

## DFS Test Report

**Report No.:** RJ190807D08A-2

**Test Model:** V-81W

**Series Model:** V-81

**Received Date:** Nov. 18, 2019

**Test Date:** Jan. 8, 2020

**Issued Date:** Feb. 24, 2020

**Applicant:** Check Point Software Technologies Ltd.

**Address:** 5 Shlomo Kaplan Street Tel Aviv 6789159, Israel

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan



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### Release Control Record

Issue No.	Description	Date Issued
RJ190807D08A-2	Original release.	Feb. 24, 2020

## 1 Certificate of Conformity

**Product:** Router

**Brand:**  **Check Point**  
SOFTWARE TECHNOLOGIES LTD

**Test Model:** V-81W

**Series Model:** V-81

**Sample Status:** Engineering Sample

**Applicant:** Check Point Software Technologies Ltd.

**Test Date:** Jan. 8, 2020

**Standards:** ARIB STD-T71 (V6.2), MIC notice 88 Appendix 45  
Certification Ordinance Article 2-1-19-3  
Certification Ordinance Article 2-1-19-3-2

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Feb. 24, 2020  
Jessica Cheng / Senior Specialist

**Approved by :**  , **Date:** Feb. 24, 2020  
Rex Lai / Associate Technical Manager

## 2 Dynamic Frequency Selection

The manufacturer shall state whether the UUT is capable of operating as a Master and/or a Slave. If the UUT is capable of operating in more than one operating mode then each operating mode shall be tested separately. See tables A and B for the applicability of DFS requirements prior to use a channel (Channel Availability Check) and during normal operation (In-Service Monitoring) for each of the operational modes.

**Table A: Applicability of DFS requirements prior to use a channel**

Requirement	Operational Mode
	Master
Interference Detection Threshold	✓
Channel Availability Check Time	✓
Non-Occupancy Period	✓

**Table B: Applicability of DFS requirements during normal operation**

Requirement	Operational Mode
	Master
Interference Detection Threshold	✓
Channel Closing Transmission Time	✓
Channel Move Time	✓
Non-Occupancy Period	✓

## 2.1 Test Limits and Radar Signal Parameters

### Interference Threshold Values

Master Device

Maximum Transmit Power	Power Value
$\geq 200\text{mW}$ ( $\geq 23\text{dBm}$ )	-64dBm
$< 200\text{mW}$ ( $< 23\text{dBm}$ )	-62dBm
This level is only for 0dBi EUT antenna gain	

### DFS Requirement Time Values

Parameter	Value
Channel Availability Check Time	60 s
Non-occupancy Period	30 minutes
Channel Move Time	10 s
Channel Closing Transmission Time	260 ms

### Parameters of DFS Test Signals

#### W53

Radar Test Signal	Pulse Repetition Frequency (PRF)	Pulse Width (us)	Number of Pulses per Burst	Burst Period (sec)	Radar Detection Probability
DFS-J1-1	700	1	18	15	60% or more
DFS-J1-2	260	2.5	18	15	60% or more

\*1. The Channel Loading is 50% of Maximum Transmission Data Rate.

\*2. The receiving threshold level is the following. (This is the average power while receiving radar with an absolute gain 0 dBi antenna.)

The case of  $P_o \geq 200\text{mW}$ ;  $\geq -64\text{dBm}(\text{avg.})$  / The case of  $P_o < 200\text{mW}$ ;  $P_o \geq -62\text{dBm}(\text{avg.})$

( $P_o$ ; Max. Transmit Power (EIRP) of EUT)

**W56**

Radar Type	Pulse Repetition Frequency (PRF)	Pulse Width (µsec)	Number of Pulses	Radar Detection Probability
DFS-J2-1	720	0.5	18	60% or more
DFS-J2-2	250	2	18	60% or more
DFS-US-1	700	1	18	60% or more
DFS-US-2	4347 – 6667	1-5	23-29	60% or more
DFS-US-3	2000 – 5000	6-10	16-18	60% or more
DFS-US-4	2000 - 5000	11-20	12-16	60% or more
Aggregate (Radar Types 1-6)				80% or more

\*1. The Channel Loading is 17% of Maximum Transmission Data Rate.  
\*2. The aggregate is the average of the percentage of successful detections of 6 Radar Types.  
\*3. The receiving threshold level is the following. (This is the average power while receiving radar with an absolute gain 0 dBi antenna.)  
The case of  $P_o \geq 200\text{mW}$ ;  $\geq -64\text{dBm}(\text{avg.})$  / The case of  $P_o < 200\text{mW}$ ;  $P_o \geq -62\text{dBm}(\text{avg.})$   
(Po; Max. Transmit Power (EIRP) of EUT)

Radar Type	Pulse Repetition Frequency (pps)	Pulse Width (µsec)	Number of Pulses per Burst	Radar Detection Probability
DFS-US-5	500-1000	50 - 100	1-3	80% or more

\*1. The Channel Loading is 17% of Maximum Transferred Data Rate.  
\*2. The transmission period for Long Pulse Radar test signal is 12 seconds.  
\*3. Each pulse has a liner frequency modulated chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a Burst will have the same chirp width. Pulse in different Bursts may have different chirp widths.  
\*4. There are a total of 8 to 20 Bursts in the 12 second period. The interval of Burst is the time when divided 12 seconds by the number of the bursts.  
\*5. In the case of being lots pulse in the Burst, each pulse is same as them.  
\*6. In the case of being lots pulse in the Burst, each Burst within the 12 second sequence must have a different number of pulses.  
\*7. The receiving threshold level is the following. (This is the average power while receiving radar with an absolute gain 0 dBi antenna.)  
The case of  $P_o \geq 200\text{mW}$ ;  $\geq -64\text{dBm}(\text{avg.})$  / The case of  $P_o < 200\text{mW}$ ;  $P_o \geq -62\text{dBm}(\text{avg.})$   
(Po; Max. Transmit Power (EIRP) of EUT)

<b>Radar Type</b>	<b>Pulse Repetition Frequency (pps)</b>	<b>Pulse Width (µsec)</b>	<b>Pulses per Hop</b>	<b>Radar Detection Probability</b>
DFS-US-6	3000	1	9	70% or more

\*1. The Channel Loading is 17% of Maximum Transferred Data Rate.  
 \*2. The frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250MHz to 5724MHz.  
 \*3. The Switching Interval of Hopping Sequence is 3 millisecond, and the Hopping Sequence Length is 300 millisecond.  
 \*4. The Burst Interval is 3 millisecond.  
 \*5. The receiving threshold level is the following. (This is the average power while receiving radar with an absolute gain 0 dBi antenna.)  
 The case of  $P_o \geq 200mW$ ;  $\geq -64dBm(avg.)$  / The case of  $P_o < 200mW$ ;  $P_o \geq -62dBm(avg.)$   
 ( $P_o$ ; Max. Transmit Power (EIRP) of EUT)

## 2.2 Test instruments

Description & Manufacturer	Model No.	Brand	Due Date of Calibration	Calibration Authority
Spectrum analyzer	FSV	R&S	Mar 06, 2019	Mar 05, 2020
Signal generator	MXG	KEYSIGHT	May 20, 2019	May 19,2020

## 2.3 EUT Information

### EUT Software and Firmware Version

No.	Product	Model No.	Software/Firmware Version
1	Router	V-81W	R80.20.0.01

All models are listed as below:

