10. Dynamic Frequency Selection

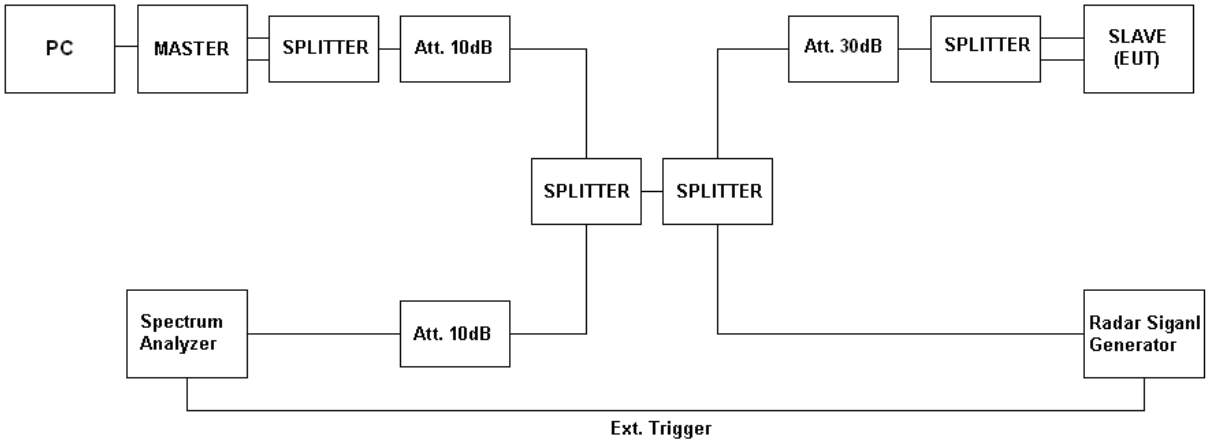
10.1. Test Equipment

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Rohde & Schwarz	FSP	100561	2007/11/02
Vector Signal Generator	Rohde & Schwarz	SUM 200A	102168	2008/01/13

Instrument	Manufacturer	Type No.	Serial No.
Splitter/Combiner (Qty: 2)	Mini-Circuits	ZAPD-50W 4.2-6.0 GHz	NN256400424
ATT (Qty: 4)	Mini-Circuits	BW-S3W2 DC-18GHz	0025
Aironet Access Point	Cisco System	AP1242AG	FOC10352PCV
Laptop PC	Dell	M65	28G9N1S
RF Cable (Qty: 5)	Schaffner		25494/6

Software	Manufacturer	Function
Cisco IOS Releases 12.3(4)JA	Cisco	DFS software
R&S K6 Pulse Sequencer	Rohde & Schwarz	Radar Signal Generation Software
Media Player Classic v6.4.8.6	Gabest	Media Player

10.2. Test Setup



10.3. Limit

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

Applicability of DFS requirements prior to use of a channel

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

Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	**Client (with radar detection)**	**Client (without radar detection)**
DFS Detection Threshold	Yes	Yes	Not Required
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Yes	Not required

Interference Threshold value, 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.	

DFS Response requirement values

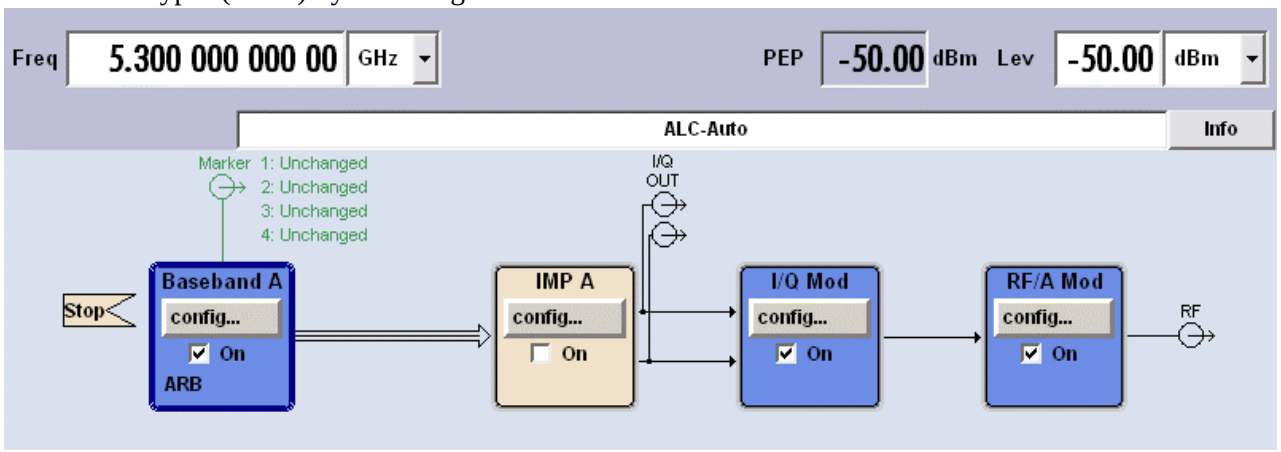
Parameter	**Value**
Non-Occupancy Period	30 Minutes
Channel Availability Check Time	60 Seconds
Channel Move Time	10 Seconds
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period (See Notes 1 and 2)
Note1: The instant that the Channel Move Time and 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 seconds period defining the radar transmission. Note 2: 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 facilitating channel changes (an aggregate of approximately 60 milliseconds) during the remainder of the 10 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.	

Short Pulse Radar Test Waveforms

Radar Type	**Pulse Width (μsec)**	**PRI (μsec)**	**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

A minimum of 30 unique waveforms are required for each of the short pulse radar type 2 through 4. For short pulse radar type 1, then same waveform is used a minimum of 30 times. If more than 30 waveforms are used for short pulse radar type 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. The aggregate is the average of the percentage of successful detections of short pulse radar type 1-4.

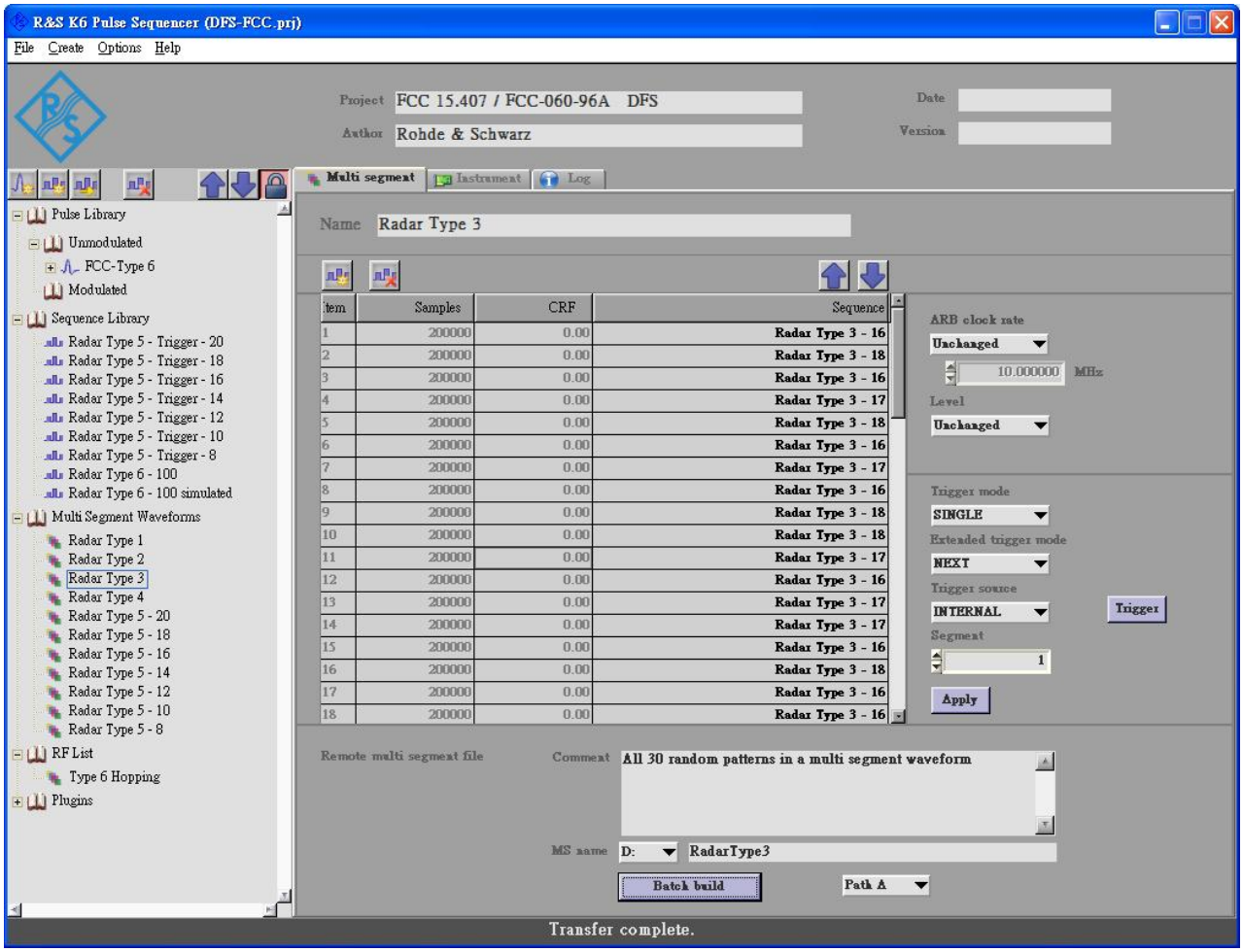
FCC Radar Types (1 to 4) System Diagram



Used R&S SMU200A (Vector SG with one ARB)

B11: Base-band Generator with ARB and Digital Modulation

B106: Frequency range (100kHz to 6GHz)



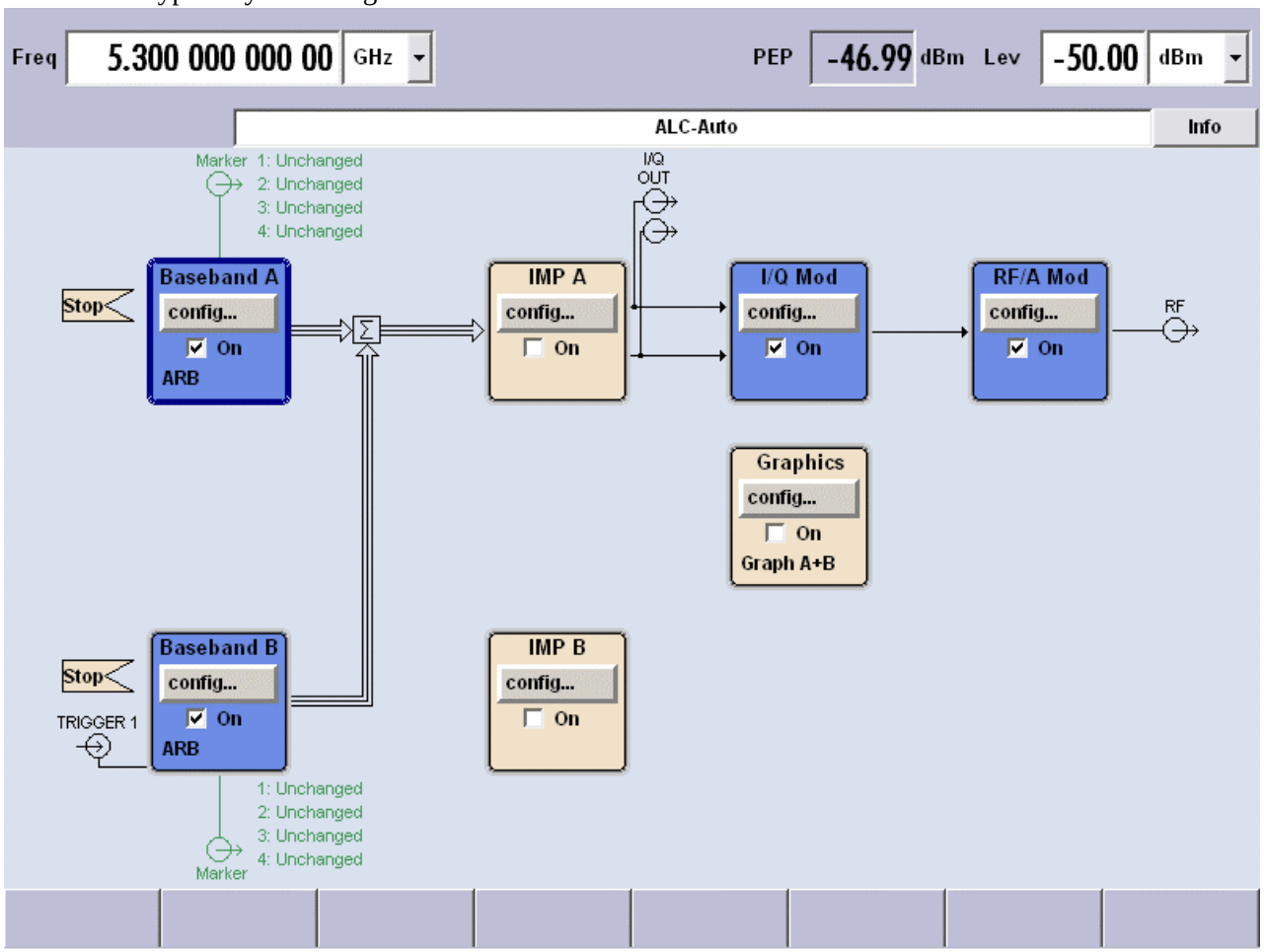
Used R&S K6 Pulse Sequencer Software to select the waveform parameters from the bounds of the signal type, system were random selection using uniform distribution.

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**

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the long pulse radar test signal. If more than 30 waveforms are used for the long pulse radar test signal, then each additional waveform must also be unique and not repeated from the previous waveforms.

FCC Radar Type 5 System Diagram

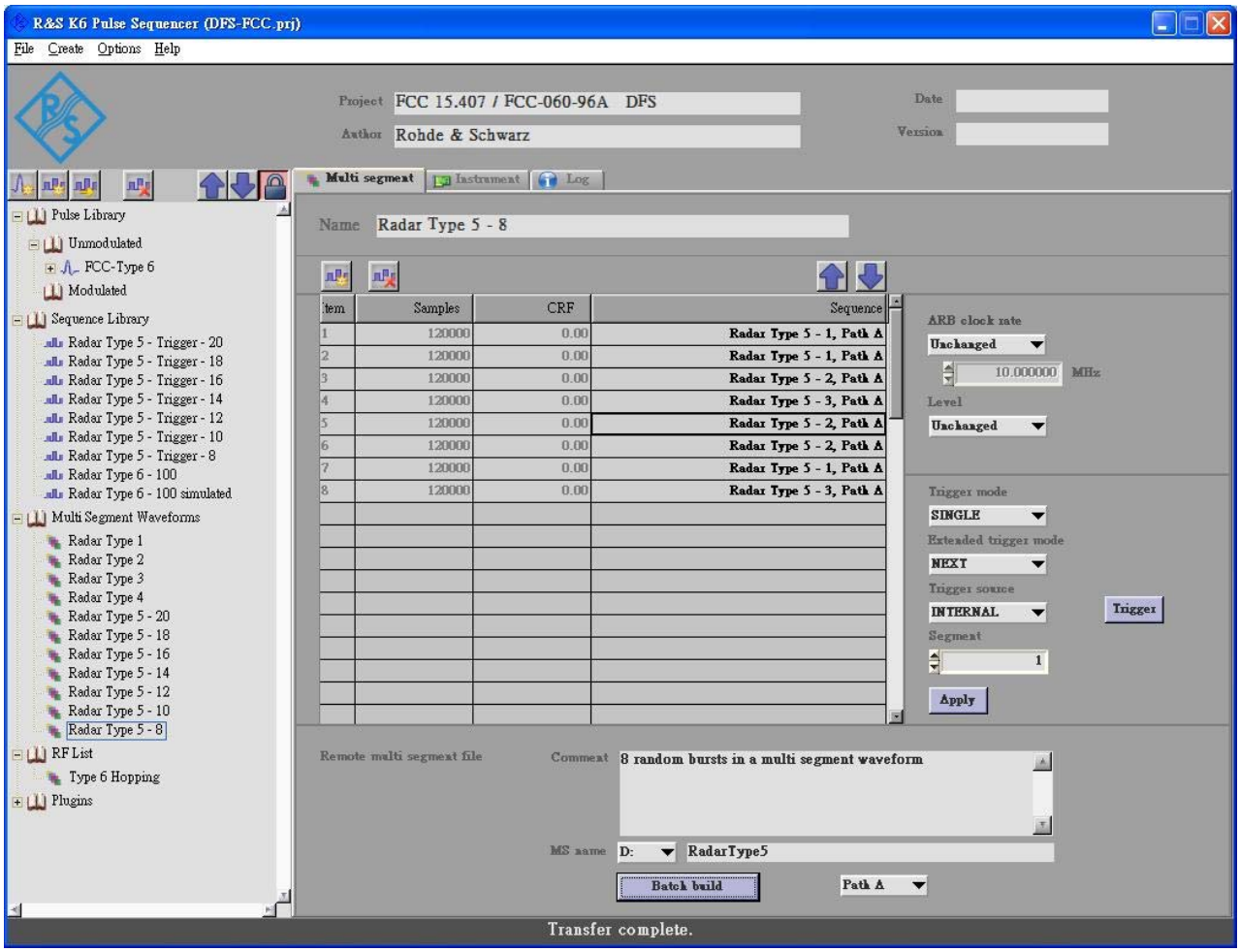


Used R&S SMU200A (Vector SG with Two ARB)

2*B11: Base-band Generator with ARB and Digital Modulation

2*B13: Base-band Main Module

B106: Frequency range (100kHz to 6GHz)



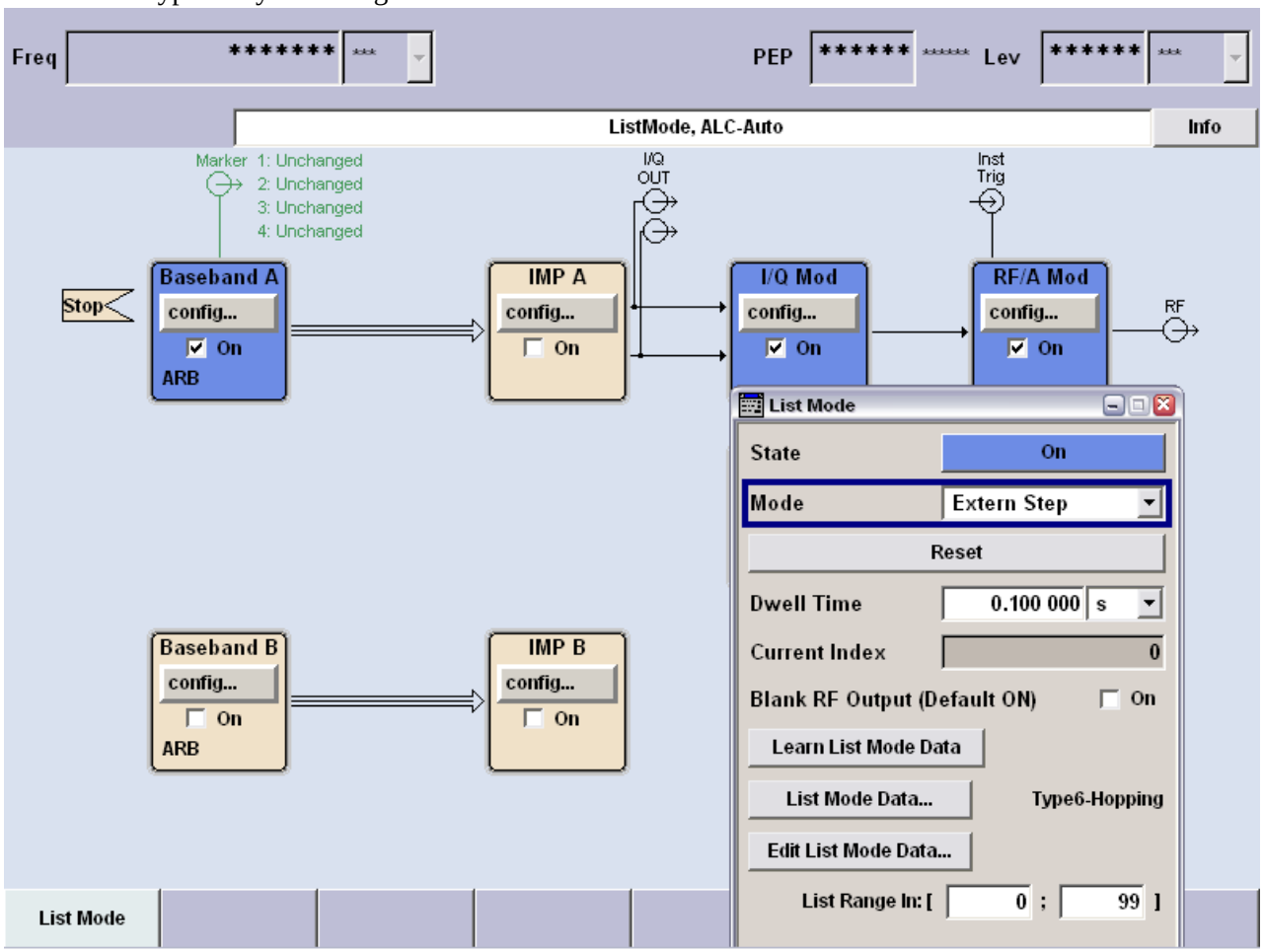
Used R&S K6 Pulse Sequencer Software to select the waveform parameters from the bounds of the signal type, system were random selection using uniform distribution.

Frequency Hopping Radar Test Signal

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

For the frequency hopping radar type, the same burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence.

FCC Radar Types 6 System Diagram

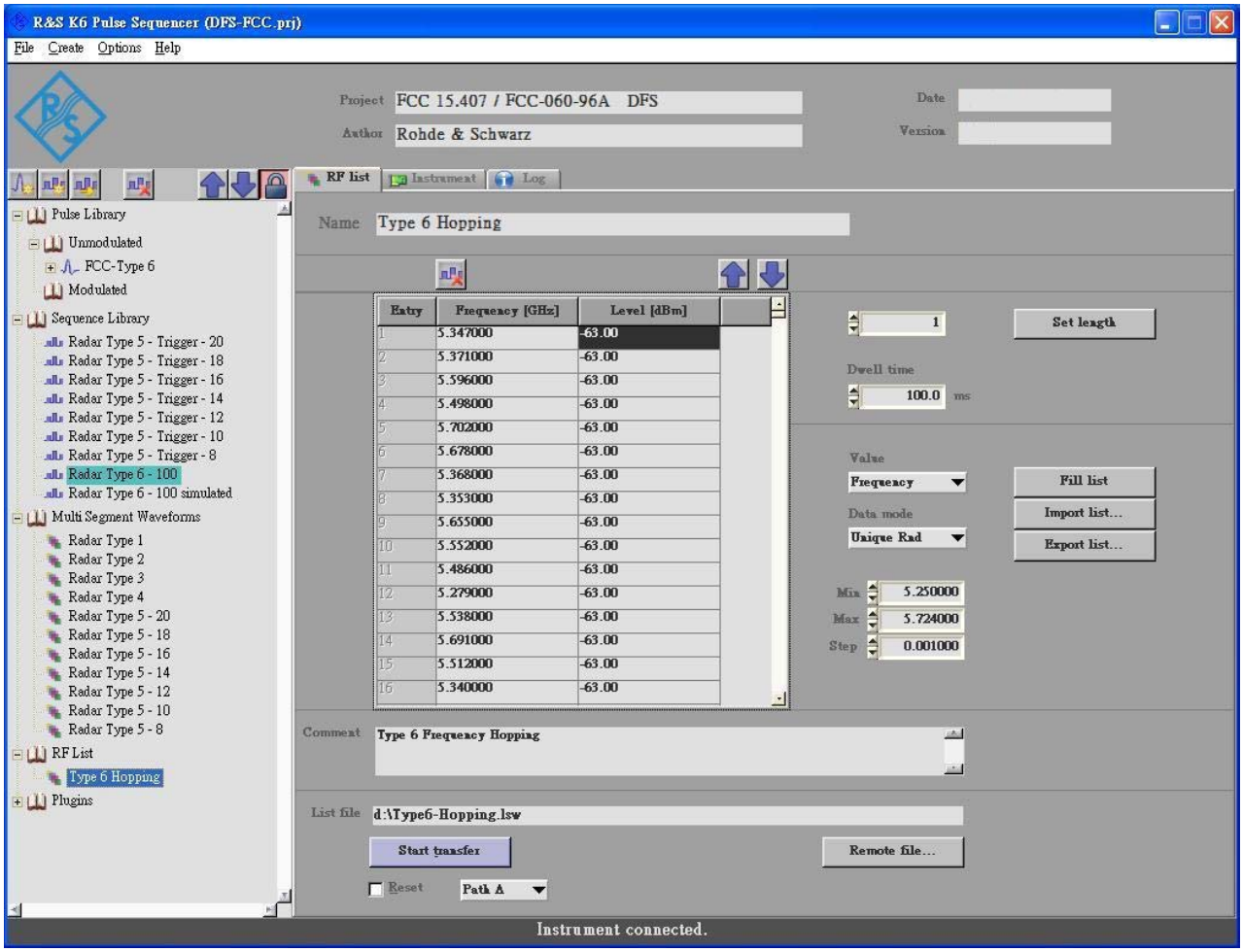


Used R&S SMU200A (Vector SG with one ARB)

B11: Base-band Generator with ARB and Digital Modulation

B13: Base-band Main Module

B106: Frequency range (100kHz to 6GHz)



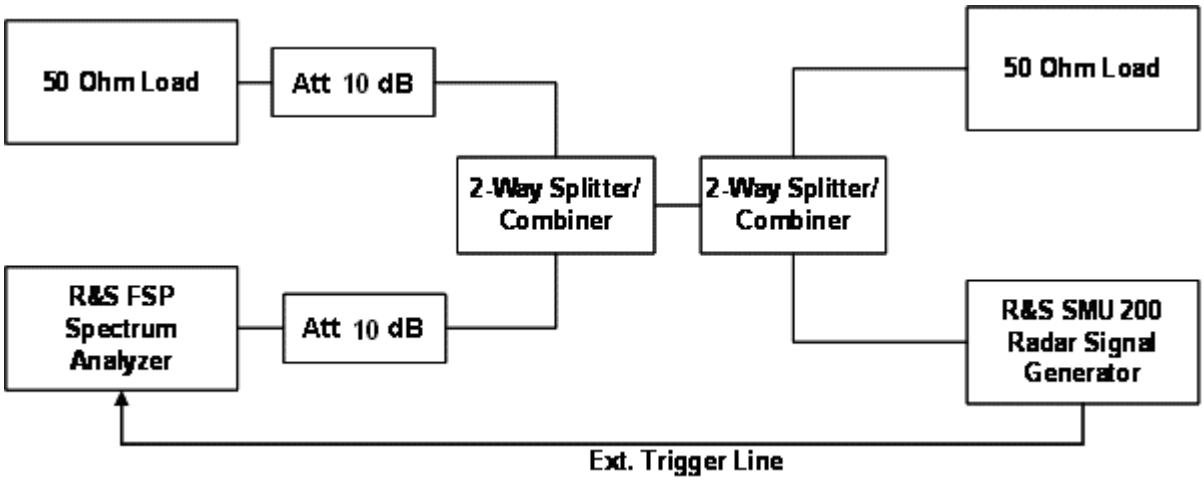
Used R&S Pulse K6 Sequencer Software to select the waveform parameters from the bounds of the signal type, system were random selection using uniform distribution.

