5512.417	No
	24	5517.509	Yes
	25	5523.079	Yes
	26	5519.945	Yes
	27	5510.858	Yes
	28	5503.012	Yes
	29	5508.652	Yes
	30	5517.687	Yes
EUT Test Frequency:		5510 MHz	
Detection Probability:		96.7%	

Statistical Performance Check – Long Pulse Radar Type 5 (continued)**Limits:****KDB 905462 D02 Table 6 – Long Pulse Radar Test Waveform**

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

5.2.9. Statistical Performance Check – Frequency Hopping Radar Type 6**Test Summary:**

Test Engineer:	Georgios Vrezas	Test Date:	24 November 2015
Test Sample Serial Number:	VPE7129190		

FCC Reference:	Part 15.407(h)(2)
Test Method Used:	KDB 905462 D02 Section 7.8.4.3 and Notes below

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	31

Notes:

1. In accordance with KDB 905462 D02 Table 2, the Statistical Performance Check test was performed on all supported channel bandwidths and frequencies selected within the radar detection bandwidth.
2. UDP test data was streamed from the Master to the Client device using iPerf3 bandwidth testing tool. This was set to 15 Mbit/s and 30 Mbit/s throughput rate for the 20 MHz and 40 MHz channels respectively. The channel loading was measured as 26.3% for 20 MHz operation and 24.2% for 40 MHz. This therefore met the channel loading requirement of >17% in KDB 905462 D02 Section 7.7(c).
3. Tests were performed using the radar detection threshold calculated in Section 4.2 of this test report.
4. Some of the randomly generated hopping radars included no hops within the detection bandwidth of the EUT. In this case additional radars, which would produce at least one hop within the operating bandwidth of the EUT, were generated and used instead.
5. The EUT met the required detection probability, and therefore complied with the *Statistical Performance Check – Frequency Hopping Radar Type 6* test.

Statistical Performance Check – Frequency Hopping Radar Type 6 (continued)**Results: 20 MHz Master – Radar Type 6**

Radar Type	Trial #	Detection	Trial #	Detection
		Yes / No		Yes / No
6	1	Yes	16	Yes
	2	Yes	17	Yes
	3	Yes	18	Yes
	4	Yes	19	Yes
	5	Yes	20	Yes
	6	Yes	21	Yes
	7	Yes	22	Yes
	8	Yes	23	Yes
	9	Yes	24	Yes
	10	Yes	25	Yes
	11	Yes	26	Yes
	12	Yes	27	Yes
	13	Yes	28	Yes
	14	Yes	29	Yes
	15	Yes	30	Yes
EUT Test Frequency:		5500 MHz		
Radar Frequency:		Hopping		
Detection Probability:		100%		

Results: 40 MHz Master – Radar Type 6

Radar Type	Trial #	Detection	Trial #	Detection
		Yes / No		Yes / No
6	1	Yes	16	Yes
	2	Yes	17	Yes
	3	Yes	18	Yes
	4	Yes	19	No
	5	Yes	20	Yes
	6	Yes	21	Yes
	7	Yes	22	Yes
	8	Yes	23	Yes
	9	Yes	24	Yes
	10	Yes	25	Yes
	11	Yes	26	Yes
	12	Yes	27	Yes
	13	Yes	28	Yes
	14	No	29	Yes
	15	Yes	30	Yes
EUT Test Frequency:		5510 MHz		
Radar Frequency:		Hopping		
Detection Probability:		93.3%		

Statistical Performance Check – Frequency Hopping Radar Type 6 (continued)**Limits:****KDB 905462 D02 Table 7 – Frequency Hopping Radar Test Waveform**

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

6. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Confidence Level (%)	Calculated Uncertainty
DFS CAC Plot Timing	95%	± 918 ms
DFS Channel Shutdown Timing	95%	± 450 μ s
DFS Non-Occupancy Timing	95%	± 79.25 ms
DFS Radar Amplitude	95%	± 2.17 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

7. Report Revision History

Version Number	Revision Details		
	Page No(s)	Clause	Details
1.0	-	-	Initial Version
2.0	-	-	Model Name updated Section 3.2 added
3.0	-	-	Model name updated, Sections 3.1, 3.2 & 3.7 updated

Appendix 1. Test Equipment Used

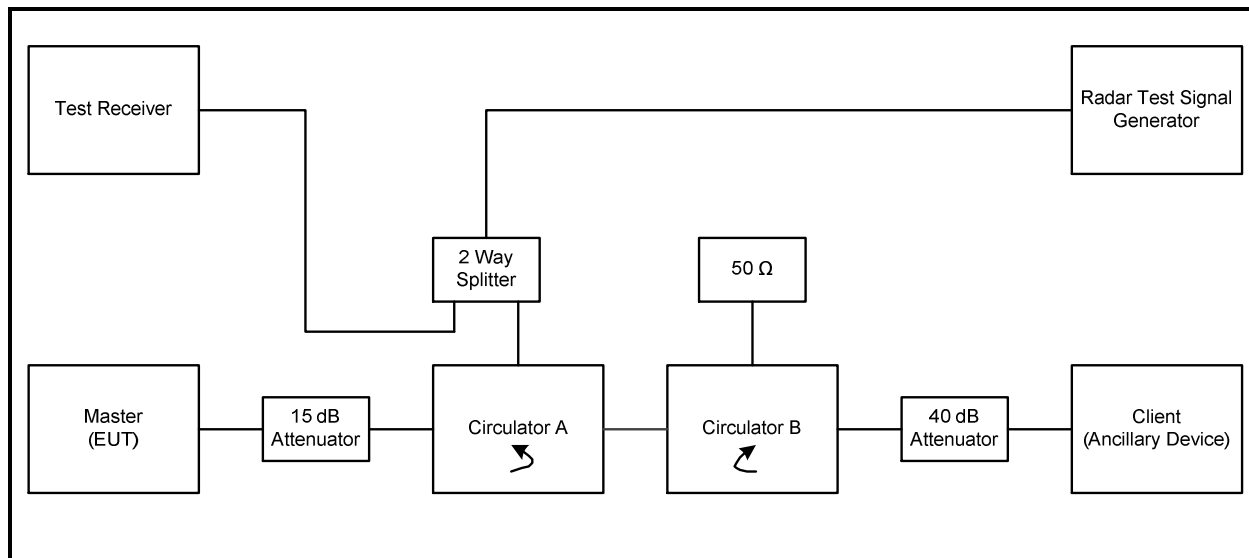
Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1659	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	23 Apr 2016	12
M1760	Thermohygrometer	None stated	HTC-1	None stated	14 Apr 2016	12
M1631	DFS Test System	Aeroflex	PXI 3000	300110/291	09 Jul 2017	24
M1886	Test Receiver	Rohde & Schwarz	ESU26	100554	21 May 2016	12
M1585	Network Analyser	Agilent	E5071C	MY46110256	30 Jul 2016	24
A030	Step Attenuator	Narda	445-69	01544	Calibrated before use	-
A090	Step Attenuator	Narda	743-60	01057	Calibrated before use	-
A2119	Power Splitter	Mini-Circuits	ZN2PD-63-S+	SUU12701203	Calibrated before use	-
A2182	Coaxial Circulator	AtlanTecRF	ACC-20130-SF-SF-SF	120409231	Calibrated before use	-
A2183	Coaxial Circulator	AtlanTecRF	ACC-20130-SF-SF-SF	120409232	Calibrated before use	-
A1317	50Ω Termination	Narda	376BNM	0103	Calibrated before use	-
A2494	50Ω Termination	Narda	TA06W5-F	082013#2	Calibrated before use	-
M122	Multimeter	Fluke	77	64910017	22 Apr 2016	12
S021	DC Power Supply	Thurlby Thandar Instruments	CPX200	061034	Calibrated before use	-

NB In accordance with UKAS requirements all the measurement equipment is on a calibration schedule.

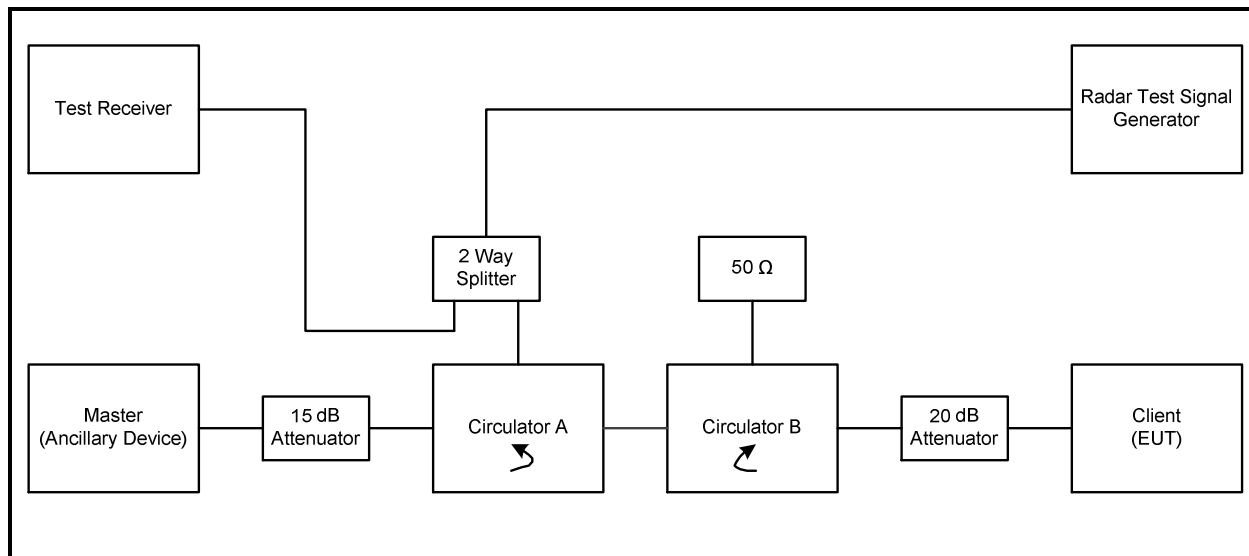
Appendix 2. Monitoring Methods Diagrams

All tests were performed as conducted measurements using the setups as shown below. The detecting device always receives the radar via a direct (non-isolated) port of any circulator or splitter to ensure impedance variations do not affect the radar amplitude in accordance with KDB 905462 D02 Section 7.2, point (2).

Setup Diagram – EUT as Master with Radar Injection at Master



Note: Circulator A directs the radar pulse towards the EUT (Master). Circulator B provides the same transmit path loss in both directions between the Master and Client devices. The EUT will appear larger than the ancillary device, and smaller than the radar at the Spectrum Analyser. The radar will be larger at the EUT than at the ancillary device. For some tests an additional 10 dB attenuator was added between the 2-way splitter and circulator A, and the calibration adjusted, to change the relative radar level on the analyser.