Model	Function
V-81	Without WiFi
V-81W	With WiFi

### Description of Available Antennas to the EUT

Ant NO.	Antenna Type	Connector	Operation Frequency Range(MHz)	Gain(dBi) Remark
1	Dipole	Reverse SMA	5250-5725	4.29
2	Dipole	Reverse SMA	5250-5725	4.29
3	Dipole	Reverse SMA	5250-5725	4.29
4	Dipole	Reverse SMA	5250-5725	4.29

## 2.4 Description of support units

### Support Unit information.

No.	Product	Brand	Model No.
1	Intel-wireless AC 7265 (inside PC)	Intel	Intel-wireless AC 7265

**NOTE:** This device was functioned as a  Master  Slave device during the DFS test.

### Software/Firmware information.

No.	Product	Model No.	Software/Firmware Version
1	Intel-wireless AC 7265 (inside PC)	Intel-wireless AC 7265	(V18.21.0.2)

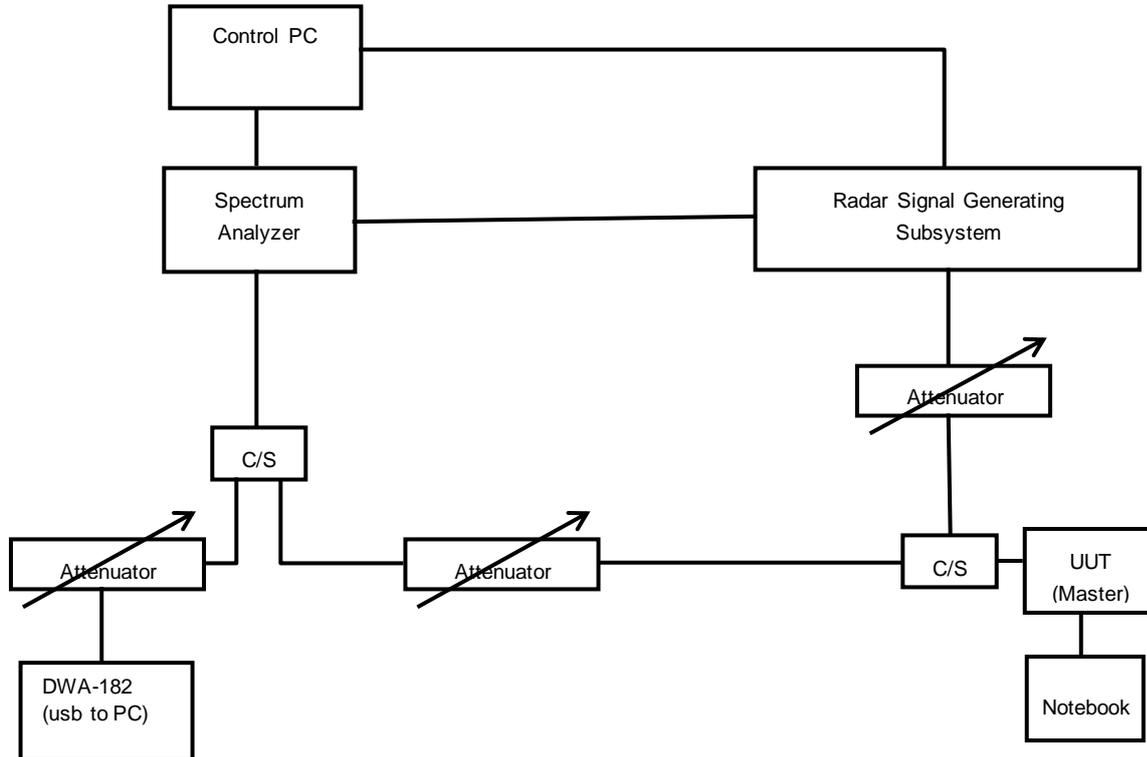
## 2.5 Test Procedure

The measured channels are in the W53 and W56 bands . The radar signal was the same as transmitted channels, and injected into the antenna port of AP (master) with -64dBm power level for W53 band and - 64dBm power level for W56 band, measured the Channel Availability Check time and channel closing transmission time and channel move time and Non-Occupancy Period. The master transmitted the test data to slave, the half of Maximum Loading factor is 12.14Mbps/24.28Mbps=50%@ 54Mbps data rate , 22.25Mbps/44.50Mbps=50%@ 150Mbps data rate , 45.99Mbps/91.98Mbps=50%@ 300Mbps data rate and 112.64Mbps/225.28Mbps=50%@ 866Mbps data rate,channel loading shall over 50%.

## 2.6 Deviation from Test Standard

No deviation.

## 2.7 Test Setup Configuration



The UUT is capable of operating as a Master mode. The radar test signals are injected into the Master Device.

## 2.8 List of Measurements

Clause	Test Parameter	Remarks	Pass/Fail
6.3.5.6	Interference Detection Threshold	Applicable	Pass
6.3.5.6	Channel Availability Check Time	Applicable	Pass
6.3.5.6	Channel Closing Transmission Time	Applicable	Pass
6.3.5.6	Channel Move Time	Applicable	Pass
6.3.5.6	Non- Occupancy Period	Applicable	Pass

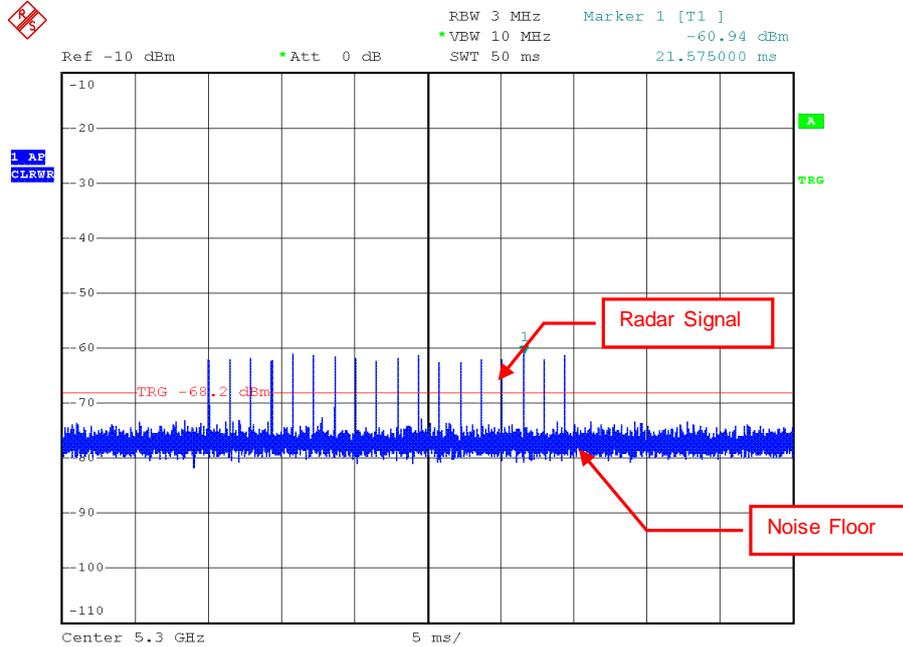
Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