10.4. Radar Waveform Calibration

The following equipment setup was used to calibrate the conducted radar waveform. A spectrum analyzer was used to establish the test signal level for each radar type. During this process there were replace 50ohm terminal from master and client device and no transmissions by either the master or client device. The spectrum analyzer was switched to the zero span (time domain) at the frequency of the radar waveform generator. Peak detection was utilized. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 1 MHz and 3 MHz.

The signal generator amplitude was set so that the power level measured at the spectrum analyzer was -50 dBm due to the interference threshold level is not required.

Conducted Calibration Setup



10.5. Channel Move Time and Channel Closing Transmission Time

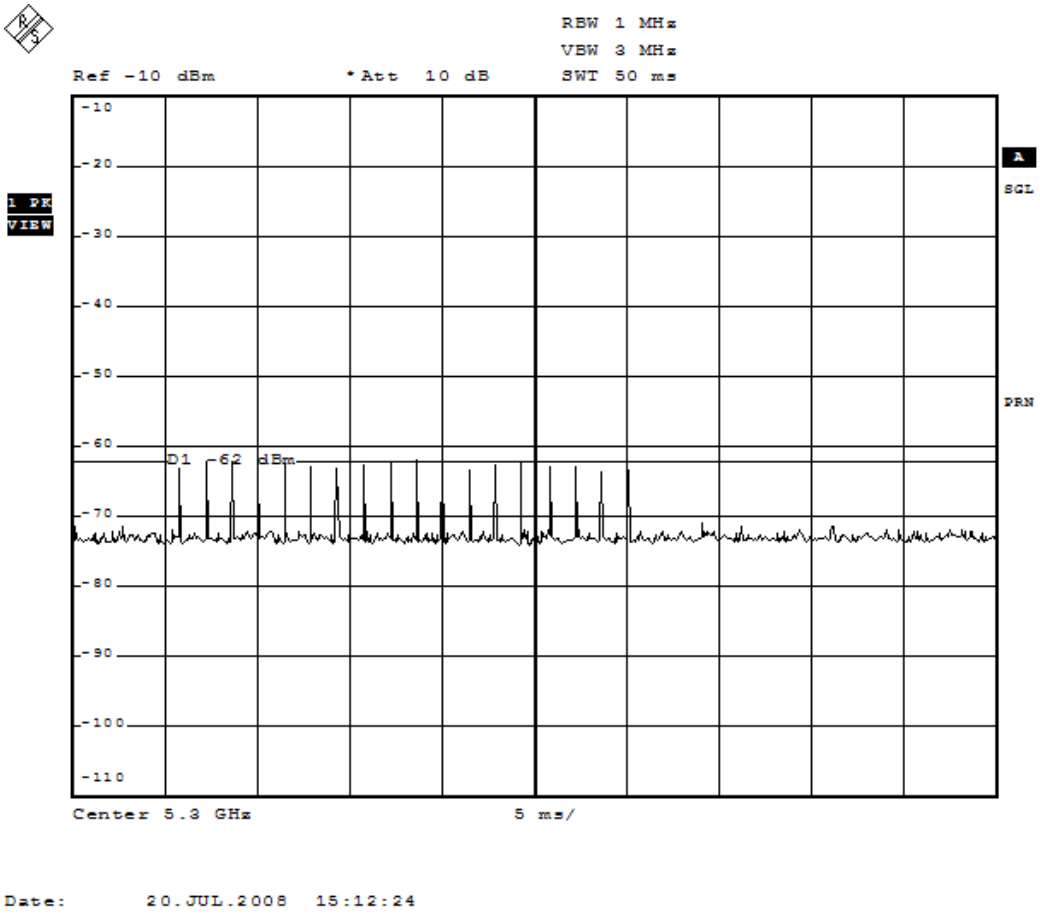
These tests define how the following DFS parameters are verified during In-Service Monitoring;
Channel Closing Transmission Time and Channel Move Time.

The steps below define the procedure to determine the above mentioned parameters when a radar burst with a level -50 dBm is generated on the operating channel of the U-NII device.

A U-NII device operating as a Client device will associate with the Master device at 5300MHz for 20MHz channel bandwidth and 5310MHz for 40 MHz channel bandwidth. Traffic data from the master device to the client device on the selected channel for the entire period of the test.

Observe the transmissions of the EUT at the end of the radar burst on the operating channel for duration greater than 10 seconds. Measure and record the transmissions from the spectrum analyzer during the observation time (Channel Move Time).Compare the channel move time and channel closing transmission time results to the limits defined in the DFS Response requirement values table.

Radar Type 1 Calibration Plot



10.6. Test Procedure

A spectrum analyzer is used as a monitor to verify that the EUT has vacated the channel within the channel closing transmission time and channel move time after the detection and channel move.

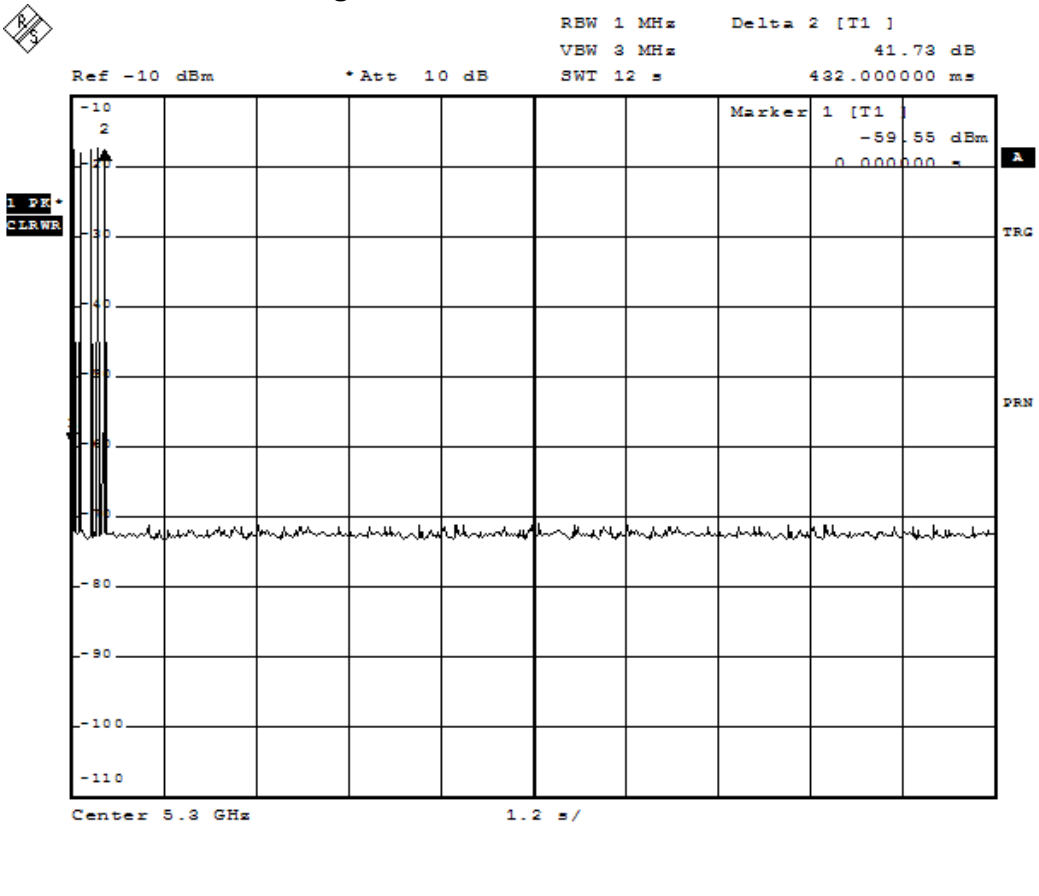
The EUT is a WLAN device operating as client without radar interference detection function. Radar test signals are injected into the master device. This set-up also contains a WLAN device operating in master device. The EUT (client device) is associated with the master device. Following is the test setup used to generate the radar waveforms and for all DFS tests described herein.

10.7. Test Result of Dynamic Frequency Selection

Product : ROS Home Center
Test Item : Dynamic Frequency Selection
Test Site : CTR
Test Mode : Mode 1: Transmitter 802.11a

20MHz Channel Mode

Channel Move Time for Radar Test Signal 1 at 5300MHz

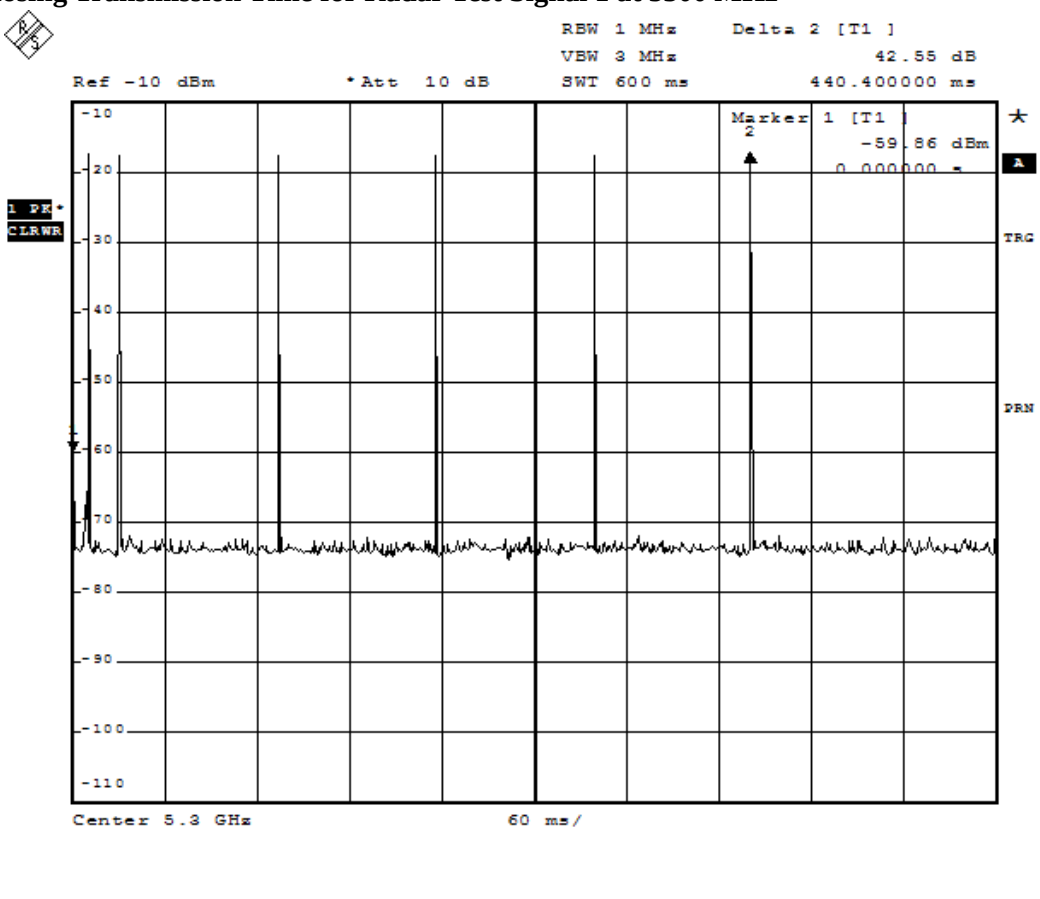


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 1 at 5300 MHz

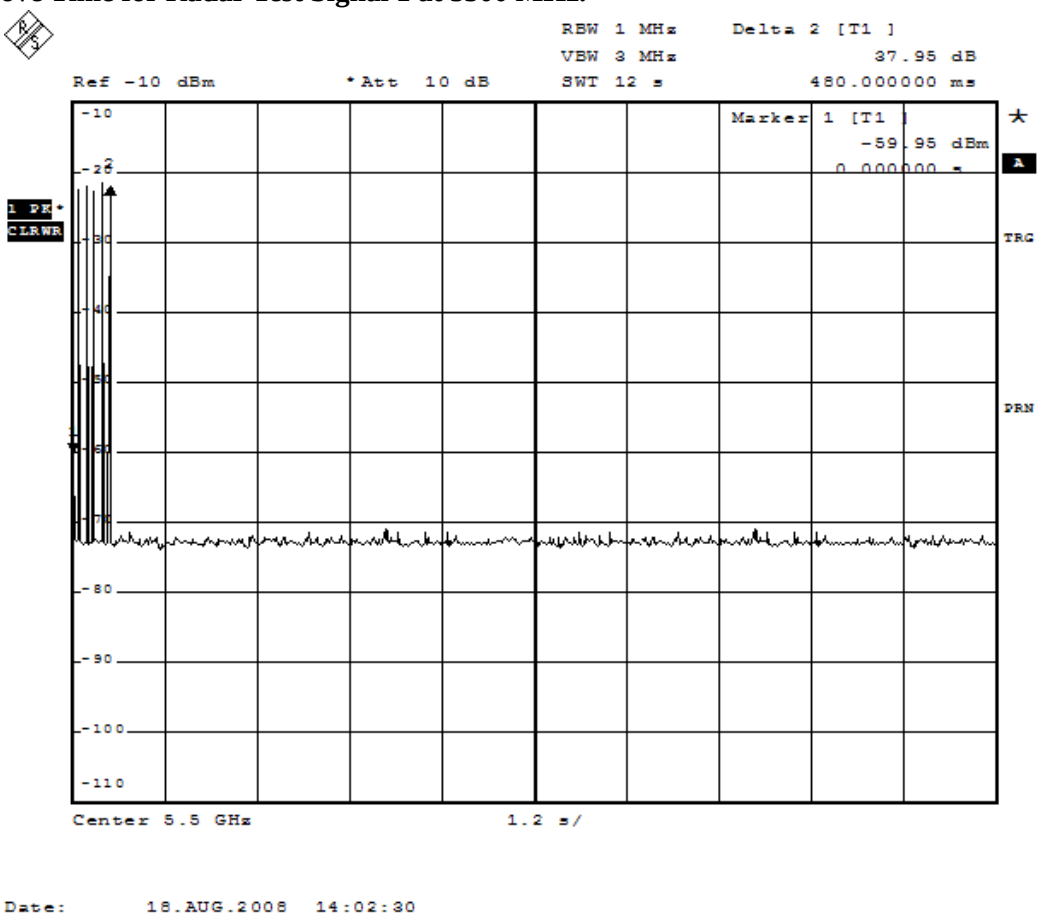


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 1 at 5500 MHz.

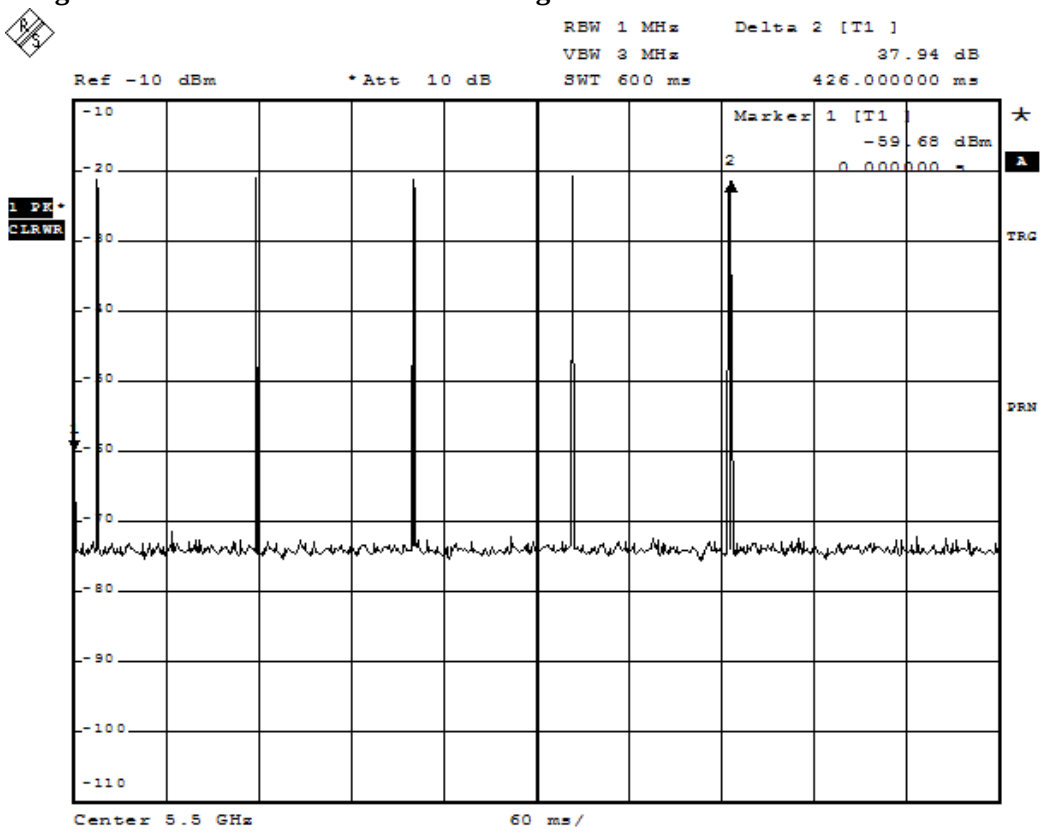


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 1 at 5500 MHz.

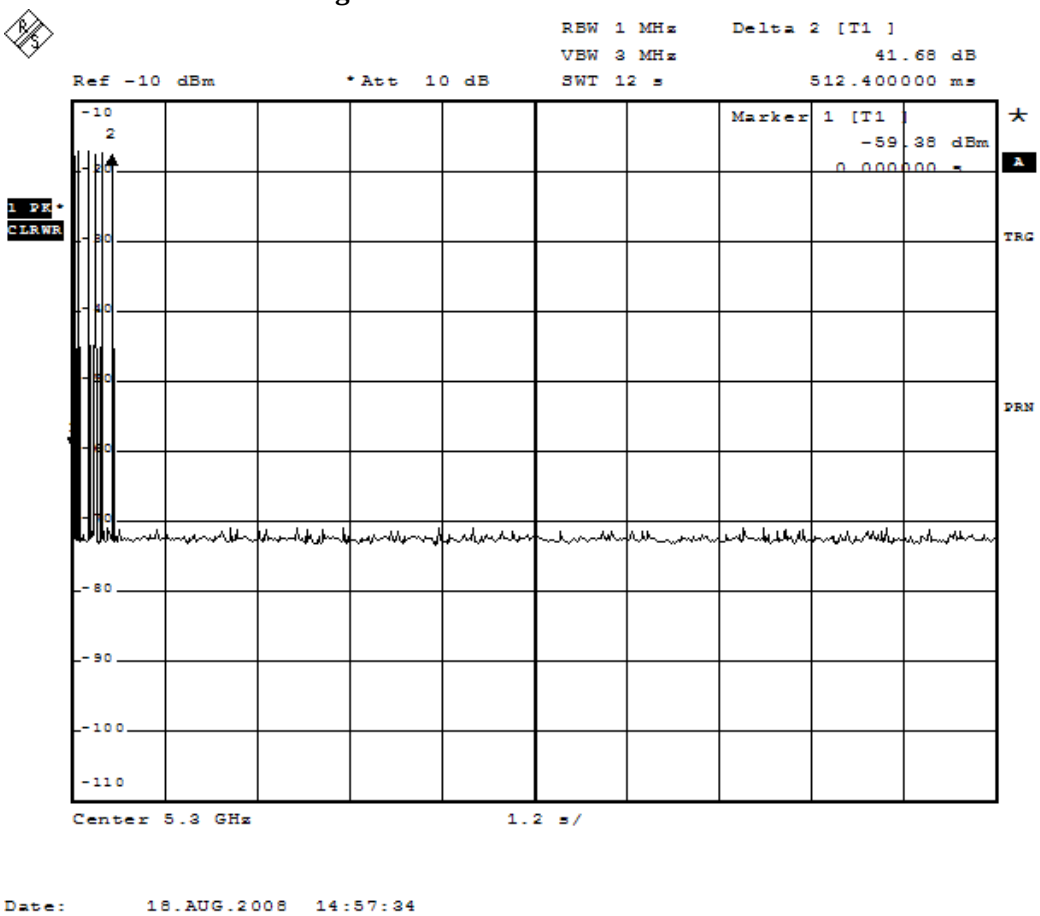


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 2 at 5300 MHz

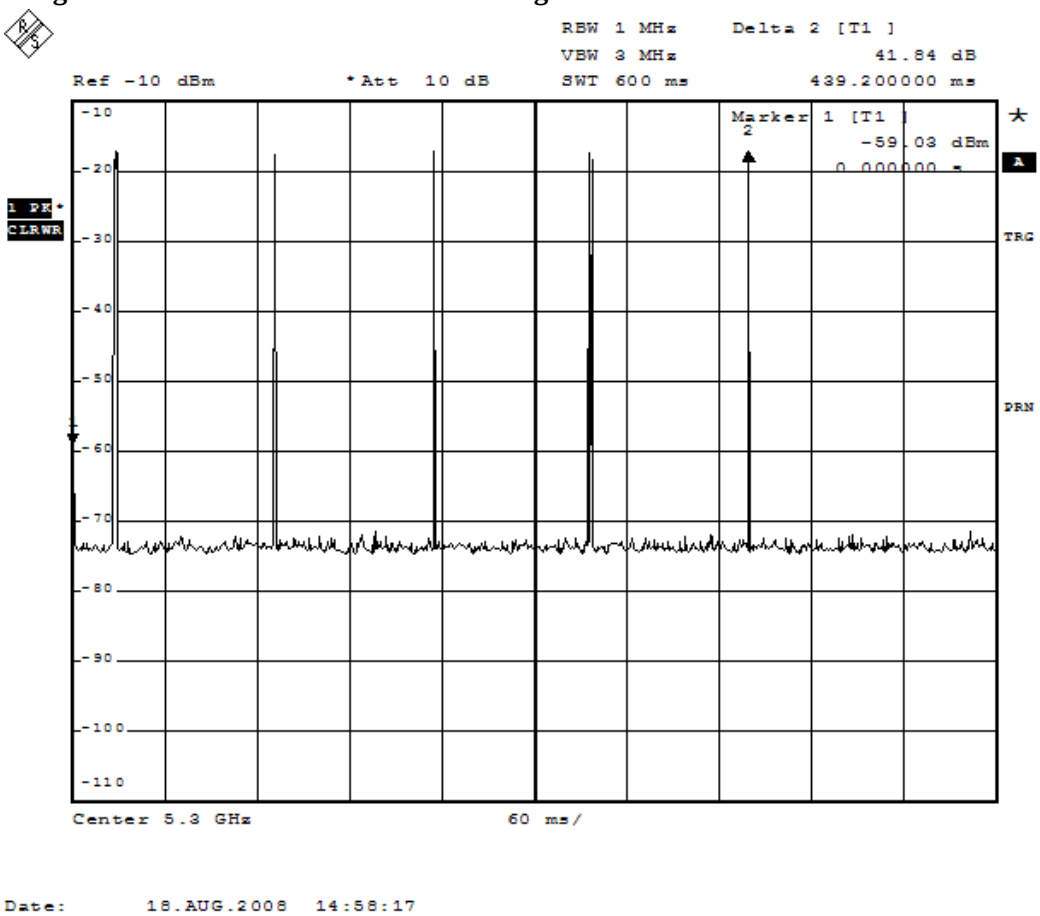


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 2 at 5300 MHz

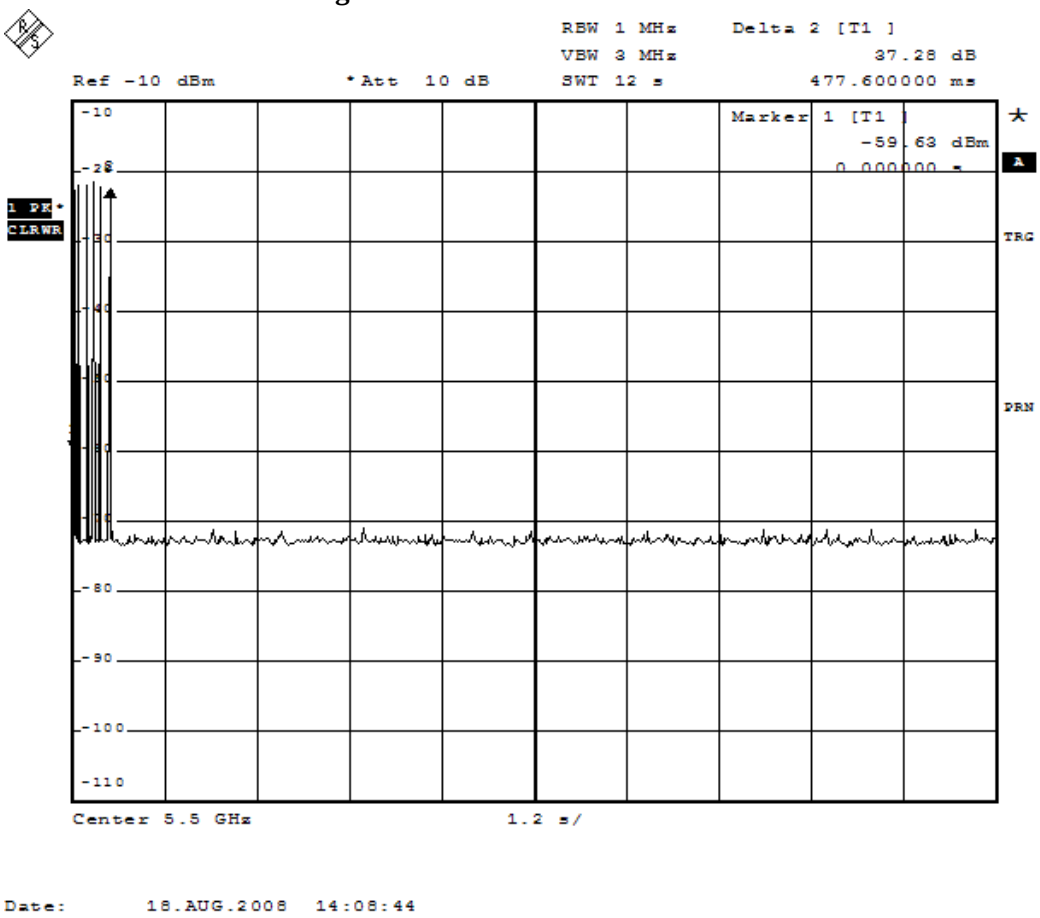


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 2 at 5500 MHz.