Setup Diagram – EUT as Client, Radar Injection at Master

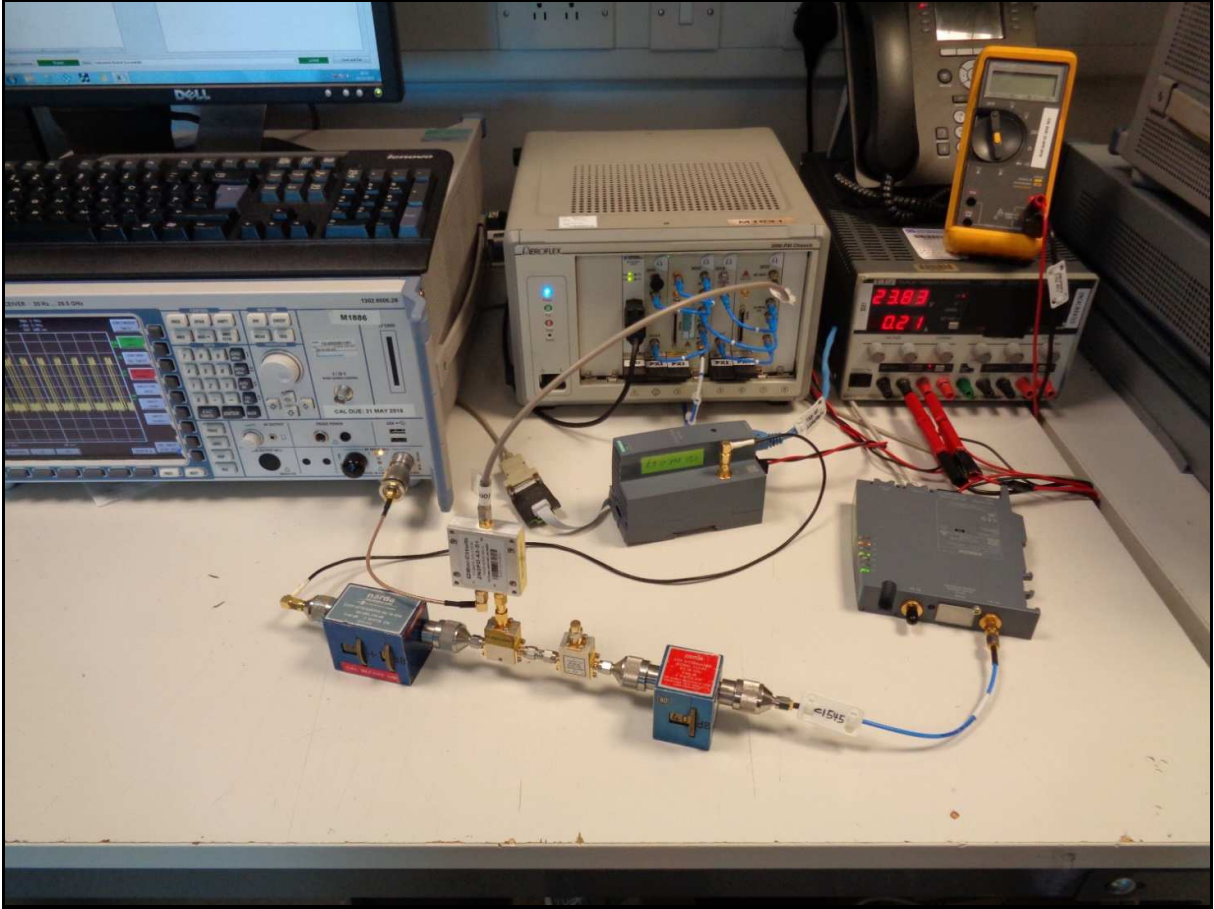
Note: Similarly to the set-up above, circulator A again directs the radar towards the radar detecting device. Circulator B provides the same transmit path loss in both directions between the Master and Client devices whilst also attenuating any radar heading in the direction of the EUT. Due to the different attenuation settings the EUT (Client) will appear larger than the Master device, and smaller than the radar at the Spectrum Analyser. The radar level is recalibrated to account for the different attenuation settings in the radar path.

Appendix 3. Radar Type 1-6 Calibration and Verification Data

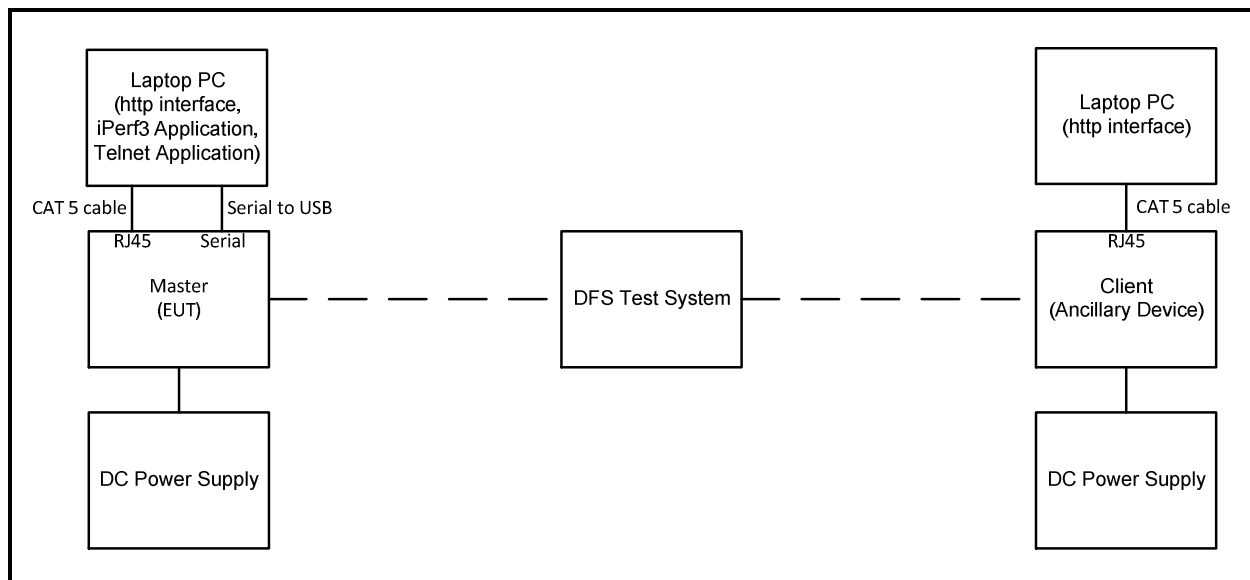
All radar types were generated and produced by an Aeroflex DFS test system. The radar pulse generation of this system has previously been verified by the FCC (see Appendix 4 of this test report).

The radar amplitude was calibrated using the setup diagram shown below. The spectrum analyser was replaced by a 50Ω load. The EUT was replaced by a spectrum analyser. The Aeroflex DFS test system was then set to transmit a CW signal used to calibrate the radar level. The output level was adjusted to give the correct level into the EUT, as calculated in Section 4.2 of this report, before the tests were performed.

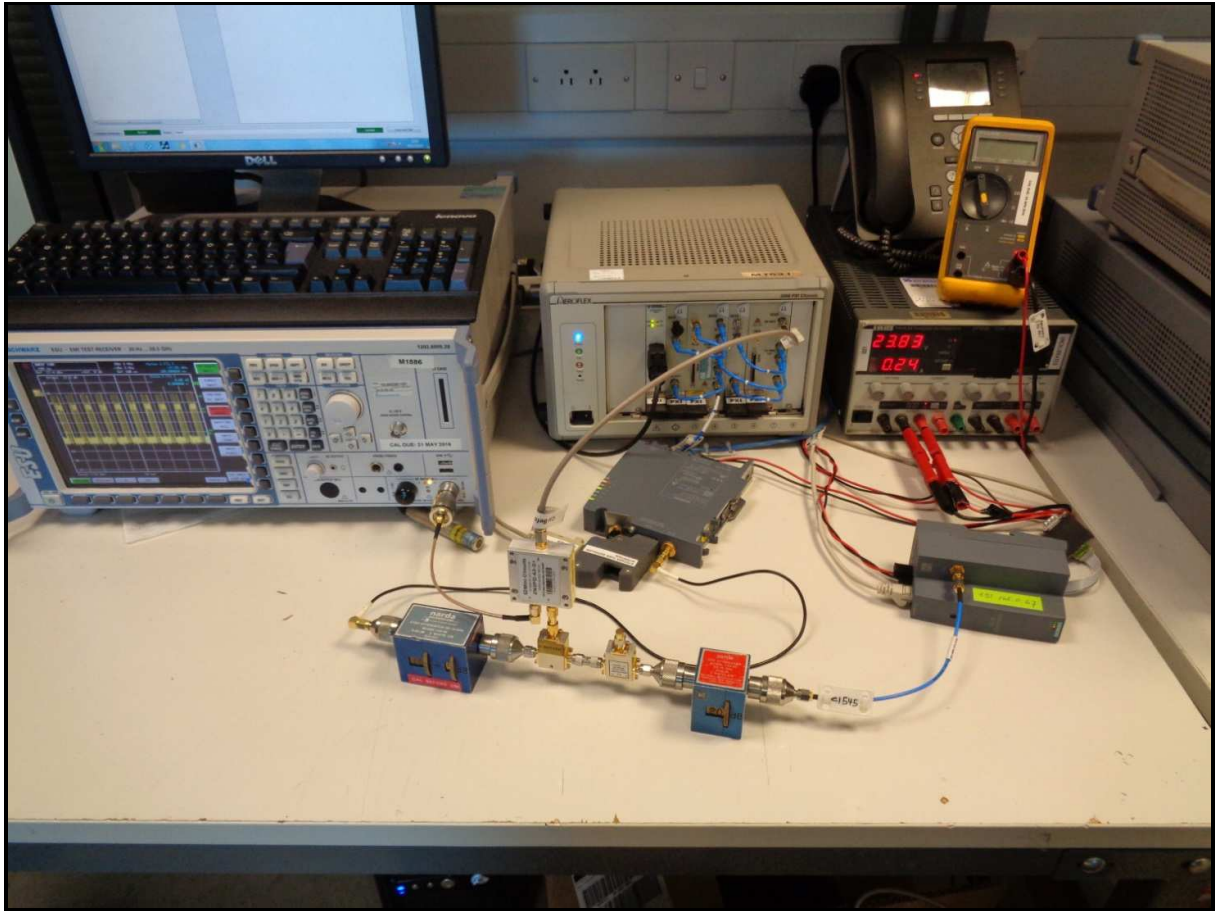
An additional check was then made using the above calibrated level and a 1 μsec pulse of a type 0 radar. Maximum spectrum analyser RBW/VBW setting was used for this to avoid pulse desensitisation effects of the very short burst time. This level was then used for all radar types during testing.

Equipment Setup Photograph – Conducted Method

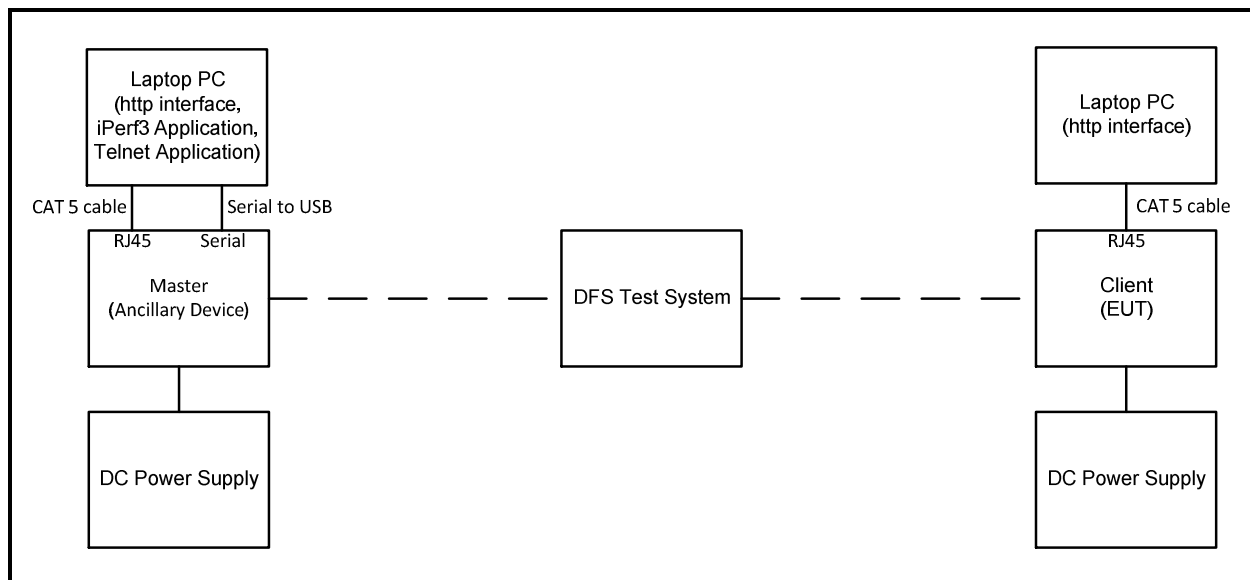
Test set-up photo showing EUT as Master with Radar Injection at Master



Test set-up block diagram showing EUT as Master with Radar Injection at Master

Equipment Setup Photograph – Conducted Method (continued)