**NOTE:** This UUT is capable of operating as a master (with radar detection).

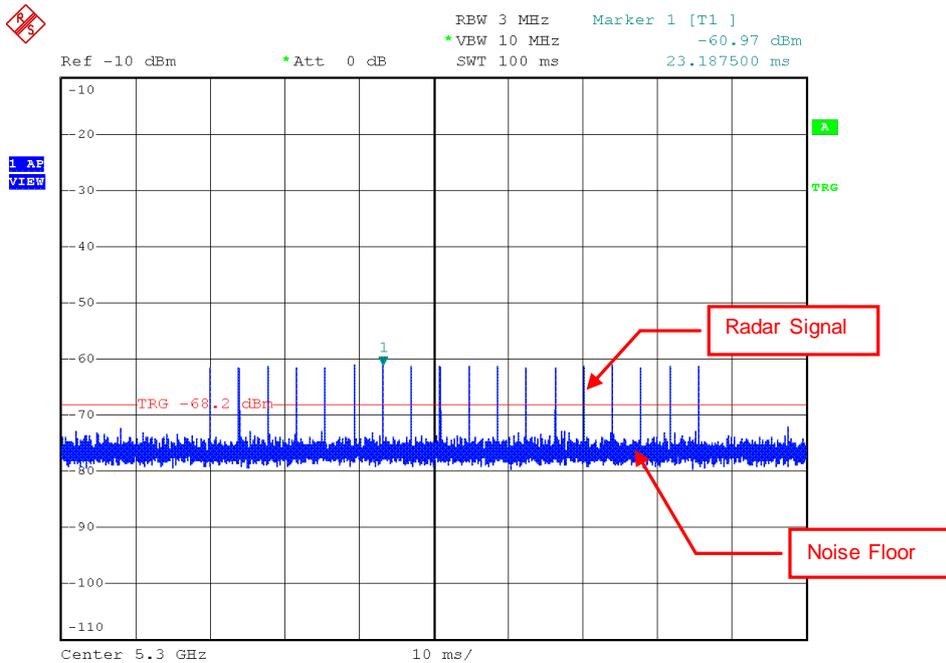
## 2.9 Test Results

### Interference Threshold Values Injected into UUT W53

For an interference threshold level of  $-64$  dBm and the AP antenna gain is 4.29 dBi. Then the radar Burst signal level to the AP connector is  $-59.71$  dBm

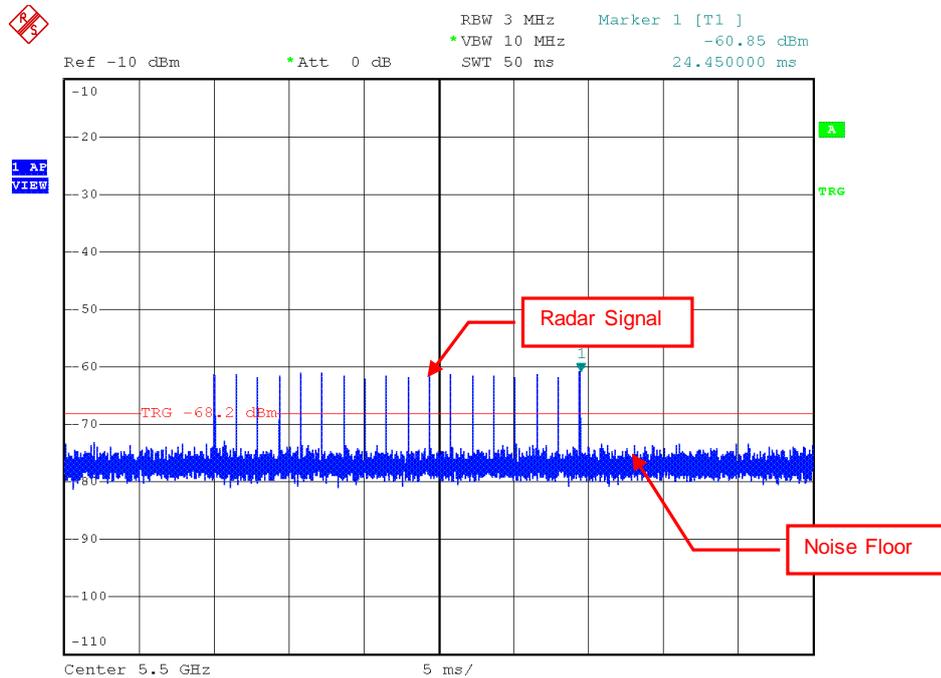


### DFS-J1-1

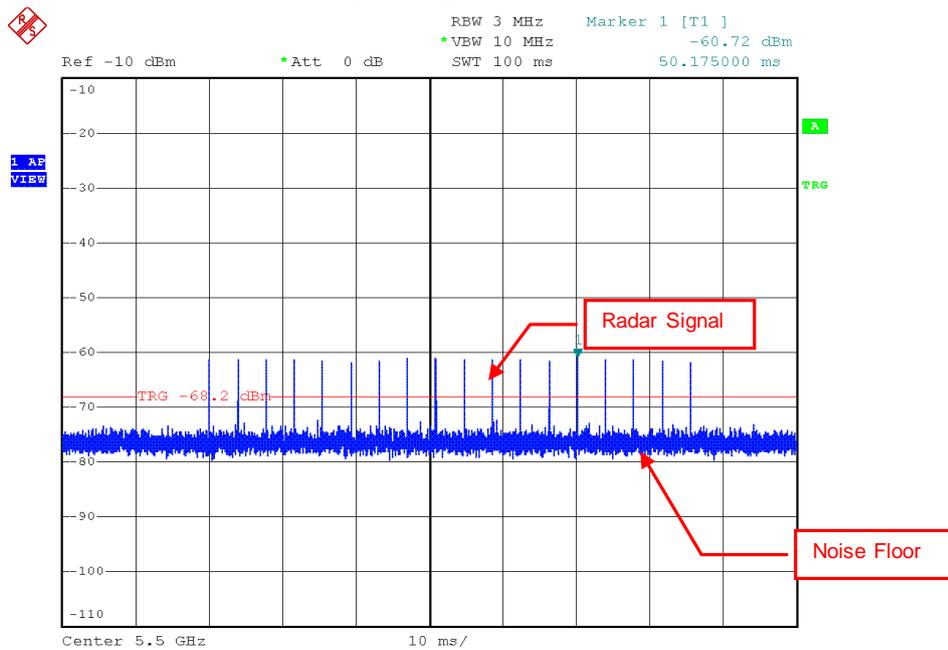


## W56

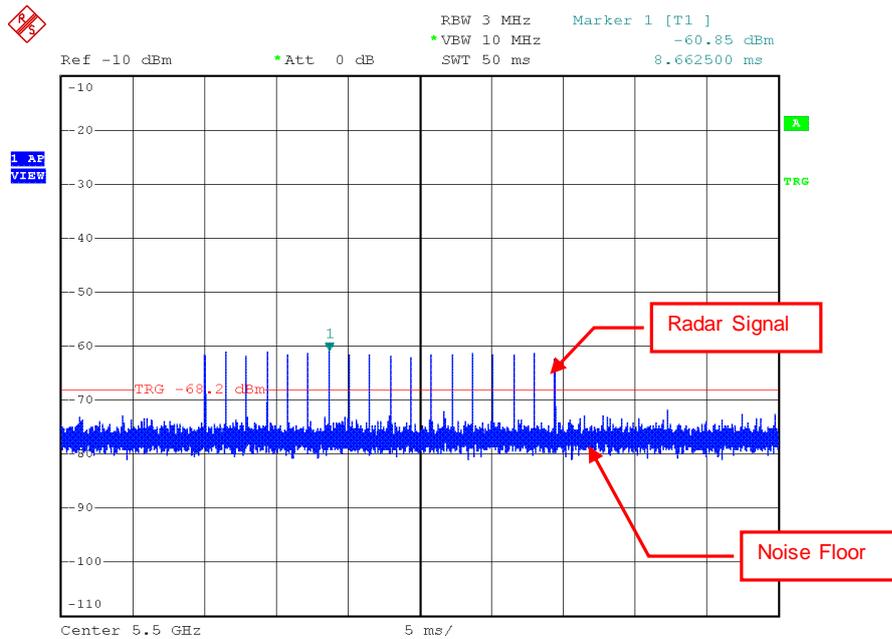
For an interference threshold level of  $-64$  dBm and the AP antenna gain is  $4.29$  dBi. Then the radar Burst signal level to the AP connector is  $-59.71$  dBm.



