1. DYNAMIC FREQUENCY SELECTION

1.1. OVERVIEW

1.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 7 A9.4 (b) (ii) **Channel Availability Check Time:** …

Additional requirements for the band 5600-5650 MHz: Until further notice, devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

RSS-210 Issue 7 A9.4 (b) (iv) **Channel closing time:** the maximum channel closing time is 260 ms.

FCC

§15.407 (h) and FCC 06-96 APPENDIX "COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVCIES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION".

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
Uniform Spreading	Yes	Not required	Not required

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client **(without DFS)**	Client **(with DFS)**
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.	

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period
The instant that the *Channel Move Time* and the *Channel Closing Transmission Time* begins is as follows: For the Short pulse radar Test Signals this instant is the end of the *Burst*. For the Frequency Hopping radar Test Signal, this instant is the end of the last radar burst generated. For the Long Pulse radar Test Signal this instant is the end of the 12 second period defining the radar transmission. The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate channel changes (an aggregate of approximately 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (Microseconds)	PRI (Microseconds)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
1	1	1428	18	60%	30
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

Table 6 – Long Pulse Radar Test Signal

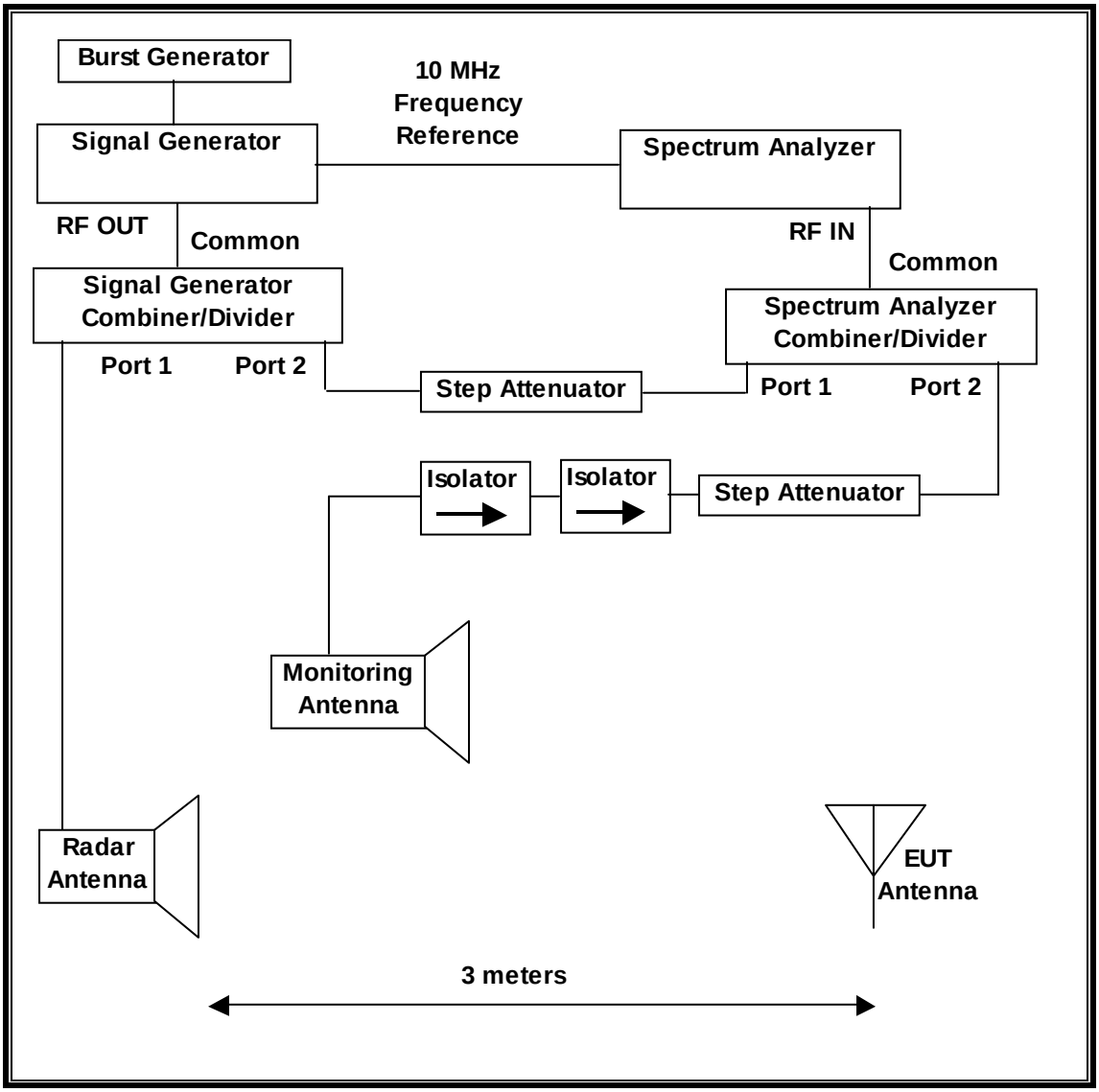
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform	Pulse Width (μsec)	PRI (μsec)	Burst Length (ms)	Pulses per Hop	Hopping Rate (kHz)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	300	9	.333	70%	30

1.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Freqeuncy Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the DFS tests documented in this report:

No Radar Triggered

Start of CAC (sec)	Timing of Start of Traffic (sec)	Total Time of CAC (sec)
21	81.4	60.4

Radar Near Beginning of CAC

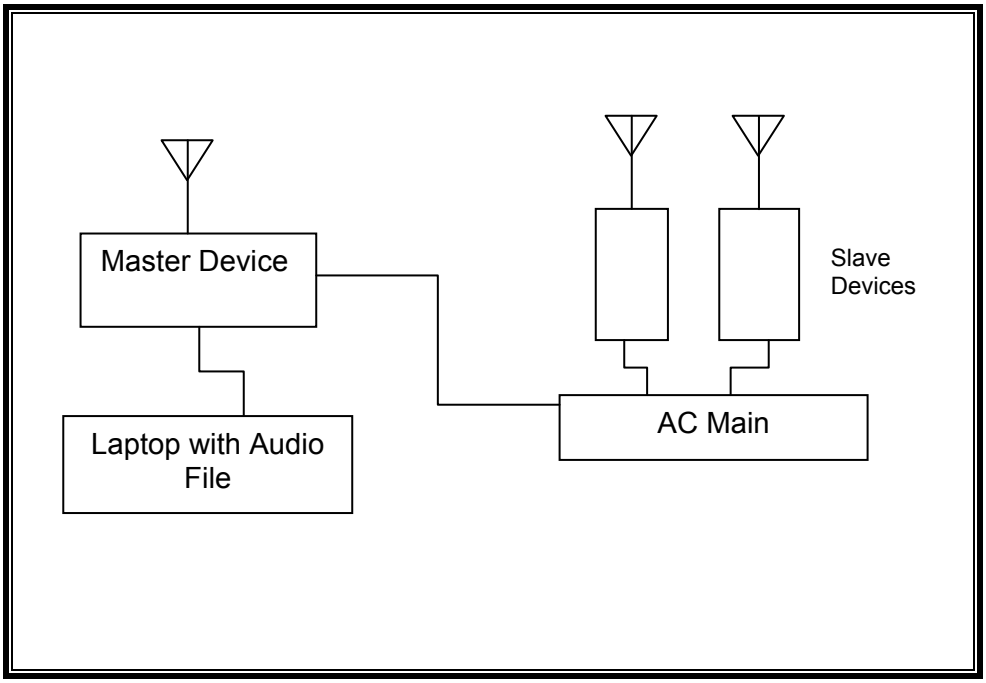
Start of CAC (sec)	Timing of Radar Burst (sec)	Radar Relative to CAC (sec)
20	21.5	1.5

Radar Near End of CAC

Start of CAC (sec)	Timing of Radar Burst (sec)	Radar Relative to CAC (sec)
20	78.9	58.9

1.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	Lenovo	92P1156	11S92P1156Z1ZDXN09W40R	Doc
Laptop	Lenovo	X200	R9-20V1F10/03	Doc
Slave HiFi System 1	Sunos	Play:3	1106-00-0E-58-78-09-98-C	N/A
Slave HiFi System 2	Sunos	Play:3	1105-00-0OE-58-78-05-5E-1	N/A

1.1.4. DESCRIPTION OF EUT

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges, excluding channels which would overlap the 5600-5650 MHz band.