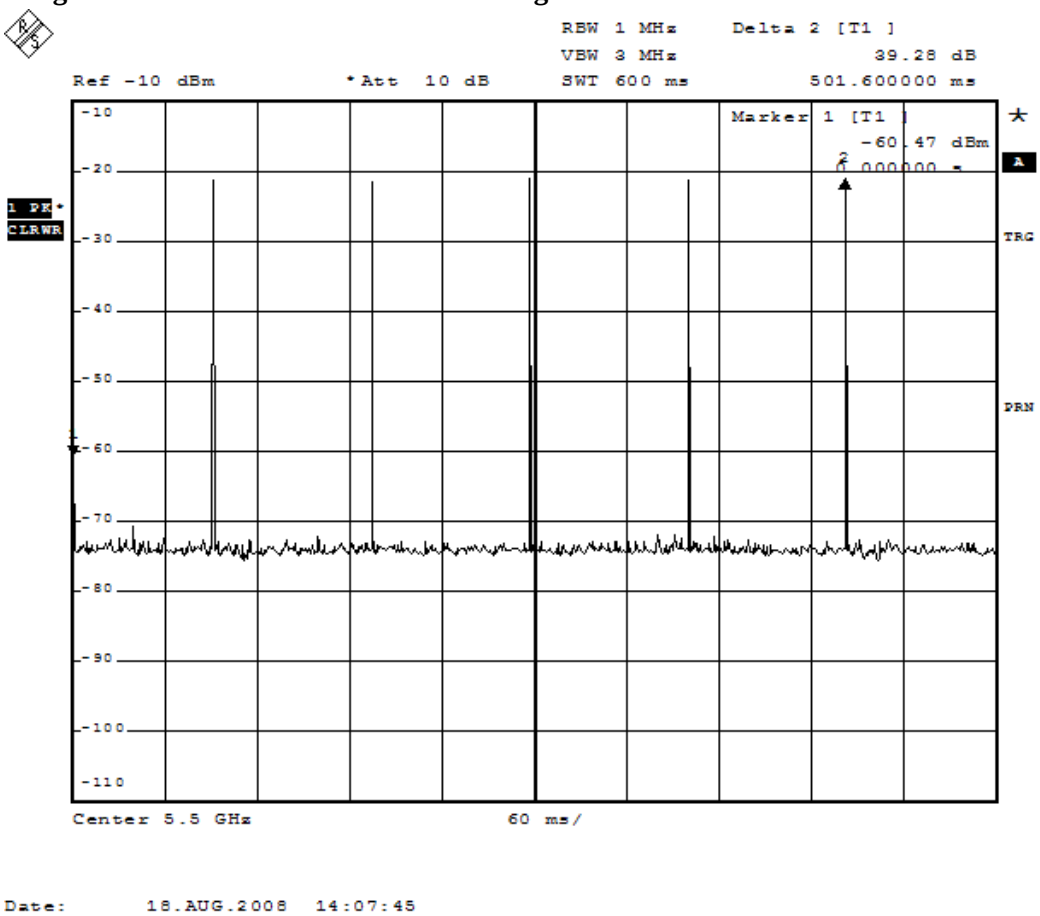


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 2 at 5500 MHz.

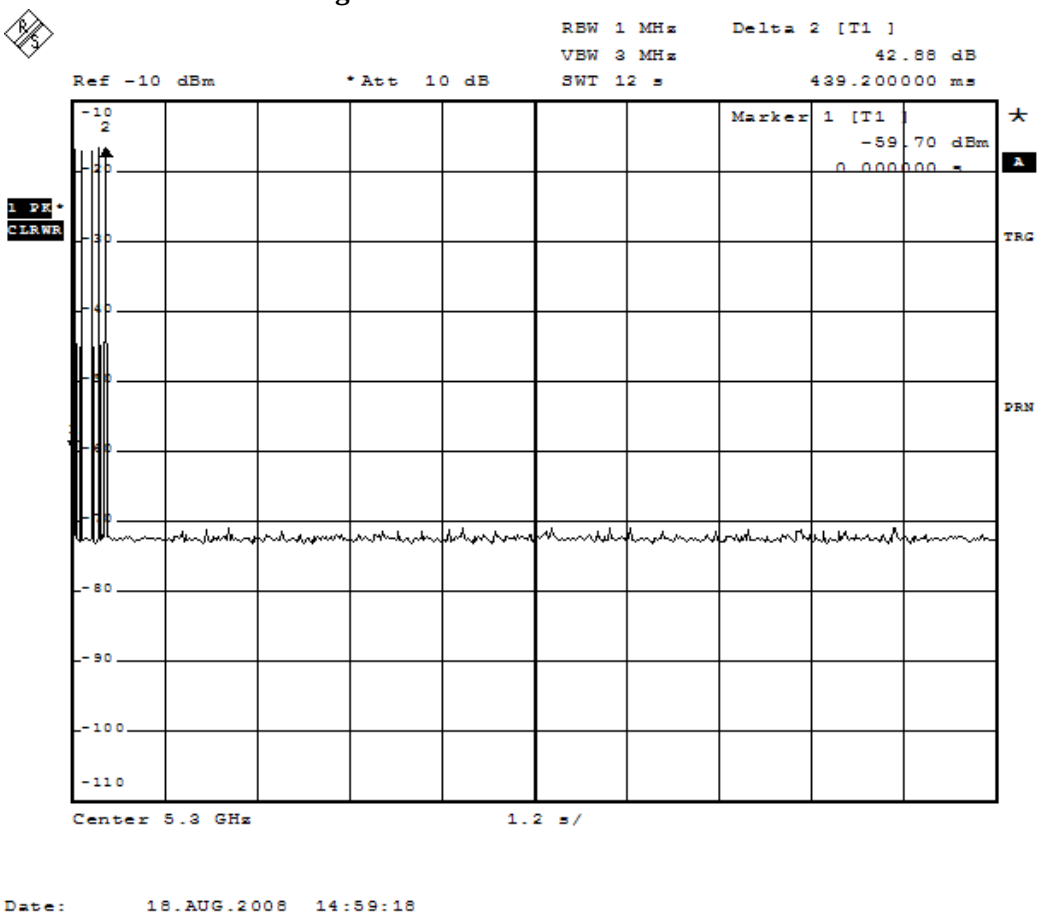


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 3 at 5300 MHz

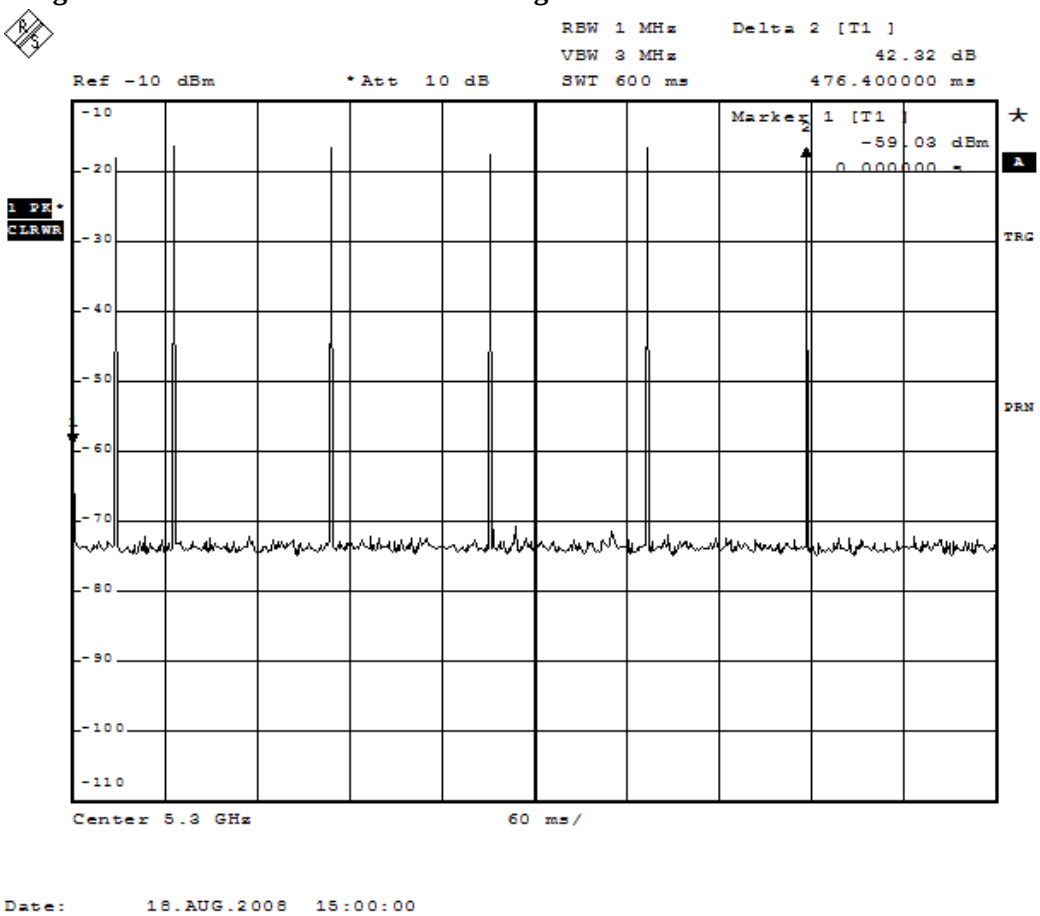


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 3 at 5300 MHz

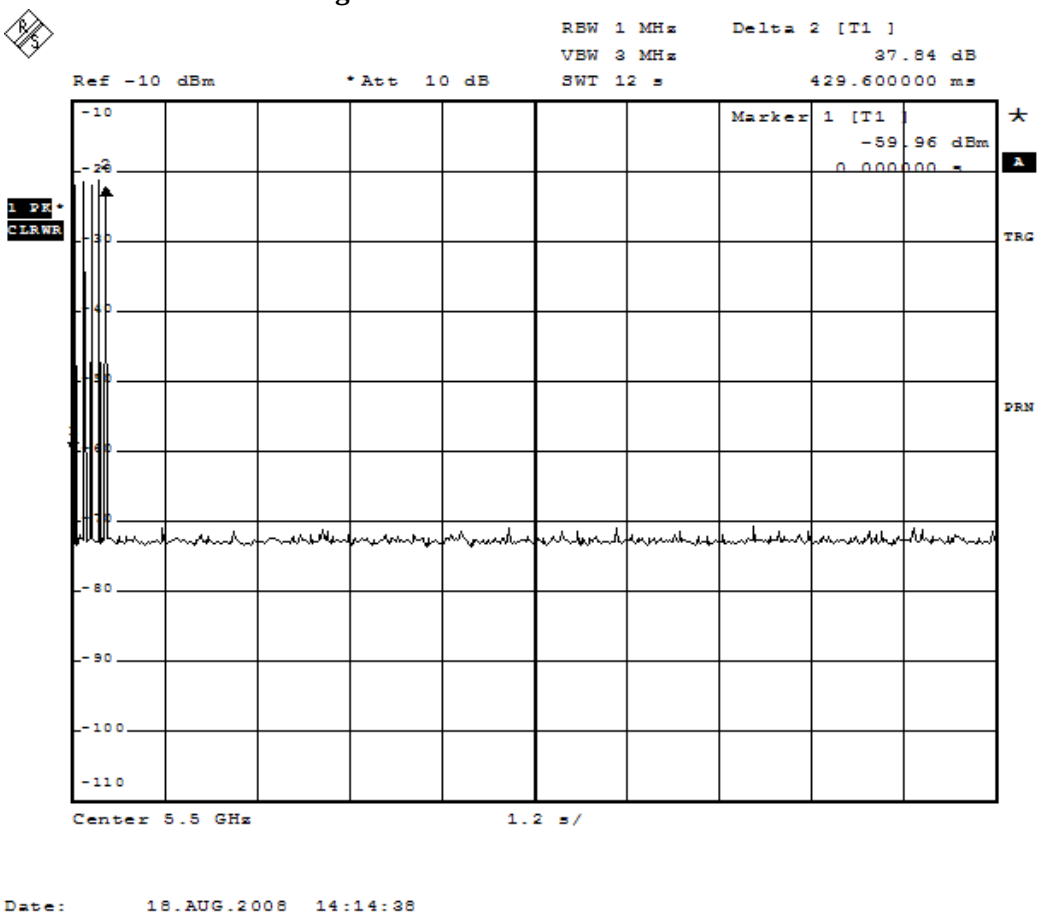


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 3 at 5500 MHz.

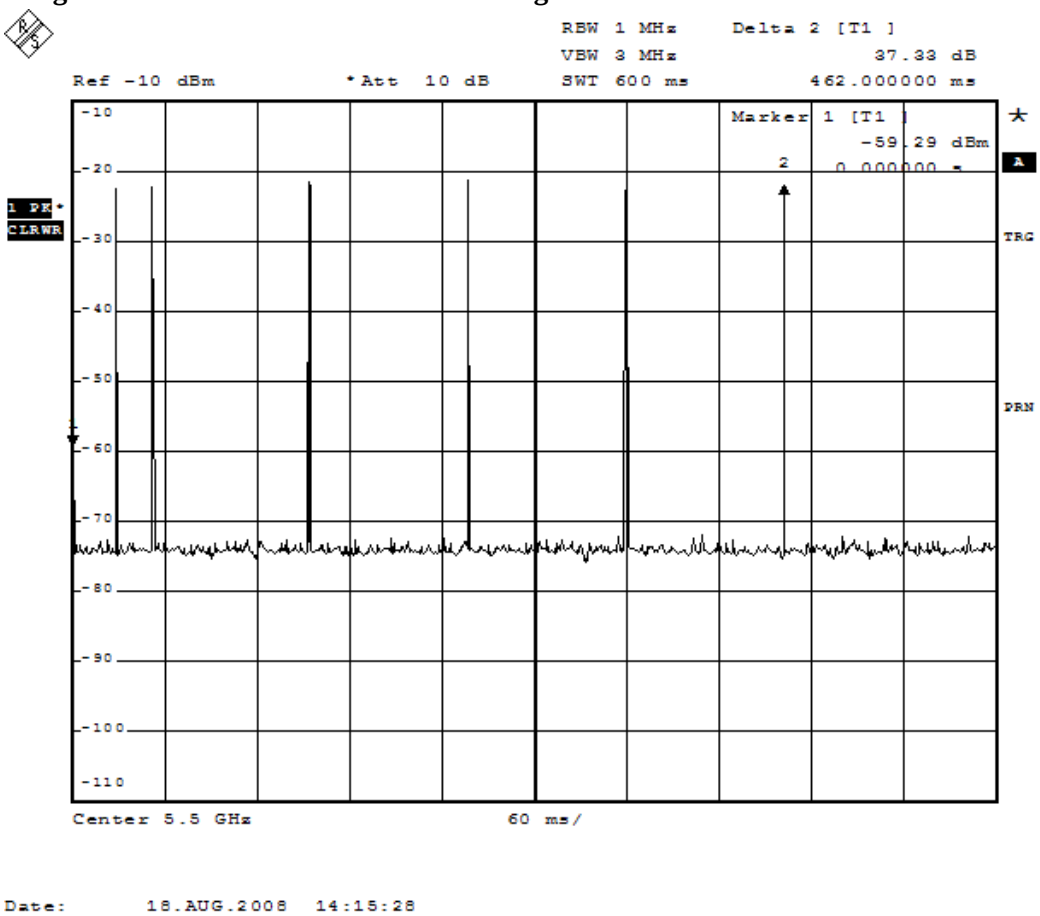


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 3 at 5500 MHz.

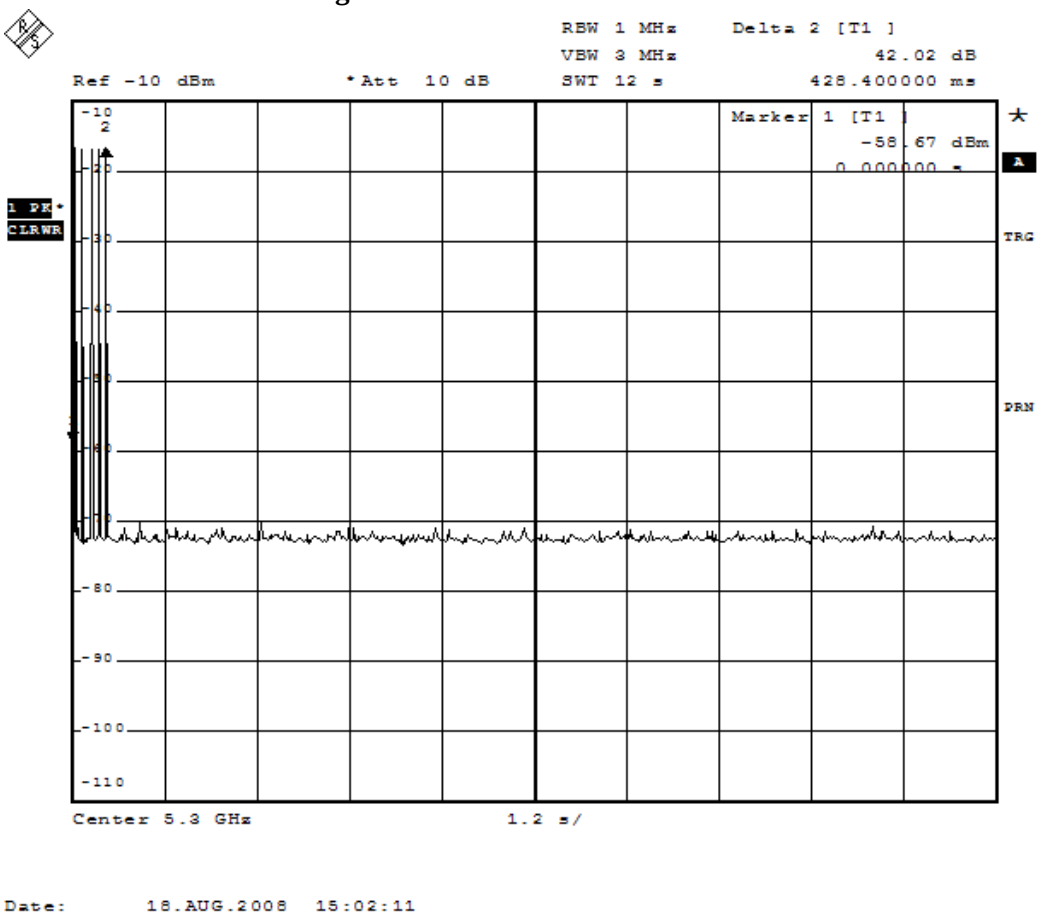


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 4 at 5300 MHz

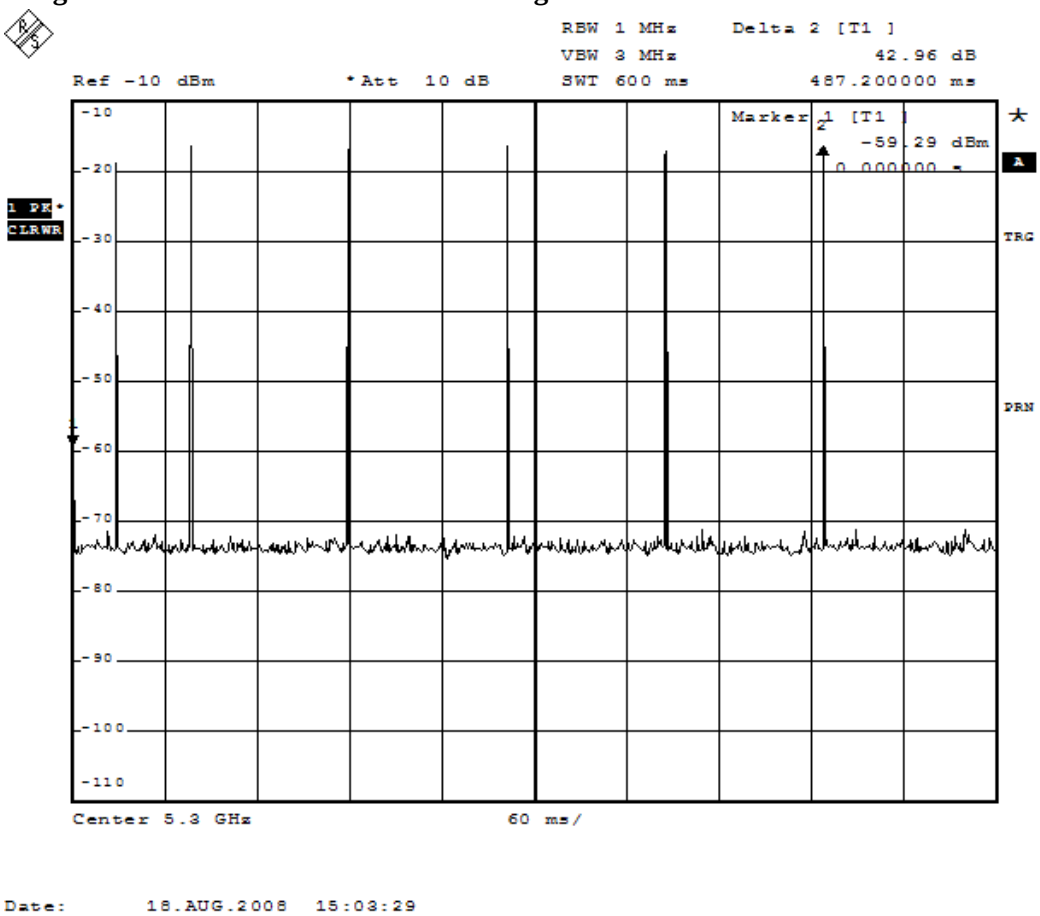


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 4 at 5300 MHz

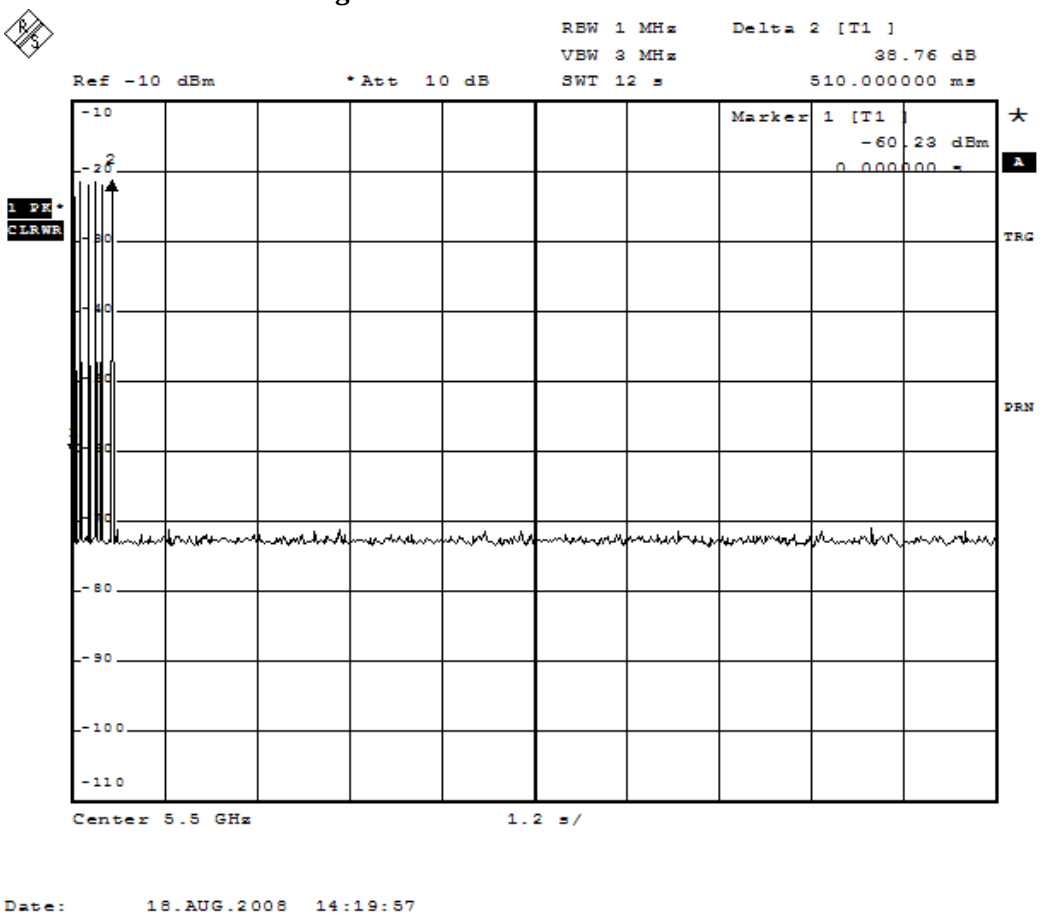


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 4 at 5500 MHz.

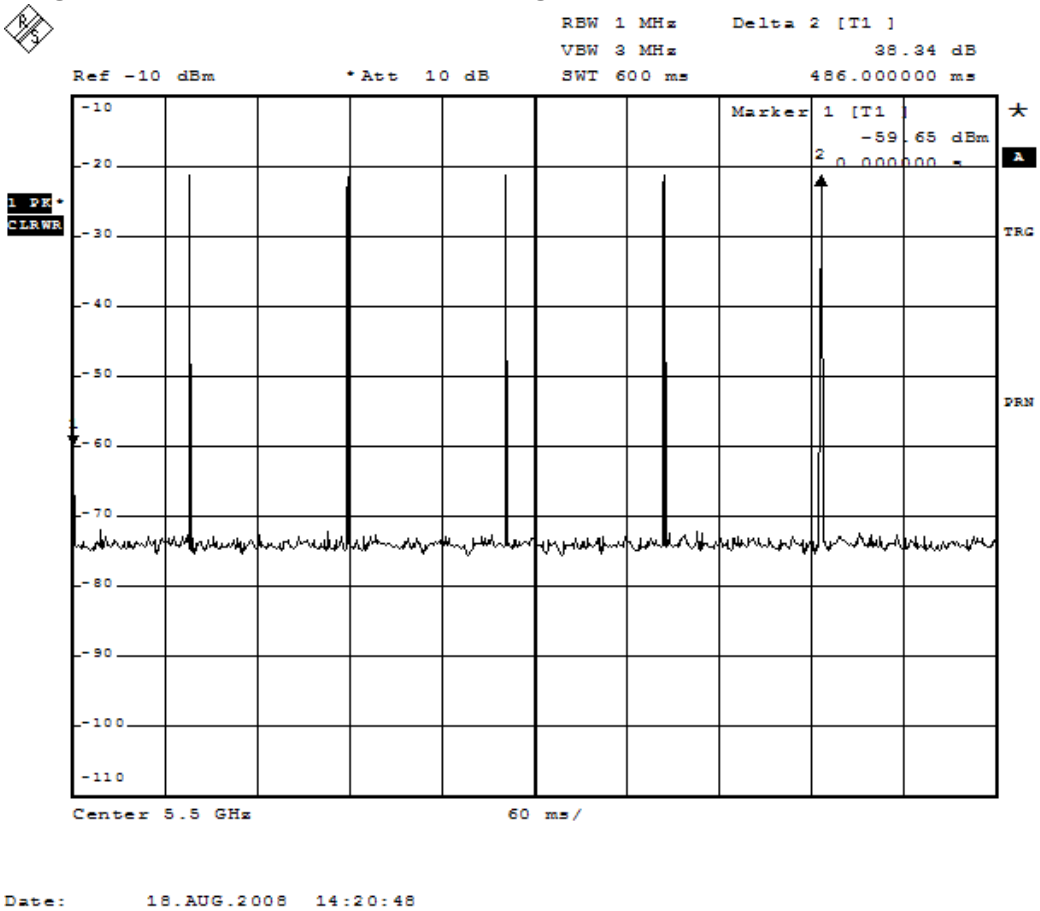


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 4 at 5500 MHz.