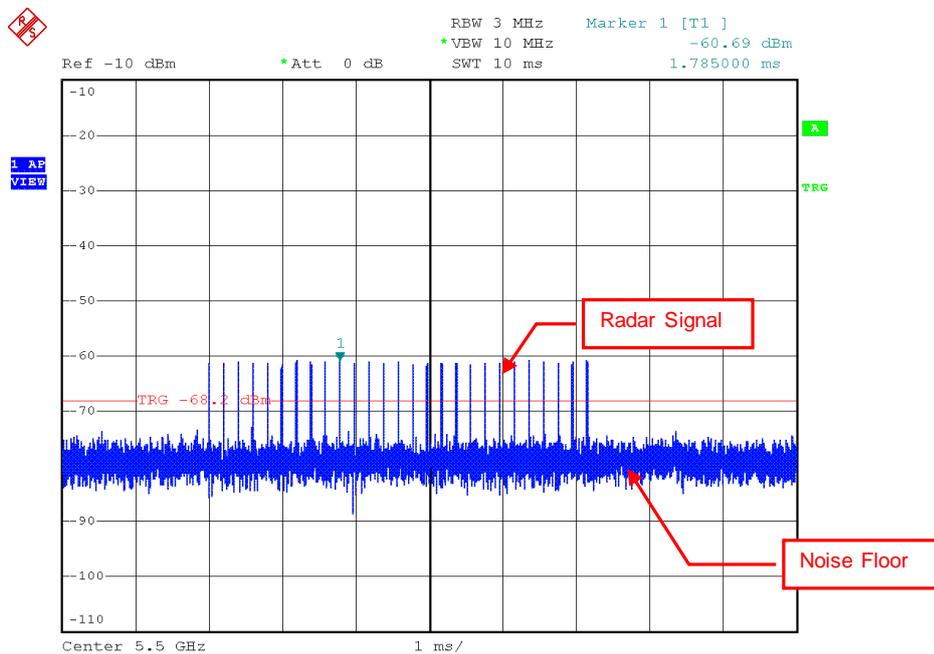
DFS-J2-1



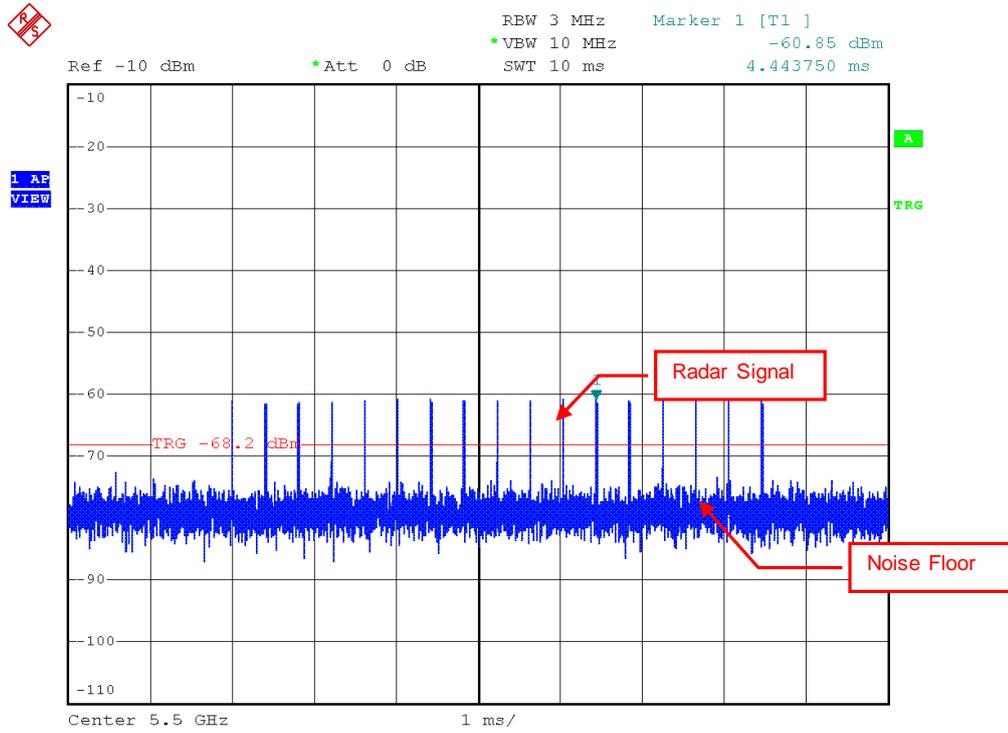
DFS-J2-2



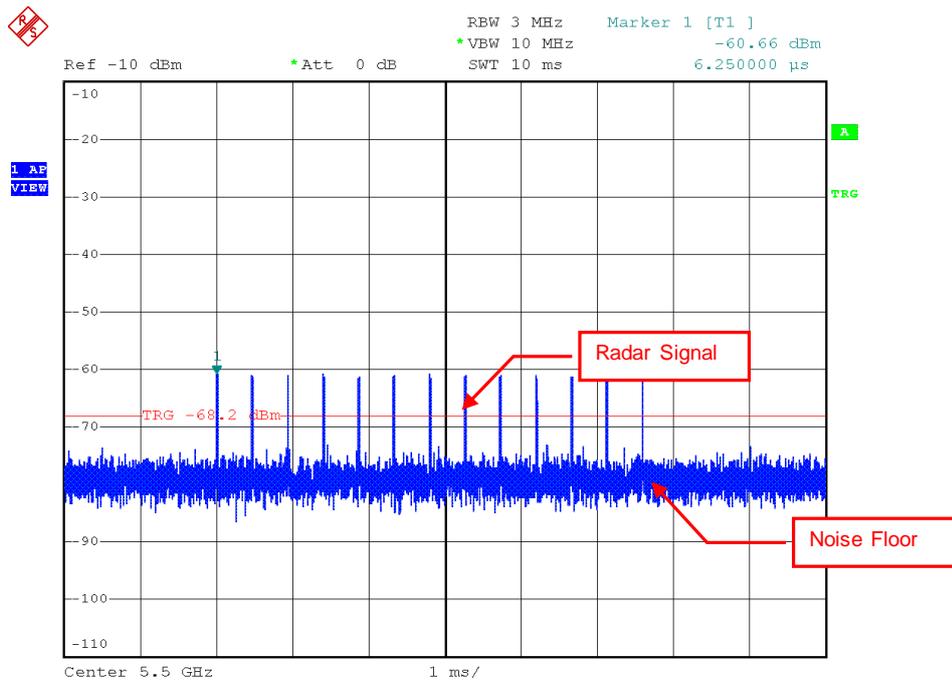
DFS-US-1



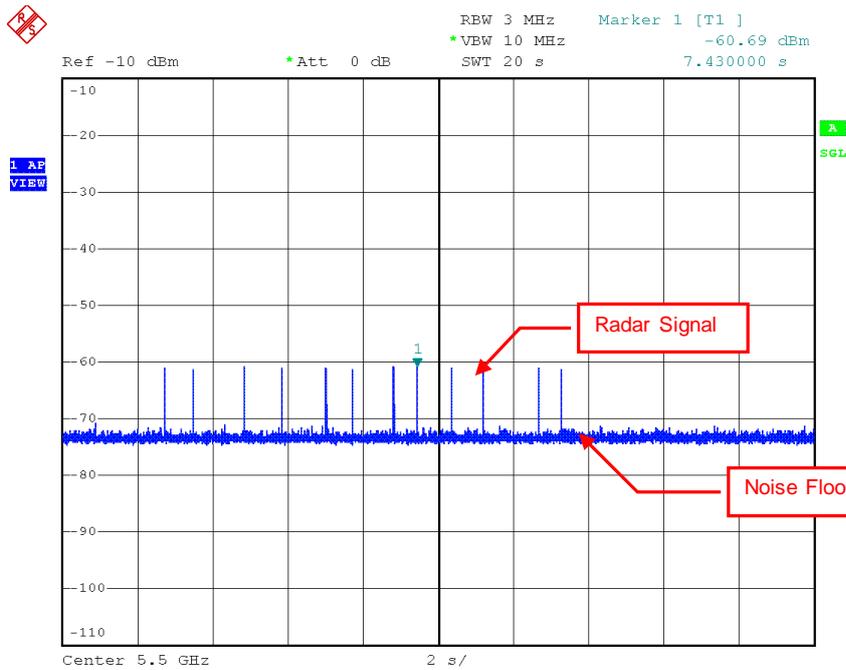
DFS-US-2



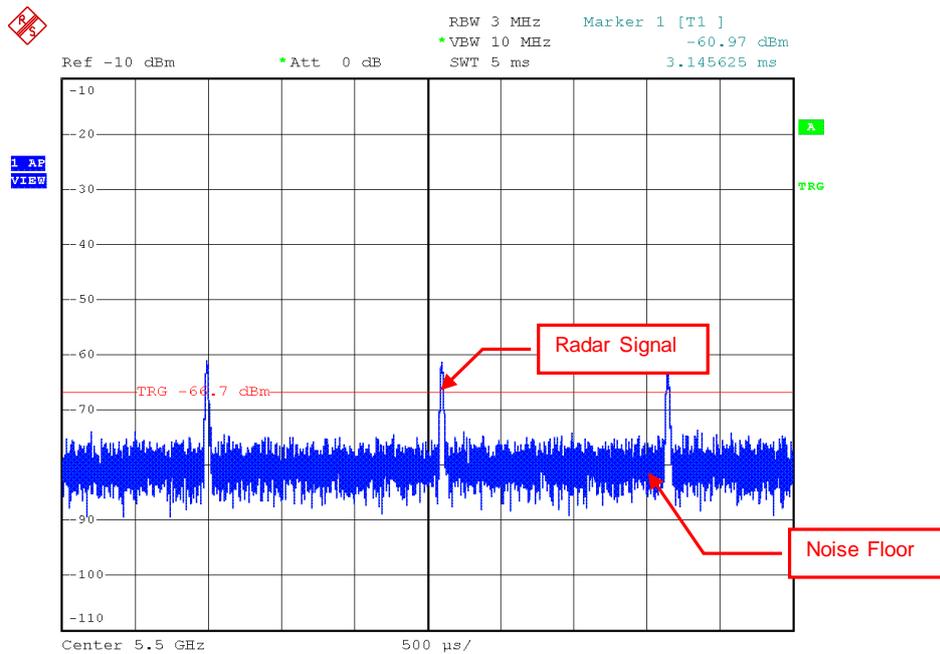
DFS-US-3



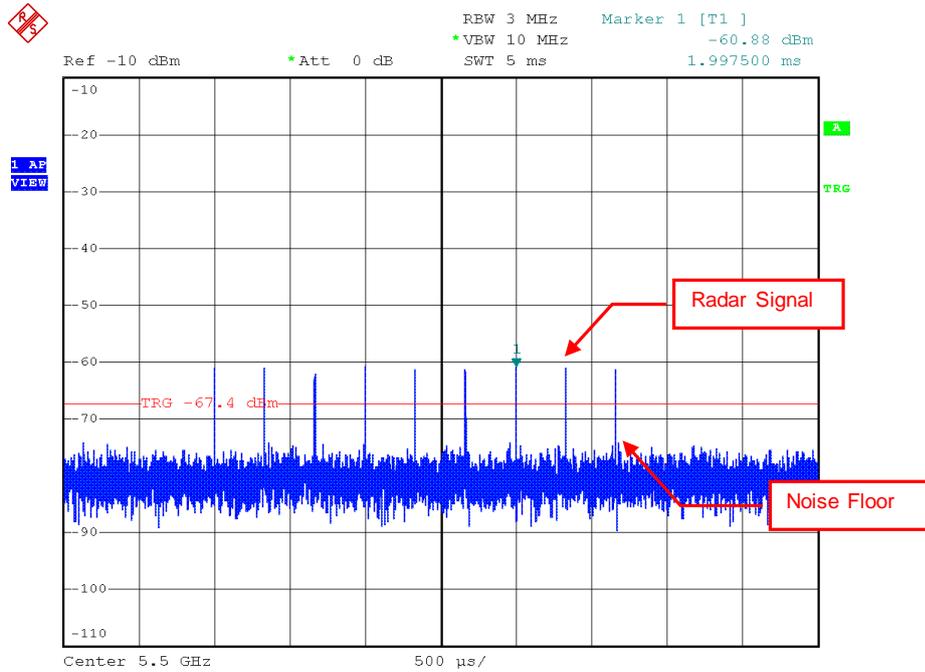
DFS-US-4