The EUT is a Master Device.

The highest power level within these bands is 22.78 dBm EIRP in the 5250-5350 MHz band and 23.77 dBm EIRP in the 5470-5725 MHz band.

The highest gain antenna assembly utilized with the EUT has a gain of 5.9 dBi in the 5250-5350 MHz band and 6 dBi in the 5470-5725 MHz band. The lowest gain antenna assembly utilized with the EUT has a gain of 4 dBi in the 5250-5350 MHz band and 4.2 dBi in the 5470-5725 MHz band.

Two identical antennas are utilized to meet the diversity and MIMO operational requirements.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is –64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is –64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides margin to the limit.

The EUT uses two transmitter/receiver chains, each connected to an antenna to perform radiated tests.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic was generated by streaming the NTIA audio test file from the Master to the Slave using the media player using the media player with the V2.61 Codec package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11n architecture. One nominal channel bandwidth, 20 MHz, is implemented.

The software installed in the Master Device is revision 20.2 with DFS Module revision 1

UNIFORM CHANNEL SPREADING

See Manufacturer’s Attestation.

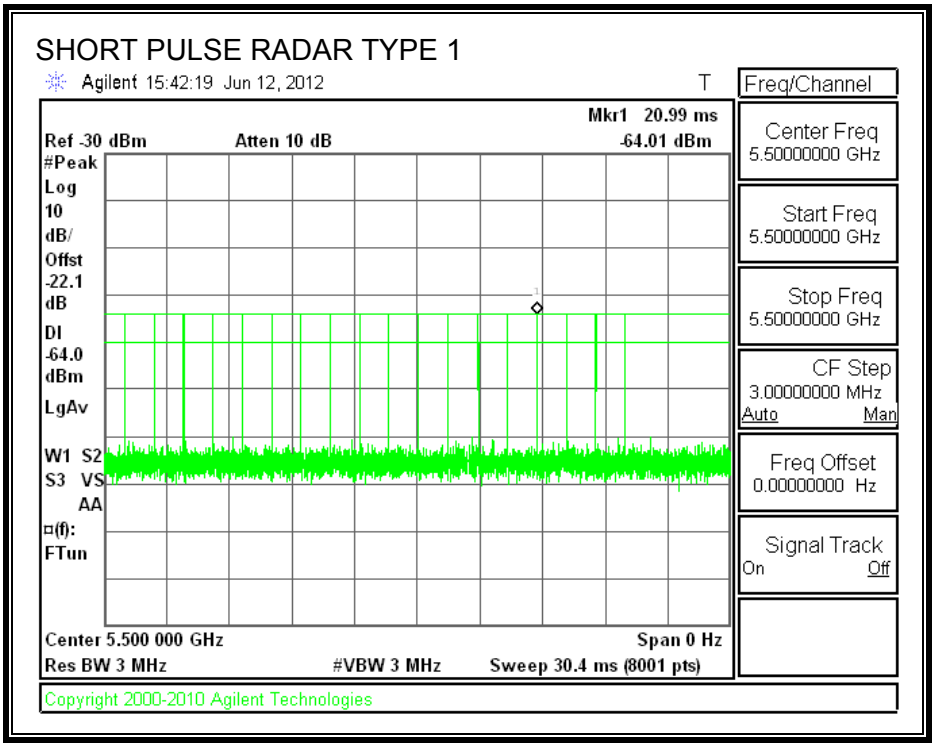
1.2. RESULTS FOR 20 MHz BANDWIDTH

1.2.1. TEST CHANNEL

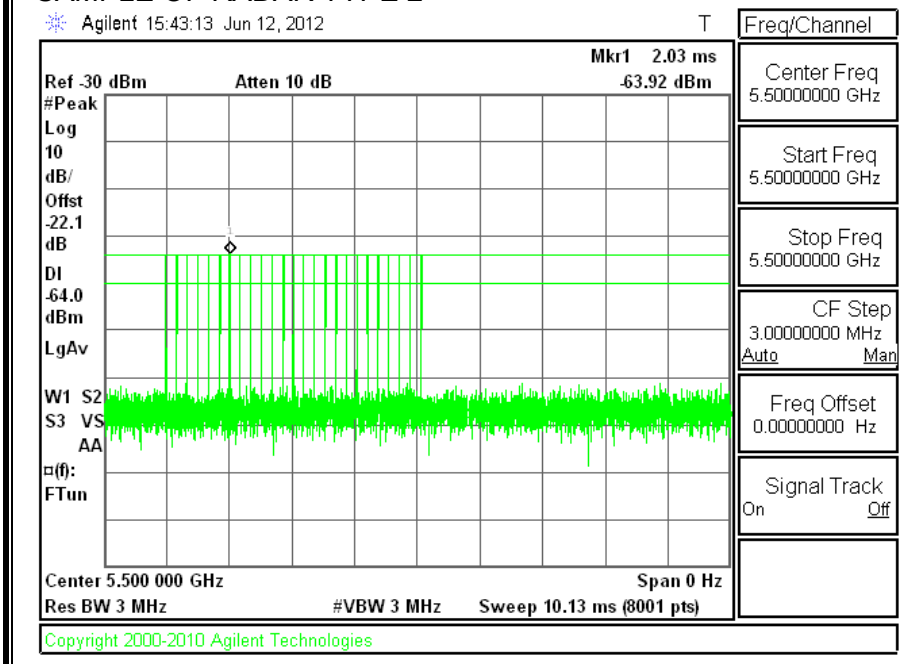
All tests were performed at a channel center frequency of 5500 MHz.