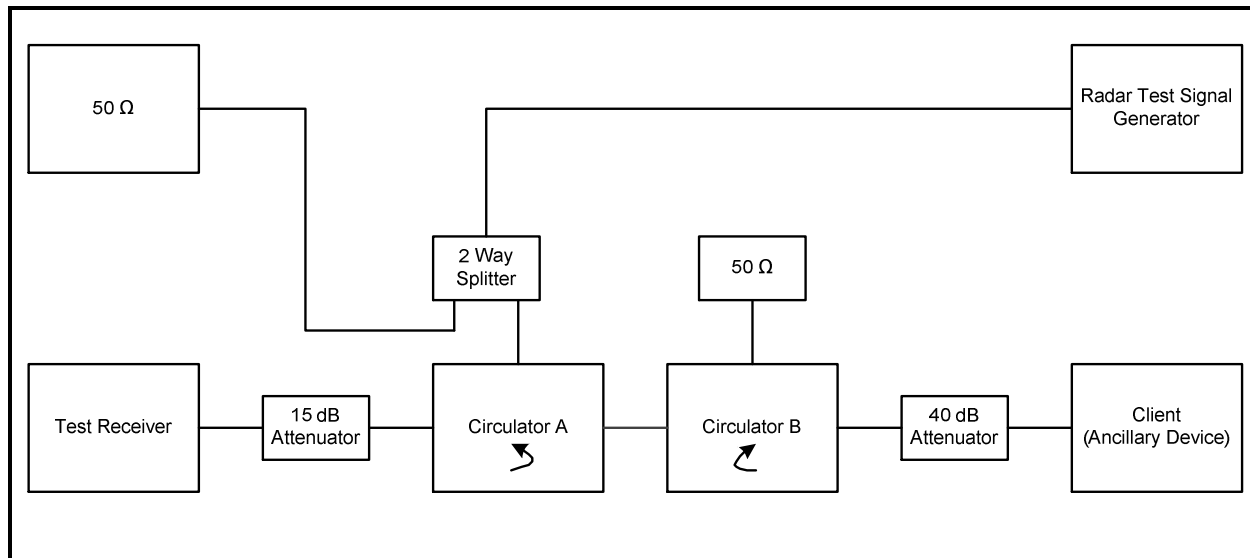
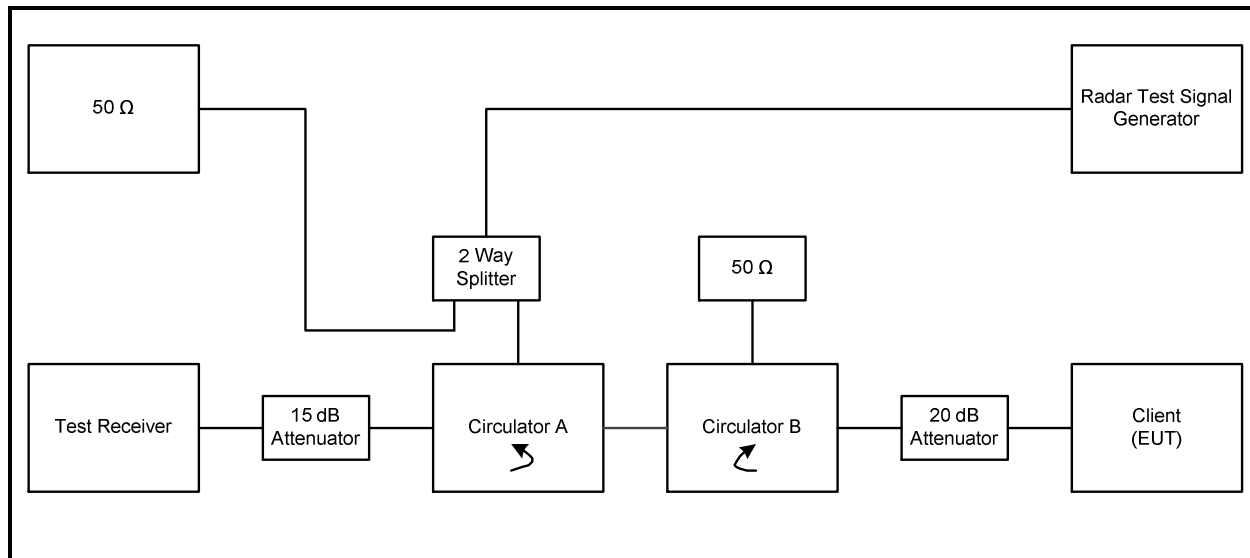
Test set-up photo showing EUT as Client with Radar Injection at Master



Test set-up block diagram showing EUT as Client with Radar Injection at Master

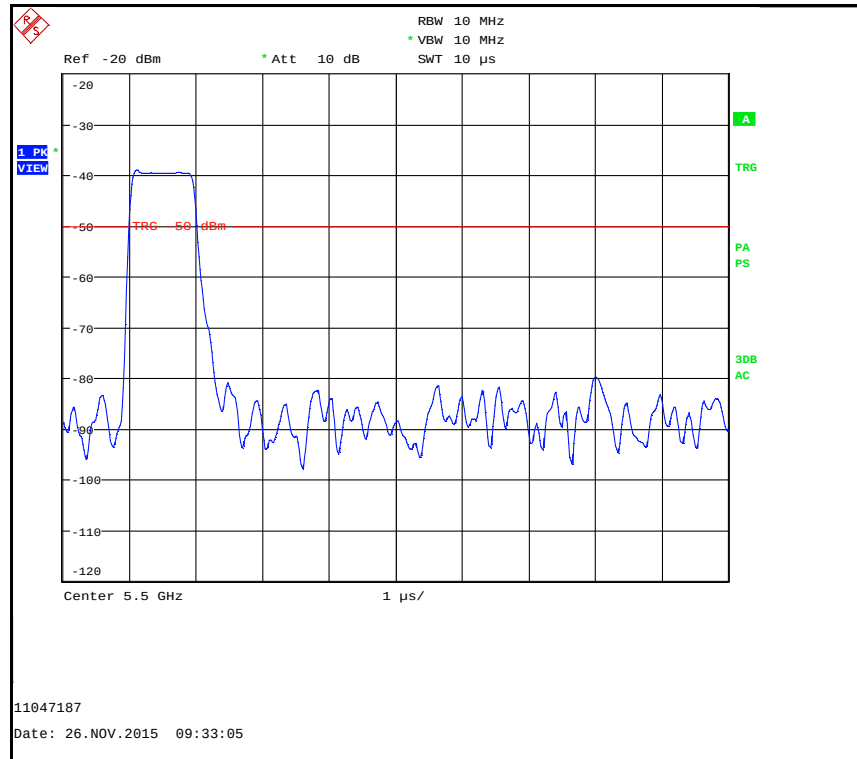
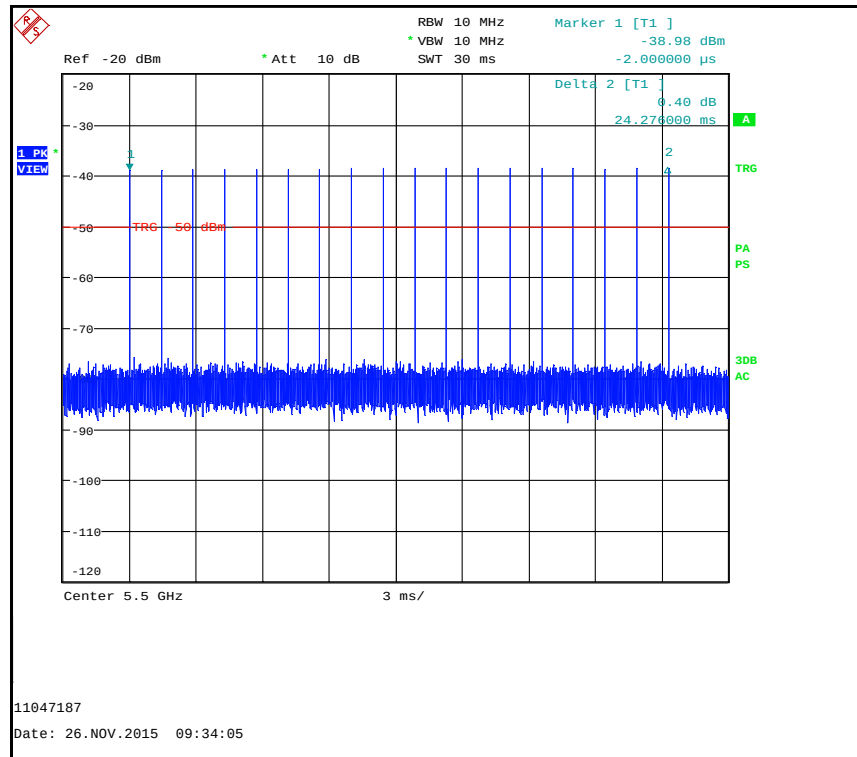
Equipment Setup for Calibration Block Diagram – Conducted Method

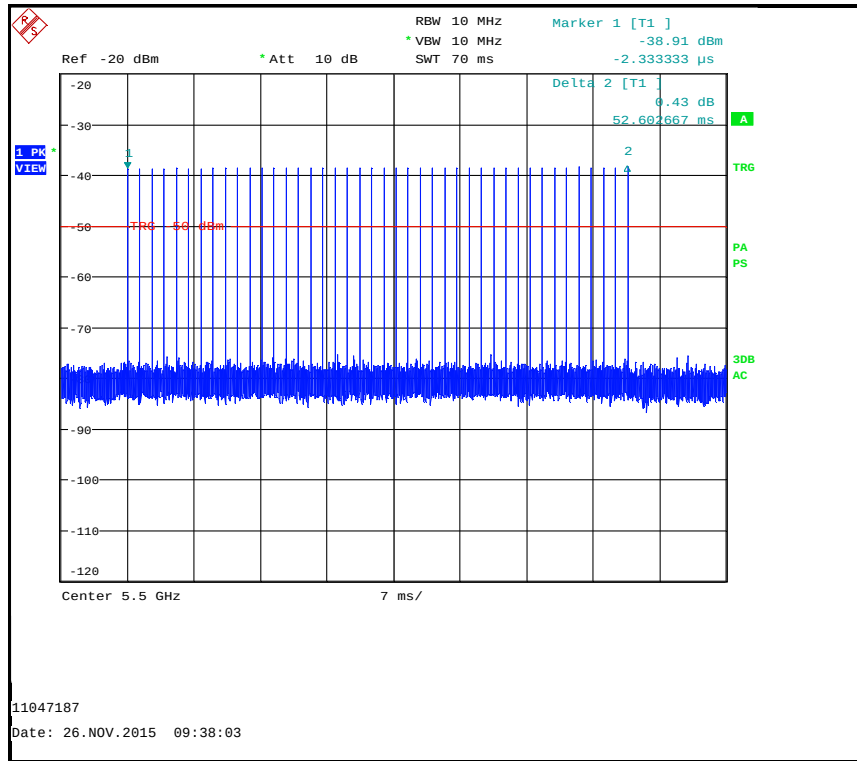
Calibration was performed using the setups as shown below.

EUT as Master with Radar Injection at Master**EUT as Client with Radar Injection at Master**

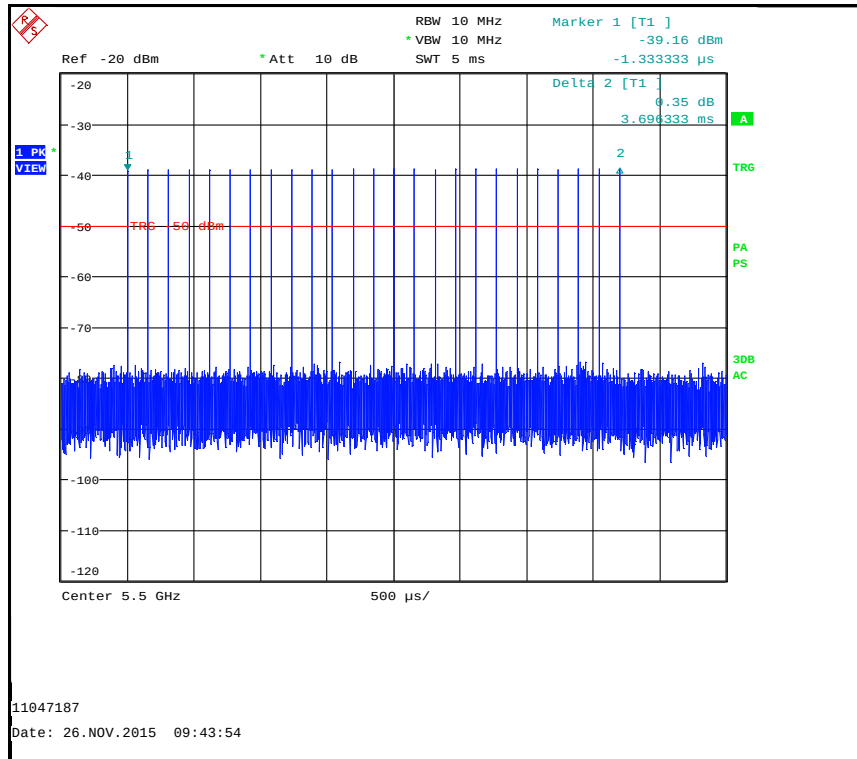
Radar Verification

The test system and its waveform generation has been validated by the FCC as an 'approved' device (see Appendix 4 of this test report), therefore full analysis of each radar is not necessary. However, below are sample plots for each of the radar types. Note the full timing plots of all the pulses in the waveform may give slightly inaccurate amplitudes. They are therefore accurate only as timing plots for an example radar overview.