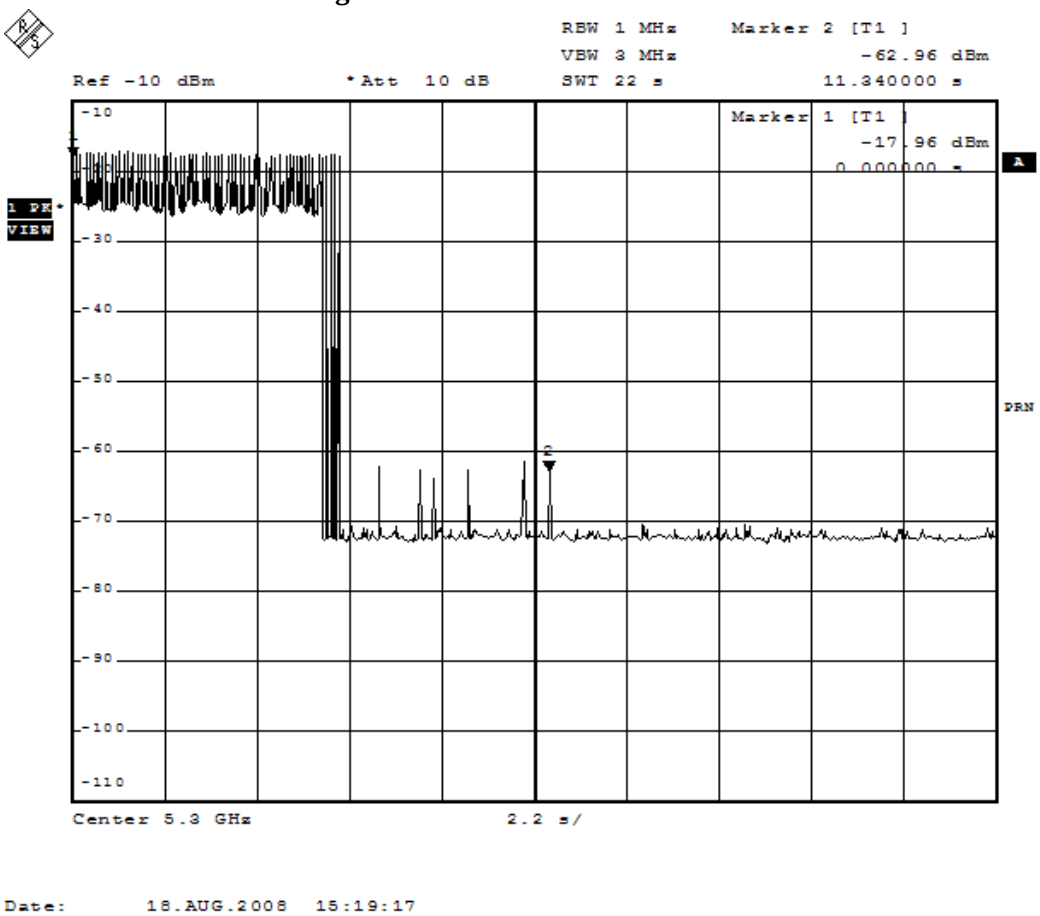


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 5 at 5300 MHz

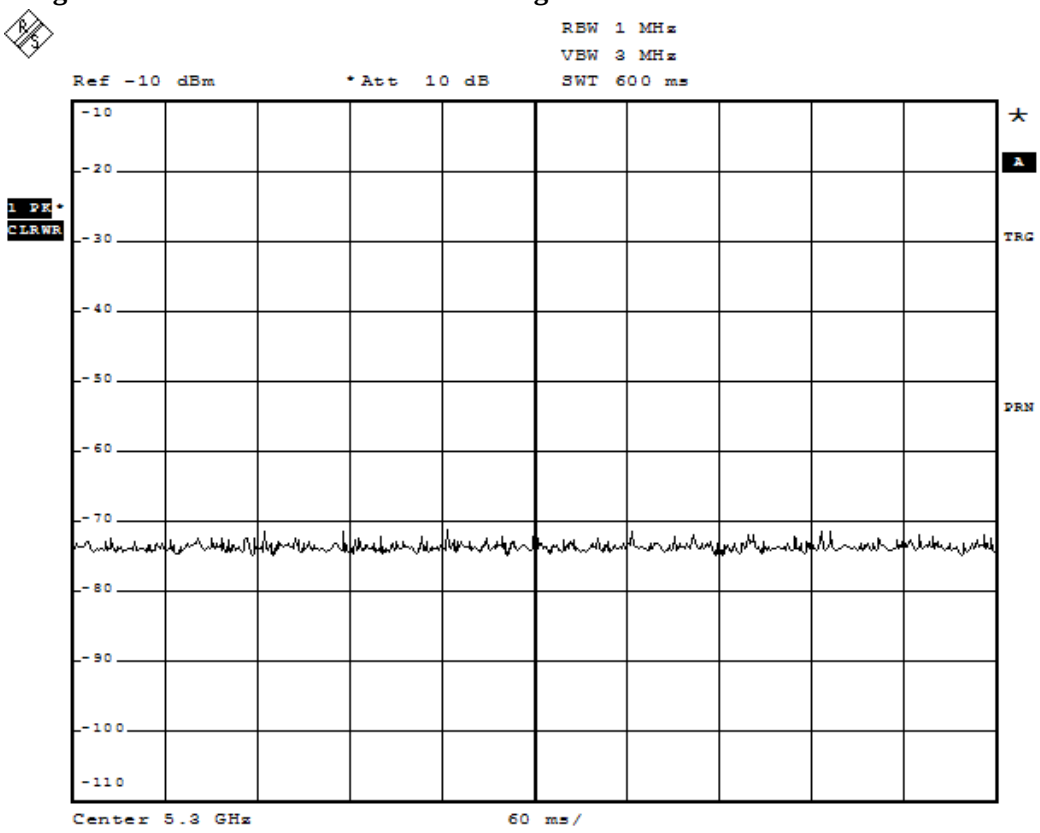


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 5 at 5300 MHz

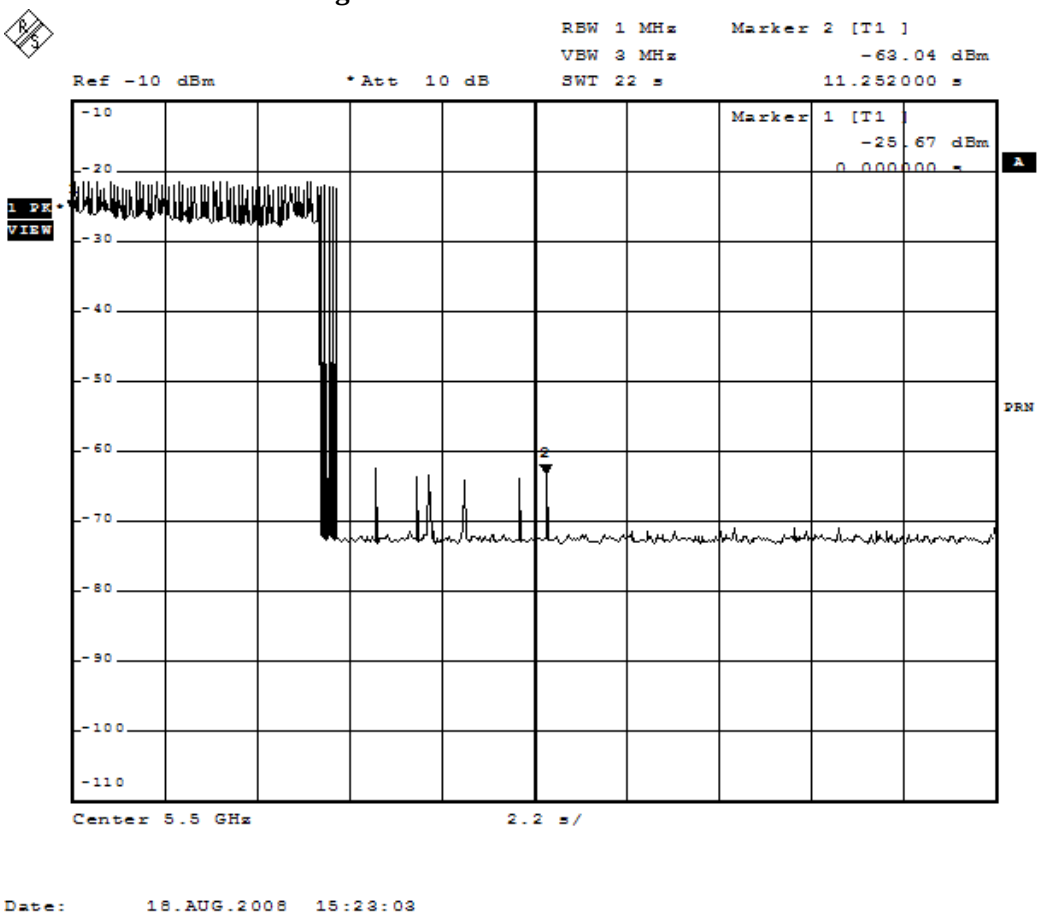


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 5 at 5500 MHz.

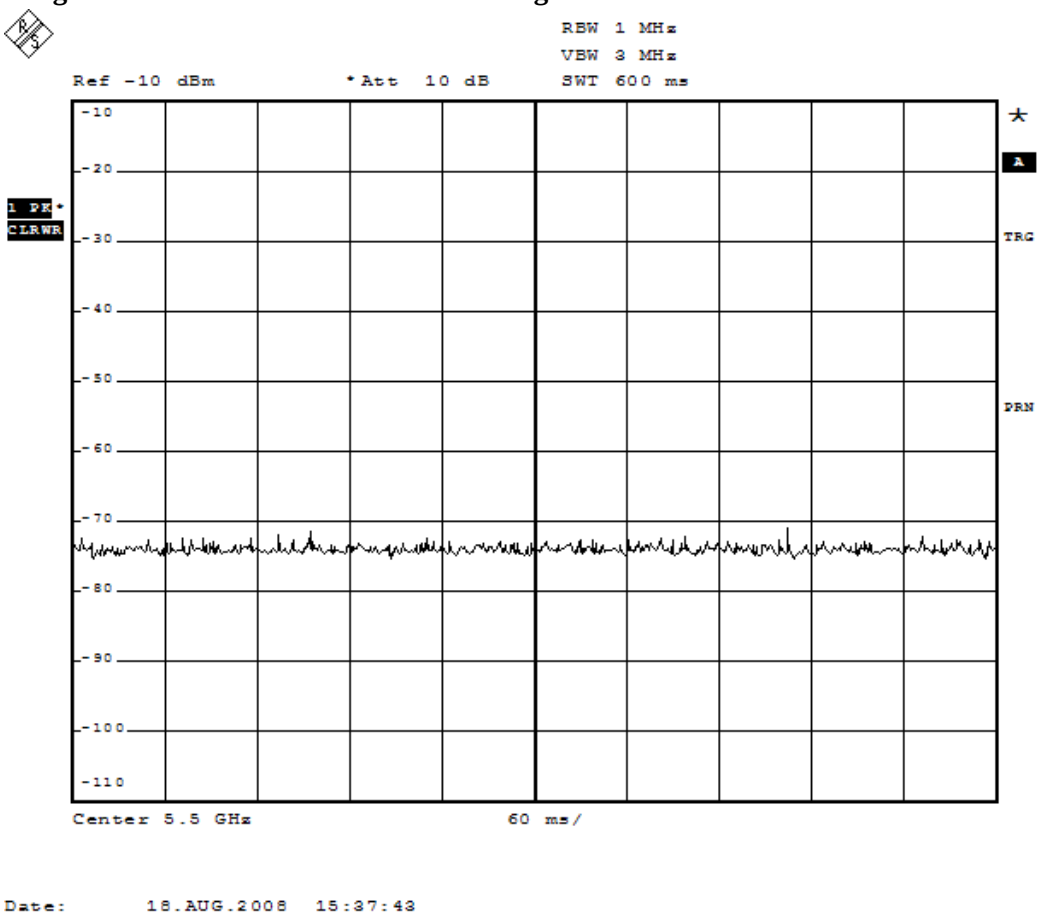


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 5 at 5500 MHz.

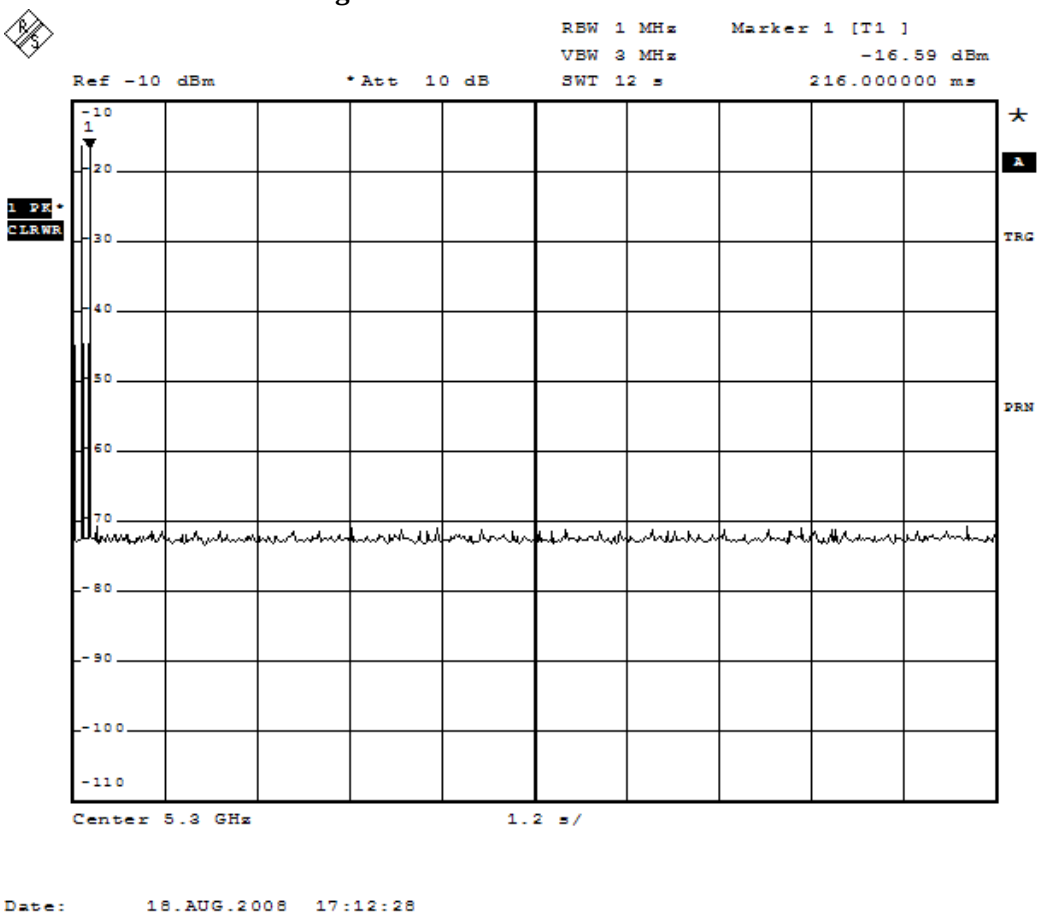


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 6 at 5300 MHz

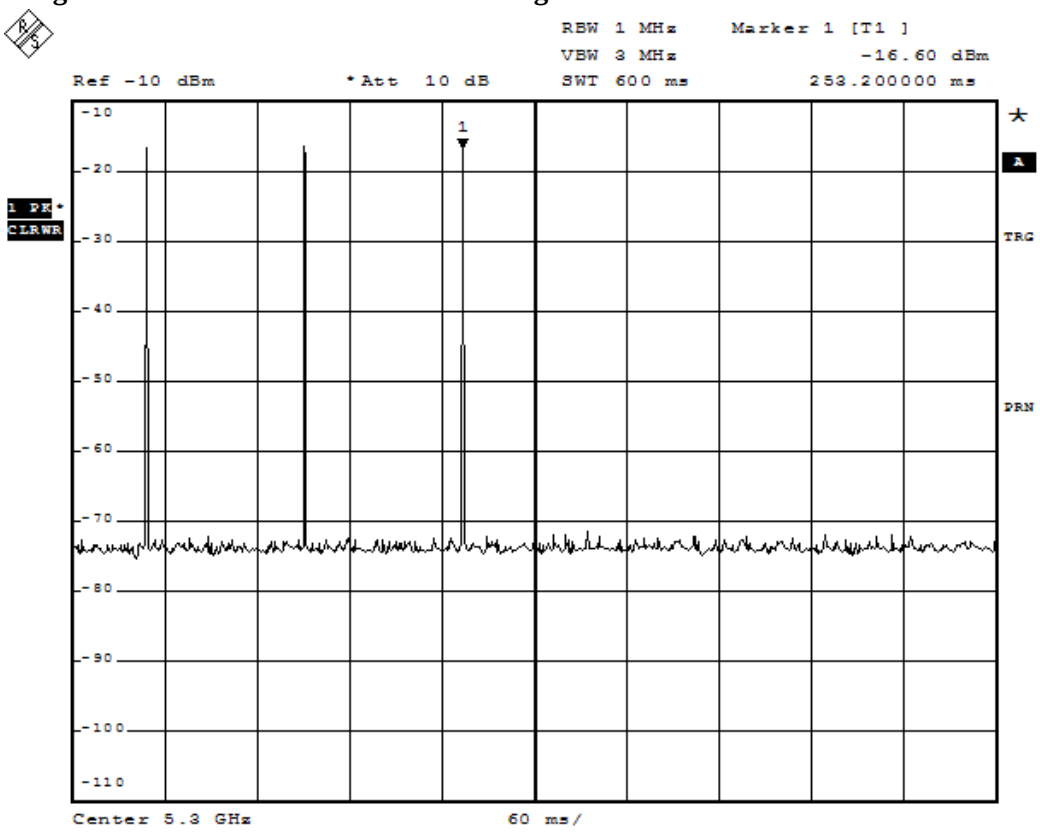


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 6 at 5300 MHz

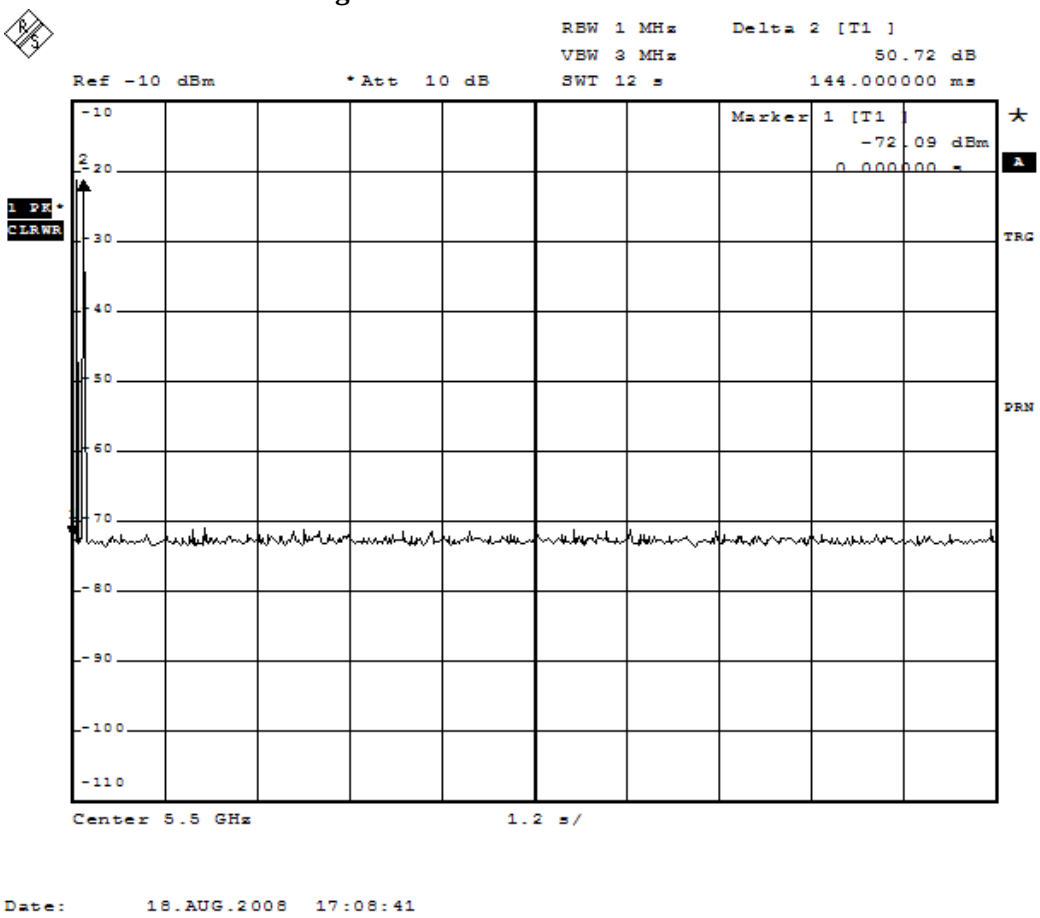


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

20MHz Channel Mode

Channel Move Time for Radar Test Signal 6 at 5500 MHz.

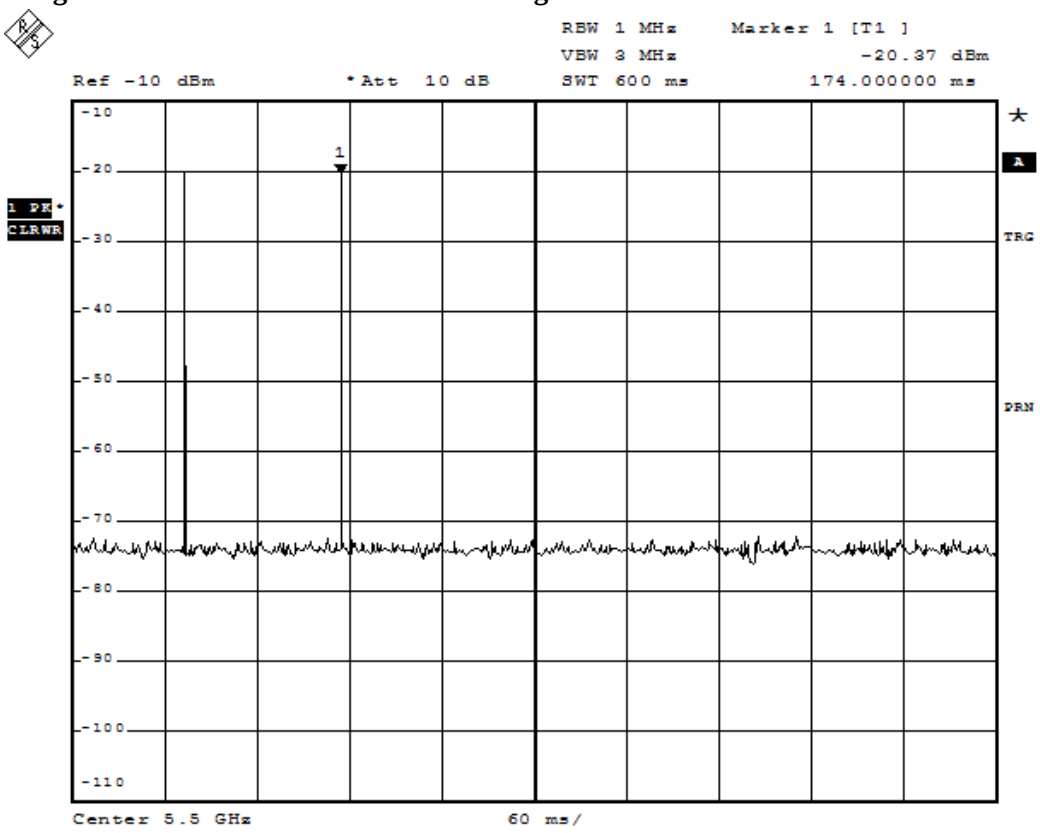


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

20MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 6 at 5500 MHz.



Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

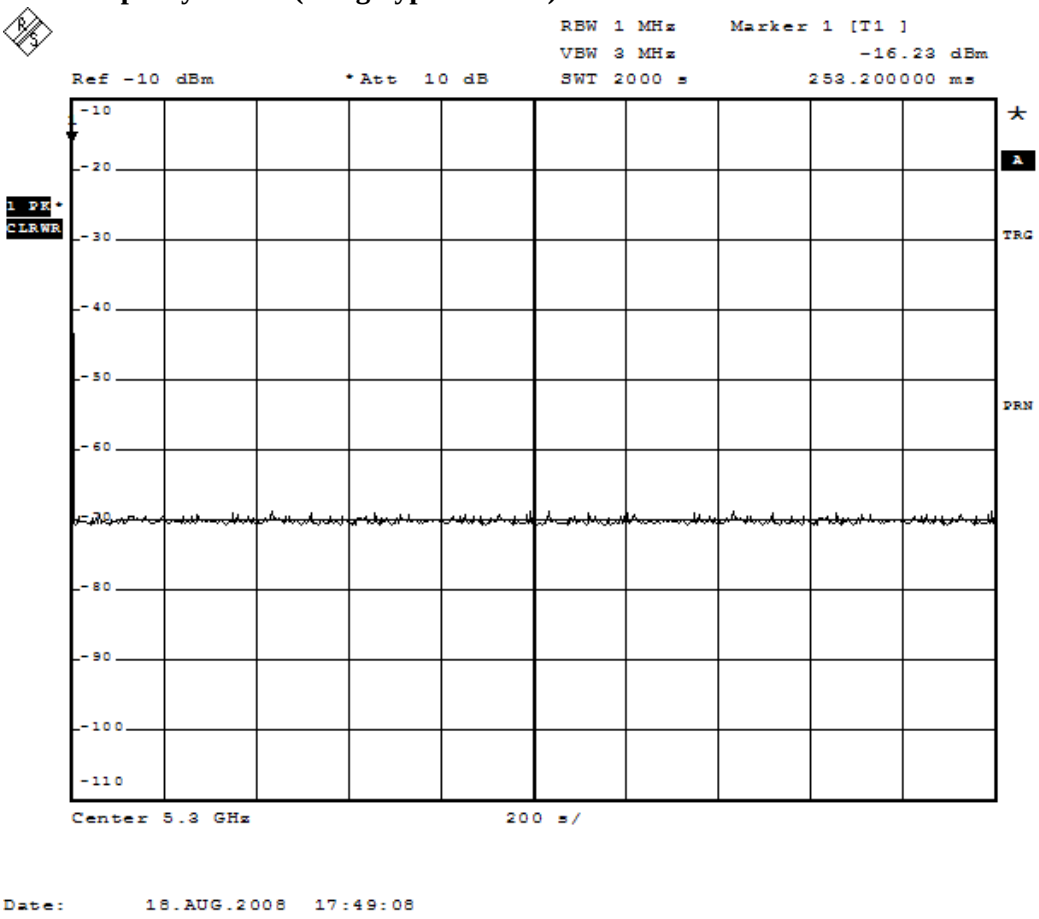
The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Non-Occupancy Period

Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this channel.