1.2.2. RADAR WAVEFORMS AND TRAFFIC

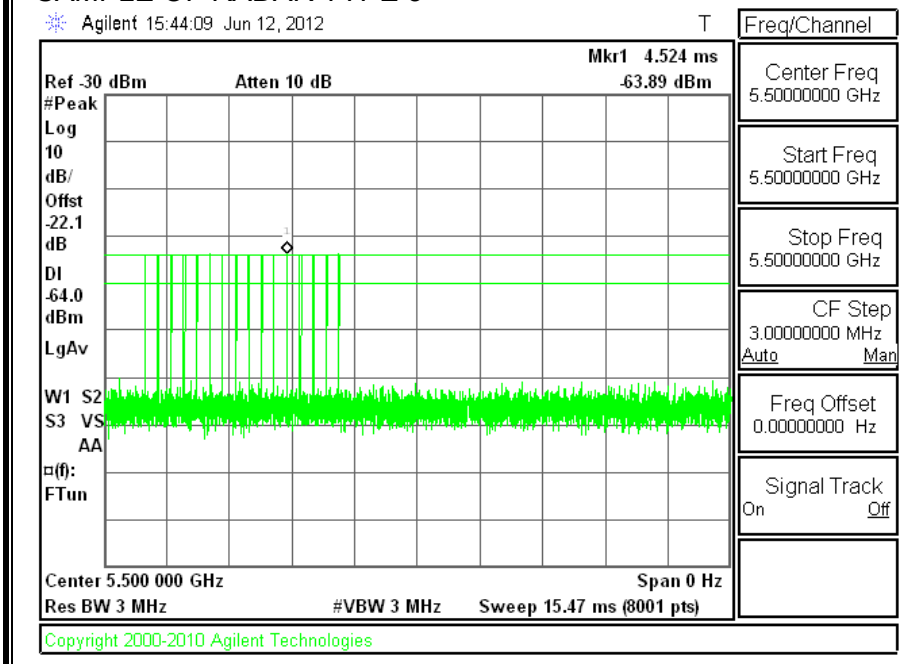
RADAR WAVEFORMS



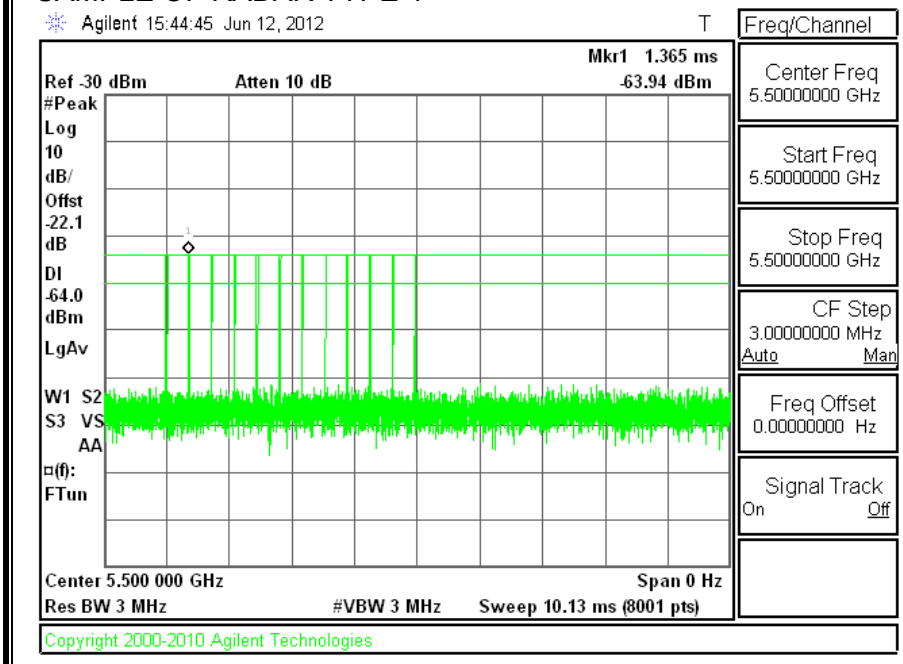
SAMPLE OF RADAR TYPE 2



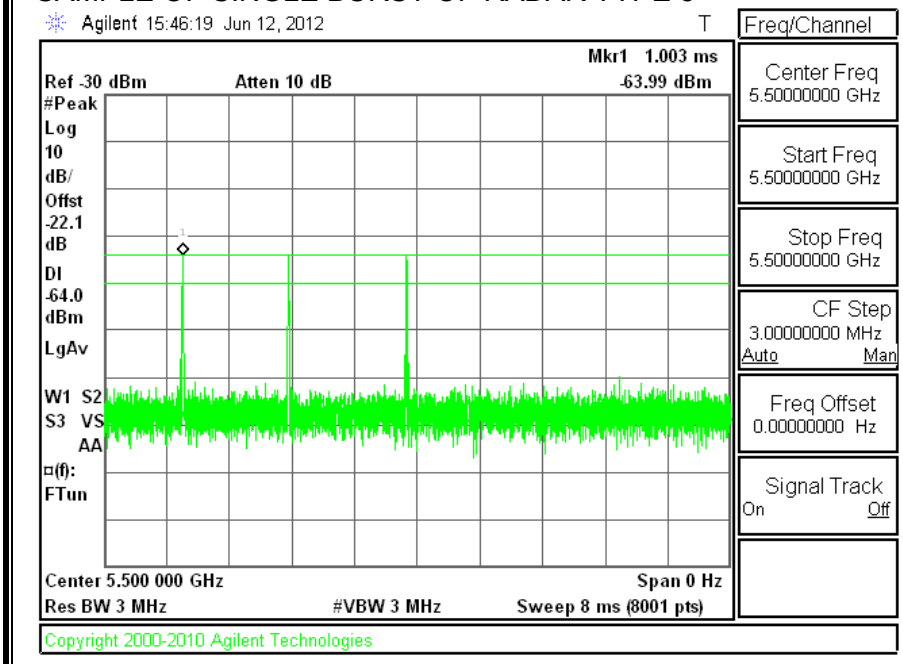
SAMPLE OF RADAR TYPE 3



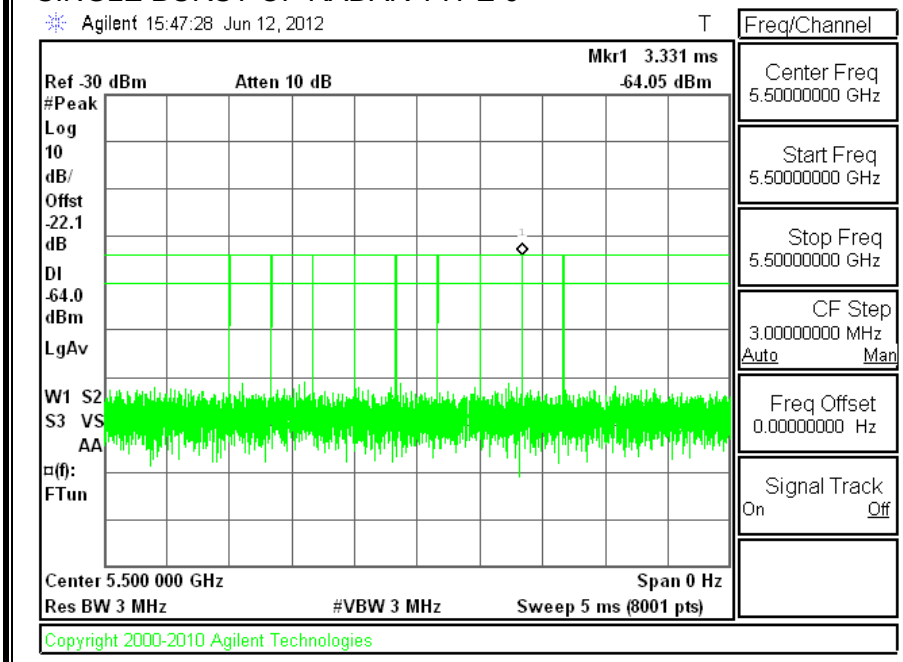
SAMPLE OF RADAR TYPE 4



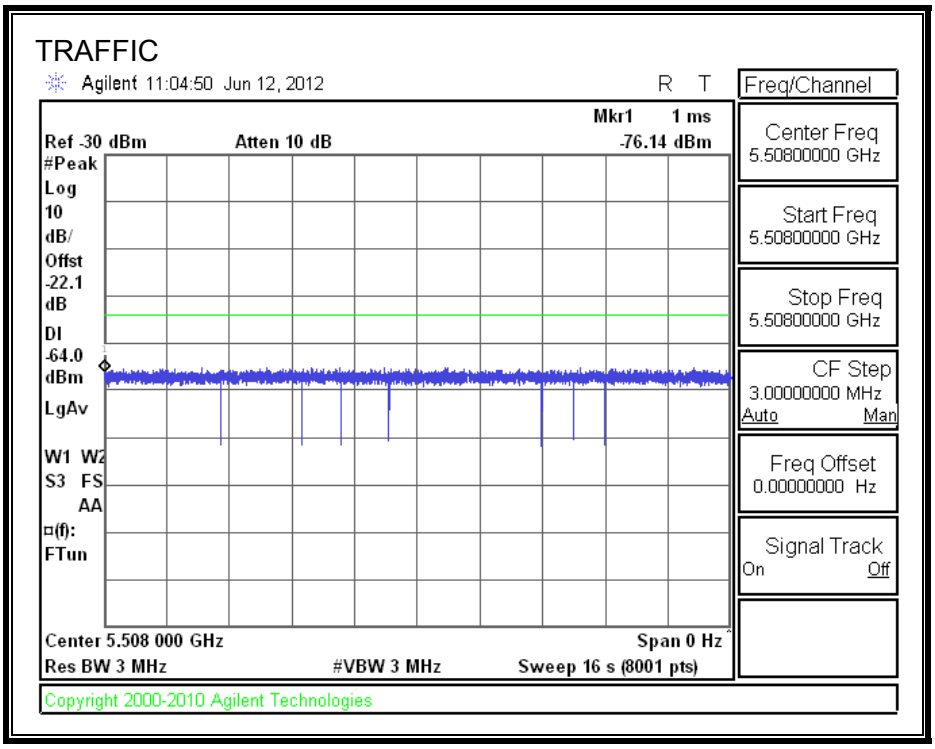
SAMPLE OF SINGLE BURST OF RADAR TYPE 5



SINGLE BURST OF RADAR TYPE 6



TRAFFIC


TRAFFIC
Agilent 11:04:50 Jun 12, 2012
R T
Freq/Channel
Mkr1 1 ms
Ref -30 dBm
Atten 10 dB
-76.14 dBm
#Peak
Log
10
dB/
Offst
-22.1
dB
Dl
-64.0
dBm
LgAv
W1 W2
S3 FS
AA
¤(f):
FTun
Center Freq
5.50800000 GHz
Start Freq
5.50800000 GHz
Stop Freq
5.50800000 GHz
CF Step
3.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Center 5.508 000 GHz
Span 0 Hz
Res BW 3 MHz
#VBW 3 MHz
Sweep 16 s (8001 pts)
Copyright 2000-2010 Agilent Technologies

1.2.3. CHANNEL AVAILABILITY CHECK TIME

PROCEDURE TO DETERMINE INITIAL POWER-UP CYCLE TIME

A link was established on channel then the EUT was rebooted. The time from the cessation of traffic to the re-initialization of traffic was measured as the time required for the EUT to complete the total power-up cycle. The time to complete the initial power-up period is 60 seconds less than this total power-up time.

PROCEDURE FOR TIMING OF RADAR BURST