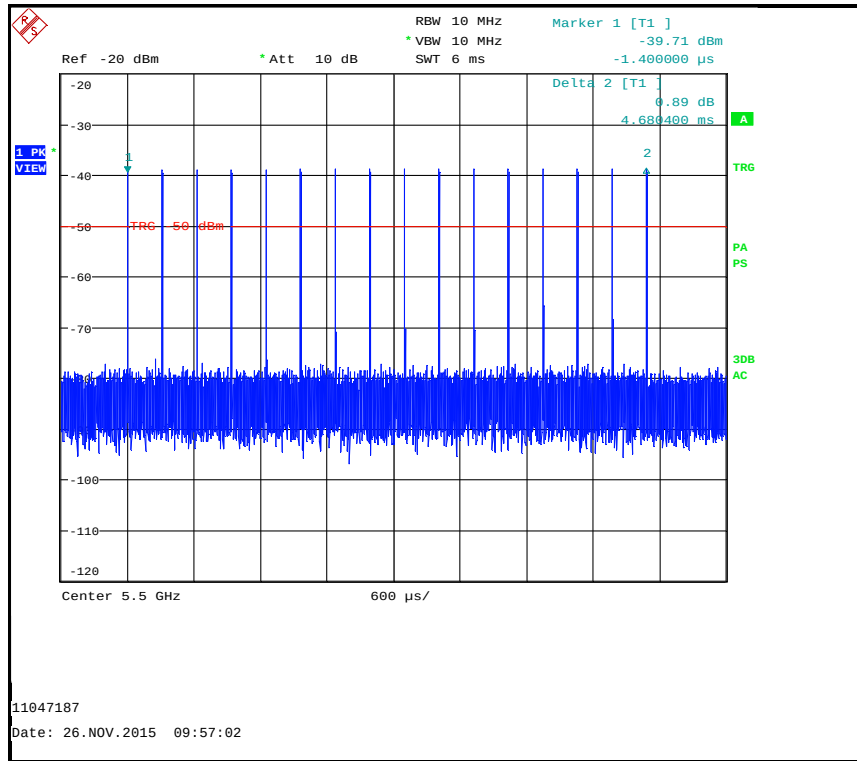
Radar Type 0Radar Type 0 – single 1 μ sec pulseRadar Type 0 – full 18 pulse waveform

Radar Type 1

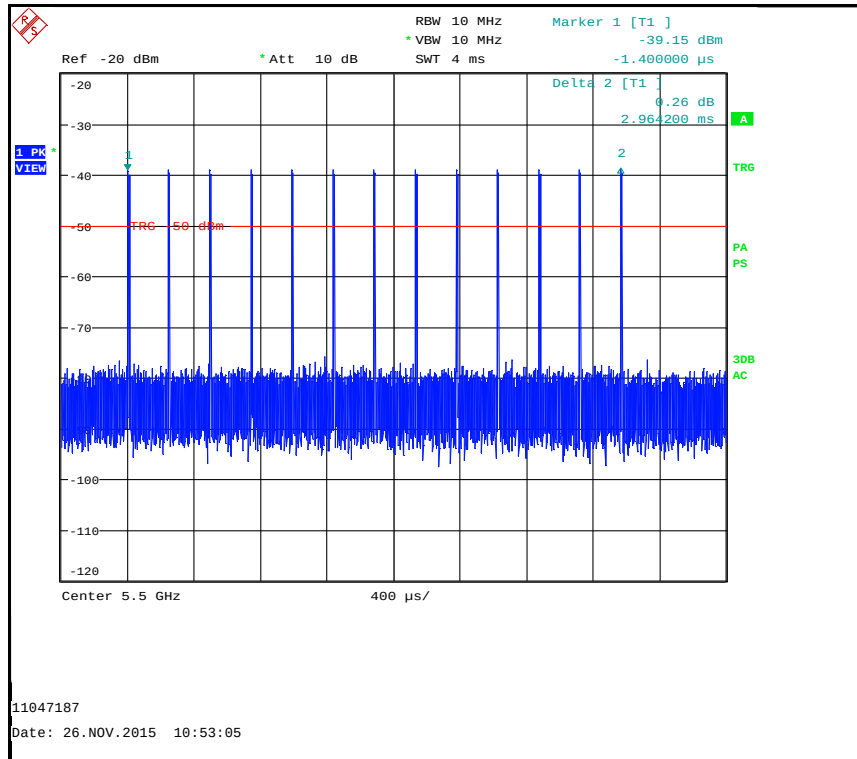
Radar Type 1 – 1 μ sec pulse width, 1283 μ sec PRI, 42 pulses

Radar Type 2

Radar Type 2 – 1 μsec pulse width, 154 μsec PRI, 25 pulses

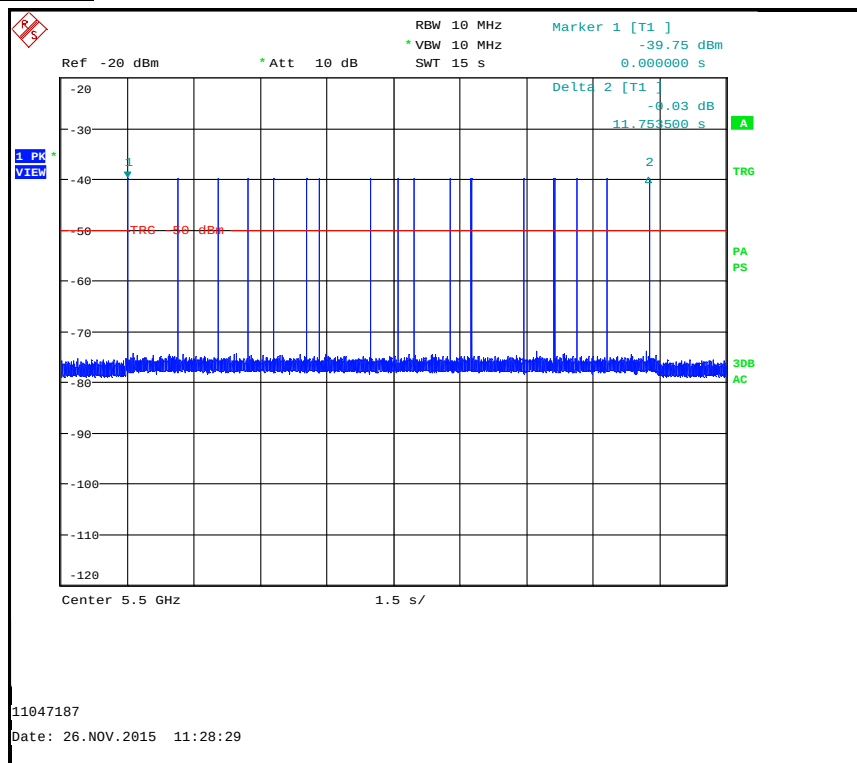
Radar Type 3

Radar Type 3 – 6 μsec pulse width, 312 μsec PRI, 16 pulses

Radar Type 4

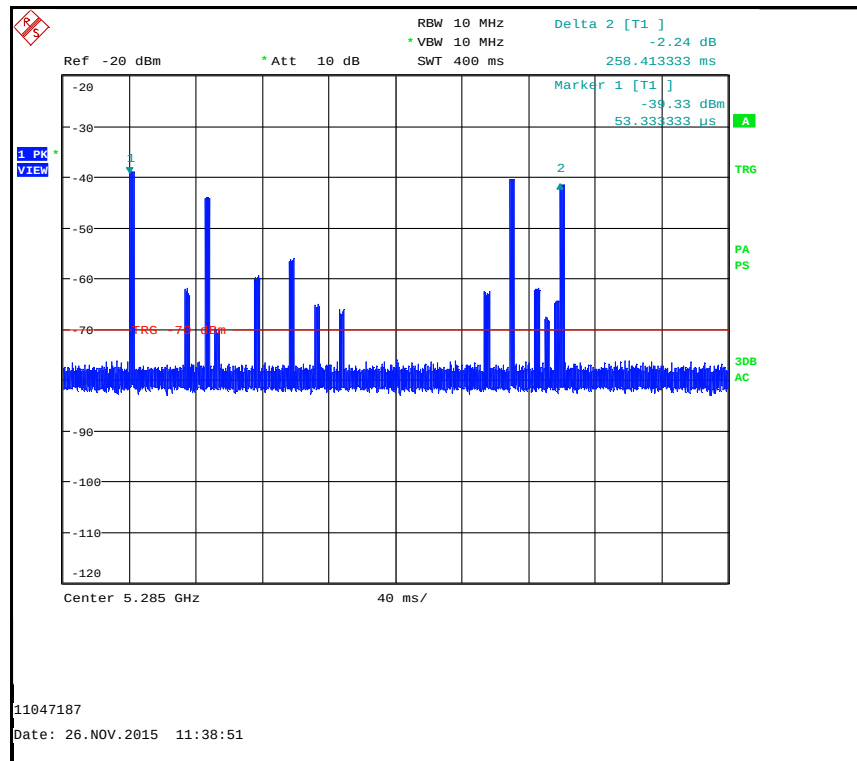
Radar Type 4 – 11.6 μ sec pulse width, 247 μ sec PRI, 13 pulses

Radar Type 5 (Long)



Long Radar Type 5

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μsec)	Pulse 2-to-3 Spacing (μsec)	Starting Location Within Interval (μsec)
1	3	65	16	1476	1932	50325
2	2	58	11	1400	-	481399
3	3	55	9	1994	1926	682588
4	1	58	7	-	-	655458
5	2	66	20	1027	-	510550
6	2	75	10	1042	-	545434
7	2	73	11	1440	-	125876
8	2	63	15	1479	-	579159
9	3	64	20	1521	1451	498543
10	2	52	20	1845	-	143729
11	1	87	18	-	-	256829
12	3	87	12	1207	1457	23605
13	3	67	15	1091	1413	497642
14	3	91	14	1710	1472	484799
15	2	60	9	1369	-	305488
16	2	50	8	1446	-	253219
17	1	79	10	-	-	508736

Radar Type 6 (Hopping)**Hopping Radar Pulse 6 (Centre Frequency adjusted to first hop frequency)**

Hopping sequence (MHz):	5285, 5397, 5400, 5596, 5322, 5659, 5614, 5722, 5644, 5565, 5505, 5305, 5537, 5490, 5613, 5279, 5419, 5316, 5478, 5345, 5405, 5667, 5512, 5383, 5331, 5270, 5464, 5627, 5674, 5389, 5696, 5444, 5295, 5510, 5599, 5520, 5541, 5258, 5670, 5326, 5463, 5521, 5313, 5551, 5481, 5713, 5533, 5511, 5366, 5375, 5626, 5665, 5716, 5647, 5653, 5534, 5526, 5532, 5702, 5430, 5662, 5555, 5640, 5567, 5467, 5399, 5410, 5623, 5499, 5470, 5329, 5264, 5395, 5448, 5557, 5575, 5281, 5656, 5558, 5319, 5504, 5304, 5582, 5314, 5718, 5259, 5280, 5388, 5632, 5606, 5472, 5638, 5496, 5384, 5350, 5600, 5406, 5515, 5636, 5507
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Appendix 4. Test platform confirmation email

From: Andrew Leimer [<mailto:Andrew.Leimer@fcc.gov>]
Sent: Friday, September 23, 2011 4:24 PM
To: Chisham, Steve
Cc: Carey, Tim; Hack, Barry; Rashmi Doshi; Joe Dichoso
Subject: RE: Certification for Aeroflex DFS solution

Hello Steve,
The Aeroflex "DXI based DFS test solution" system used for DFS alternative radar signal generation has been approved by the FCC and NTIA.
This approval permits the system to be used by labs in the testing of DFS devices for equipment authorization Certification. It is recommended that applicants that use your system for testing include a statement in the Test Report or a Letter Exhibit stating that the system has FCC and NTIA approval. This E-mail is your record of this approval.
Note that the appropriate term for your system is Approved as the term Certification is reserved for devices gaining equipment authorization through the FCC or a TCB.