Long Pulse Radar



Long Pulse Radar Signal



Frequency Hopping Radar Signal

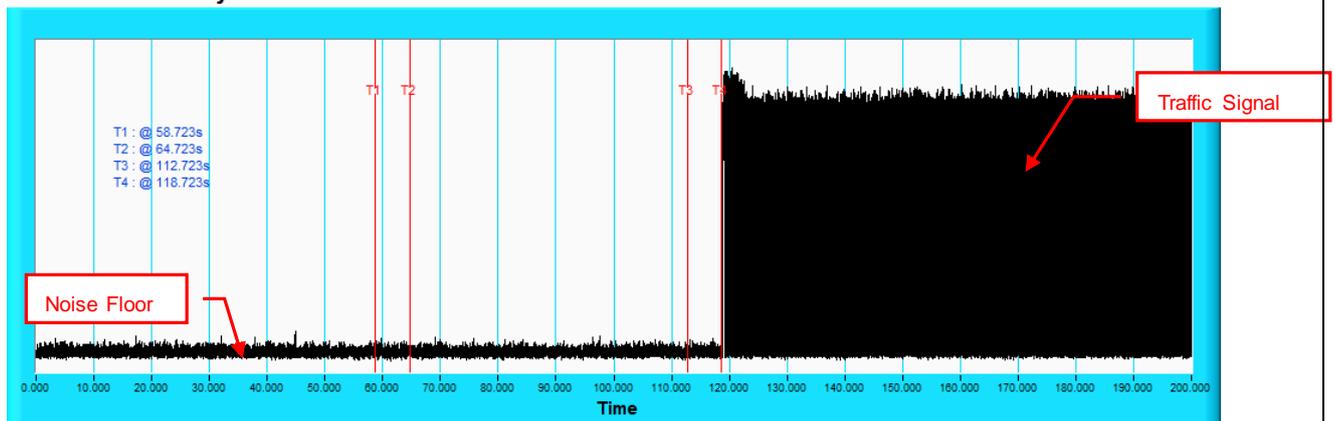
### Channel Availability Check Time

If the UUT successfully detected the radar burst, it should be observed as the UUT has no transmissions occurred until the UUT starts transmitting on another channel.