With a link established on channel, the EUT was rebooted. A radar signal was triggered within 0 to 6 seconds after the initial power-up period, and transmissions on the channel were monitored on the spectrum analyzer.

The Non-Occupancy list was cleared. With a link established on channel, the EUT was rebooted. A radar signal was triggered within 54 to 60 seconds after the initial power-up period, and transmissions on the channel were monitored on the spectrum analyzer.

QUANTITATIVE RESULTS

No Radar Triggered

Start of CAC (sec)	Timing of Start of Traffic (sec)	Total Time of CAC (sec)
21	81.4	60.4

Radar Near Beginning of CAC

Start of CAC (sec)	Timing of Radar Burst (sec)	Radar Relative to CAC (sec)
20	21.5	1.5

Radar Near End of CAC

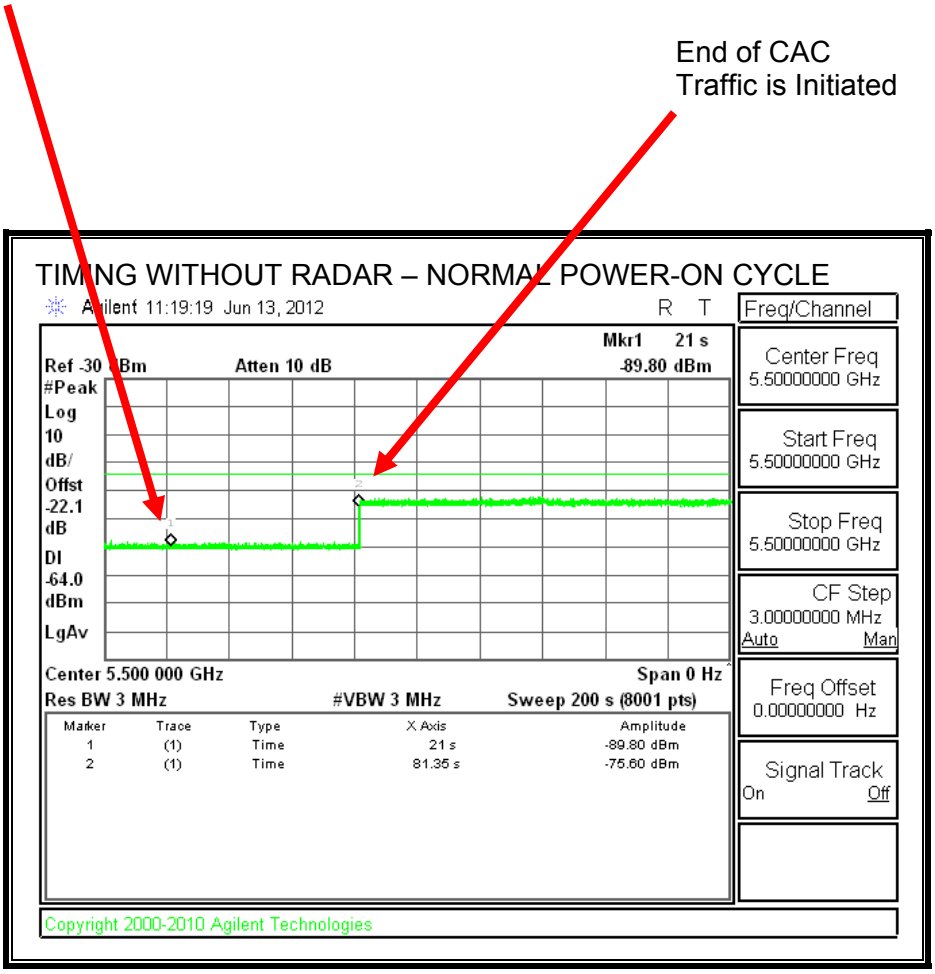
Start of CAC (sec)	Timing of Radar Burst (sec)	Radar Relative to CAC (sec)
20	78.9	58.9

QUALITATIVE RESULTS

Timing of Radar Burst	Display on Control Computer	Spectrum Analyzer Display
No Radar Triggered	EUT marks Channel as active	Transmissions begin on channel after completion of the initial power-up cycle and the CAC
Within 0 to 6 second window	EUT indicates radar detected	No transmissions on channel
Within 54 to 60 second window	EUT indicates radar detected	No transmissions on channel

TIMING WITHOUT RADAR DURING CAC

Start of CAC

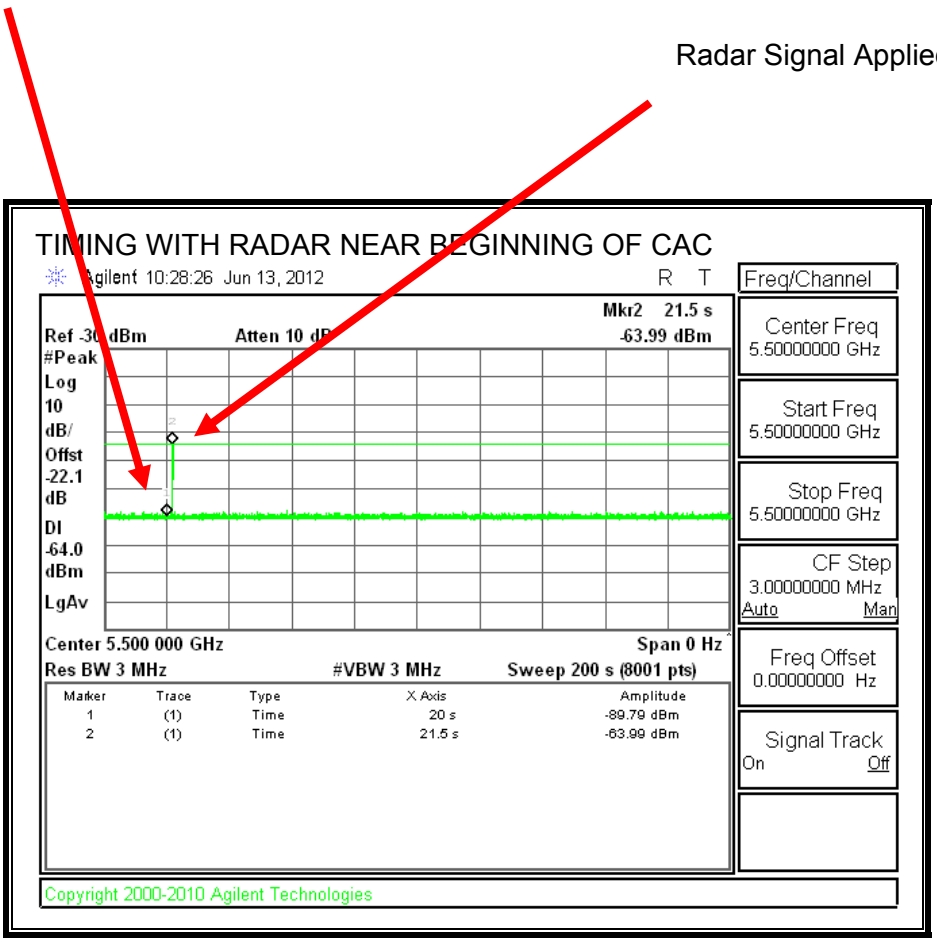


Transmissions begin on channel after completion of the initial power-up cycle and the CAC.