20MHz Channel Mode

30 Minute Non-Occupancy Period (using Type 1 Radar) at 5300 MHz

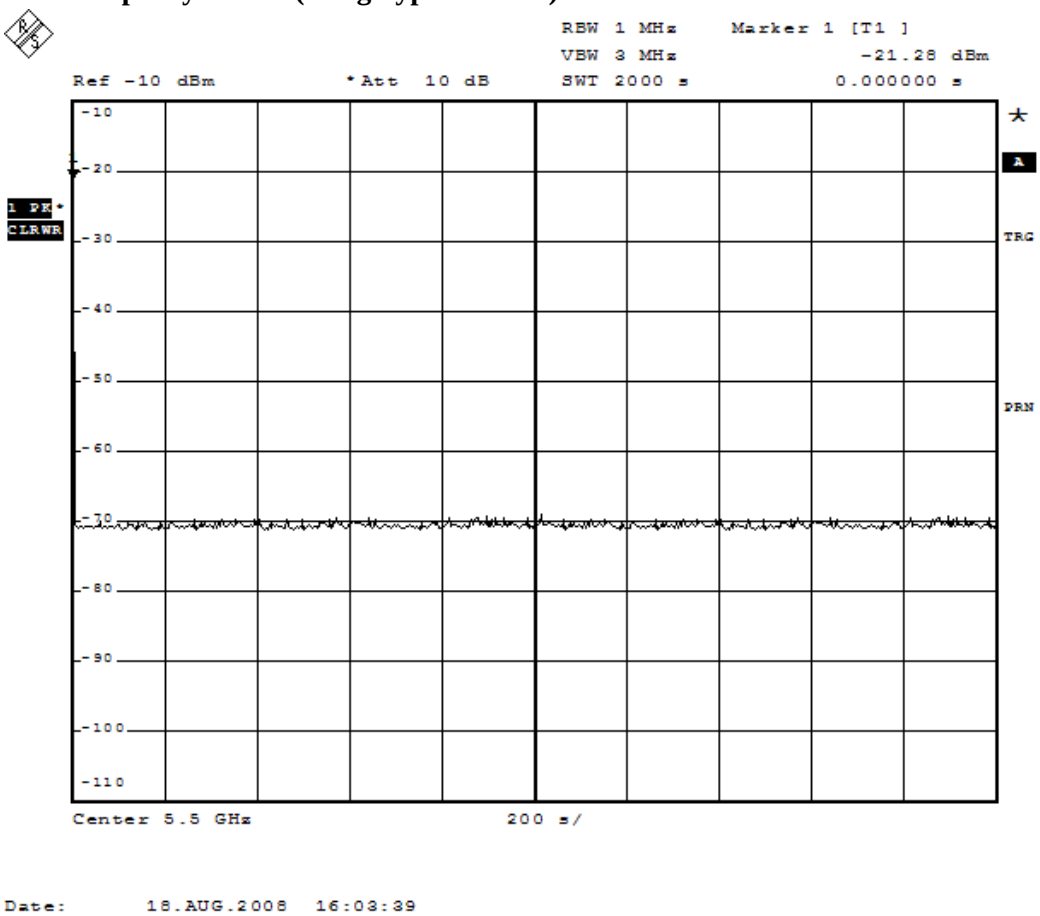


Test Item	Limit	Results
Non-Occupancy Period	30 Minutes	Pass

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

20MHz Channel Mode

30 Minute Non-Occupancy Period (using Type 1 Radar) at 5500 MHz

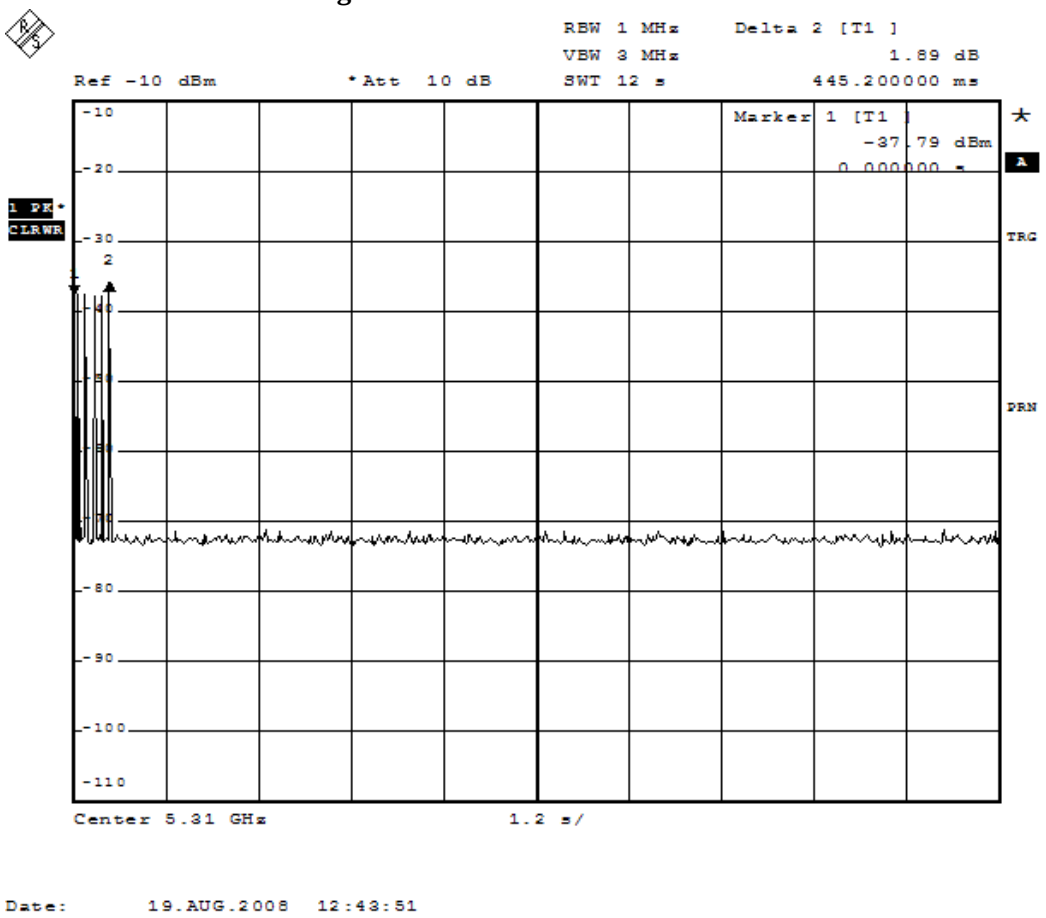


Test Item	Limit	Results
Non-Occupancy Period	30 Minutes	Pass

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

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 1 at 5310MHz

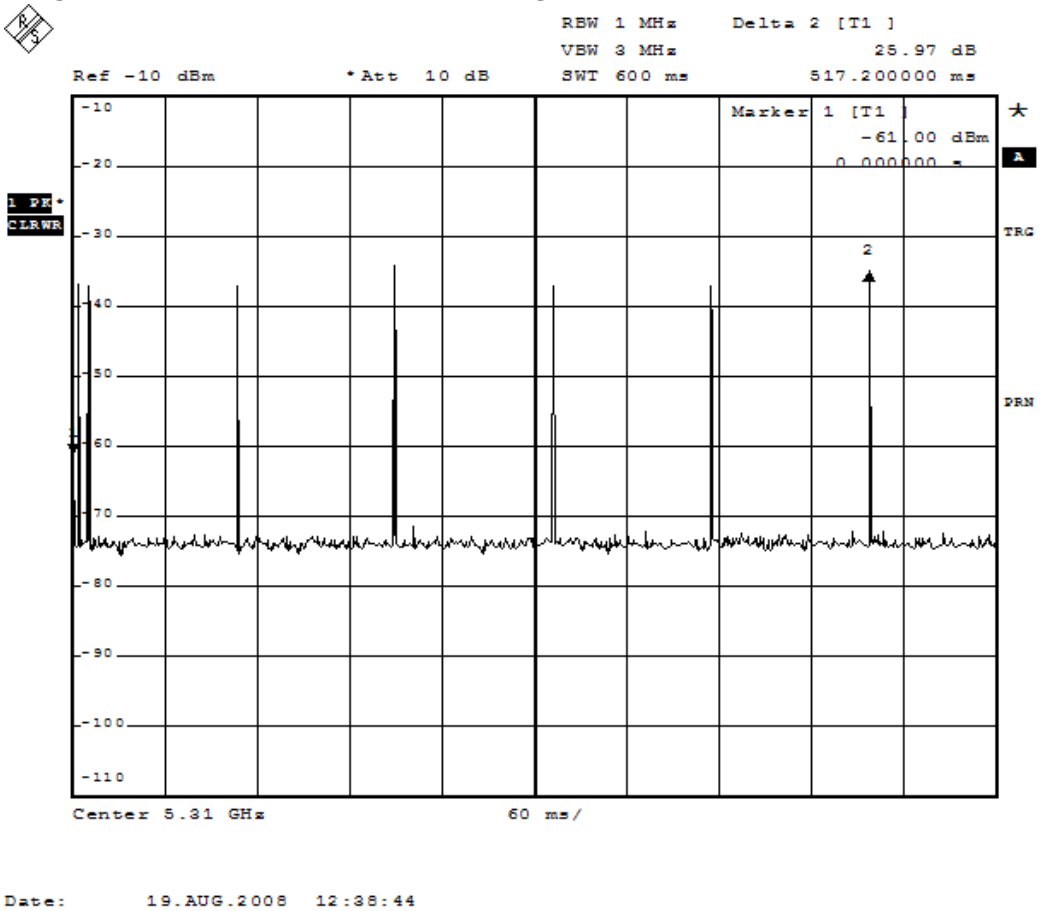


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 1 at 5310 MHz

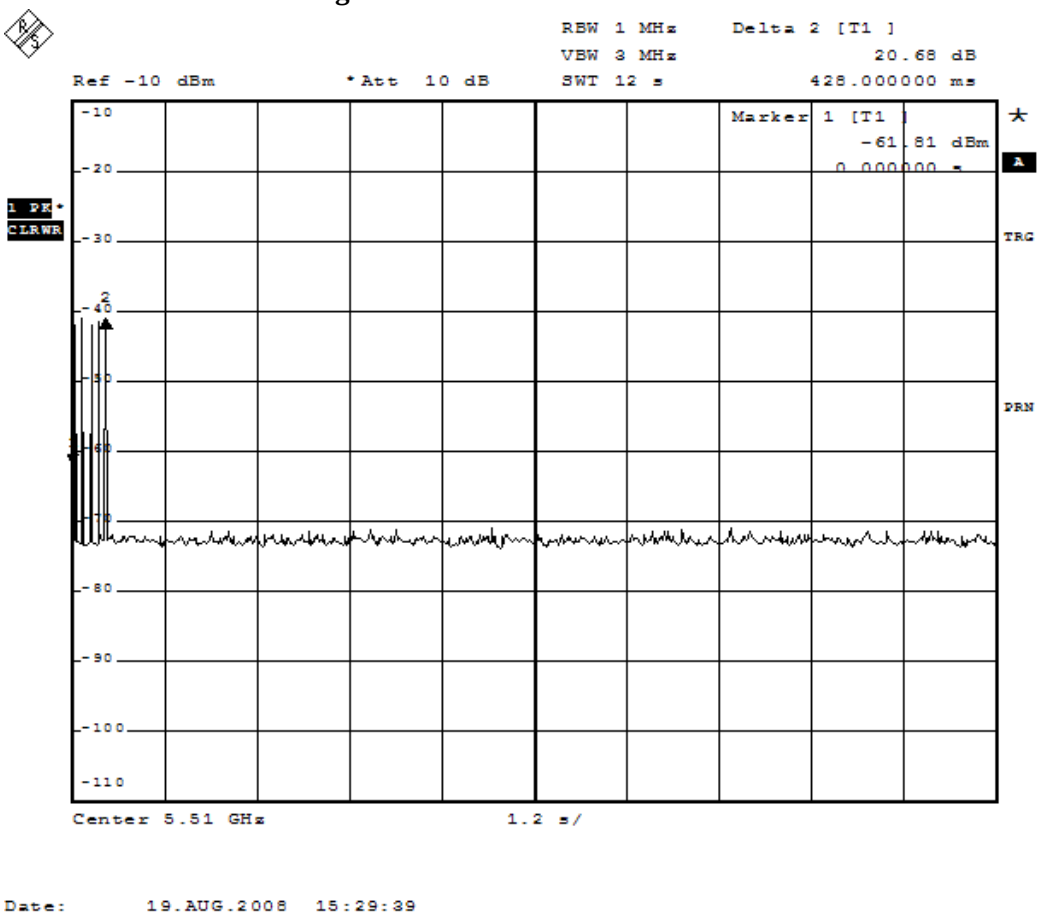


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 1 at 5510 MHz.

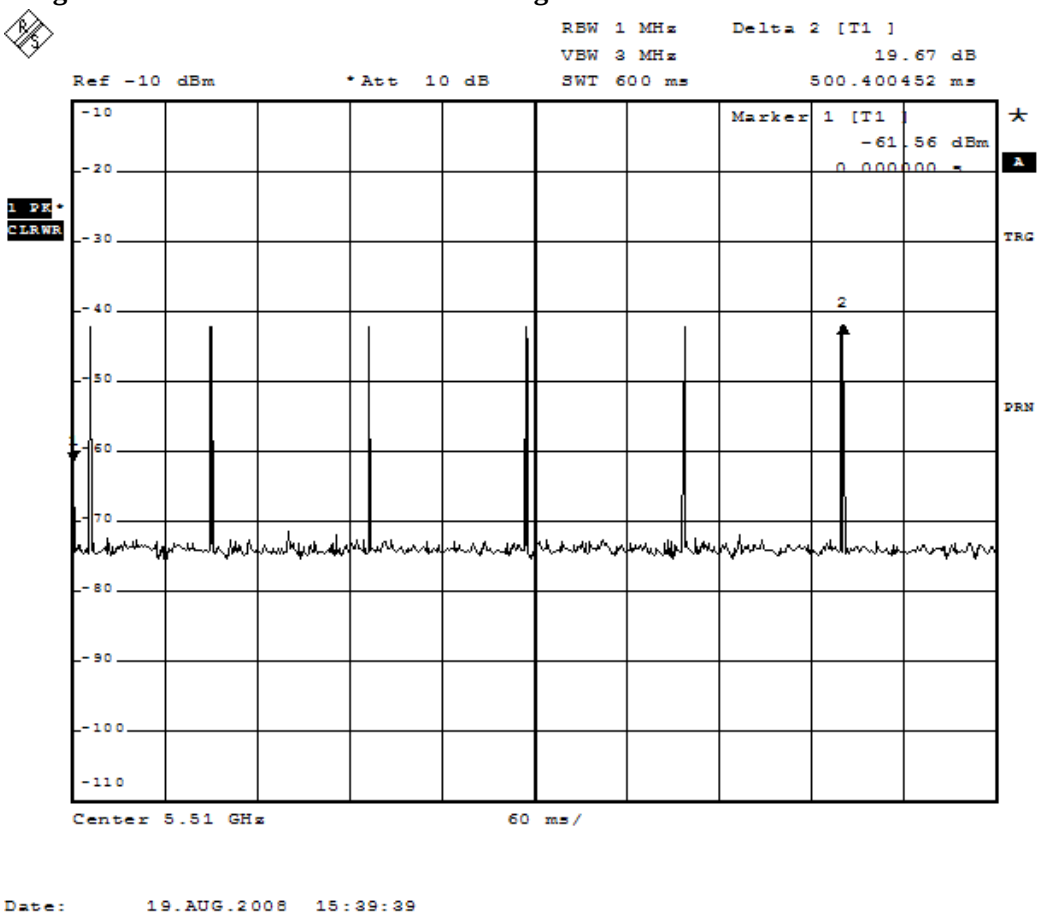


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 1 at 5510 MHz.

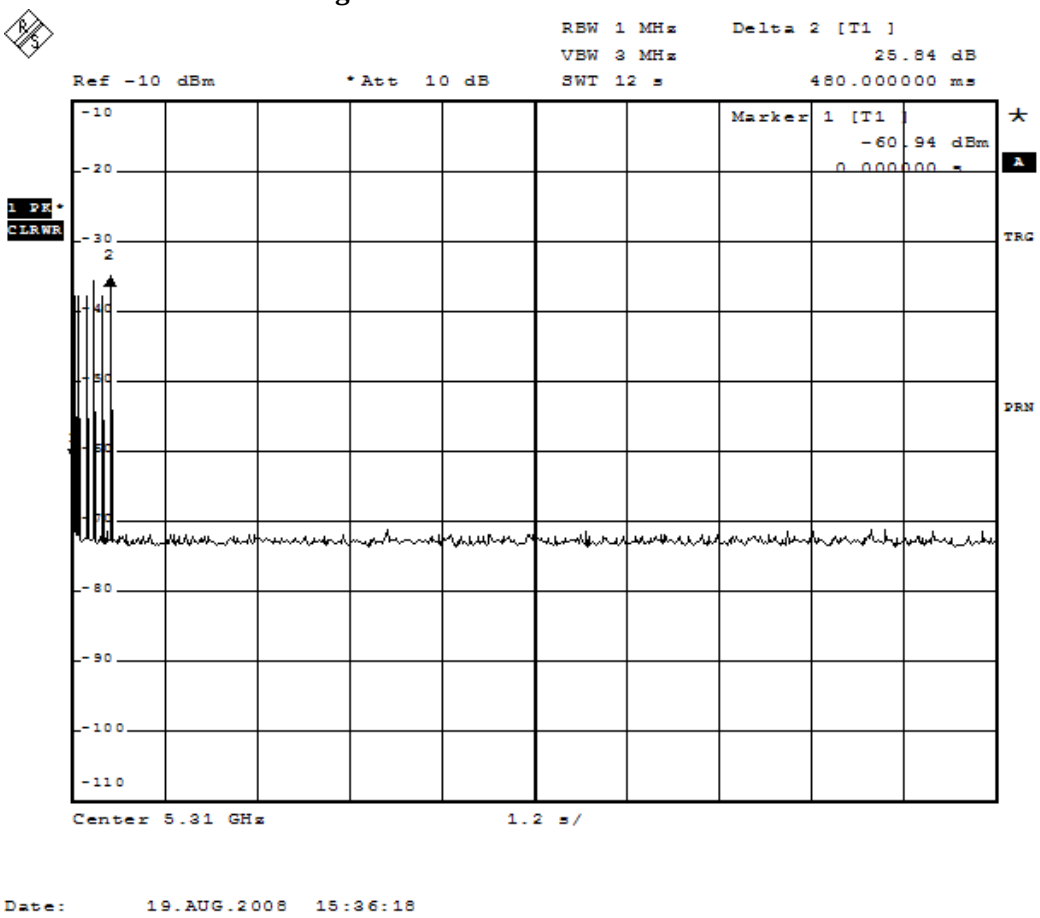


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 2 at 5310 MHz

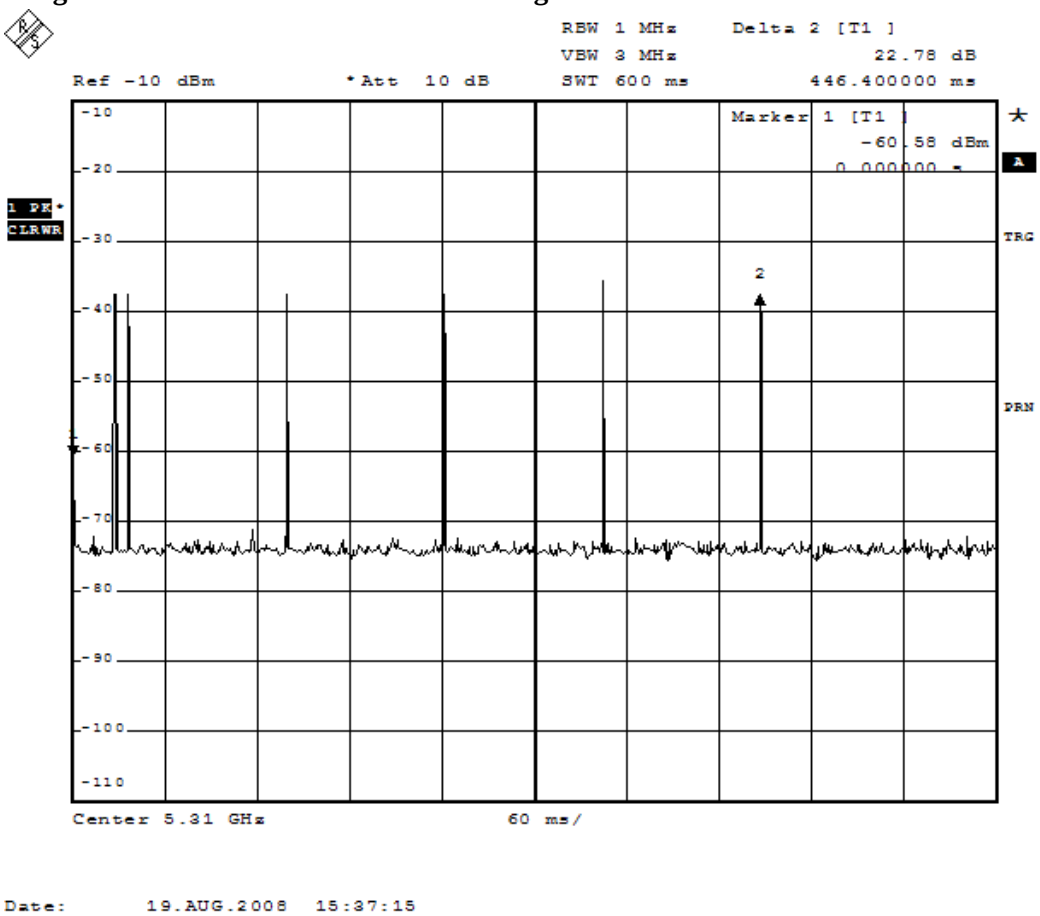


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 2 at 5310 MHz

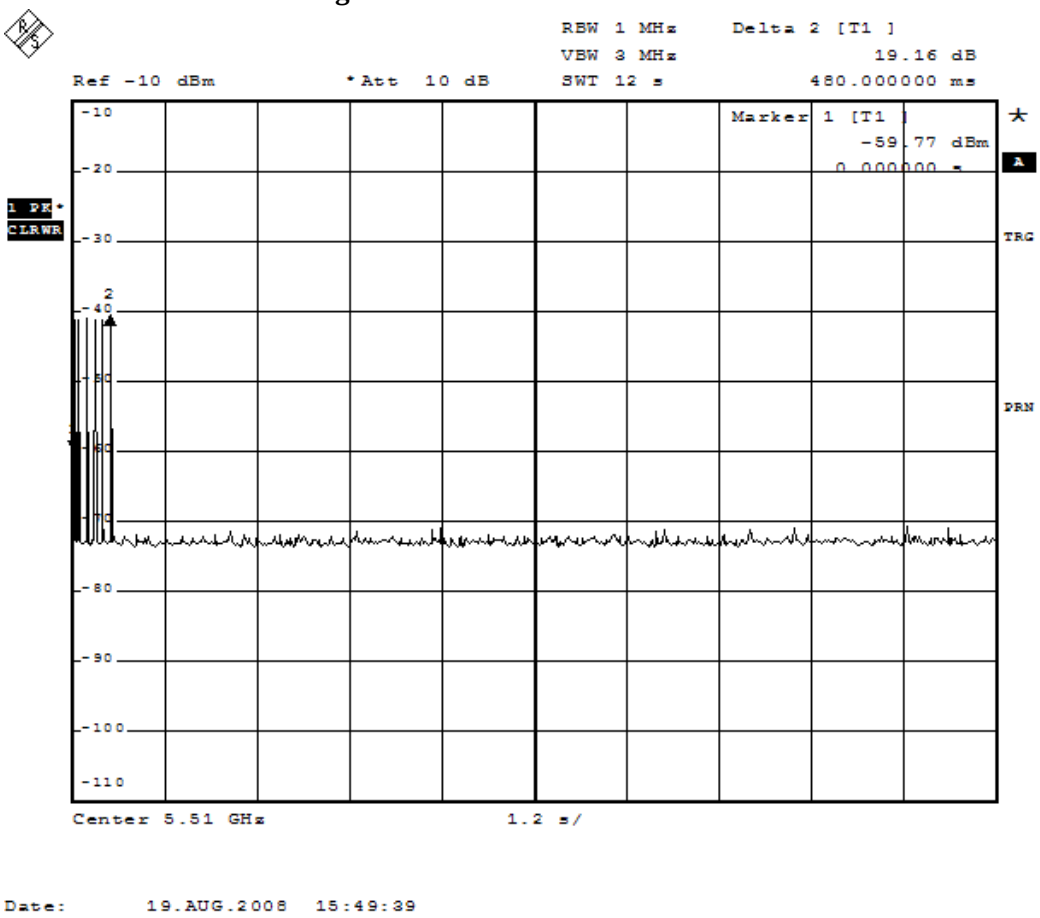


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 2 at 5510 MHz.

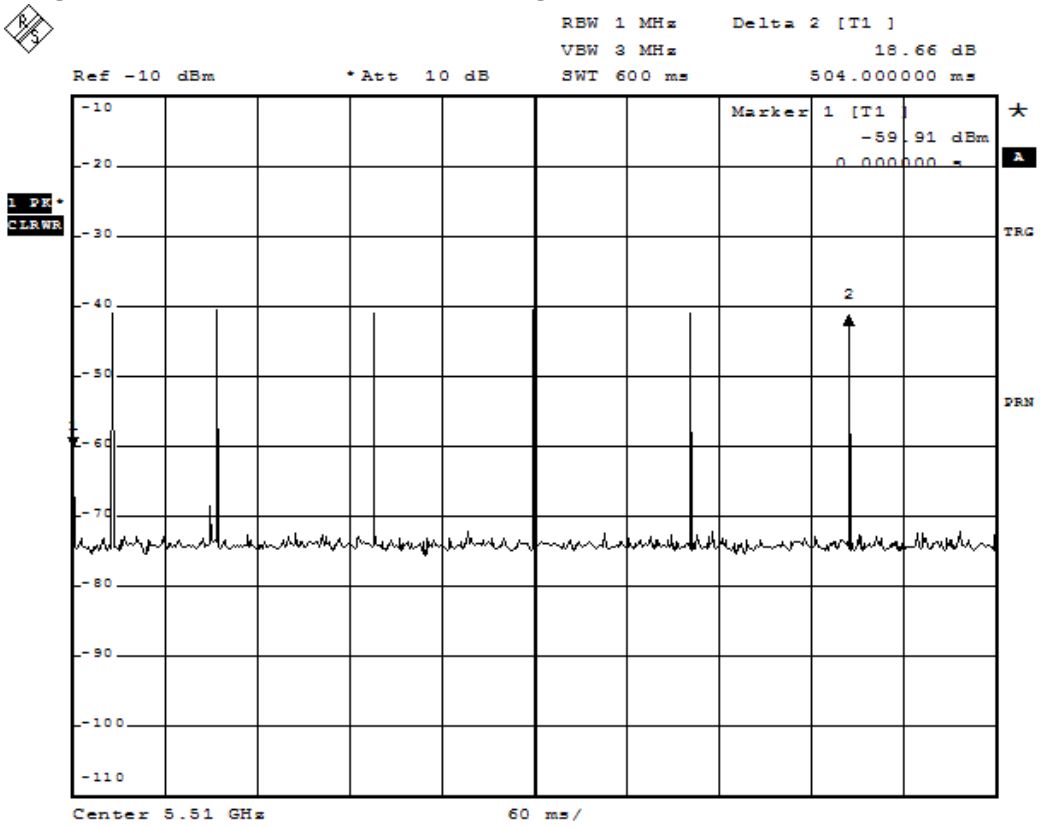


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 2 at 5510 MHz.