Timing of Radar Signal	Observation	
	UUT	Spectrum Analyzer
Within 1 to 6 second	Detected	No transmissions
Within 54 to 60 second	Detected	No transmissions

### Initial Channel Availability Check Time

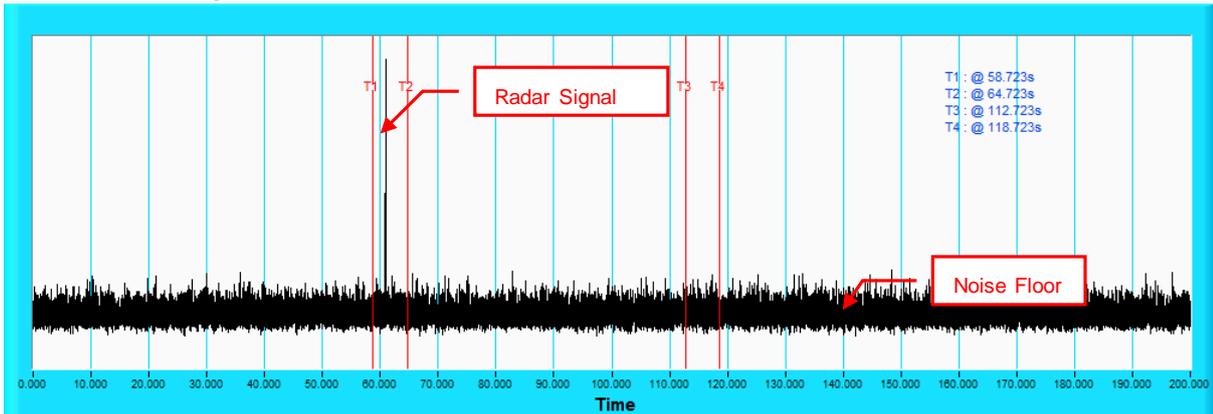
#### Channel Availability Check



**NOTE:** T1 denotes the end of power-up time period is 58.723<sup>th</sup> second. T4 denotes the end of Channel Availability Check time is 118.723<sup>th</sup> second. Channel Availability Check time is equal to ( T4 – T1) 60 seconds.

### Radar Burst at the Beginning of the Channel Availability Check Time

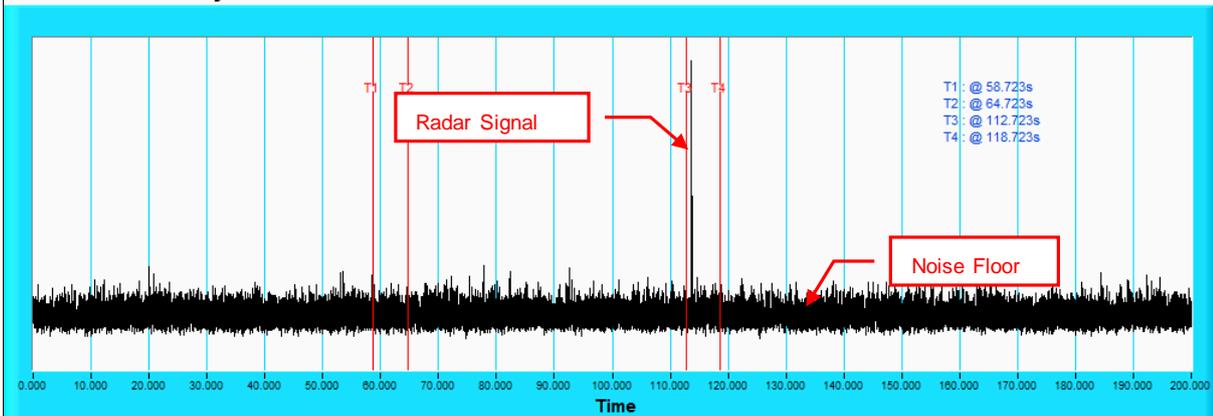
#### Channel Availability Check



**NOTE:** T1 denotes the end of power up time period is 58.723<sup>th</sup> second. the radar burst was commenced within a 6 second window starting from the end of power-up sequence. T4 denotes the 118.723<sup>th</sup> second.

### Radar Burst at the End of the Channel Availability Check Time

#### Channel Availability Check



**NOTE:** T1 denotes the end of power up time period is 58.723<sup>th</sup> second. T3 denotes 112.723<sup>th</sup> second and T4 denotes the 118.723<sup>th</sup> second. The radar burst was commenced within 54<sup>th</sup> second to 60<sup>th</sup> second window starting from the end of power-up sequence.

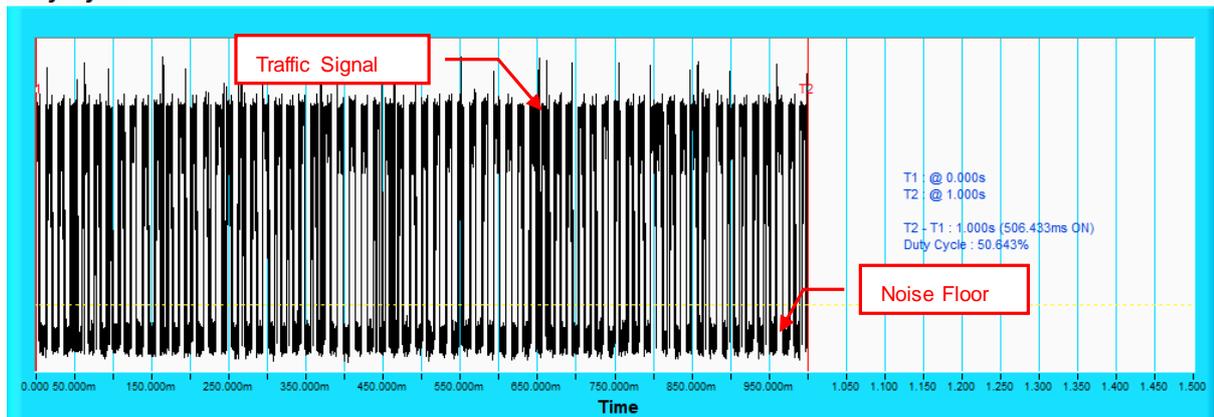
## CHANNEL CLOSING TRANSMISSION TIME AND CHANNEL MOVE TIME

The channel closing time is aggregated duration of all transmissions from the UUT during the channel move time. The Aggregate duration of all transmission of the UUT does not include quiet periods in between transmissions of the UUT.