TIMING WITH RADAR NEAR BEGINNING OF CAC

Start of CAC

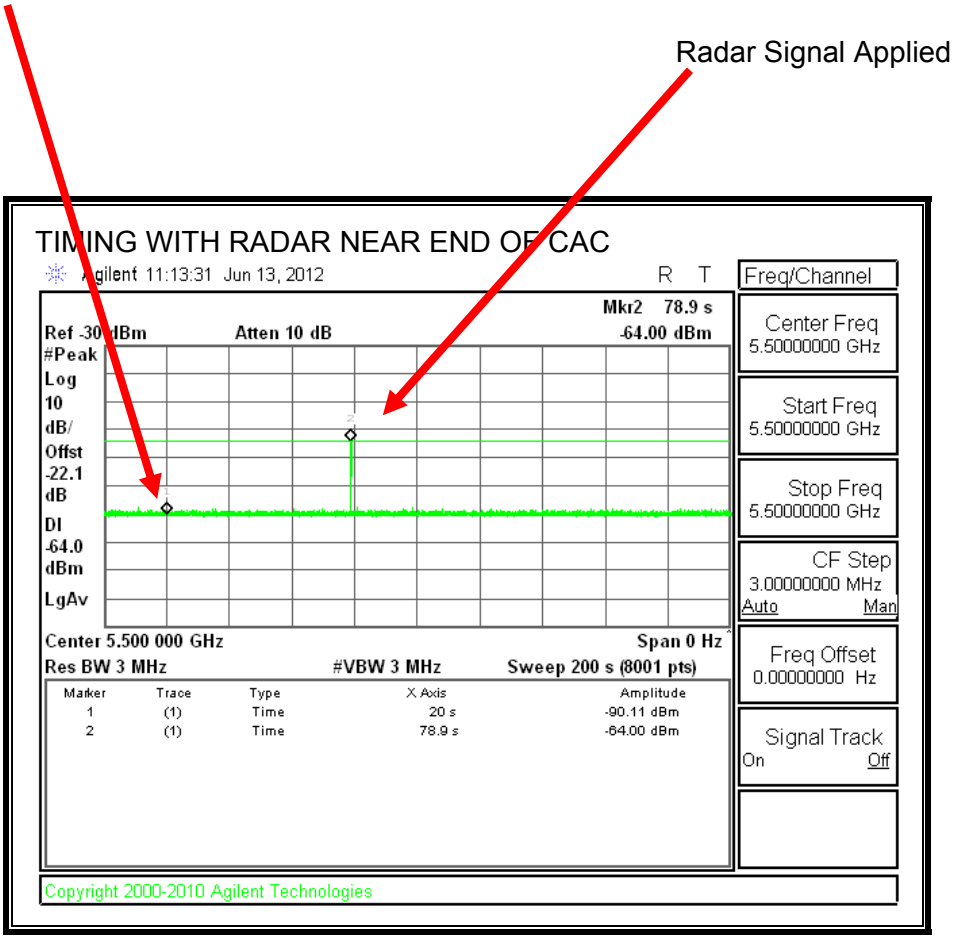
Radar Signal Applied



No EUT transmissions were observed after the radar signal.

TIMING WITH RADAR NEAR END OF CAC

Start of CAC



No EUT transmissions were observed after the radar signal.

1.2.4. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

1.2.5. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

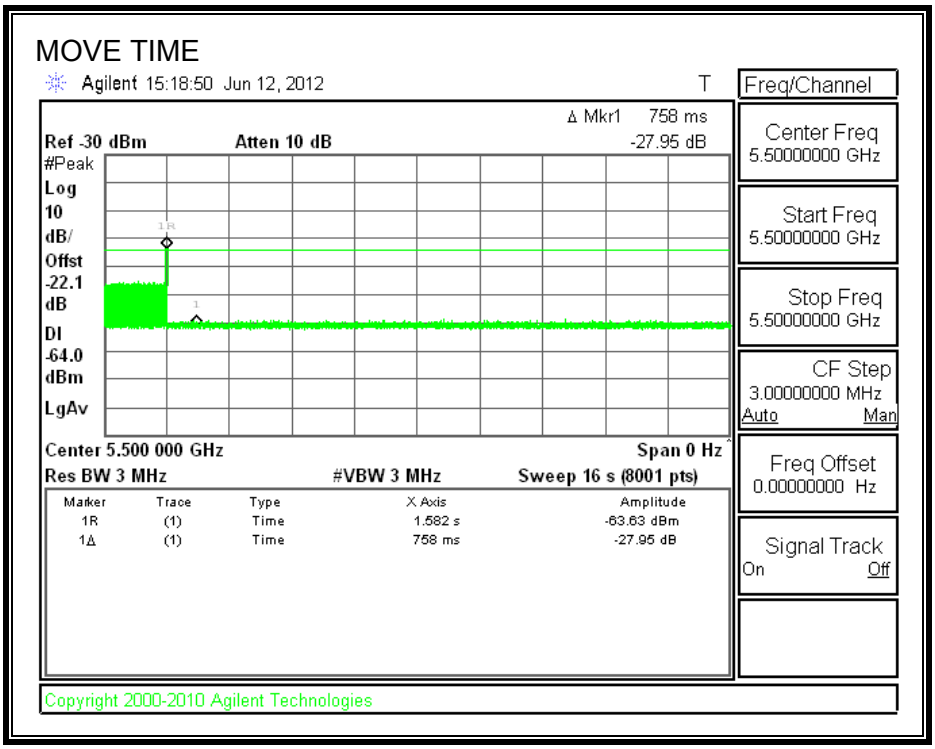
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

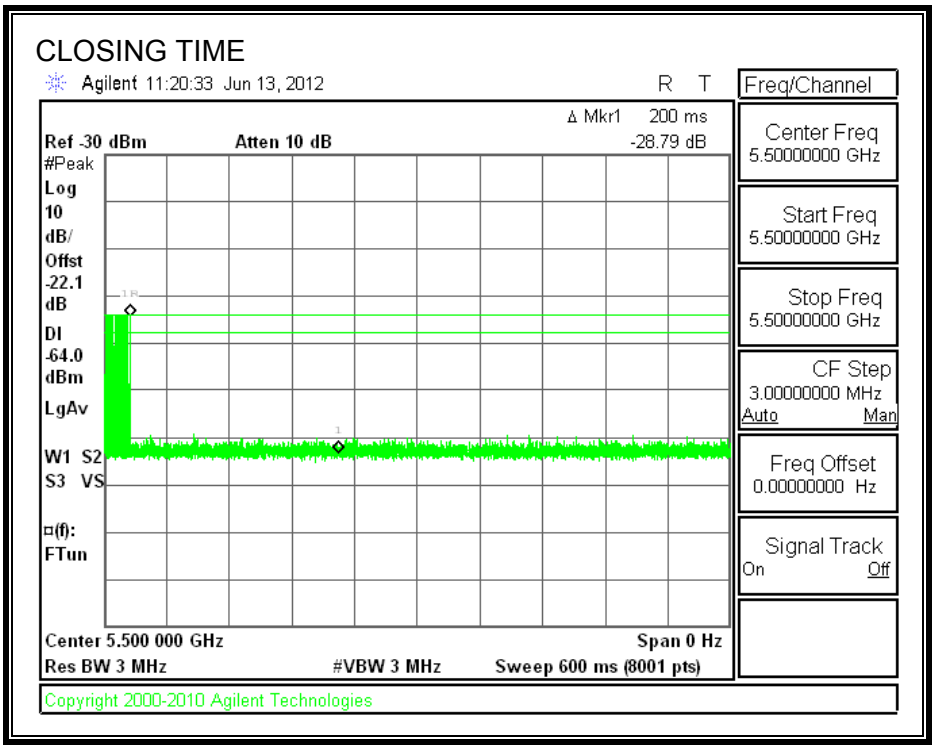
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.000	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	0.0	260