Regards,
Andy Leimer

FCC/OET/EACB

Appendix 5. Statistical Performance Check– Radar Type 1 Trial Records

20 MHz Master

Radar Type 1			
Trial #	'Test A' Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses/s)	Pulse Repetition Interval (µsec)
1	N/A - 'Test B' Radar	779.4	1283
2	N/A - 'Test B' Radar	775.8	1289
3	N/A - 'Test B' Radar	709.2	1410
4	N/A - 'Test B' Radar	636.1	1572
5	N/A - 'Test B' Radar	610.9	1637
6	N/A - 'Test B' Radar	606.4	1649
7	N/A - 'Test B' Radar	462.1	2164
8	N/A - 'Test B' Radar	447.6	2234
9	N/A - 'Test B' Radar	402.7	2483
10	N/A - 'Test B' Radar	370.6	2698
11	N/A - 'Test B' Radar	341.8	2926
12	1	1930.5	518
13	N/A - 'Test B' Radar	1926.8	519
14	N/A - 'Test B' Radar	1869.2	535
15	3	1792.1	558
16	4	1730.1	578
17	5	1672.2	598
18	6	1618.1	618
19	7	1567.4	638
20	8	1519.8	658
21	10	1432.7	698
22	11	1392.8	718
23	12	1355.0	738
24	N/A - 'Test B' Radar	1298.7	770
25	14	1285.3	778
26	N/A - 'Test B' Radar	1259.4	794
27	15	1253.1	798
28	18	1165.5	858
29	20	1113.6	898
30	22	1066.1	938

40 MHz Master

Radar Type 1			
Trial #	'Test A' Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses/s)	Pulse Repetition Interval (µsec)
1	N/A - 'Test B' Radar	989.1	1011
2	N/A - 'Test B' Radar	909.9	1099
3	N/A - 'Test B' Radar	810.4	1234
4	N/A - 'Test B' Radar	769.8	1299
5	N/A - 'Test B' Radar	649.8	1539
6	N/A - 'Test B' Radar	632.9	1580
7	N/A - 'Test B' Radar	528.5	1892
8	N/A - 'Test B' Radar	458.7	2180
9	N/A - 'Test B' Radar	399.7	2502
10	N/A - 'Test B' Radar	345.3	2896
11	N/A - 'Test B' Radar	338.5	2954
12	N/A - 'Test B' Radar	333.9	2995
13	23	326.2	3066
14	1	1930.5	518
15	N/A - 'Test B' Radar	1923.1	520
16	2	1858.7	538
17	3	1792.1	558
18	4	1730.1	578
19	5	1672.2	598
20	6	1618.1	618
21	8	1519.8	658
22	9	1474.9	678
23	N/A - 'Test B' Radar	1459.9	685
24	10	1432.7	698
25	11	1392.8	718
26	16	1222.5	818
27	17	1193.3	838
28	19	1139.0	878
29	N/A - 'Test B' Radar	1107.4	903
30	22	1066.1	938

Appendix 6. Statistical Performance Check– Radar Type 2 Trial Records

20 MHz Master

Radar Type 2			
Trial #	Number Pulses per Burst	Pulse Width (µsec)	PRI (µsec)
1	25	1.0	154
2	26	1.1	173
3	25	1.3	209
4	29	1.8	187
5	25	1.8	212
6	26	2.0	150
7	26	2.0	194
8	23	2.0	222
9	23	2.1	158
10	23	2.1	216
11	23	2.2	165
12	24	2.2	196
13	24	2.3	154
14	28	2.3	205
15	26	2.5	177
16	23	2.7	155
17	24	2.9	154
18	29	2.9	162
19	28	3.0	179
20	28	3.2	179
21	23	3.2	194
22	27	3.3	174
23	28	3.6	207
24	27	3.8	182
25	27	4.3	191
26	27	4.4	208
27	29	4.4	228
28	23	4.5	201
29	28	4.6	217
30	29	4.8	230

40 MHz Master

Radar Type 2			
Trial #	Number Pulses per Burst	Pulse Width (µsec)	PRI (µsec)
1	26	1.1	199
2	23	1.1	214
3	23	1.3	170
4	25	1.4	172
5	27	1.4	213
6	25	1.7	160
7	28	1.8	185
8	27	2.2	188
9	24	2.4	198
10	25	2.5	173
11	29	2.6	178
12	26	2.6	185
13	24	2.8	179
14	25	3.0	213
15	26	3.1	203
16	26	3.5	220
17	28	3.6	165
18	27	3.7	185
19	26	3.8	226
20	24	3.9	172
21	28	4.1	203
22	24	4.3	194
23	28	4.3	221
24	25	4.4	161
25	29	4.5	171
26	23	4.6	195
27	26	4.7	188
28	23	4.7	213
29	29	4.8	218
30	26	4.9	218

Appendix 7. Statistical Performance Check– Radar Type 3 Trial Records

20 MHz Master

Radar Type 3			
Trial #	Number Pulses per Burst	Pulse Width (µsec)	PRI (µsec)
1	16	6.0	312
2	18	6.2	399
3	16	6.5	213
4	17	6.5	386
5	17	6.6	458
6	17	6.7	337
7	18	7.1	330
8	16	7.2	342
9	16	7.4	238
10	17	7.5	336
11	16	7.5	396
12	18	7.6	209
13	17	8.2	239
14	18	8.2	266
15	18	8.2	392
16	17	8.6	213
17	16	8.6	250
18	18	8.6	271
19	16	8.6	352
20	18	8.7	436
21	17	8.8	347
22	16	8.8	416
23	17	9.0	230
24	18	9.3	412
25	17	9.4	274
26	17	9.4	480
27	17	9.5	438
28	18	9.8	231
29	17	9.8	299
30	18	9.9	251

40 MHz Master

Radar Type 3			
Trial #	Number Pulses per Burst	Pulse Width (µsec)	PRI (µsec)
1	17	10.0	473
2	16	6.5	318
3	16	6.7	397
4	18	6.9	335
5	17	6.9	387
6	17	7.1	374
7	16	7.1	464
8	17	7.2	378
9	18	7.2	489
10	16	7.3	264
11	16	7.3	269
12	17	7.3	415
13	18	7.3	494
14	18	7.7	307
15	16	7.7	360
16	17	8.0	500
17	18	8.1	325
18	18	8.3	446
19	18	8.4	319
20	18	8.8	283
21	17	8.9	473
22	16	9.0	422
23	16	9.3	477
24	16	9.5	254
25	16	9.6	290
26	18	9.6	308
27	17	9.7	347
28	16	9.8	218
29	17	9.8	224
30	17	9.8	496

Appendix 8. Statistical Performance Check– Radar Type 4 Trial Records

20 MHz Master

Radar Type 4			
Trial #	Number Pulses per Burst	Pulse Width (µsec)	PRI (µsec)
1	13	11.6	247
2	14	11.6	383
3	15	12.4	297
4	12	12.7	466
5	12	12.9	354
6	16	13.2	431
7	14	13.5	379
8	15	13.7	439
9	14	13.8	492
10	15	13.9	262
11	16	13.9	377
12	12	14.2	216
13	15	14.2	400
14	13	15.1	302
15	16	15.9	397
16	16	16.0	215
17	15	16.4	387
18	15	16.9	259
19	12	17.0	229
20	16	17.5	432
21	14	17.5	467
22	14	17.7	242
23	15	17.8	368
24	16	19.0	310
25	16	19.2	445
26	12	19.3	231
27	16	19.7	232
28	15	19.8	271
29	14	19.9	281
30	15	19.9	412

40 MHz Master

Radar Type 4			
Trial #	Number Pulses per Burst	Pulse Width (µsec)	PRI (µsec)
1	14	11.0	255
2	14	11.1	283
3	14	11.6	244
4	16	12.1	389
5	13	12.3	390
6	13	12.4	309
7	13	12.5	412
8	16	13.3	333
9	16	13.4	289
10	12	13.5	386
11	12	13.6	467
12	15	13.7	433
13	14	13.8	441
14	15	14.1	415
15	12	14.2	346
16	13	15.8	201
17	16	15.8	368
18	12	16.1	276
19	12	16.1	284
20	16	16.1	384
21	16	16.2	247
22	13	16.3	430
23	13	16.8	309
24	12	17.3	416
25	13	17.6	408
26	16	18.5	440
27	13	18.9	316
28	12	19.5	223
29	16	19.7	460
30	16	19.9	434

Appendix 9. Statistical Performance Check– Radar Type 5 Trial Records

20 MHz Master - Trial 1

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	65	16	1476	1932	50325
2	2	58	11	1400	-	481399
3	3	55	9	1994	1926	682588
4	1	58	7	-	-	655458
5	2	66	20	1027	-	510550
6	2	75	10	1042	-	545434
7	2	73	11	1440	-	125876
8	2	63	15	1479	-	579159
9	3	64	20	1521	1451	498543
10	2	52	20	1845	-	143729
11	1	87	18	-	-	256829
12	3	87	12	1207	1457	23605
13	3	67	15	1091	1413	497642
14	3	91	14	1710	1472	484799
15	2	60	9	1369	-	305488
16	2	50	8	1446	-	253219
17	1	79	10	-	-	508736

20 MHz Master - Trial 2

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	60	14	-	-	651625
2	2	51	17	1870	-	756120
3	1	71	5	-	-	1400
4	2	62	11	1135	-	584685
5	2	69	15	1072	-	488241
6	1	94	8	-	-	171893
7	2	75	7	1056	-	608556
8	3	57	17	1617	1954	712617
9	1	84	13	-	-	266108
10	2	52	5	1537	-	10645
11	3	60	20	1062	1838	604249
12	2	97	5	1587	-	253715
13	3	62	17	1201	1371	643683
14	1	84	10	-	-	684421
15	3	81	11	1240	1698	720556

20 MHz Master - Trial 3

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	87	13	-	-	198067
2	2	59	12	1386	-	349369
3	1	61	5	-	-	236642
4	1	89	5	-	-	423443
5	3	90	18	1360	1962	355695
6	3	67	8	1157	1981	381855
7	2	91	7	1854	-	341650
8	2	63	5	1020	-	403703
9	1	66	18	-	-	563964
10	3	52	15	1992	1634	641140
11	2	90	9	1909	-	29135
12	2	67	8	1774	-	638938
13	1	51	13	-	-	540024
14	3	63	6	1149	1841	398537
15	2	50	14	1346	-	480329
16	2	77	6	1807	-	493901
17	3	60	13	1013	1979	491644
18	2	61	17	1051	-	185197

20 MHz Master - Trial 4

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	53	12	-	-	60956
2	3	50	18	1473	1967	684337
3	1	51	12	-	-	791004
4	1	98	7	-	-	664629
5	3	61	11	1030	1289	1260838
6	2	75	18	1245	-	961771
7	3	67	17	1322	1421	999103
8	2	95	15	1742	-	718927
9	1	67	17	-	-	209634

20 MHz Master - Trial 5

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	77	11	1557	-	887712
2	1	65	7	-	-	76705
3	3	61	17	1514	1548	456392
4	1	81	17	-	-	179929
5	1	68	16	-	-	67909
6	3	82	5	1510	1757	565413
7	3	52	9	1132	1901	11813
8	3	72	16	1129	1802	41622

20 MHz Master - Trial 6

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	87	13	-	-	588367
2	2	56	11	1366	-	479415
3	2	83	20	1686	-	582379
4	2	77	19	1536	-	400042
5	2	88	6	1642	-	724586
6	2	81	13	1354	-	544587
7	3	81	10	1147	1705	328896
8	1	66	18	-	-	513769
9	2	66	5	1331	-	352432
10	2	57	8	1229	-	335507
11	3	88	14	1267	1472	672855
12	1	54	13	-	-	109635
13	3	79	6	1639	1714	716894
14	2	92	20	1338	-	137365
15	1	54	18	-	-	114257
16	1	87	16	-	-	127984

20 MHz Master - Trial 7

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	70	9	1907	-	822773
2	1	51	5	-	-	674851
3	3	62	8	1754	1698	924126
4	3	62	10	1618	1511	258384
5	1	61	19	-	-	264593
6	3	84	16	1114	1236	155878
7	2	96	8	1658	-	357662
8	1	59	18	-	-	546418
9	3	64	7	1176	1089	947280
10	2	69	19	1358	-	308
11	2	56	15	1111	-	173184
12	1	71	15	-	-	150553