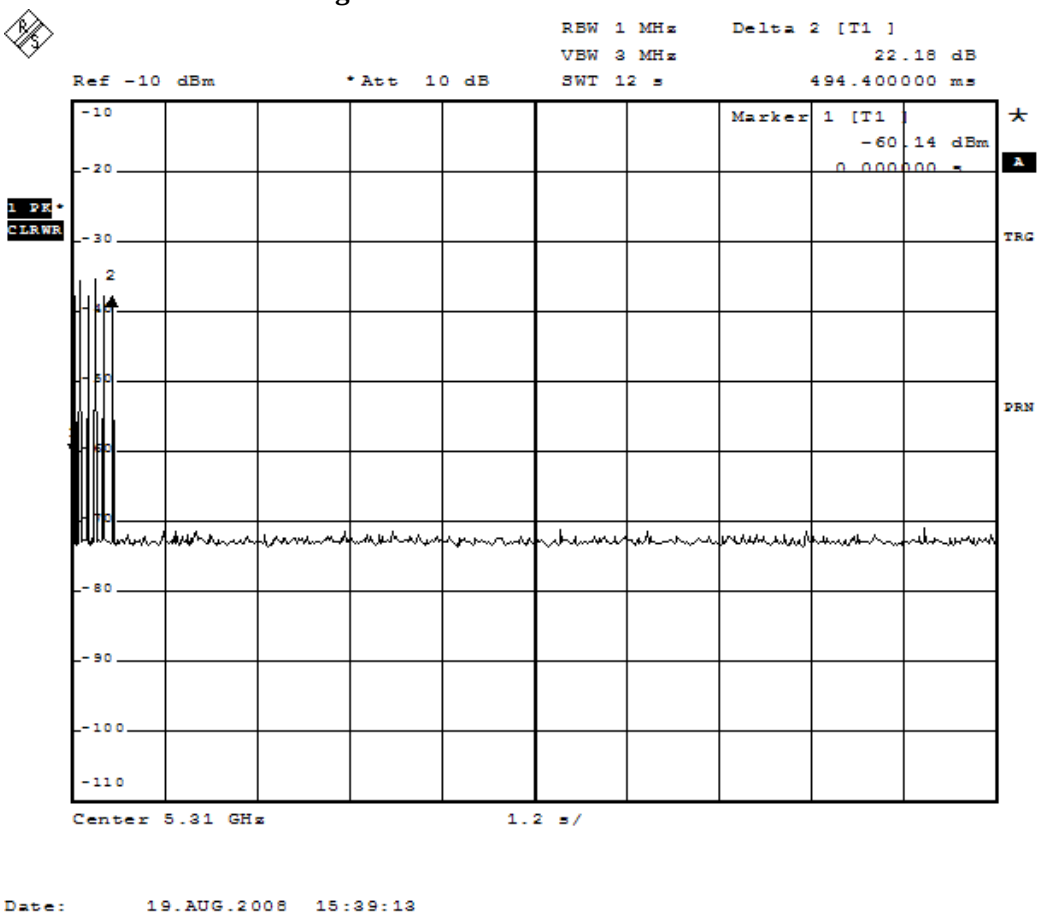
Date: 19.AUG.2008 15:50:26

Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 3 at 5310 MHz

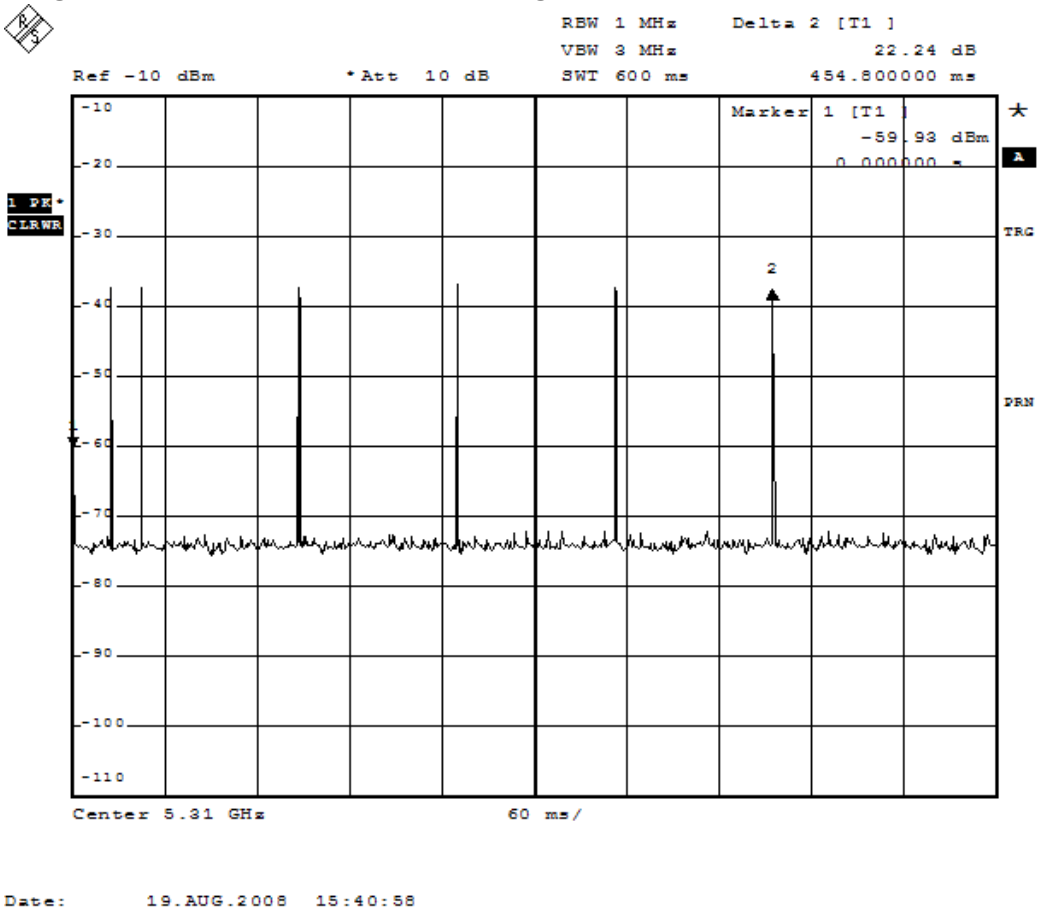


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 3 at 5310 MHz

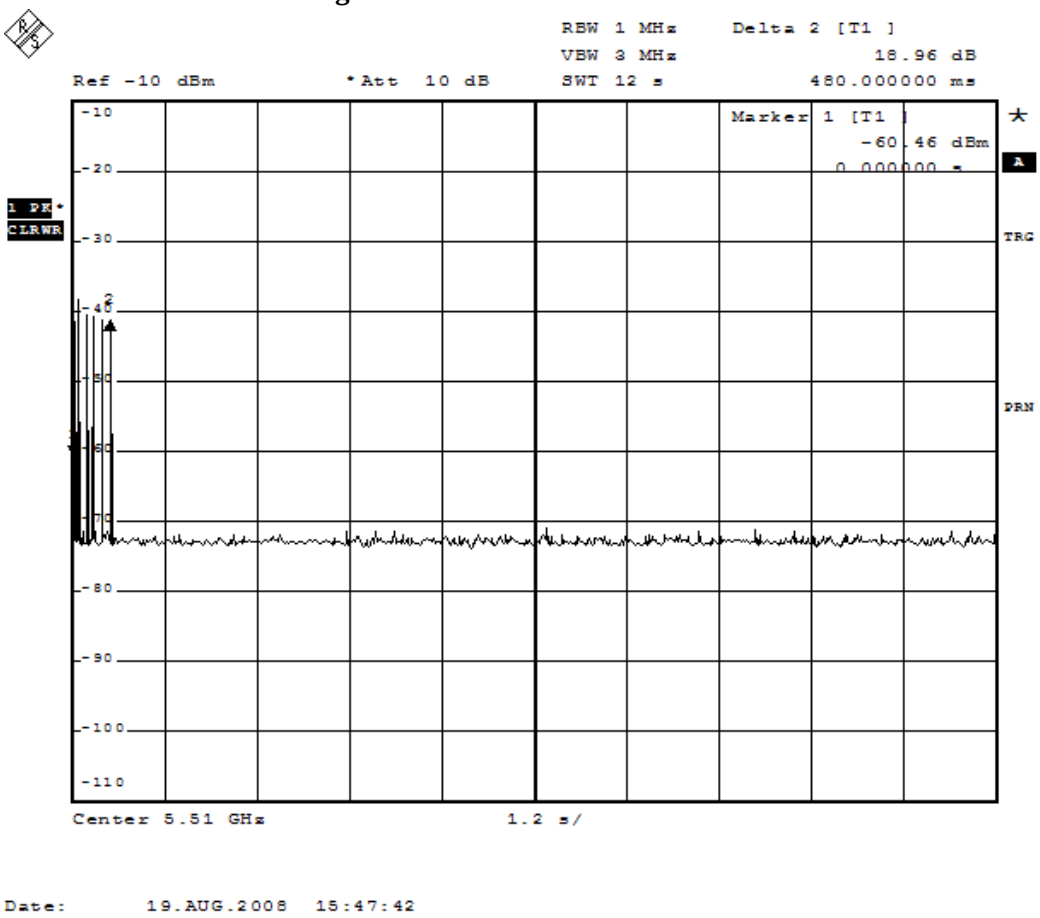


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 3 at 5510 MHz.

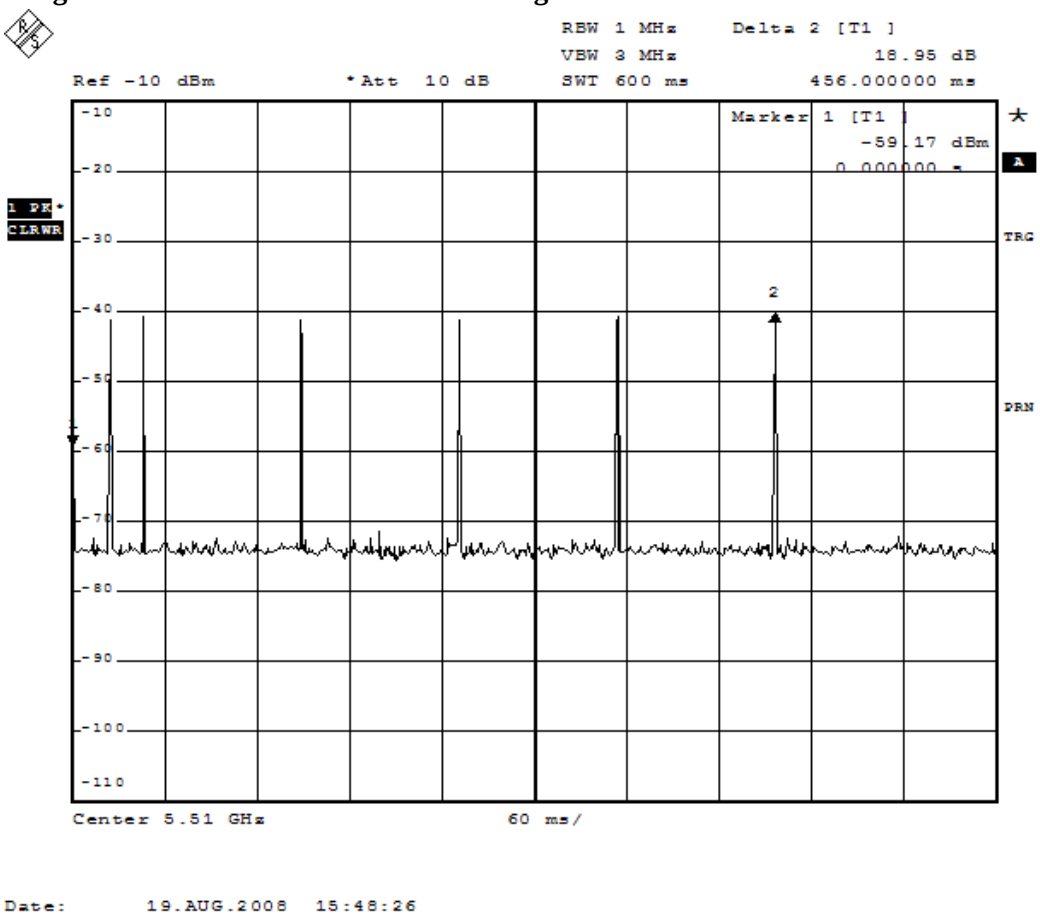


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 3 at 5510 MHz.

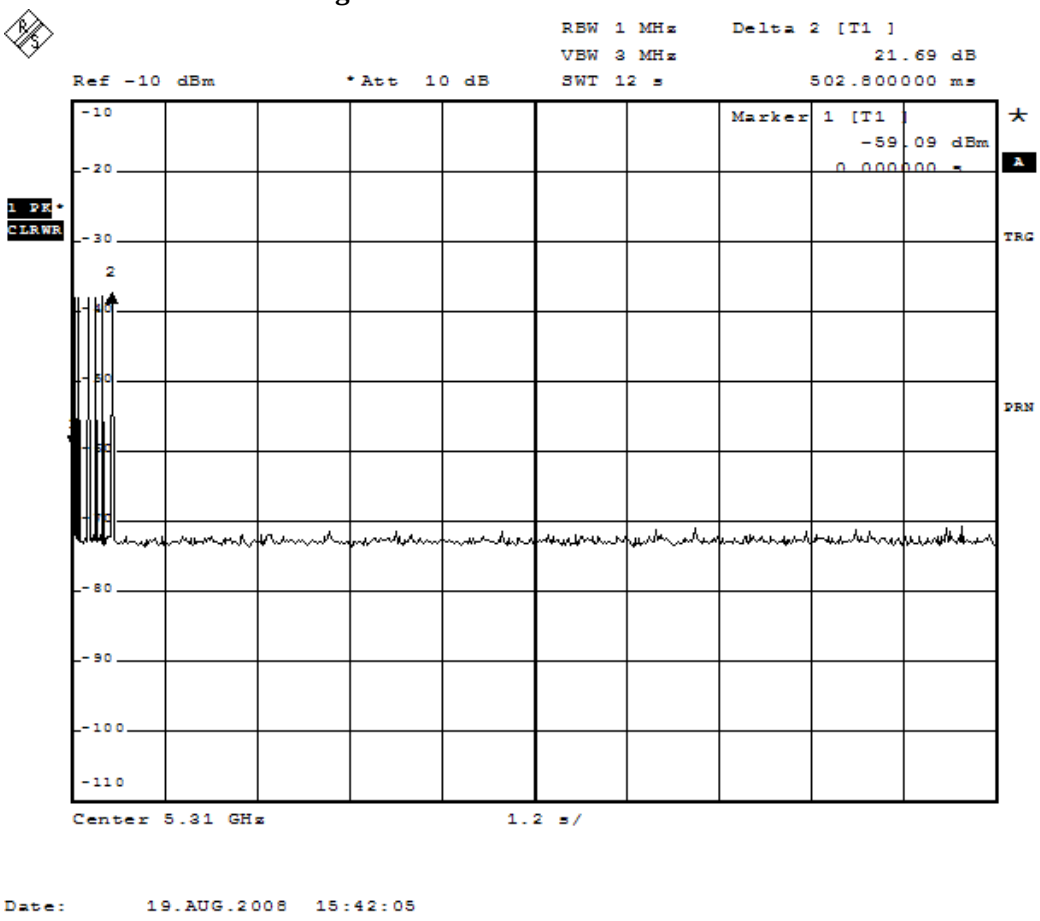


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 4 at 5310 MHz

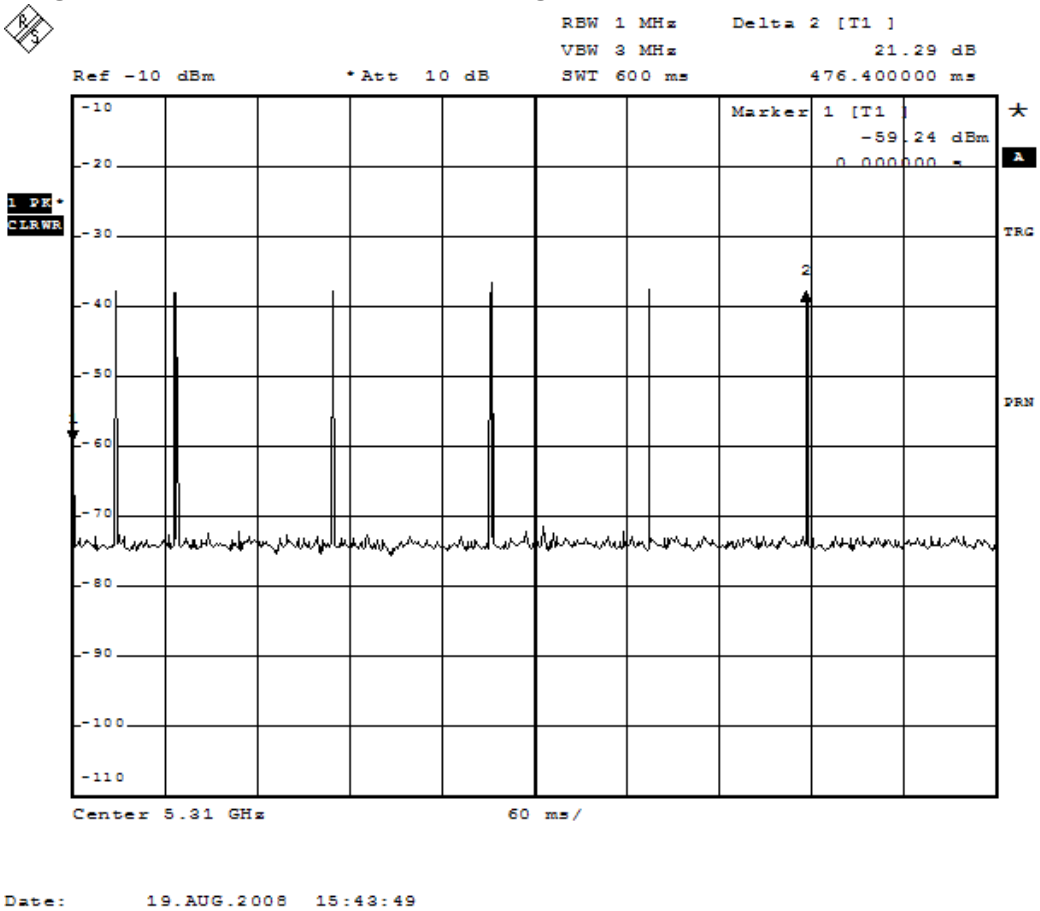


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 4 at 5310 MHz

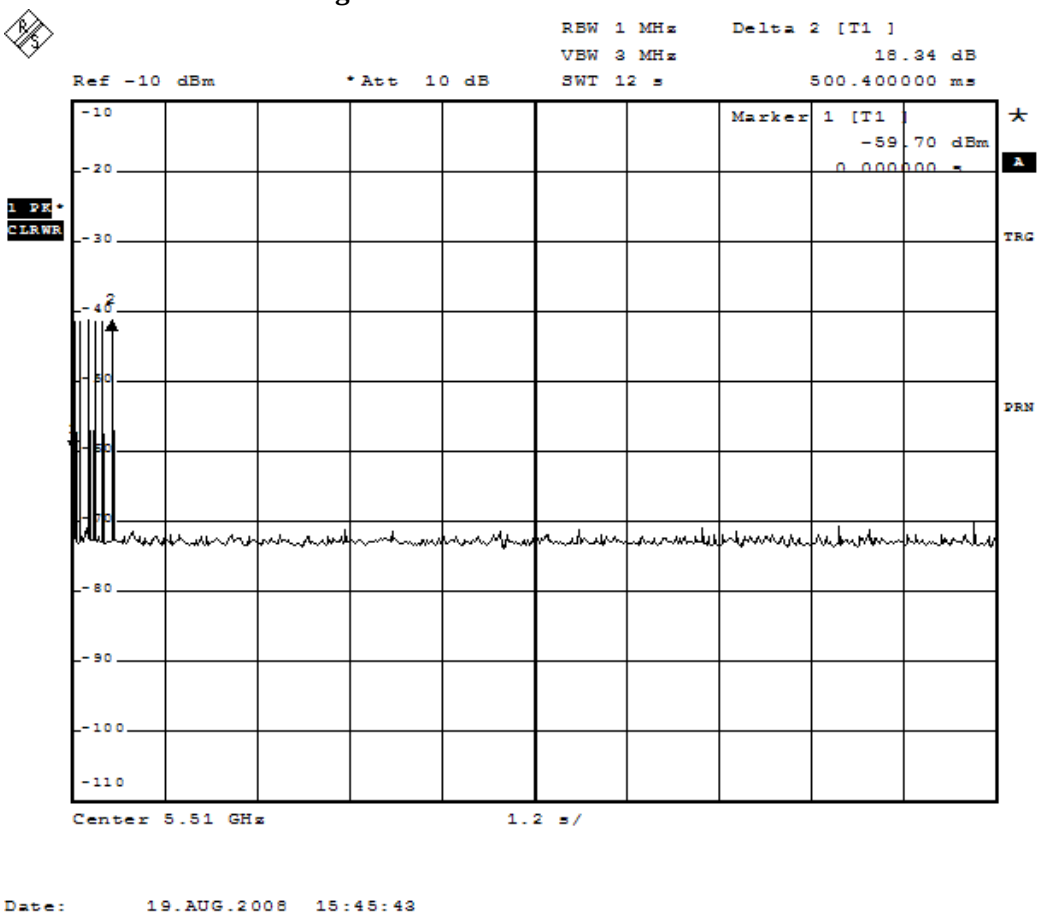


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 4 at 5510 MHz.

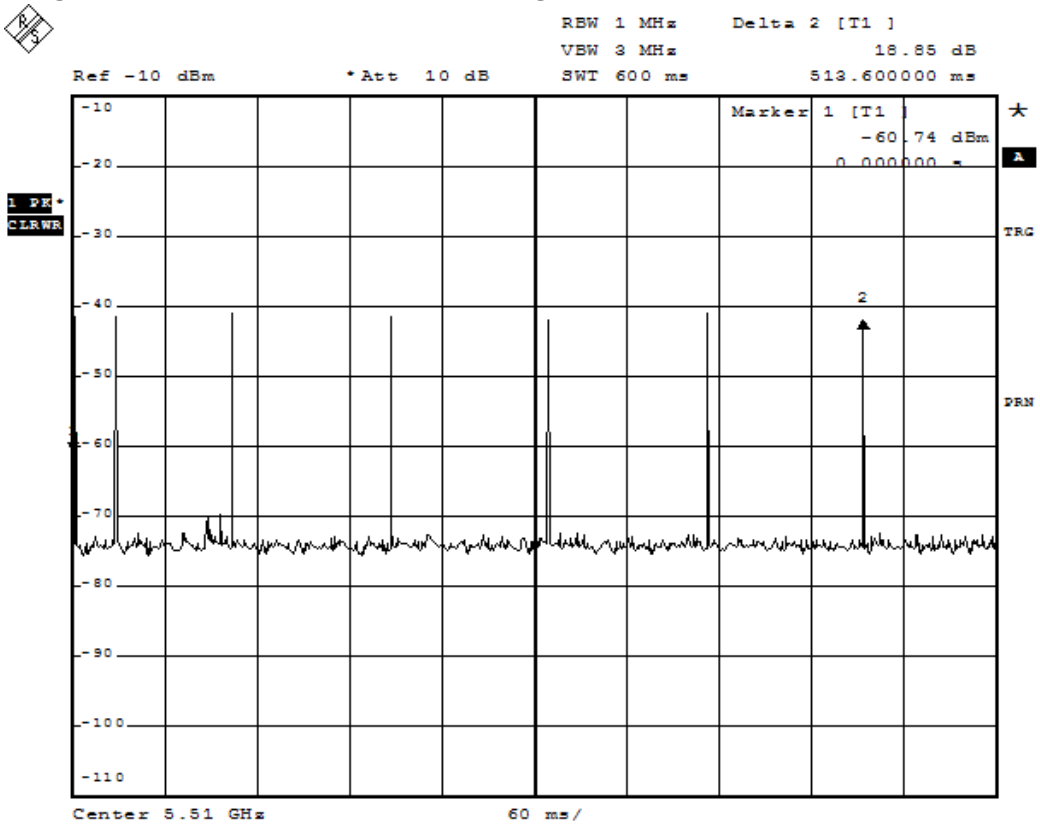


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 4 at 5510 MHz.