MOVE TIME

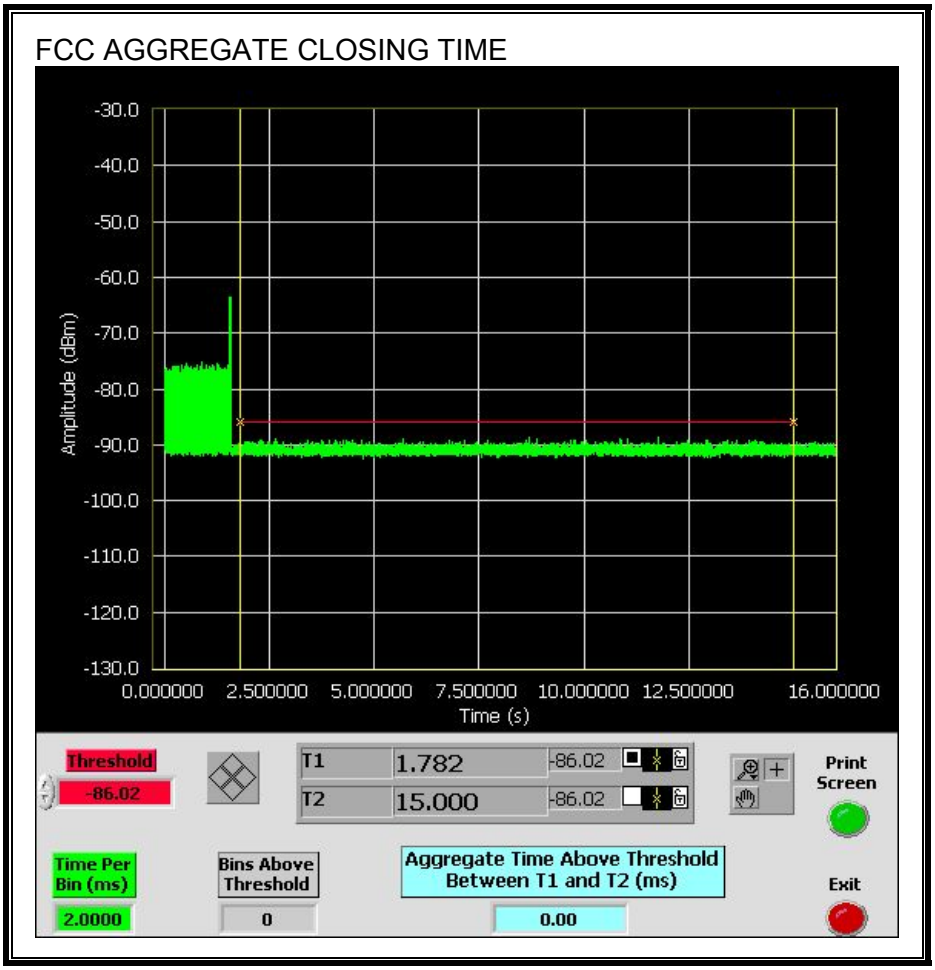

MOVE TIME
Agilent 15:18:50 Jun 12, 2012
T
Freq/Channel
Δ Mkr1 758 ms
Ref -30 dBm
Atten 10 dB
-27.95 dB
#Peak
Log
10
dB/
Offst
-22.1
dB
Dl
-64.0
dBm
LgAv
Center Freq
5.50000000 GHz
Start Freq
5.50000000 GHz
Stop Freq
5.50000000 GHz
CF Step
3.00000000 MHz
Auto
Man
Center 5.500 000 GHz
Span 0 Hz
Res BW 3 MHz
#VBW 3 MHz
Sweep 16 s (8001 pts)
Freq Offset
0.00000000 Hz
Marker Trace Type X Axis Amplitude
1R (1) Time 1.582 s -63.63 dBm
1Δ (1) Time 758 ms -27.95 dB
Signal Track
On
Off
Copyright 2000-2010 Agilent Technologies

CHANNEL CLOSING TIME

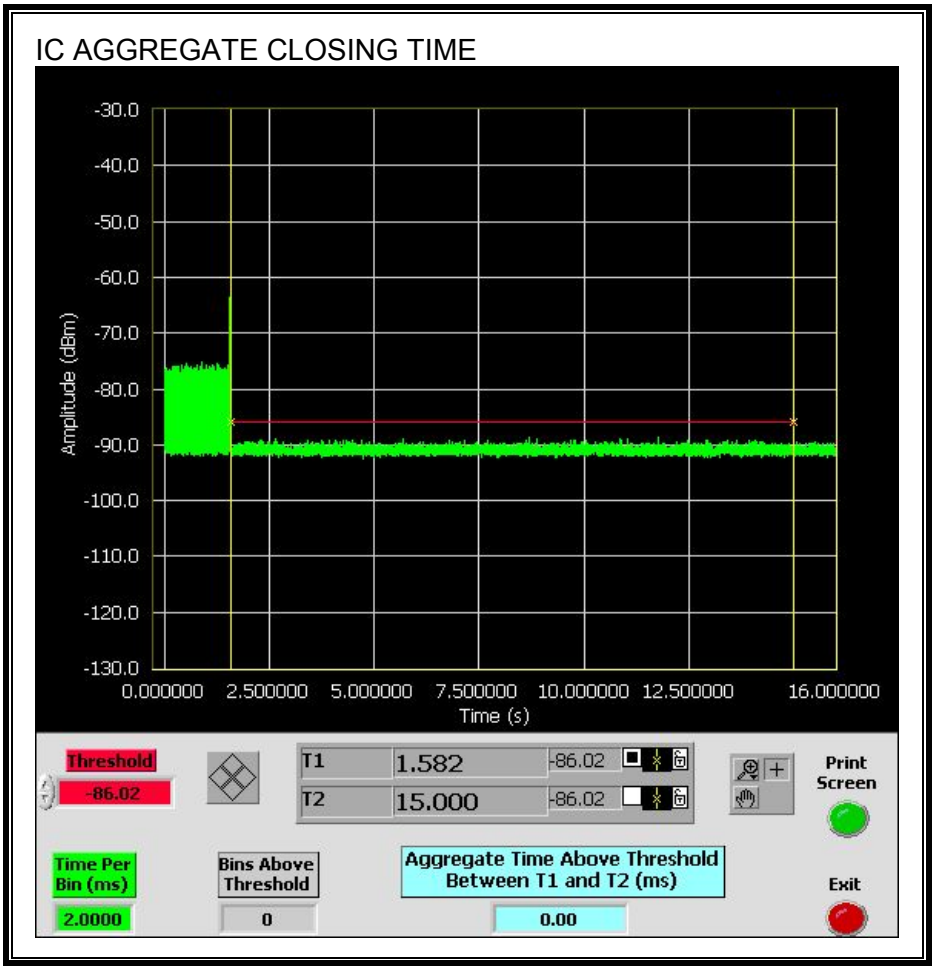


AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No intermittent transmissions are observed during the FCC aggregate monitoring period.