20 MHz Master - Trial 8

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	97	12	-	-	555469
2	3	66	14	1040	1569	441570
3	1	78	6	-	-	495830
4	3	57	5	1802	1315	169095
5	1	91	17	-	-	202067
6	3	65	9	1077	1484	164105
7	3	77	15	1055	1647	298944
8	3	76	9	1630	1912	294988
9	2	92	20	1814	-	50424
10	1	57	5	-	-	94070
11	2	66	20	1201	-	399387
12	1	60	18	-	-	421108
13	1	74	13	-	-	323158
14	2	76	19	1016	-	797978

20 MHz Master - Trial 9

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	76	13	1686	-	214240
2	3	73	19	1295	1972	190005
3	1	97	12	-	-	61709
4	1	60	16	-	-	640147
5	1	58	13	-	-	498745
6	3	78	11	1790	1978	136431
7	2	96	5	1149	-	386862
8	2	79	6	1641	-	498524
9	1	50	9	-	-	681113
10	3	62	19	1548	1090	220275
11	2	66	7	1162	-	563410
12	2	96	18	1724	-	90778
13	3	57	12	1732	1879	38882
14	1	51	11	-	-	661541
15	2	57	14	1045	-	446540
16	1	96	14	-	-	579463

20 MHz Master - Trial 10

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	94	16	1683	1765	80293
2	3	94	11	1063	1668	573106
3	2	76	17	1102	-	411401
4	2	51	18	1025	-	695148
5	1	60	17	-	-	221721
6	3	57	14	1575	1549	244032
7	1	58	12	-	-	787638
8	2	91	20	1778	-	252260
9	1	81	10	-	-	171327
10	3	88	5	1240	1494	528210
11	2	79	19	1532	-	639352
12	3	75	19	1488	1352	476711
13	1	91	13	-	-	289310
14	2	60	6	1821	-	516959
15	3	78	9	1524	1694	194442

20 MHz Master - Trial 11

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	50	13	1701	1898	51113
2	3	59	16	1157	1635	456704
3	1	99	19	-	-	338110
4	2	86	5	1804	-	593572
5	3	57	13	1979	1420	594139
6	3	91	10	1408	1838	391139
7	3	75	19	1975	1652	491685
8	1	96	10	-	-	448356
9	2	79	11	1586	-	482100
10	3	54	18	1806	1676	309158
11	3	57	18	1961	1723	335660
12	1	98	10	-	-	281742
13	3	90	6	1254	1465	28402
14	2	89	5	1777	-	629353
15	2	61	15	1979	-	393066
16	3	58	7	1718	1500	423067
17	1	55	5	-	-	252065

20 MHz Master - Trial 12

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	97	8	-	-	21105
2	3	99	8	1722	1778	489142
3	1	61	17	-	-	873581
4	1	90	19	-	-	819299
5	2	97	7	1982	-	245903
6	2	53	17	1655	-	1347797
7	1	82	20	-	-	298027
8	1	51	12	-	-	1266709

20 MHz Master - Trial 13

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	98	13	1982	1961	133132
2	1	75	20	-	-	268867
3	1	72	18	-	-	175400
4	2	82	11	1838	-	21849
5	3	79	20	1147	1309	223488
6	2	57	10	1133	-	74478
7	3	54	8	1993	1136	399417
8	3	98	8	1781	1933	93599
9	1	70	13	-	-	302685
10	2	68	11	1563	-	448587
11	1	73	6	-	-	144797
12	3	90	8	1645	1386	38700
13	3	68	18	1674	1043	156561
14	3	56	20	1758	1491	410955
15	1	92	11	-	-	549407
16	3	90	19	1241	1771	626801
17	2	72	13	1635	-	86400
18	3	66	17	1646	1298	552417

20 MHz Master - Trial 14

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	89	9	-	-	512060
2	2	61	13	1245	-	308350
3	3	59	14	1205	1247	548665
4	3	52	12	1762	1144	202211
5	3	90	11	1131	1409	74471
6	1	91	7	-	-	78911
7	1	90	13	-	-	550956
8	2	77	5	1314	-	467914
9	3	76	13	1764	1253	685047
10	2	95	20	1332	-	531929
11	1	77	16	-	-	306733
12	1	99	19	-	-	419228
13	1	55	12	-	-	310914
14	1	85	20	-	-	550864
15	3	73	6	1460	1027	89381
16	1	71	17	-	-	303114
17	1	57	7	-	-	691028

20 MHz Master - Trial 15

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	74	11	-	-	1089213
2	2	55	6	1666	-	831424
3	2	71	8	1552	-	312862
4	1	61	6	-	-	314336
5	1	88	11	-	-	1057223
6	3	87	6	1438	1271	804981
7	3	97	17	1437	1088	1064306
8	2	99	18	1786	-	401034
9	3	79	17	1421	1833	717382
10	3	77	7	1677	1196	1155373

20 MHz Master - Trial 16

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	3	61	17	1168	1601	428164
2	3	61	18	1423	1980	475940
3	3	100	7	1663	1844	73587
4	2	64	19	1513	-	110207
5	2	73	5	1128	-	124461
6	3	55	20	1489	1971	556799
7	2	94	6	1249	-	231110
8	1	98	6	-	-	538445
9	1	91	15	-	-	611822
10	2	86	19	1312	-	352932
11	3	84	20	1449	1049	121993
12	3	78	13	1633	1327	447833
13	2	75	17	1978	-	324923
14	1	79	14	-	-	473927
15	1	66	17	-	-	417186
16	1	90	17	-	-	44113
17	2	74	5	1804	-	273987
18	2	64	19	1025	-	513247
19	3	77	17	1632	1322	495488

20 MHz Master - Trial 17

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	3	66	19	1992	1092	564274
2	1	86	17	-	-	861869
3	2	57	17	1031	-	535033
4	3	75	5	1156	1319	1208937
5	3	92	12	1040	1491	641177
6	3	52	20	1551	1007	30859
7	2	64	12	1922	-	104523
8	2	52	16	1087	-	833335
9	1	97	17	-	-	315868

20 MHz Master - Trial 18

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	82	9	1598	-	110412
2	2	61	16	1500	-	252379
3	3	80	20	1606	1663	572724
4	1	67	6	-	-	178756
5	3	97	20	1414	1607	68216
6	2	91	10	1817	-	371047
7	1	62	16	-	-	139891
8	2	82	20	1841	-	368283
9	1	78	20	-	-	361316
10	1	92	6	-	-	67446
11	2	88	19	1594	-	454707
12	3	52	13	1641	1898	657459
13	1	93	11	-	-	245683
14	3	91	16	1348	1243	263013
15	1	61	7	-	-	335630
16	2	99	8	1980	-	297144
17	1	89	20	-	-	340491
18	2	80	19	1965	-	370922

20 MHz Master - Trial 19

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	83	17	1737	-	1047139
2	3	85	19	1185	1277	784436
3	2	74	18	1705	-	202925
4	2	89	6	1122	-	1078039
5	3	78	8	1612	1210	77464
6	2	50	17	1785	-	933359
7	1	53	14	-	-	797643
8	2	75	7	1726	-	941090
9	1	50	16	-	-	792358
10	3	65	6	1806	1210	78470
11	1	94	11	-	-	322497

20 MHz Master - Trial 20

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	80	6	-	-	500902
2	3	67	18	1422	1493	573243
3	1	71	9	-	-	649172
4	3	52	14	1365	1259	589703
5	3	94	12	1745	1906	627469
6	2	90	16	1662	-	653717
7	3	89	17	1632	1865	243758
8	2	50	13	1236	-	386201
9	1	93	14	-	-	593789
10	3	92	12	1031	1528	338049
11	1	70	20	-	-	157597
12	1	69	18	-	-	506700
13	3	53	16	1832	1881	366377
14	2	75	10	1868	-	447259
15	1	67	16	-	-	434345
16	1	83	14	-	-	96796
17	1	55	16	-	-	216303
18	2	56	12	1539	-	239444

20 MHz Master - Trial 21

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	87	20	1584	-	172146
2	3	58	18	1377	1983	30776
3	1	67	12	-	-	407531
4	2	68	7	1431	-	502830
5	3	79	13	1235	1832	435786
6	1	87	6	-	-	465464
7	2	50	9	1670	-	629700
8	1	84	14	-	-	57927
9	1	74	11	-	-	184247
10	2	55	17	1760	-	145678
11	3	65	17	1311	1107	401221
12	1	91	8	-	-	500954
13	3	80	14	1438	1779	450602
14	2	51	20	1674	-	360838
15	2	84	17	1076	-	259551
16	1	63	9	-	-	596984
17	1	53	19	-	-	587921
18	1	89	19	-	-	63845

20 MHz Master - Trial 22

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	76	7	1902	1935	521013
2	2	72	5	1643	-	376116
3	1	53	17	-	-	53900
4	3	61	15	1991	1234	450902
5	1	95	13	-	-	207130
6	2	85	16	1721	-	260832
7	1	88	12	-	-	80031
8	1	57	11	-	-	368610
9	3	98	14	1952	1241	387941
10	3	93	6	1249	1812	129142
11	3	57	19	1862	1188	224625
12	2	82	14	1319	-	87675
13	3	86	14	1634	1845	356239
14	3	77	19	1268	1644	558980
15	1	82	17	-	-	52876
16	1	90	12	-	-	343758
17	2	95	13	1618	-	545672
18	3	81	20	1919	1522	490431
19	1	71	17	-	-	512595

20 MHz Master - Trial 23

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	100	18	1281	-	142950
2	3	94	19	1152	1253	974516
3	1	71	9	-	-	393304
4	3	54	17	1698	1887	220251
5	1	89	5	-	-	1035138
6	1	81	11	-	-	531407
7	2	73	8	1831	-	580154
8	2	64	19	1198	-	450198
9	3	50	14	1465	1613	1001140
10	2	76	15	1161	-	1036365
11	3	82	6	1925	1030	663585

20 MHz Master - Trial 24

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	66	7	1098	1469	539189
2	2	89	15	1388	-	1065875
3	3	53	19	1897	1362	1161765
4	3	81	13	1154	1109	658061
5	2	99	8	1536	-	861627
6	3	55	19	1502	1857	85446
7	1	94	9	-	-	754551
8	2	56	20	1831	-	305592
9	1	81	18	-	-	105676
10	1	50	9	-	-	170729

20 MHz Master - Trial 25

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	53	5	1726	-	1172929
2	2	56	8	1915	-	1198026
3	3	77	12	1387	1950	2172
4	3	51	6	1342	1330	744563
5	2	66	18	1538	-	1285033
6	1	58	12	-	-	1050482
7	2	99	18	1095	-	1182412
8	1	69	6	-	-	955862

20 MHz Master - Trial 26

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	60	7	-	-	748549
2	3	77	8	1890	1086	221204
3	3	60	17	1721	1909	403342
4	3	94	8	1788	1995	49941
5	2	55	11	1574	-	536058
6	1	58	20	-	-	361669
7	3	72	18	1006	1284	383981
8	2	57	5	1618	-	207902
9	1	61	16	-	-	292045
10	1	56	7	-	-	271098
11	1	75	18	-	-	727856
12	2	63	17	1047	-	394054
13	1	96	20	-	-	624529
14	1	92	5	-	-	652556

20 MHz Master - Trial 27

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	81	5	1288	1724	141669
2	1	88	20	-	-	126917
3	2	53	11	1492	-	63039
4	3	86	19	1109	1593	199138
5	3	75	11	1991	1014	62285
6	3	76	20	1385	1672	345793
7	1	71	13	-	-	175730
8	3	89	14	1680	1755	167868
9	2	83	11	1734	-	245819
10	3	95	10	1918	1931	100671
11	2	99	6	1621	-	178036
12	3	56	12	1237	1003	494145
13	3	75	7	1072	1544	329317
14	3	57	13	1914	1579	274300
15	3	87	14	1280	1694	494587
16	2	80	12	1741	-	245524
17	2	72	12	1672	-	410226
18	1	73	7	-	-	310452
19	1	87	20	-	-	536965
20	2	67	9	1333	-	380395

20 MHz Master - Trial 28

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	63	5	1513	-	122968
2	3	85	11	1440	1671	403146
3	2	68	20	1082	-	397381
4	2	55	19	1052	-	47233
5	1	87	5	-	-	121172
6	1	90	16	-	-	487445
7	2	77	9	1972	-	457799
8	1	57	13	-	-	622024
9	1	90	20	-	-	426251
10	1	75	19	-	-	587820
11	2	99	18	1952	-	472944
12	1	73	14	-	-	471293
13	2	76	20	1331	-	659004
14	1	100	16	-	-	56164
15	1	65	11	-	-	447373
16	2	97	5	1694	-	562804
17	1	53	11	-	-	9188
18	1	57	9	-	-	541731