### W53 WLAN TRAFFIC

#### 802.11a

##### Duty Cycle

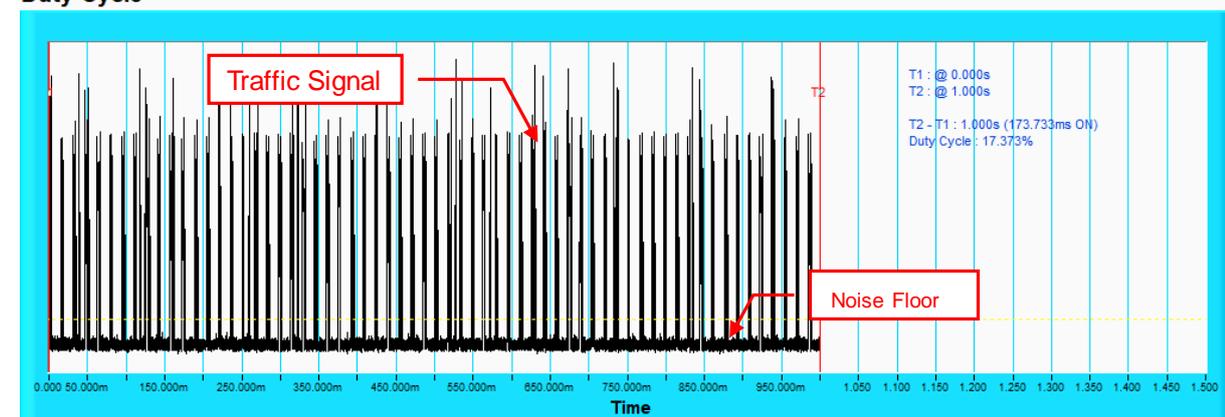


- Note:** 1. Traffic signal from master transmit to slave and average channel loading is 54Mbps.  
 2. T1 denotes the start of duty cycle period is 0<sup>th</sup> second. T2 denotes the end of duty cycle period is 1<sup>th</sup> second. T2 – T1= 1<sup>th</sup> seconds. Duty Cycle = 50.643%

### W56 WLAN TRAFFIC

#### 802.11a

##### Duty Cycle



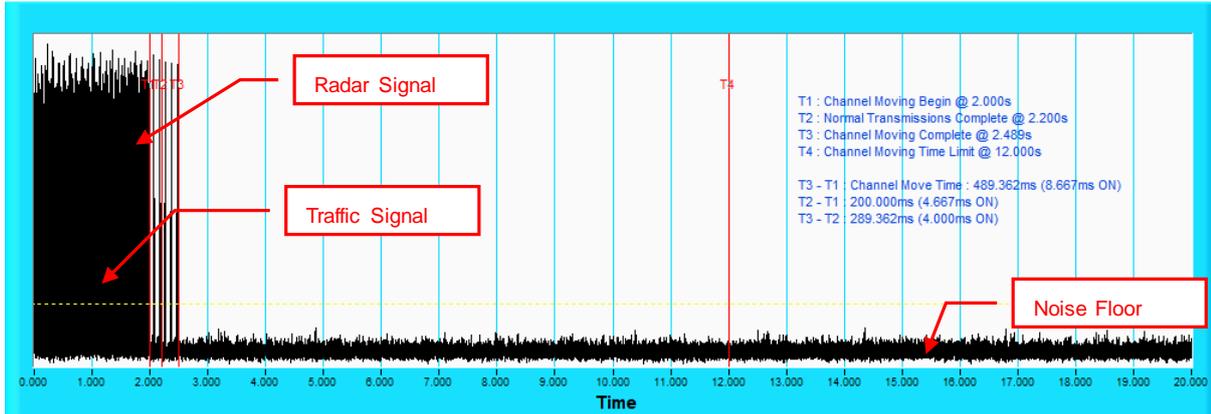
- Note:** 1. T1 denotes the start of duty cycle period is 0<sup>th</sup> second. T2 denotes the end of duty cycle period is 1<sup>th</sup> second. T2 – T1= 1<sup>th</sup> seconds. Duty Cycle = 17.373%

**W53 802.11a**

<b>Radar Test Signal</b>	<b>Pulse Repetition Frequency (pps)</b>	<b>Pulse Width (us)</b>	<b>Number of Pulses per Burst</b>	<b>Burst Period (sec)</b>	<b>Minimum Percentage of Successful Detection</b>	<b>Percentage of Successful Detection (%)</b>
DFS-J1-1	700	1	18	15	60%	100%
DFS-J1-2	260	2.5	18	15	60%	100%

**W53**  
**DFS-J1-1**

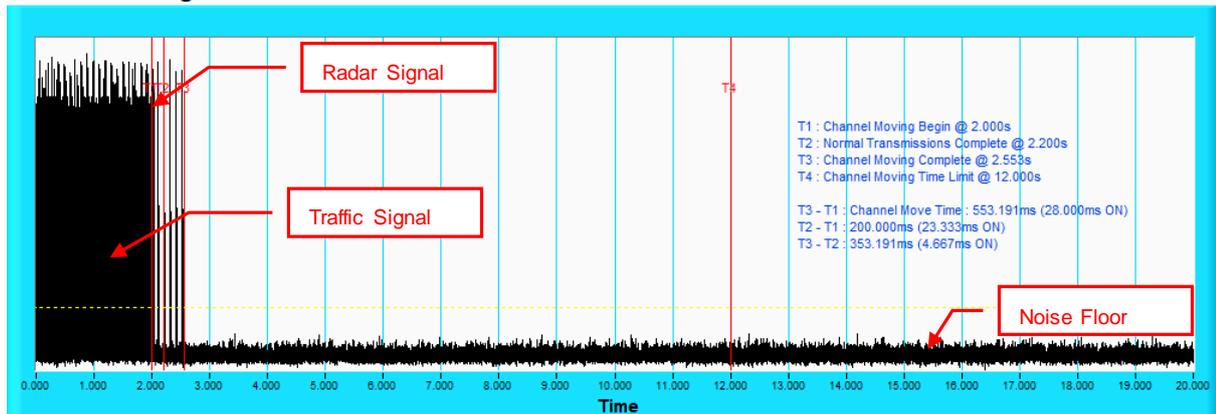
**Channel Closing Transmission Time & Channel Move Time**



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

**W53**  
**DFS-J1-2**

**Channel Closing Transmission Time & Channel Move Time**



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



**W53 802.11a**

<b>DFS-J1-1 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5293	Yes
2	5301	Yes
3	5308	Yes
4	5302	Yes
5	5300	Yes
6	5307	Yes
7	5292	Yes
8	5298	Yes
9	5310	Yes
10	5299	Yes
11	5304	Yes
12	5306	Yes
13	5296	Yes
14	5305	Yes
15	5290	Yes
16	5291	Yes
17	5295	Yes
18	5303	Yes
19	5309	Yes
20	5297	Yes
<b>Detection Rate</b>		<b>100%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>

**W53 802.11a**

<b>DFS-J1-2 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5303	Yes
2	5291	Yes
3	5310	Yes
4	5309	Yes
5	5297	Yes
6	5293	Yes
7	5302	Yes
8	5290	Yes
9	5296	Yes
10	5305	Yes
11	5298	Yes
12	5304	Yes
13	5301	Yes
14	5299	Yes
15	5294	Yes
16	5292	Yes
17	5306	Yes
18	5308	Yes
19	5307	Yes
20	5295	Yes
<b>Detection Rate</b>		<b>100%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>