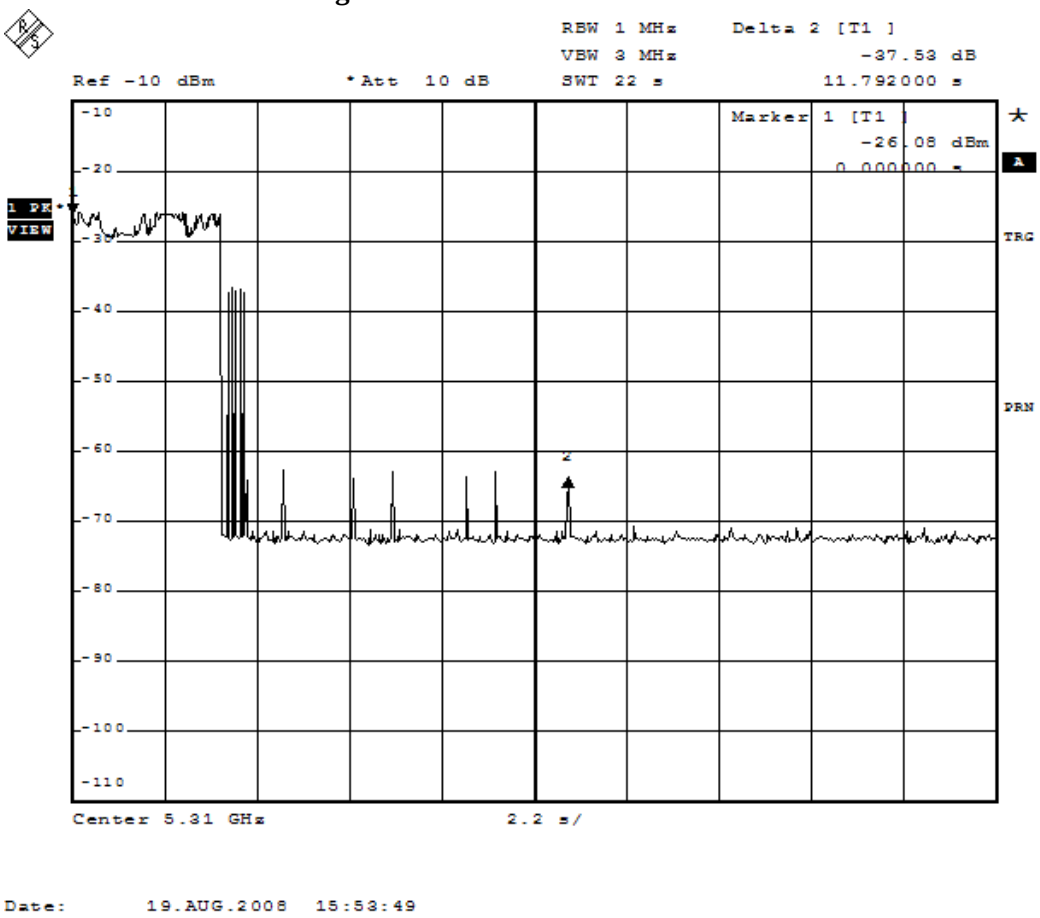
Date: 19.AUG.2008 15:46:29

Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 5 at 5310 MHz

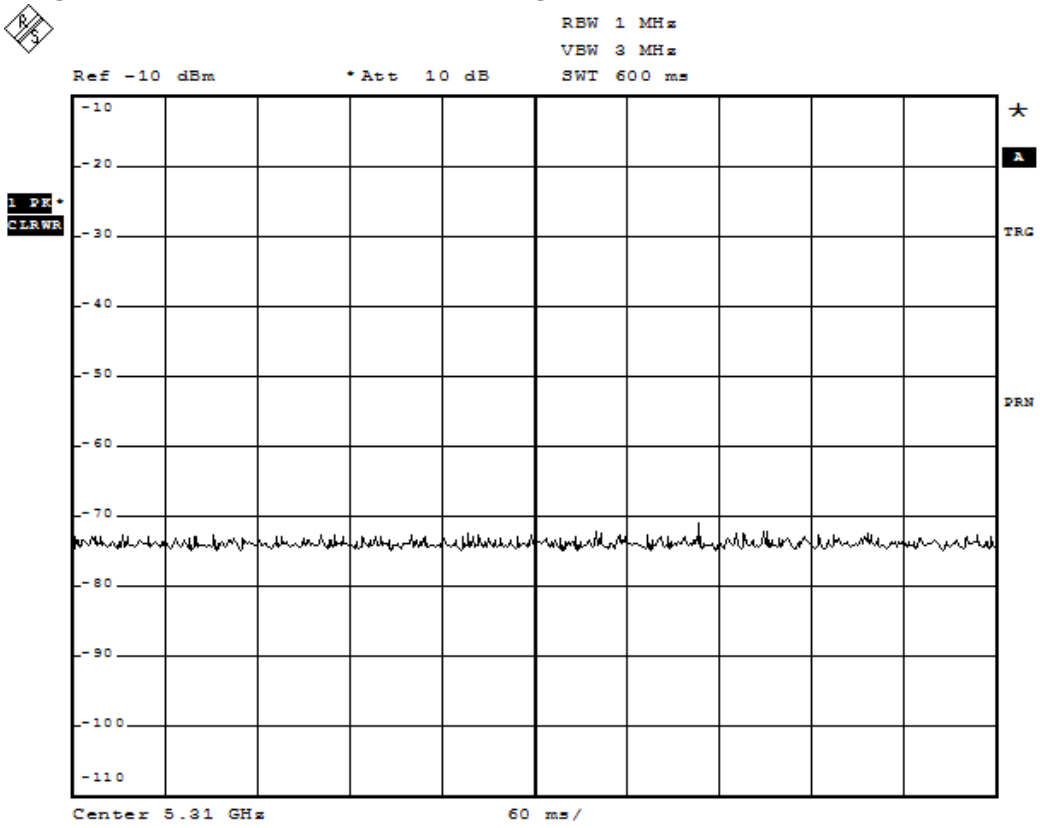


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 5 at 5310 MHz

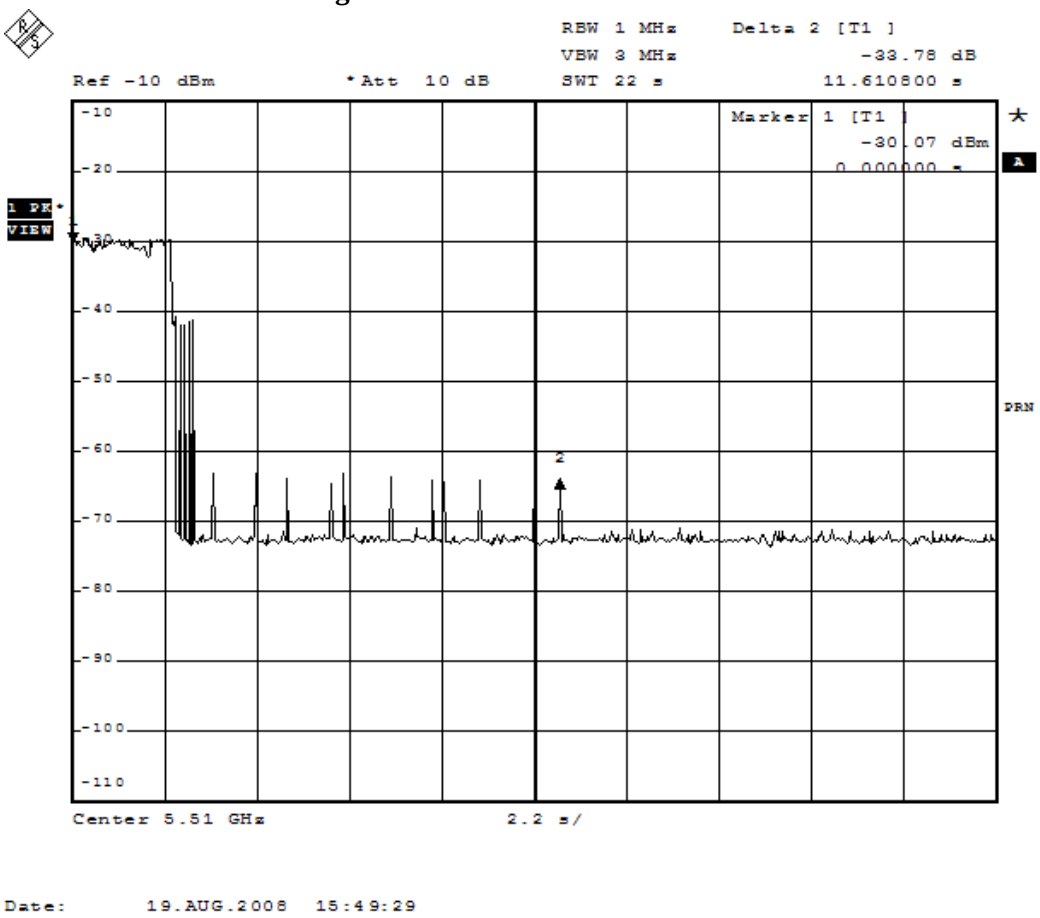


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 5 at 5510 MHz.

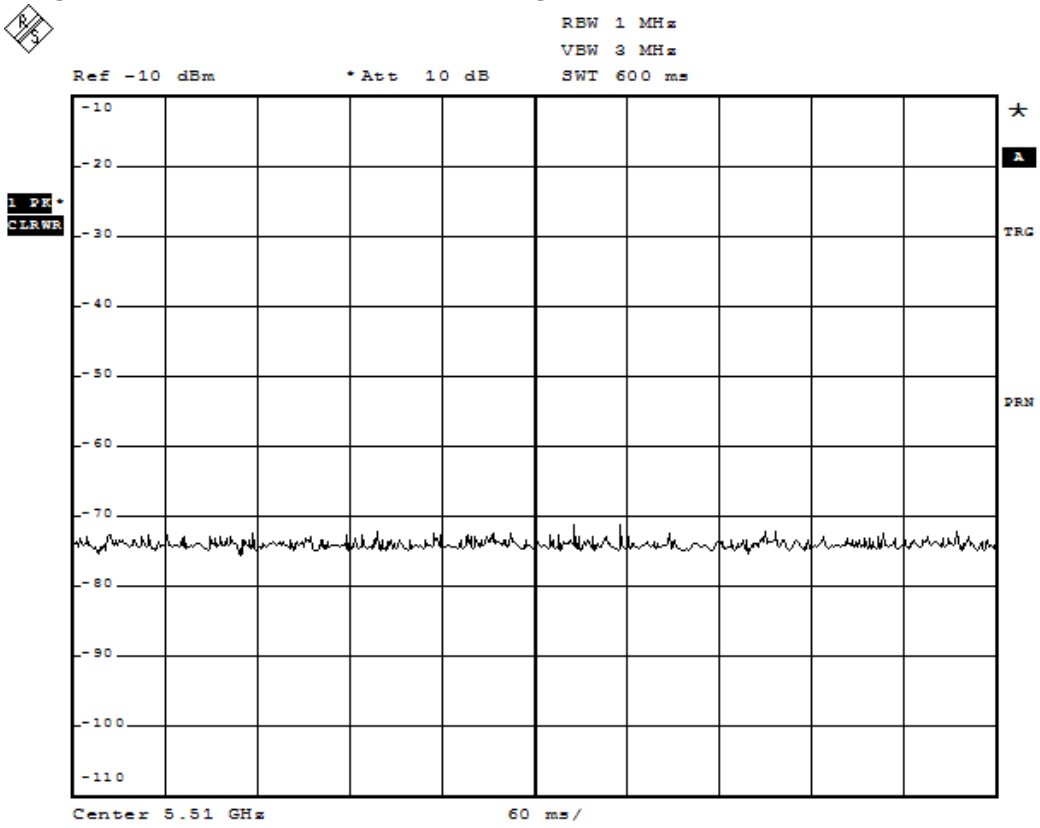


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 5 at 5510 MHz.

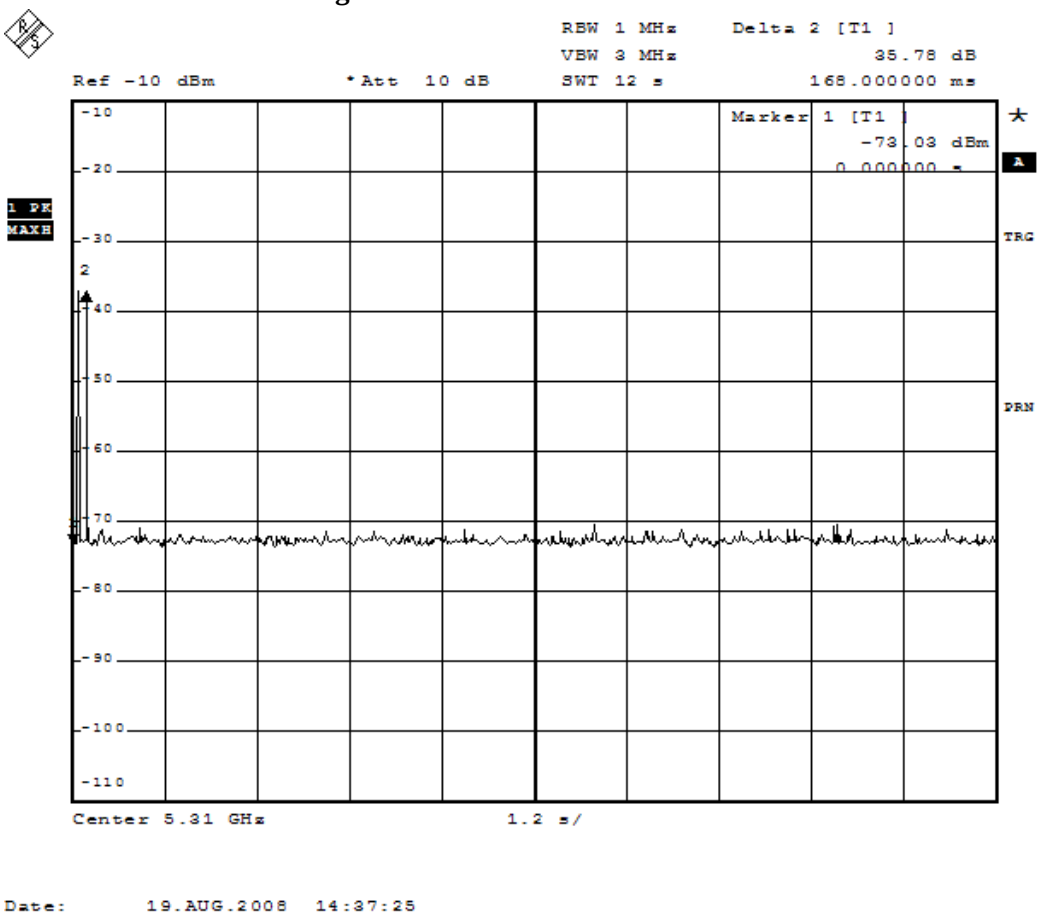


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 6 at 5310 MHz

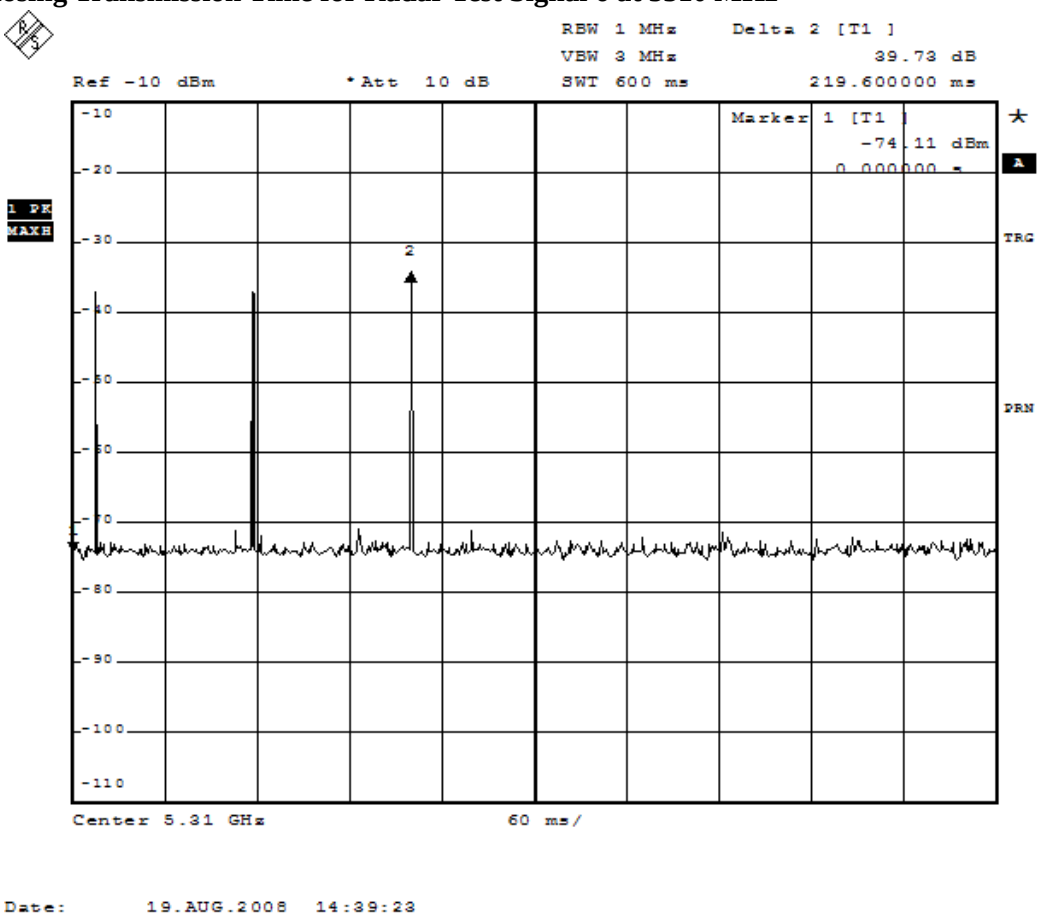


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 6 at 5310 MHz

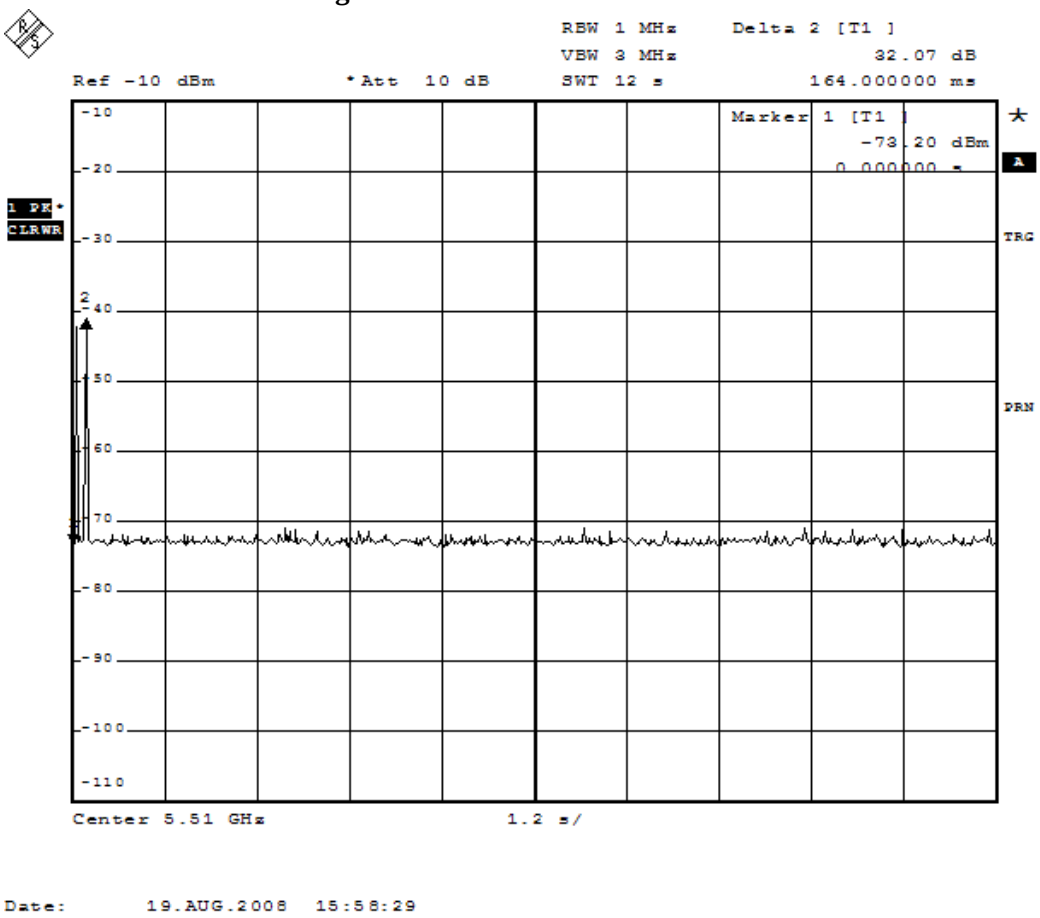


Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Move Time for Radar Test Signal 6 at 5510 MHz.

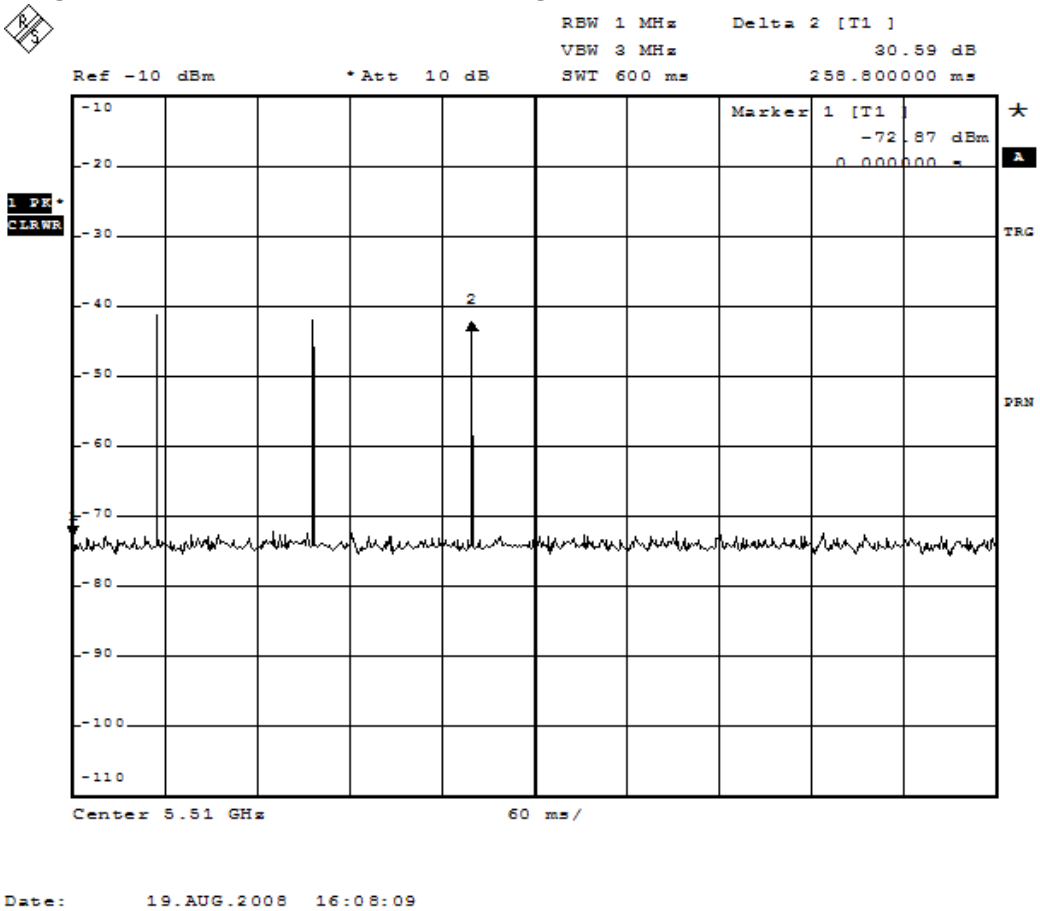


Test Item	Limit	Results
Channel Move Time	10 Seconds	Pass

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Draft 802.11n Standard – 40MHz Channel Mode

Channel Closing Transmission Time for Radar Test Signal 6 at 5510 MHz.



Test Item	Limit	Results
Channel Closing Transmission	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period	Pass

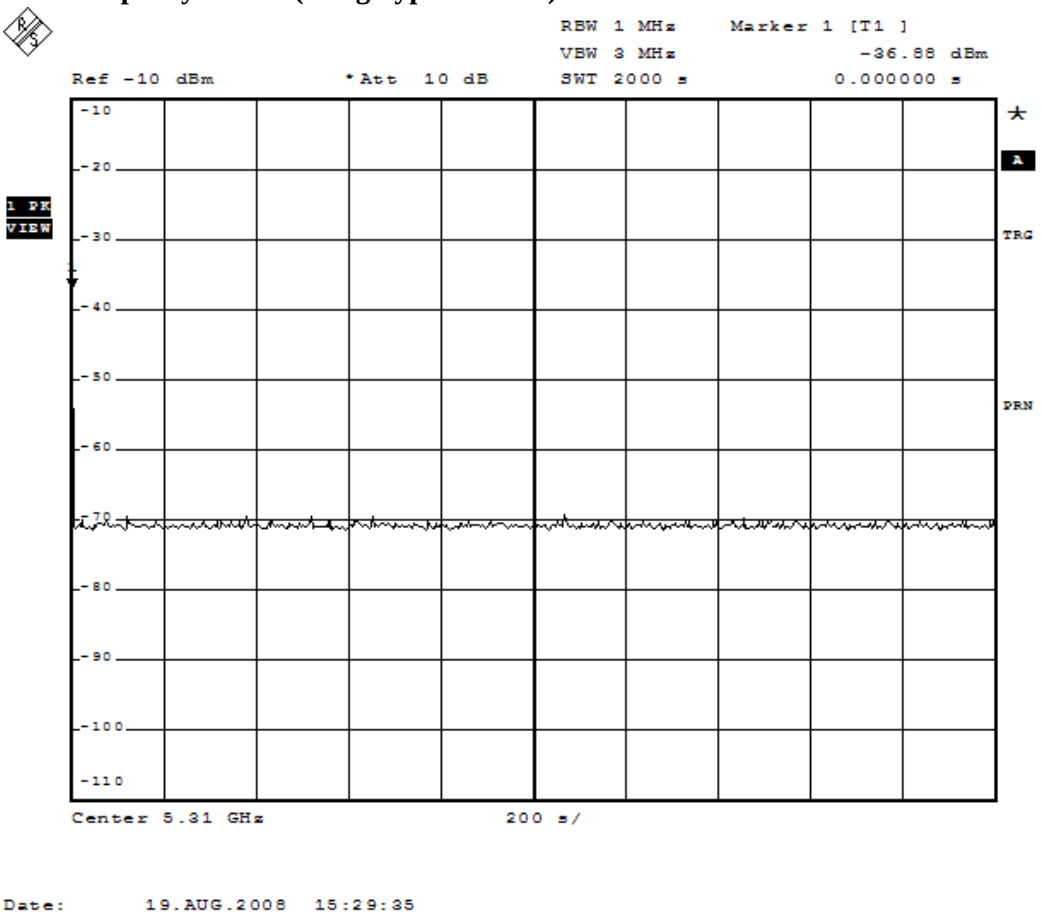
The results showed that after radar signal injected the transmission closing was less than 260 milliseconds.

Non-Occupancy Period

Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this channel.