20 MHz Master - Trial 29

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	89	15	1334	1844	257566
2	3	97	15	1553	1602	176147
3	3	50	20	1944	1369	397307
4	2	86	10	1885	-	594537
5	1	67	10	-	-	347598
6	1	68	9	-	-	557299
7	1	59	9	-	-	62558
8	3	72	17	1468	1036	457775
9	3	65	13	1091	1581	249023
10	1	75	6	-	-	569743
11	2	92	6	1512	-	6481
12	3	81	20	1476	1867	468439
13	2	66	16	1570	-	58247
14	2	96	5	1503	-	373880
15	1	71	5	-	-	400451
16	2	69	19	1769	-	659290
17	2	90	9	1444	-	188826
18	1	53	16	-	-	56063

20 MHz Master - Trial 30

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	91	20	1169	1984	211088
2	3	90	13	1493	1917	227307
3	2	78	9	1421	-	632574
4	1	96	11	-	-	743090
5	3	61	12	1405	1922	415997
6	3	72	11	1011	1716	1233649
7	3	85	16	1140	1251	57107
8	2	81	14	1405	-	412281

40 MHz Master - Trial 1

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	50	17	1043	-	510845
2	1	69	18	-	-	643187
3	3	77	20	1044	1700	778778
4	2	93	15	1916	-	692557
5	3	88	18	1508	1971	808978
6	3	83	6	1107	1410	710047
7	3	70	13	1080	1306	90709
8	3	63	6	1236	1513	492185
9	2	79	14	1289	-	336462
10	1	98	14	-	-	834029
11	1	90	17	-	-	144406
12	1	53	15	-	-	185168
13	3	88	15	1456	1705	23225
14	2	58	18	1161	-	641274

40 MHz Master - Trial 2

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	85	13	1241	-	181857
2	1	69	11	-	-	415774
3	1	90	7	-	-	567451
4	3	85	14	1735	1912	38069
5	1	64	5	-	-	273943
6	2	94	6	1688	-	390400
7	3	56	13	1144	1192	605352
8	1	78	9	-	-	390030
9	3	56	15	1269	1627	315928
10	3	74	15	1847	1331	26355
11	2	96	6	1716	-	321933
12	2	66	5	1372	-	97261
13	2	92	12	1471	-	497844
14	2	99	20	1541	-	99235
15	1	59	5	-	-	647308
16	2	50	11	1939	-	356574
17	2	73	18	1223	-	623406

40 MHz Master - Trial 3

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	51	12	1403	-	526823
2	1	62	7	-	-	579184
3	3	93	17	1156	1743	247407
4	2	86	9	1190	-	530412
5	1	96	8	-	-	275684
6	2	60	11	1525	-	732966
7	3	79	14	1572	1789	48389
8	2	75	13	1837	-	674447
9	1	50	8	-	-	155149
10	2	60	9	1196	-	131313
11	3	88	13	1032	1176	320887
12	3	93	6	1965	1507	643751
13	3	60	6	1124	1240	179486
14	2	84	16	1006	-	126069
15	2	64	15	1251	-	516170
16	3	94	8	1937	1181	261215

40 MHz Master - Trial 4

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	52	14	1396	1359	453995
2	3	69	14	1330	1039	477563
3	3	56	6	1258	1967	1186500
4	2	72	19	1591	-	87370
5	3	78	7	1034	1864	317734
6	3	79	15	1373	1110	254890
7	1	83	18	-	-	11811
8	2	99	14	1593	-	185035
9	1	63	12	-	-	750181

40 MHz Master - Trial 5

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	63	5	1663	-	568222
2	1	66	20	-	-	526904
3	3	59	9	1893	1149	529153
4	3	68	20	1690	1936	5903
5	2	56	19	1181	-	300248
6	1	100	19	-	-	311981
7	1	87	12	-	-	607990
8	2	73	13	1019	-	296716
9	3	94	6	1828	1998	519208
10	1	54	12	-	-	474358
11	2	95	9	1762	-	395103
12	3	50	7	1161	1481	267796
13	3	66	5	1340	1566	286368
14	3	97	13	1374	1235	212863
15	2	90	6	1922	-	484125
16	1	52	7	-	-	251245
17	3	62	13	1602	1999	605510
18	3	53	14	1325	1363	338455
19	1	98	13	-	-	18163

40 MHz Master - Trial 6

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	68	8	1148	-	809295
2	2	57	13	1767	-	833803
3	2	99	8	1017	-	90433
4	1	51	7	-	-	64104
5	2	87	14	1491	-	848263
6	3	96	5	1872	1801	401650
7	3	76	19	1282	1693	584491
8	3	62	18	1870	1404	41060
9	1	100	9	-	-	87149
10	2	65	9	1209	-	14380
11	3	74	13	1749	1866	751391
12	1	64	5	-	-	281472
13	1	88	9	-	-	125833
14	1	53	20	-	-	278472

40 MHz Master - Trial 7

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	89	9	1205	-	98166
2	3	67	13	1712	1757	502229
3	3	81	14	1454	1016	34562
4	2	77	18	1804	-	696161
5	3	91	13	1132	1294	861831
6	3	61	5	1400	1983	769290
7	3	62	13	1270	1411	53529
8	2	69	12	1533	-	449830
9	2	83	7	1843	-	119819
10	1	85	11	-	-	458796
11	2	81	18	1481	-	611806
12	3	70	11	1659	1483	673320
13	1	88	17	-	-	693591

40 MHz Master - Trial 8

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	89	20	1475	-	355897
2	2	63	11	1328	-	1144022
3	2	56	6	1713	-	258072
4	1	99	12	-	-	262956
5	1	71	5	-	-	727672
6	2	83	7	1720	-	10098
7	3	67	18	1881	1411	749723
8	2	62	16	1956	-	239725
9	1	67	11	-	-	183069
10	3	75	9	1304	1947	319767

40 MHz Master - Trial 9

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	63	13	-	-	486380
2	3	73	7	1526	1813	151081
3	3	63	15	1986	1127	546412
4	3	73	6	1970	1586	12312
5	1	51	18	-	-	24982
6	3	95	20	1398	1829	710959
7	3	70	7	1553	1322	813771
8	3	58	6	1211	1143	32987
9	2	54	17	1167	-	536893
10	3	77	18	1862	1298	756708
11	1	100	13	-	-	602169
12	3	79	9	1588	1414	308881
13	3	76	8	1820	1574	249753

40 MHz Master - Trial 10

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	97	19	1374	-	578945
2	1	77	17	-	-	173958
3	3	66	5	1855	1992	604036
4	2	79	5	1564	-	526205
5	1	53	14	-	-	547787
6	2	87	16	1554	-	384825
7	2	67	5	1634	-	470461
8	1	97	11	-	-	298734
9	1	87	20	-	-	580998
10	2	94	20	1556	-	372117
11	2	51	6	1664	-	543066
12	1	74	14	-	-	384449
13	2	53	17	1141	-	365452
14	3	60	16	1367	1306	264936
15	1	90	20	-	-	18935
16	1	86	18	-	-	533830
17	2	78	16	1873	-	44917
18	1	68	13	-	-	337740

40 MHz Master - Trial 11

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	100	7	1103	-	392404
2	2	67	16	1151	-	120208
3	1	84	17	-	-	319982
4	2	57	11	1551	-	28578
5	1	77	6	-	-	117122
6	3	62	5	1658	1189	429920
7	3	59	12	1696	1861	525263
8	1	62	5	-	-	107458
9	2	84	11	1559	-	399100
10	3	85	17	1190	1229	573167
11	3	91	12	1463	1326	266618
12	3	74	18	1598	1923	102764
13	1	59	20	-	-	346214
14	3	96	15	1336	1911	231341
15	2	83	10	1117	-	344888
16	2	94	13	1252	-	294542
17	3	89	8	1388	1969	145992
18	2	71	12	1772	-	115975
19	2	74	13	1412	-	240079

40 MHz Master - Trial 12

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	86	18	-	-	390207
2	3	50	11	1424	1838	70927
3	1	94	9	-	-	444001
4	1	67	12	-	-	152739
5	1	99	14	-	-	434975
6	3	69	9	1843	1139	137495
7	3	58	18	1706	1166	684403
8	2	92	11	1947	-	49956
9	3	92	20	1131	1137	243993
10	2	61	7	1878	-	169165
11	1	65	7	-	-	313878
12	1	84	20	-	-	350719
13	1	52	18	-	-	153408
14	2	83	8	1502	-	532029
15	2	98	12	1947	-	379853
16	1	73	7	-	-	484381

40 MHz Master - Trial 13

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	52	16	1610	-	884102
2	1	79	7	-	-	505799
3	2	88	19	1964	-	792479
4	3	84	5	1912	1623	320794
5	2	95	18	1825	-	816978
6	1	70	9	-	-	471543
7	1	85	9	-	-	350774
8	1	68	11	-	-	498426
9	2	95	19	1032	-	464829
10	3	99	20	1455	1997	561610
11	1	91	6	-	-	513635
12	2	65	20	1706	-	216221
13	3	86	16	1901	1303	594470

40 MHz Master - Trial 14

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	73	13	1743	1489	520923
2	1	79	5	-	-	724926
3	1	99	8	-	-	855932
4	3	72	8	1795	1264	685425
5	1	57	17	-	-	83027
6	1	83	7	-	-	642023
7	3	58	20	1729	1858	312976
8	1	75	20	-	-	253610
9	1	75	15	-	-	545707
10	2	90	20	1014	-	497067
11	2	51	9	1516	-	105602
12	1	98	10	-	-	682500

40 MHz Master - Trial 15

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	75	18	1348	-	353976
2	3	93	16	1588	1107	628381
3	3	68	12	1970	1674	541629
4	1	75	14	-	-	693693
5	1	61	7	-	-	561478
6	2	71	15	1891	-	485269
7	3	100	12	1806	1518	527761
8	1	57	7	-	-	485726
9	3	53	11	1907	1604	464009
10	3	91	13	1432	1268	667868
11	3	54	16	1324	1276	460748
12	2	95	11	1201	-	590030
13	3	60	19	1262	1557	680987
14	1	69	15	-	-	587638
15	3	95	19	1710	1319	396567
16	1	97	14	-	-	70561
17	2	71	20	1166	-	263172

40 MHz Master - Trial 16

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	74	15	-	-	788210
2	1	63	12	-	-	295960
3	2	85	16	1398	-	156507
4	3	66	5	1641	1117	6843
5	1	90	14	-	-	1275389
6	1	71	20	-	-	1080078
7	1	69	12	-	-	345460
8	3	95	12	1775	1744	973797
9	1	78	13	-	-	536932

40 MHz Master - Trial 17

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	81	18	-	-	519940
2	3	90	17	1402	1781	584500
3	1	59	9	-	-	408760
4	2	78	7	1313	-	314647
5	2	93	5	1439	-	674996
6	2	83	5	1584	-	228491
7	2	78	12	1778	-	60570
8	2	67	8	1682	-	107654
9	1	66	20	-	-	491742
10	2	79	16	1156	-	138145
11	1	59	18	-	-	169758
12	1	50	18	-	-	140382
13	1	96	8	-	-	111901
14	3	59	6	1175	1268	503400
15	2	61	7	1183	-	230820
16	2	58	11	1068	-	610718
17	1	50	11	-	-	573551

40 MHz Master - Trial 18

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	68	7	1742	1323	283764
2	3	61	8	1154	1316	387939
3	3	65	7	1900	1521	135926
4	3	64	19	1015	1041	729001
5	2	54	16	1938	-	847963
6	3	58	13	1415	1660	733888
7	3	97	11	1945	1383	547896
8	3	100	5	1010	1037	141655
9	1	97	20	-	-	684920
10	3	76	13	1564	1850	271502
11	1	68	8	-	-	549288
12	3	62	10	1985	1789	33241
13	2	72	10	1967	-	74856
14	1	74	15	-	-	807591

40 MHz Master - Trial 19

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	1	92	10	-	-	1372133
2	2	50	5	1079	-	474349
3	1	95	6	-	-	14745
4	2	82	6	1702	-	1112467
5	3	88	15	1044	1222	1495587
6	3	84	14	1001	1712	955651
7	1	95	14	-	-	1222718
8	1	72	5	-	-	492132