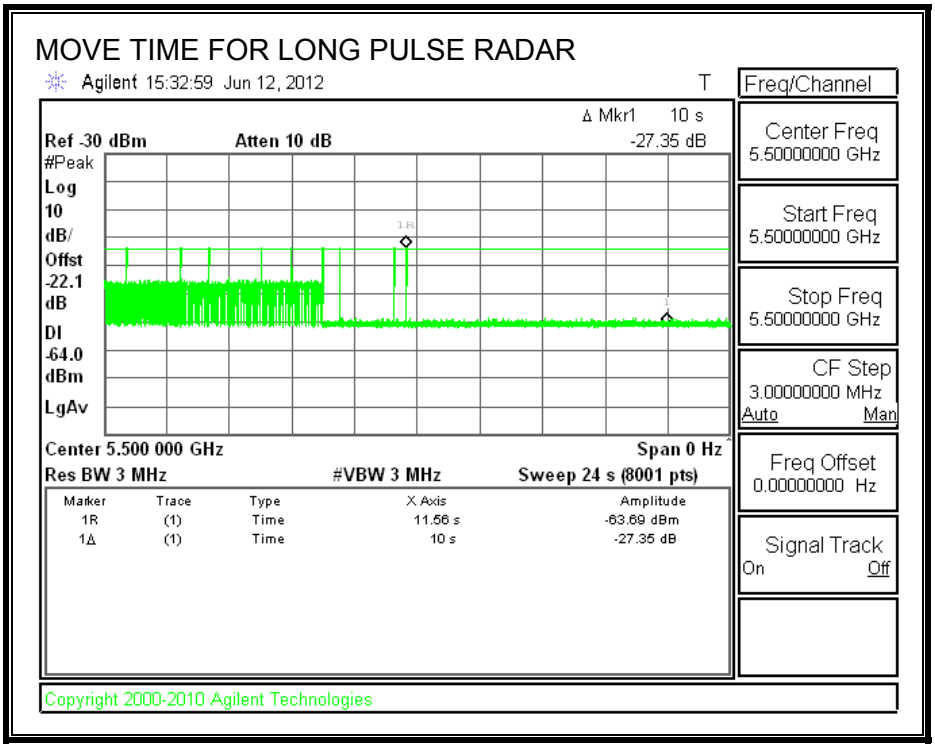


No intermittent transmissions are observed during the IC aggregate monitoring period.



LONG PULSE CHANNEL MOVE TIME

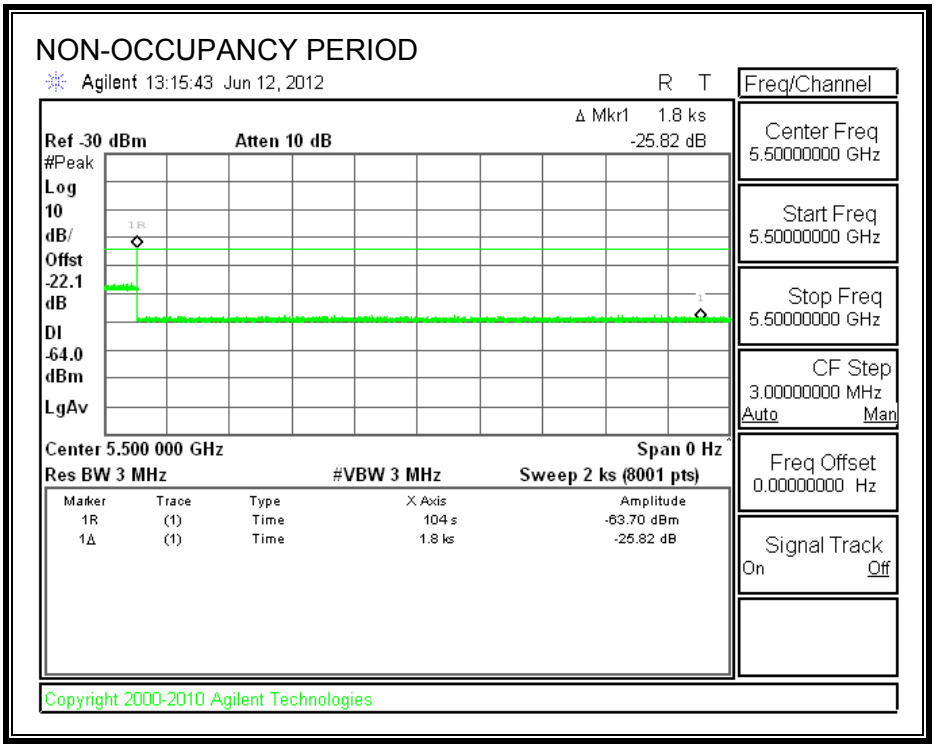
The traffic ceases prior to 10 seconds after the end of the radar waveform.



1.2.6. NON-OCCUPANCY PERIOD

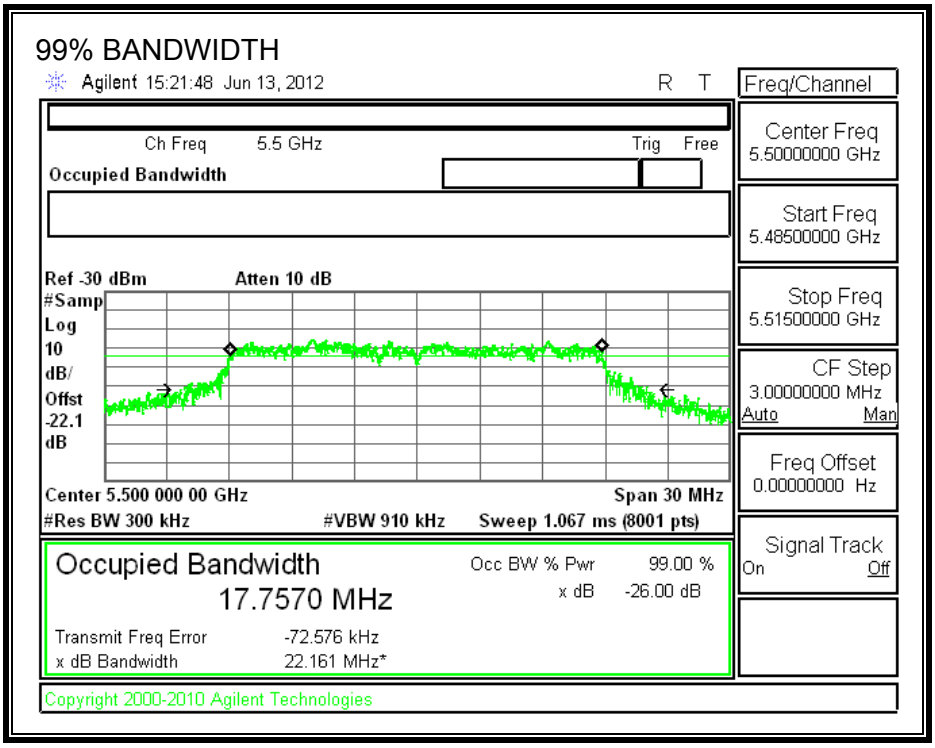
RESULTS

No EUT transmissions were observed on the test channel during the 30 minute observation time.