Draft 802.11n Standard – 40MHz Channel Mode

30 Minute Non-Occupancy Period (using Type 1 Radar) at 5310 MHz

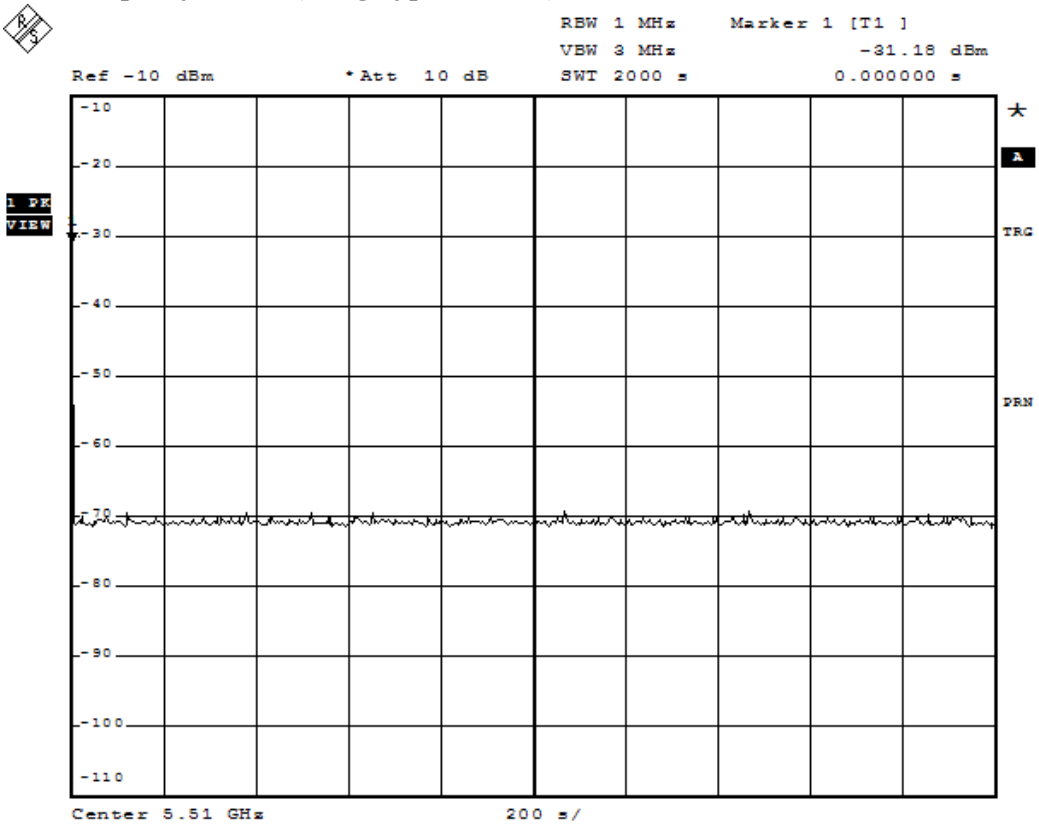


Test Item	Limit	Results
Non-Occupancy Period	30 Minutes	Pass

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

Draft 802.11n Standard – 40MHz Channel Mode

30 Minute Non-Occupancy Period (using Type 1 Radar) at 5510 MHz



Test Item	Limit	Results
Non-Occupancy Period	30 Minutes	Pass

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

Statistical Performance Check

The steps below define the procedure to determine the minimum percentage of detection when a radar burst with a level equal to the DFS Detection Threshold -59dBm is generated on the Operating Channel of the U-NII device.

A U-NII device operating as a Master Device will associate with the Client Device at 5300 MHz. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test.

The Radar Waveform generator sends the individual waveform for each of the radar types 1-6 at -59dbm. Statistical data will be gathered to determine the ability of the device to detect the radar test waveforms. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs. The percentage of successful detection is calculated by:

$$\frac{TotalWaveformDetection}{TotalWaveformTrials} \times 100 = \text{Probability of Detection Radar Waveform}$$

The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in the *Radar Test Waveforms* section.

20MHz Channel Mode

In-Service Monitoring Results at 5300 MHz

Radar Test Summary:				
Signal Type	Trial No.	Detection (%)	Limit (%)	Pass/Fail
Type 1	30	100.00	60	Pass
Type 2	30	100.00	60	Pass
Type 3	30	96.66	60	Pass
Type 4	30	96.66	60	Pass
Aggregate	4	98.33	80	Pass
Type 5	30	100.00	80	Pass
Type 6	30	96.66	70	Pass

20MHz Channel Mode

In-Service Monitoring Results at 5500 MHz

Radar Test Summary:				
Signal Type	Trial No.	Detection (%)	Limit (%)	Pass/Fail
Type 1	30	100.00	60	Pass
Type 2	30	100.00	60	Pass
Type 3	30	100.00	60	Pass
Type 4	30	96.66	60	Pass
Aggregate	4	99.17	80	Pass
Type 5	30	100.00	80	Pass
Type 6	30	93.33	70	Pass

Draft 802.11n Standard – 40MHz Channel Mode

In-Service Monitoring Results at 5310 MHz

Radar Test Summary:				
Signal Type	Trial No.	Detection (%)	Limit (%)	Pass/Fail
Type 1	30	100.00	60	Pass
Type 2	30	100.00	60	Pass
Type 3	30	100.00	60	Pass
Type 4	30	100.00	60	Pass
Aggregate	4	100.00	80	Pass
Type 5	30	100.00	80	Pass
Type 6	30	93.33	70	Pass

Draft 802.11n Standard – 40MHz Channel Mode

In-Service Monitoring Results at 5510 MHz

Radar Test Summary:				
Signal Type	Trial No.	Detection (%)	Limit (%)	Pass/Fail
Type 1	30	100.00	60	Pass
Type 2	30	100.00	60	Pass
Type 3	30	96.66	60	Pass
Type 4	30	100.00	60	Pass
Aggregate	4	99.17	80	Pass
Type 5	30	96.66	80	Pass
Type 6	30	93.33	70	Pass

20MHz Channel Mode

Type 1 Radar Statistical Performance at 5300 MHz

Trial #	Pulse Width (us)	PRI (us)	Pulses/Burst	1 = Detection Blank = No Detection
1	1	1428	18	1
2	1	1428	18	1
3	1	1428	18	1
4	1	1428	18	1
5	1	1428	18	1
6	1	1428	18	1
7	1	1428	18	1
8	1	1428	18	1
9	1	1428	18	1
10	1	1428	18	1
11	1	1428	18	1
12	1	1428	18	1
13	1	1428	18	1
14	1	1428	18	1
15	1	1428	18	1
16	1	1428	18	1
17	1	1428	18	1
18	1	1428	18	1
19	1	1428	18	1
20	1	1428	18	1
21	1	1428	18	1
22	1	1428	18	1
23	1	1428	18	1
24	1	1428	18	1
25	1	1428	18	1
26	1	1428	18	1
27	1	1428	18	1
28	1	1428	18	1
29	1	1428	18	1
30	1	1428	18	1
Detection Percentage				100%

20MHz Channel Mode

Type 2 Radar Statistical Performance at 5300 MHz

Trial #	Pulse Width (us)	PRI (us)	Pulses/Burst	1 = Detection Blank = No Detection
1	4.3	208	23	1
2	4.2	217	27	1
3	4.4	179	29	1
4	3.1	172	24	1
5	4.6	156	25	1
6	4.5	215	28	1
7	2.8	203	27	1
8	4.0	207	23	1
9	1.7	173	27	1
10	3.3	225	29	1
11	4.3	178	23	1
12	3.9	224	27	1
13	3.4	187	26	1
14	2.4	194	25	1
15	2.8	211	24	1
16	3.6	152	27	1
17	3.0	171	28	1
18	2.6	163	29	1
19	1.0	161	23	1
20	1.4	199	26	1
21	4.4	162	27	1
22	1.3	150	23	1
23	1.8	158	29	1
24	2.1	188	27	1
25	3.1	205	23	1
26	4.4	199	28	1
27	3.0	223	23	1
28	4.6	181	25	1
29	1.1	182	25	1
30	1.7	210	24	1
Detection Percentage				100%

20MHz Channel Mode

Type 3 Radar Statistical Performance at 5300 MHz

Trial #	Pulse Width (us)	PRI (us)	Pulses/Burst	1 = Detection Blank = No Detection
1	8.8	350	16	1
2	9.3	218	18	1
3	9.7	433	16	1
4	9.9	341	17	1
5	9.2	483	18	1
6	9.8	238	16	1
7	6.7	321	17	1
8	6.1	224	16	1
9	8.9	450	18	1
10	8.9	317	18	1
11	9.7	418	17	1
12	9.2	257	16	1
13	8.5	369	17	1
14	6.7	289	17	1
15	7.3	276	16	1
16	9.2	381	18	1
17	9.6	214	16	1
18	6.9	364	16	1
19	8.7	417	17	1
20	7.1	206	16	1
21	8.8	468	18	
22	6.8	278	18	1
23	9.0	475	17	1
24	9.5	265	16	1
25	7.0	383	17	1
26	6.2	388	17	1
27	7.1	380	18	1
28	9.9	247	16	1
29	7.1	439	18	1
30	8.8	304	16	1
Detection Percentage				96.66%

20MHz Channel Mode

Type 4 Radar Statistical Performance at 5300 MHz

Trial #	Pulse Width (us)	PRI (us)	Pulses/Burst	1 = Detection Blank = No Detection
1	15.1	273	15	1
2	13.8	489	12	1
3	19.0	439	14	1
4	13.8	450	13	1
5	14.7	253	12	1
6	18.3	333	13	1
7	17.2	253	16	1
8	16.1	371	15	1
9	18.7	384	12	1
10	11.3	409	16	1
11	17.2	231	16	1
12	18.8	216	15	1
13	14.6	276	12	1
14	17.9	214	13	1
15	16.3	304	12	1
16	16.0	279	14	1
17	18.4	203	16	1
18	14.7	416	16	1
19	11.0	413	15	
20	18.8	367	13	1
21	13.4	402	15	1
22	15.3	459	16	1
23	13.8	340	12	1
24	13.7	208	12	1
25	15.3	493	14	1
26	14.6	333	13	1
27	14.5	279	16	1
28	15.7	424	13	1
29	19.9	350	15	1
30	11.5	396	14	1
Detection Percentage				96.66%

20MHz Channel Mode

Type 5 Radar Statistical Performance at 5300 MHz

Trial #	1 = Detection Blank = No Detection
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
Detection Percentage	100%

20MHz Channel Mode

Type 5 Radar Statistical Performance at 5300 MHz

Trial # 1

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	64.4	1799.6	1717.6	12
2	2	87.7	1823.3		16
3	3	67.1	1262.9	1788.9	17
4	1	64.3			17
5	2	54.4	1294.6		7
6	1	92.6			8
7	3	81.3	1910.7	1581.7	8
8	3	53	1272	1254	19
9	3	73.2	1390.8	1206.8	14
10	2	72.9	1799.1		11

Trial # 2

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	78.7			15
2	3	80.9	1543.1	1593.1	15
3	2	97.7	1173.3		14
4	2	73.1	1230.9		18
5	3	69	1516	1479	12
6	1	55.2			7
7	2	56.8	1057.2		11
8	1	97.7			18
9	3	83.8	1370.2	1106.2	6
10	1	55.3			6
11	2	56.3	1781.7		18
12	2	82.5	1352.5		8
13	1	85.2			17
14	3	97.6	1058.4	1894.4	14
15	3	75.6	1898.4	1734.4	15
16	2	83.7	1861.3		9

Trial # 3

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	83.5			18
2	1	72.6			10
3	2	62.5	1769.5		12
4	3	95.6	924.4	1768.4	13
5	2	67.7	1803.3		6
6	2	75.9	1035.1		18
7	1	57.8			7
8	3	63.2	1852.8	1185.8	9

Trial # 4

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	2	88.4	1183.6		10
2	1	71.9			17
3	3	50.5	1468.5	1472.5	19
4	1	56.9			16
5	1	93.3			13
6	3	55.3	1139.7	1231.7	11
7	2	73.7	1631.3		18
8	3	86.6	1338.4	1030.4	8
9	2	50.1	949.9		15
10	3	70	1298	1834	16
11	1	95.5			18
12	2	78.8	1663.2		11
13	3	57.3	1901.7	1873.7	6
14	2	61.8	951.2		12
15	1	98.1			8
16	1	53.7			7
17	2	59.4	1308.6		13
18	3	93.7	1043.3	1727.3	19
19	2	60.9	1364.1		9
20	3	65	1639	1265	18

Trial # 5

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	74.3			7
2	1	64			7
3	2	91	1678		15
4	3	79.2	1577.8	1429.8	8
5	2	83.2	1088.8		16
6	2	62.2	1743.8		18
7	1	74.2			5
8	3	69.8	1411.2	1166.2	11

Trial # 6

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	55.2			18
2	1	66.6			17
3	3	83.7	1680.3	1170.3	9
4	2	63.7	1603.3		10
5	2	79.4	1656.6		19
6	1	52.6			17
7	3	55.7	1079.3	1633.3	10
8	1	81.5			17
9	2	65.7	1754.3		16
10	3	85.3	1019.7	1289.7	12
11	2	96.4	1747.6		6
12	1	99.1			9

Trial # 7

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	75	1285	1825	18
2	3	86	1347	1533	11
3	1	85.3			18
4	2	97.6	1795.4		14
5	1	75.1			12
6	3	83.1	1429.9	1378.9	12
7	1	88			18
8	2	72.2	1098.8		9
9	2	79.1	1810.9		11
10	3	79.2	1475.8	1284.8	9
11	1	97.2			14
12	1	77			12
13	3	94.6	1829.4	1445.4	17
14	2	85.1	1489.9		7

Trial # 8

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	69.9	1658.1	1569.1	9
2	3	95.9	1686.1	1273.1	6
3	1	97.2			9
4	2	96.4	983.6		19
5	1	61			16
6	3	59	1368	1869	9
7	1	79.9			19
8	2	98.4	1361.6		17
9	2	98.9	1418.1		15
10	3	53.7	1148.3	1267.3	8
11	1	75.6			17
12	1	96			16
13	3	79.1	1370.9	1284.9	11
14	2	68.2	1610.8		11

Trial # 9

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	81.5			19
2	1	61.5			14
3	3	70.1	1660.9	1878.9	16
4	2	65.9	1676.1		18
5	2	74.6	1628.4		13
6	1	88.3			15
7	3	88.8	1115.2	1491.2	17
8	1	97.6			10
9	2	91.5	1524.5		17
10	3	70	1634	1502	10
11	2	98.2	1264.8		7
12	1	96.3			11

Trial # 10

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	88.1			16
2	1	61.6			9
3	2	56.8	1543.2		15
4	3	98.7	1626.3	1513.3	17
5	2	62.6	1499.4		12
6	2	63.6	1306.4		13
7	1	65.9			14
8	3	96.8	1889.2	1303.2	7

Trial # 11

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	97.6			14
2	1	85			13
3	3	85.9	1417.1	1787.1	12
4	2	83	1161		8
5	2	91.9	1233.1		15
6	1	53.5			19
7	3	81	1803	1308	11
8	1	92.7			8
9	2	59	976		19
10	3	93.3	934.7	1887.7	11
11	2	52.1	1852.9		6
12	1	83			16

Trial # 12

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	92.5	1252.5	1302.5	10
2	2	51.4	1511.6		14
3	3	72.3	1596.7	1867.7	13
4	1	70.2			19
5	2	58.4	1451.6		17
6	1	93.1			18
7	3	65.7	956.3	1675.3	6
8	3	99.7	1390.3	1787.3	8
9	3	55.7	1156.3	1734.3	18
10	2	82.1	1413.9		6

Trial # 13

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	56.5			11
2	1	95.4			9
3	2	86.9	1434.1		11
4	3	86.3	1757.7	1244.7	13
5	2	96	1445		9
6	2	86.9	1397.1		12
7	1	52.1			19
8	3	81	1480	1080	7

Trial # 14

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	84.3	1873.7	995.7	13
2	2	89.5	1811.5		9
3	1	96			7
4	3	89.9	1459.1	1839.1	7
5	2	69.3	1083.7		11
6	3	84.7	1608.3	1669.3	10
7	1	59.7			16
8	2	50	1173		15
9	3	83.3	968.7	1861.7	9
10	2	71	1341		16
11	1	96.4			9
12	3	57.7	1871.3	1737.3	6
13	1	51.7			11
14	3	89.4	1436.6	1897.6	12
15	1	83			19
16	2	67.7	1777.3		14
17	2	97	1649		18
18	3	79.6	1888.4	1204.4	9

Trial # 15

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	55.9	1135.1	1841.1	18
2	3	55.3	1352.7	1596.7	15
3	1	90.7			9
4	2	87.9	1444.1		18
5	1	92.7			9
6	3	53.8	1634.2	1832.2	10
7	1	78.1			6
8	2	70.2	1848.8		5
9	2	76.1	926.9		11
10	3	54.5	1390.5	977.5	12
11	1	83.4			6
12	1	58.7			14
13	3	92.6	1201.4	1733.4	18
14	2	67	1353		18

Trial # 16

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	69.7	1811.3	1812.3	8
2	2	61.7	1374.3		12
3	3	66.7	1403.3	1894.3	17
4	1	79.4			11
5	2	64.6	1120.4		11
6	1	92.5			18
7	3	70.1	1183.9	1798.9	15
8	3	59.9	1463.1	1251.1	14
9	3	99.3	985.7	933.7	9
10	2	97.9	1666.1		6

Trial # 17

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	53.6			16
2	1	55.1			11
3	3	55.3	1349.7	1363.7	13
4	2	92.2	1204.8		16
5	2	54	1692		8
6	1	68.5	1907.5		14
7	3	81	1616	1410	15
8	1	78.3			19
9	2	64.3	1819.7		12
10	3	95.9	1857.1	1824.1	6
11	2	64.2	1870.8		14
12	1	71.5			19

Trial # 18

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	97.4			14
2	1	62.2			14
3	2	64.3	1276.7		6
4	3	78.5	996.5	1145.5	5
5	2	86.8	1135.2		12
6	2	55.9	1105.1		12
7	1	94.1			8
8	3	97.1	1201.9	1286.9	11

Trial # 19

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	79.3	1327.7	1232.7	5
2	3	55.8	1673.2	1030.2	15
3	1	76.9			15
4	2	59.8	1089.2		13
5	1	95.9			7
6	3	52.6	1823.4	1765.4	18
7	1	99.9			11
8	2	54.3	1864.7		14
9	2	54.3	1139.7		19
10	3	68	989	1806	8
11	1	61.4			9
12	1	86.1			15
13	3	93.5	1618.5	1247.5	7
14	2	70.1	1771.9		5

Trial # 20

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	60.3			6
2	1	79.4			12
3	3	66.1	1890.9	955.9	5
4	2	50.7	1266.3		13
5	2	93	1458		5
6	1	83			13
7	3	85.4	1309.6	1597.6	13
8	1	64			15
9	2	98.6	1176.4		7
10	3	50.6	1733.4	1137.4	8
11	2	54.3	1673.7		6
12	1	69.9			14

Trial # 21

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	63.1	1270.9	1814.9	10
2	2	83.4	998.6		11
3	3	87.2	1596.8	986.8	18
4	1	51.4			15
5	2	61.2	1752.8		19
6	1	53.8			12
7	3	96	1293	1178	13
8	3	51.3	1286.7	1062.7	18
9	3	66.8	1192.2	1000.2	18
10	2	96.4	1551.6		11

Trial # 22

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	67.3	1774.7	1524.7	7
2	2	95.2	1583.8		19
3	3	81	1551	1269	6
4	1	72.9			18
5	2	83.3	1313.7		6
6	1	60.9			12
7	3	97.1	1865.9	1152.9	13
8	3	86.9	1494.1	1704.1	12
9	3	54.9	1628.1	1300.1	12
10	2	75	996		12

Trial # 23

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	89.3	1788.7	1594.7	12
2	2	98.4	1767.6		15
3	3	52.3	1539.7	1409.7	17
4	1	71.4			5
5	2	82.6	1105.4		11
6	1	74.5			10
7	3	83.1	1445.9	1195.9	7
8	3	86.7	925.3	1421.3	13
9	3	75.8	1381.2	1762.2	15
10	2	94	1351		8

Trial # 24

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	57.1			11
2	1	80.2			8
3	2	89.5	1548.5		17
4	3	63.2	1817.8	1059.8	19
5	2	87.7	1181.3		16
6	2	51.6	1893.4		7
7	1	92.9			9
8	3	74.7	1658.3	1630.3	9
1	1	61.9			6
2	3	76.3	971.7	1921.7	15
3	2	84.1	1446.9		11
4	2	69.9	983.1		5
5	3	50.3	1726.7	1096.7	18
6	1	85.4			14
7	2	60.2	990.8		6
8	1	77.9			15
9	3	82.8	964.2	1129.2	15
10	1	79.1			11
11	2	55.7	1326.3		15
12	2	71.8	1218.2		7
13	1	93.6			17
14	3	96.2	1004.8	1480.8	15
15	3	92.7	1645.3	1457.3	12
16	2	67.2	1779.8		19

Trial # 25

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	50.6	1385.4	1024.4	9
2	2	74.2	948.8		15
3	3	69	1148	1458	6
4	1	95.4			17
5	2	95.4	1549.6		19
6	1	74			11
7	3	90.1	1042.9	1115.9	16
8	3	65.5	1662.5	1116.5	15
9	3	86.1	1572.9	1788.9	10
10	2	95.4	1272.6		7

Trial # 26

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	70.3			5
2	1	84			18
3	3	77.8	1182.2	983.2	9
4	2	75.5	1766.5		6
5	2	77.9	1600.1		18
6	1	56.4			9
7	3	59.7	1813.3	1931.3	19
8	1	65.3			6
9	2	55.2	1537.8		12
10	3	58.1	1878.9	1081.9	17
11	2	90.7	1066.3		7
12	1	58.5			14

Trial # 27

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	95.5	1750.5	1779.5	14
2	3	76.3	1888.7	1462.7	5
3	1	86.3			8
4	2	75.9	1348.1		18
5	1	71.2			6
6	3	66.6	1858.4	1321.4	18
7	1	80.6			9
8	2	86.7	1721.3		14
9	2	88.9	1596.1		8
10	3	72.4	1547.6	1031.6	15
11	1	95.1			12
12	1	75.4			12
13	3	68	1301	1054	8
14	2	91.9	1179.1		12

Trial # 28

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	77			16
2	1	71.1			16
3	3	92.3	1496.7	971.7	19
4	2	63.9	1380.1		13
5	2	54.7	1617.3		11
6	1	69.9			9
7	3	83.4	1805.6	1572.6	6
8	1	98			16
9	2	59.5	1633.5		13
10	3	79.5	1075.5	932.5	13
11	2	96.1	1199.9		17
12	1	81.6			16

Trial # 29

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	3	98.2	1070.8	1781.8	7
2	2	69.4	1639.6		7
3	3	92.4	1120.6	1535.6	18
4	1	94.8			9
5	2	58.9	1294.1		16
6	1	73.3			11
7	3	85.8	1721.2	1114.2	16
8	3	51.5	1591.5	1023.5	16
9	3	73.3	1441.7	1757.7	5
10	2	69.5	1565.5		15

Trial # 30

Burst #	Pulses	Pulse Width (us)	Inter-pulse spacing/s (us)		Chirp (MHz)
1	1	67			18
2	1	84.4			7
3	2	99.9	1347.1		7
4	3	63.1	1142.9	1834.9	11
5	2	60.6	1080.4		9
6	2	85.5	1340.5		9
7	1	54.4			19
8	3	84.8	1708.2	1097.2	17

20MHz Channel Mode

Type 6 Radar Statistical Performance at 5300 MHz

Trial #	Pulse Width (us)	PRI (us)	Pulses/Hop	1 = Detection Blank = No Detection
1	1	333	9	1
2	1	333	9	1
3	1	333	9	1
4	1	333	9	1
5	1	333	9	1
6	1	333	9	1
7	1	333	9	1
8	1	333	9	1
9	1	333	9	1
10	1	333	9	1
11	1	333	9	1
12	1	333	9	1
13	1	333	9	1
14	1	333	9	1
15	1	333	9	1
16	1	333	9	1
17	1	333	9	
18	1	333	9	1
19	1	333	9	1
20	1	333	9	1
21	1	333	9	1
22	1	333	9	1
23	1	333	9	1
24	1	333	9	1
25	1	333	9	1
26	1	333	9	1
27	1	333	9	1
28	1	333	9	1
29	1	333	9	1
30	1	333	9	1
Detection Percentage				96.66%

20MHz Channel Mode

Type 6 Radar Statistical Performance at 5300 MHz

Trial # 1

Hop #	Frequency (GHz)
11	5.305
44	5.311
59	5.303
99	5.296

Trial # 2

Hop #	Frequency (GHz)
3	5.305
15	5.301
48	5.299
57	5.306
71	5.298

Trial # 3

Hop #	Frequency (GHz)
6	5.305
12	5.306
13	5.291
99	5.292

Trial # 4

Hop #	Frequency (GHz)
16	5.29
37	5.289
41	5.293
43	5.31
49	5.291
52	5.311
63	5.298

Trial # 5

Hop #	Frequency (GHz)
27	5.293
58	5.297
64	5.296
81	5.305
82	5.295
84	5.294

Trial # 6

Hop #	Frequency (GHz)
20	5.302
34	5.306

Trial # 7

Hop #	Frequency (GHz)
8	5.299
100	5.303

Trial # 8

Hop #	Frequency (GHz)
9	5.289
12	5.307
18	5.296
26	5.297
30	5.295
39	5.303
84	5.299
89	5.304

Trial # 9

Hop #	Frequency (GHz)
33	5.295
51	5.296
57	5.311
70	5.293
87	5.299

Trial # 10

Hop #	Frequency (GHz)
34	5.307
37	5.31
40	5.303
56	5.305
67	5.304
75	5.311
89	5.298

Trial # 11

Hop #	Frequency (GHz)
6	5.31
14	5.302
37	5.289
39	5.297
74	5.311
78	5.292
84	5.299
85	5.307

Trial # 12

Hop #	Frequency (GHz)
25	5.309
40	5.289
48	5.311
61	5.303

Trial # 13

Hop #	Frequency (GHz)
12	5.294
17	5.29
38	5.307
49	5.298
54	5.303
57	5.308
98	5.304

Trial # 14

Hop #	Frequency (GHz)
15	5.294
22	5.302
44	5.293
48	5.297
51	5.307
65	5.295

Trial # 15

Hop #	Frequency (GHz)
23	5.298
44	5.307
60	5.299
91	5.309

Trial # 16

Hop #	Frequency (GHz)
11	5.309
53	5.302
56	5.299
66	5.303
88	5.311

Trial # 17

Hop #	Frequency (GHz)
7	5.305
39	5.298

Trial # 18

Hop #	Frequency (GHz)
19	5.294
33	5.298
39	5.295
41	5.302
42	5.291
71	5.299
86	5.293
90	5.309

Trial # 19

Hop #	Frequency (GHz)
19	5.294
55	5.302
99	5.311

Trial # 20

Hop #	Frequency (GHz)
37	5.291
44	5.293
51	5.3

Trial # 21

Hop #	Frequency (GHz)
2	5.301
30	5.294
35	5.296
42	5.291
46	5.305
52	5.299

54	5.307

Trial # 22

Hop #	Frequency (GHz)
9	5.301
11	5.3
16	5.309
26	5.308
65	5.292
73	5.303
77	5.302
94	5.307

Trial # 23

Hop #	Frequency (GHz)
7	5.303
17	5.298
61	5.305

Trial # 24

Hop #	Frequency (GHz)
24	5.289
39	5.311
54	5.303
61	5.299

Trial # 25

Hop #	Frequency (GHz)
36	5.306
44	5.297
53	5.308
54	5.303
95	5.301
99	5.302
100	5.29

Trial # 26

Hop #	Frequency (GHz)
34	5.3
41	5.298
67	5.299

Trial # 27

Hop #	Frequency (GHz)
36	5.307
68	5.292
82	5.303

Trial # 28

Hop #	Frequency (GHz)
8	5.298
17	5.305
45	5.294
96	5.299

Trial # 29

Hop #	Frequency (GHz)
2	5.311
37	5.309
72	5.305
91	5.302

Trial # 30

Hop #	Frequency (GHz)
36	5.297
56	5.303
70	5.289
89	5.293
90	5.309

11. EMI Reduction Method During Compliance Testing

No modification was made during testing.