40 MHz Master - Trial 20

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	3	60	8	1668	1777	231027
2	1	72	17	-	-	486763
3	1	76	16	-	-	1250415
4	1	69	20	-	-	928463
5	2	54	19	1396	-	34516
6	2	84	20	1995	-	710657
7	1	60	8	-	-	39926
8	2	84	20	1545	-	626956

40 MHz Master - Trial 21

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	93	14	1248	-	811223
2	3	85	7	1300	1056	434744
3	2	67	18	1702	-	243847
4	1	71	8	-	-	873795
5	3	90	7	1765	1237	595544
6	1	100	7	-	-	65018
7	3	82	20	1592	1173	489615
8	2	82	14	1346	-	679536
9	2	84	20	1038	-	752857
10	3	68	10	1129	1492	551488
11	2	77	11	1643	-	683270
12	3	50	8	1544	1690	982637

40 MHz Master - Trial 22

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	1	90	12	-	-	812173
2	2	60	17	1538	-	921242
3	3	59	11	1129	1221	789969
4	2	87	17	1673	-	11054
5	2	65	9	1411	-	224706
6	2	91	15	1631	-	401287
7	3	100	14	1438	1734	265240
8	1	56	16	-	-	125476
9	2	98	16	1513	-	382582
10	3	76	12	1102	1528	528397
11	3	50	20	1662	1906	553813

40 MHz Master - Trial 23

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	2	56	11	1088	-	1359823
2	2	52	8	1870	-	1035058
3	2	74	8	1606	-	104610
4	2	82	14	1591	-	1157320
5	1	63	5	-	-	515507
6	2	55	19	1031	-	1459783
7	2	89	18	1735	-	291834
8	2	79	16	1288	-	69951

40 MHz Master - Trial 24

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	57	6	1823	-	1167955
2	2	66	19	1702	-	550817
3	2	52	10	1737	-	16494
4	1	55	5	-	-	632553
5	3	80	5	1228	1279	1095413
6	2	88	5	1020	-	592616
7	3	67	14	1361	1299	1090954
8	1	59	10	-	-	1129723
9	3	50	10	1514	1249	877768
10	2	100	7	1304	-	557564

40 MHz Master - Trial 25

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	62	15	1464	1921	597235
2	3	66	18	1294	1859	154600
3	2	100	12	1954	-	327207
4	1	55	19	-	-	518344
5	2	50	14	1679	-	534466
6	1	59	7	-	-	562291
7	3	86	5	1195	1585	247177
8	3	92	20	1378	1286	40856
9	1	75	7	-	-	92327
10	3	62	9	1559	1560	58597
11	1	78	20	-	-	131204
12	1	52	17	-	-	154579
13	3	87	7	1123	1455	106523
14	1	71	11	-	-	104608
15	1	80	6	-	-	542984
16	2	82	13	1522	-	334624

40 MHz Master - Trial 26

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	3	89	19	1589	1189	606013
2	2	74	8	1410	-	84246
3	3	52	17	1608	1560	707862
4	3	51	5	1946	1482	670070
5	1	66	20	-	-	773303
6	2	96	10	1658	-	561392
7	2	61	11	1994	-	644324
8	2	97	16	1628	-	557071
9	1	50	5	-	-	436717
10	2	66	6	1069	-	597630
11	2	74	12	1610	-	264877
12	3	90	9	1232	1794	29648
13	2	96	17	1402	-	67366
14	3	70	14	1753	1310	9661
15	2	69	8	1298	-	670889

40 MHz Master - Trial 27

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	3	70	15	1362	1850	765428
2	1	61	7	-	-	827173
3	1	52	5	-	-	428256
4	3	95	14	1137	1273	331305
5	2	73	16	1935	-	666422
6	1	72	13	-	-	185681
7	1	68	5	-	-	127840
8	3	73	18	1154	1676	946030
9	2	83	7	1933	-	263997

40 MHz Master - Trial 28

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	2	87	20	1310	-	441556
2	3	55	5	1591	1458	323442
3	3	85	18	1533	1138	525528
4	1	54	9	-	-	26736
5	3	65	18	1875	1748	911756
6	2	97	14	1450	-	528040
7	2	80	20	1577	-	447290
8	1	85	9	-	-	252456
9	1	75	8	-	-	146092
10	1	72	18	-	-	178368
11	1	57	6	-	-	852633
12	3	65	14	1434	1138	435283

40 MHz Master - Trial 29

Burst Segment	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Starting Location Within Interval (µsec)
1	3	84	6	1008	1007	559924
2	1	55	19	-	-	674948
3	3	64	11	1792	1005	12533
4	2	52	16	1717	-	210311
5	1	62	16	-	-	313510
6	2	84	14	1298	-	243449
7	1	65	17	-	-	1887
8	2	78	19	1497	-	169382
9	2	51	10	1896	-	156366
10	2	93	16	1060	-	659254
11	1	57	11	-	-	306489
12	3	70	17	1437	1348	396402
13	2	56	13	1803	-	403569
14	3	69	12	1381	1372	307204
15	1	98	18	-	-	249875
16	3	98	8	1025	1232	410513
17	2	81	15	1011	-	144559

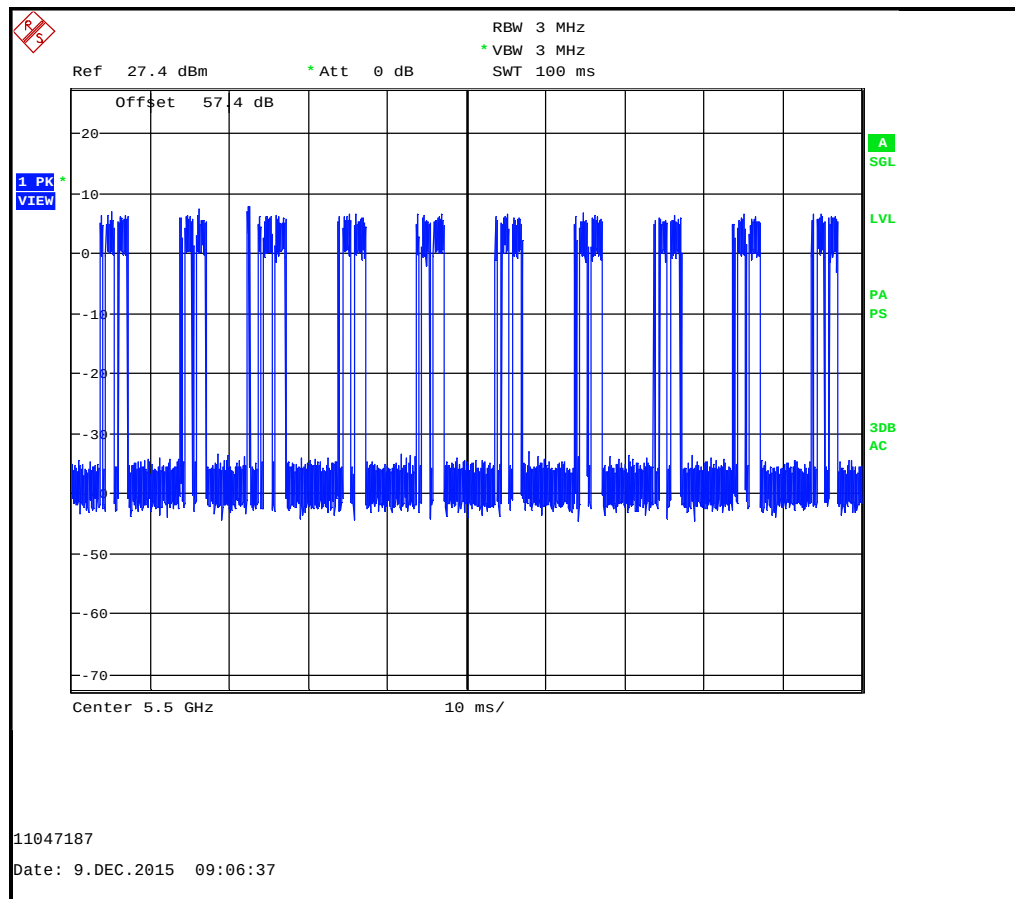
40 MHz Master - Trial 30

Burst Segment	Number of Pulses	Pulse Width (μsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Starting Location Within Interval (μsec)
1	3	54	14	1653	1131	402619
2	3	79	8	1484	1544	226371
3	2	56	11	1336	-	485528
4	2	59	7	1560	-	56475
5	1	72	13	-	-	290157
6	1	99	5	-	-	355828
7	3	90	10	1048	1506	262182
8	3	86	9	1524	1026	165938
9	1	60	11	-	-	623624
10	2	55	8	1295	-	652442
11	1	91	5	-	-	145302
12	3	53	7	1091	1721	320686
13	3	78	16	1606	1753	670123
14	2	81	5	1562	-	683283
15	1	83	7	-	-	228313
16	3	91	5	1678	1794	8152
17	3	87	14	1717	1971	241376

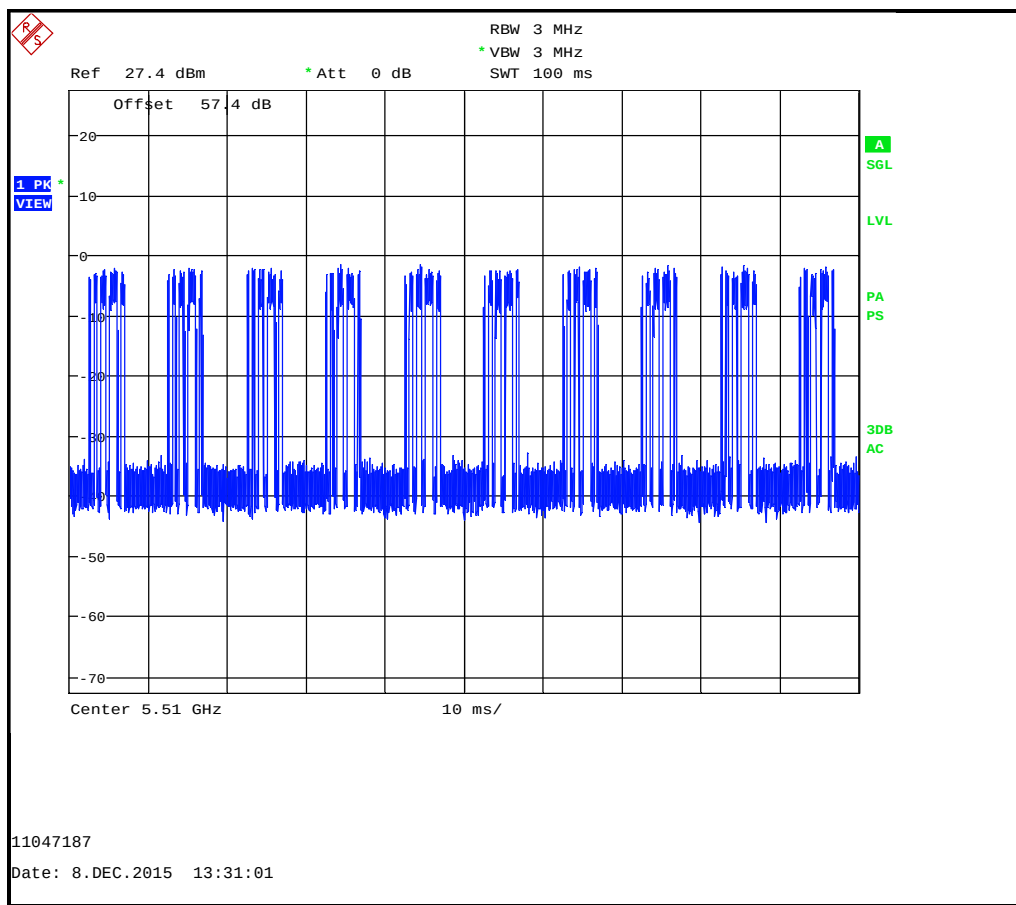
Appendix 10. Channel Loading

UDP data was transmitted from the EUT to the companion device. 100 ms of transmissions showing both the EUT and companion device were then captured on a spectrum analyser in the time domain. The spectrum analyser was set to 30,001 sweep points giving a sample size accuracy of 3.333 μ sec. The data points were then exported as an ASCII file and each sample determined to be either transmissions from the EUT or companion device (channel loading) or idle. The duty cycle was then calculated from this ratio.

Included below are spectrum analyser plots from which the raw data was extracted to calculate the channel loading.



26.3% Channel Loading at 20 MHz Bandwidth



24.2% Channel Loading at 40 MHz Bandwidth

--- END OF REPORT ---