1.2.7. DETECTION BANDWIDTH

REFERENCE PLOT OF 99% POWER BANDWIDTH



RESULTS

FL (MHz)	FH (MHz)	Detection Bandwidth (MHz)	99% Power Bandwidth (MHz)	Ratio of Detection BW to 99% Power BW (%)	Minimum Limit (%)
5491	5509	18	17.757	101.4	80

DETECTION BANDWIDTH PROBABILITY

DETECTION BANDWIDTH PROBABILITY RESULTS

Detection Bandwidth Test Results				
FCC Type 1 Waveform: 1 us Pulse Width, 1428 us PRI, 18 Pulses per Burst				
Frequency (MHz)	Number of Trials	Number Detected	Detection (%)	Mark
5491	10	10	100	FL
5492	10	10	100	
5493	10	10	100	
5494	10	10	100	
5495	10	10	100	
5496	10	10	100	
5497	10	10	100	
5498	10	10	100	
5499	10	10	100	
5500	10	10	100	
5501	10	10	100	
5502	10	10	100	
5503	10	10	100	
5504	10	10	100	
5505	10	10	100	
5506	10	10	100	
5507	10	10	100	
5508	10	10	100	
5509	10	10	100	FH

1.2.8. IN-SERVICE MONITORING

RESULTS

FCC Radar Test Summary				
Signal Type	Number of Trials	Detection (%)	Limit (%)	Pass/Fail
FCC Short Pulse Type 1	30	100.00	60	Pass
FCC Short Pulse Type 2	30	80.00	60	Pass
FCC Short Pulse Type 3	30	83.33	60	Pass
FCC Short Pulse Type 4	30	73.33	60	Pass
Aggregate		84.17	80	Pass
FCC Long Pulse Type 5	30	90.00	80	Pass
FCC Hopping Type 6	34	91.18	70	Pass

TYPE 1 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 1 1 us Pulse Width, 1428 us PRI, 18 Pulses per Burst	
Trial	**Successful Detection (Yes/No)**
1	Yes
2	Yes
3	Yes
4	Yes
5	Yes
6	Yes
7	Yes
8	Yes
9	Yes
10	Yes
11	Yes
12	Yes
13	Yes
14	Yes
15	Yes
16	Yes
17	Yes
18	Yes
19	Yes
20	Yes
21	Yes
22	Yes
23	Yes
24	Yes
25	Yes
26	Yes
27	Yes
28	Yes
29	Yes
30	Yes

TYPE 2 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 2				
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Successful Detection (Yes/No)
2001	1	172.00	25	No
2002	2.1	209.00	28	Yes
2003	1.2	226.00	27	Yes
2004	4.3	178.00	29	Yes
2005	4.9	197.00	26	Yes
2006	2.2	205.00	25	Yes
2007	4.2	203.00	23	Yes
2008	2.9	229.00	23	Yes
2009	4.1	164.00	24	Yes
2010	2	168.00	27	Yes
2011	2.6	154.00	26	Yes
2012	1.6	156.00	26	No
2013	5	229.00	27	Yes
2014	3.7	210.00	25	Yes
2015	4.7	194.00	26	Yes
2016	3.8	177.00	26	Yes
2017	2.9	208.00	26	No
2018	1.3	221.00	25	No
2019	4.2	177.00	29	Yes
2020	2.7	176.00	23	No
2021	1.8	193.00	24	Yes
2022	2.4	220.00	27	Yes
2023	4.3	218.00	25	Yes
2024	2.2	213.00	24	No
2025	3.5	196.00	29	Yes
2026	5	216.00	26	Yes
2027	3.2	159.00	27	Yes
2028	4.7	180.00	25	Yes
2029	2.4	185.00	28	Yes
2030	4	195.00	24	Yes

TYPE 3 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 3				
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Successful Detection (Yes/No)
3001	7	320.00	16	No
3002	9	489.00	16	Yes
3003	5.3	341.00	18	Yes
3004	5.2	319.00	17	Yes
3005	6.9	482.00	18	Yes
3006	6.2	375.00	16	Yes
3007	6.3	257.00	17	Yes
3008	8.5	268.00	16	No
3009	9.3	478.00	18	Yes
3010	9.9	332.00	17	Yes
3011	7.1	287.00	16	No
3012	9	499.00	18	Yes
3013	7.8	329.00	17	Yes
3014	7.1	401.00	18	Yes
3015	7.4	333.00	17	Yes
3016	6.6	466.00	17	Yes
3017	9.8	343.00	16	Yes
3018	8.6	378.00	16	Yes
3019	6.4	254.00	17	Yes
3020	9.5	351.00	16	Yes
3021	6.3	387.00	17	No
3022	6.1	363.00	18	Yes
3023	8.7	321.00	17	Yes
3024	7.9	276.00	17	Yes
3025	5.5	298.00	18	No
3026	6.2	377.00	17	Yes
3027	5.8	431.00	18	Yes
3028	6.1	263.00	17	Yes
3029	5.6	480	18	Yes
3030	10	331	18	Yes

TYPE 4 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 4				
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Successful Detection (Yes/No)
4001	10	367.00	12	No
4002	12.4	459.00	16	No
4003	17.1	457.00	12	Yes
4004	17.3	312.00	15	Yes
4005	17.7	373.00	15	Yes
4006	10	447.00	12	No
4007	12.9	477.00	16	No
4008	16	358.00	12	No
4009	15.6	268.00	15	Yes
4010	18.7	488.00	12	Yes
4011	12.3	450.00	15	Yes
4012	17.5	483.00	12	Yes
4013	10.1	404.00	15	Yes
4014	12	355.00	13	Yes
4015	12.4	497.00	15	Yes
4016	19.9	294.00	14	Yes
4017	13.8	481.00	14	No
4018	14.4	369.00	15	Yes
4019	13	320.00	14	Yes
4020	13.3	326.00	16	Yes
4021	12.9	429.00	16	Yes
4022	13.7	368.00	12	Yes
4023	10.1	429.00	16	Yes
4024	11	345.00	12	No
4025	15.8	345.00	13	No
4026	16.5	471.00	13	Yes
4027	15.5	486.00	12	Yes
4028	16.4	251.00	16	Yes
4029	18	295.00	13	Yes
4030	15.7	280.00	14	Yes

TYPE 5 DETECTION PROBABILITY

Data Sheet for FCC Long Pulse Radar Type 5	
Trial	Successful Detection (Yes/No)
1	Yes
2	Yes
3	Yes
4	Yes
5	Yes
6	Yes
7	Yes
8	No
9	Yes
10	Yes
11	Yes
12	Yes
13	Yes
14	Yes
15	No
16	Yes
17	Yes
18	Yes
19	Yes
20	No
21	Yes
22	Yes
23	Yes
24	Yes
25	Yes
26	Yes
27	Yes
28	Yes
29	Yes
30	Yes

Note: The Type 5 randomized parameters are shown in a separate document.

TYPE 6 DETECTION PROBABILITY

Data Sheet for FCC Hopping Radar Type 6				
1 us Pulse Width, 333 us PRI, 9 Pulses per Burst, 1 Burst per Hop				
NTIA August 2005 Hopping Sequence				
Trial	Starting Index Within Sequence	Signal Generator Frequency (MHz)	Hops within Detection BW	Successful Detection (Yes/No)
1	199	5492	5	Yes
2	674	5493	5	Yes
3	1149	5494	1	Yes
4	1624	5495	1	No
5	2099	5496	1	No
6	2574	5497	4	Yes
7	3049	5498	3	Yes
8	3524	5499	2	Yes
9	3999	5500	4	Yes
10	4474	5501	4	Yes
11	4949	5502	4	Yes
12	5424	5503	4	Yes
13	5899	5504	4	Yes
14	6374	5505	3	Yes
15	6849	5506	2	Yes
16	7324	5507	4	Yes
17	7799	5508	5	Yes
18	8274	5492	4	Yes
19	8749	5493	3	Yes
20	9224	5494	4	Yes
21	9699	5495	2	Yes
22	10174	5496	2	Yes
23	10649	5497	4	Yes
24	11124	5498	3	Yes
25	11599	5499	5	Yes
26	12074	5500	1	Yes
27	12549	5501	5	Yes
28	13024	5502	2	Yes
29	13499	5503	3	Yes
30	13974	5504	5	Yes
31	14449	5505	1	Yes
32	14924	5506	3	Yes
33	15399	5507	4	Yes
34	15874	5508	4	No

2. MEDIUM ACCESS PROTOCOL

REQUIREMENT

A medium access protocol shall be implemented by the equipment and shall be active under all circumstances.

IMPLEMENTATION

See Manufacturer's Attestation.

3. USER ACCESS RESTRICTIONS

REQUIREMENT

DFS controls (hardware or software) related to radar detection shall not be accessible to the user so that the DFS requirements described in clauses 4.7.2.1 to 4.7.2.4 can neither be disabled nor altered.

IMPLEMENTATION

See Manufacturer's Attestation.