**W56 802.11a**

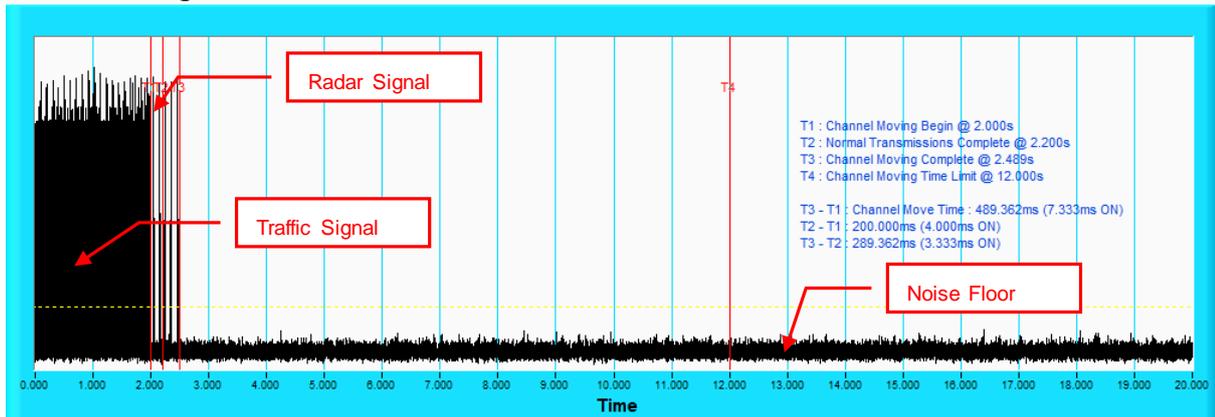
<b>Radar Type</b>	<b>Pulse Repetition Frequency (pps)</b>	<b>Pulse Width (µsec)</b>	<b>Number of Pulses</b>	<b>Minimum Percentage of Successful Detection</b>	<b>Percentage of Successful Detection (%)</b>
DFS-J2-1	720	0.5	18	60%	100%
DFS-J2-2	250	2	18	60%	100%
DFS-US-1	700	1	18	60%	100%
DFS-US-2	4347 – 6667	1-5	23-29	60%	95%
DFS-US-3	2000 – 5000	6-10	16-18	60%	90%
DFS-US-4	2000 - 5000	11-20	12-16	60%	100%
Aggregate (Radar Types 1-6)				80%	97.5%

<b>Radar Type</b>	<b>Pulse Repetition Frequency (pps)</b>	<b>Pulse Width (µsec)</b>	<b>Number of Pulses per Burst</b>	<b>Minimum Percentage of Successful Detection</b>	<b>Percentage of Successful Detection (%)</b>
DFS-US-5	500-1000	50 - 100	1-3	80%	90%

<b>Radar Type</b>	<b>Pulse Repetition Frequency (pps)</b>	<b>Pulse Width (µsec)</b>	<b>Pulses per Hop</b>	<b>Minimum Percentage of Successful Detection</b>	<b>Percentage of Successful Detection (%)</b>
DFS-US-6	3000	1	9	70%	95%

### DFS-J2-1

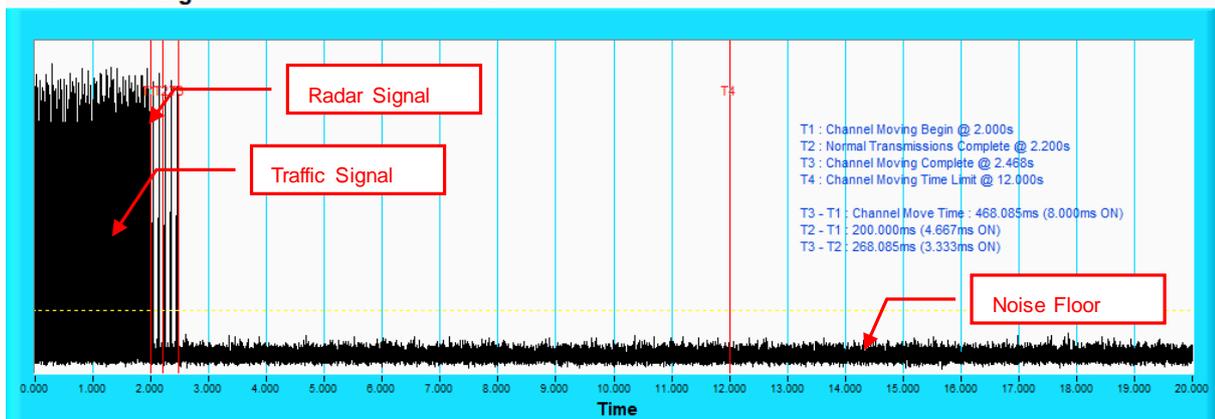
#### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### DFS-J2-2

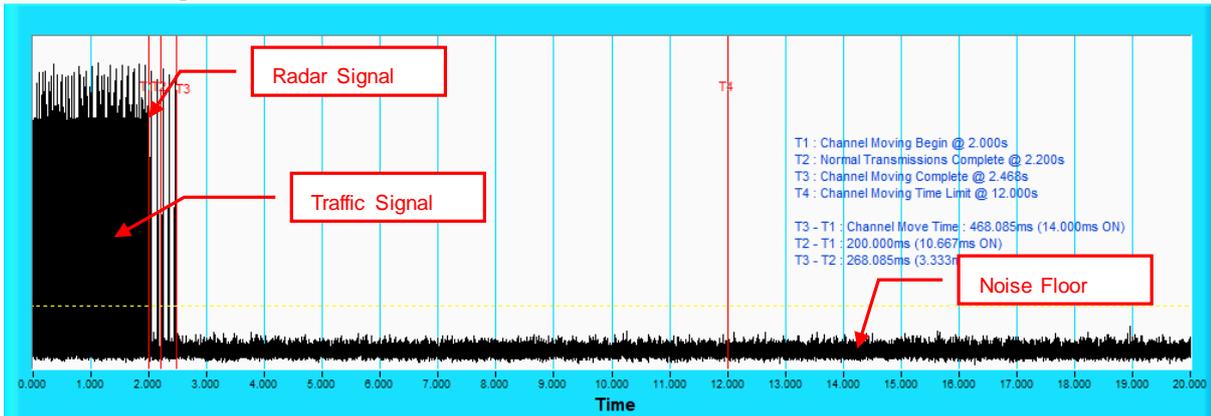
#### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

## DFS-US-1

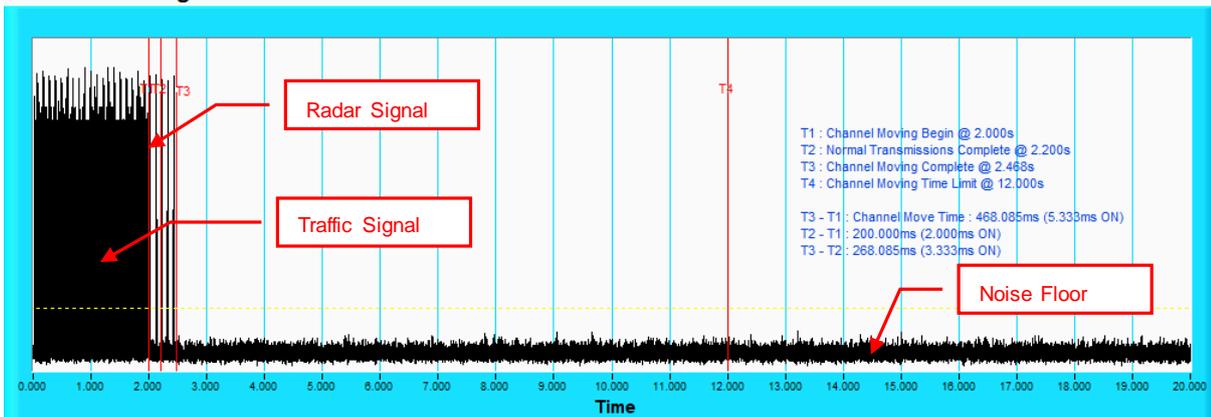
### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

## DFS-US-2

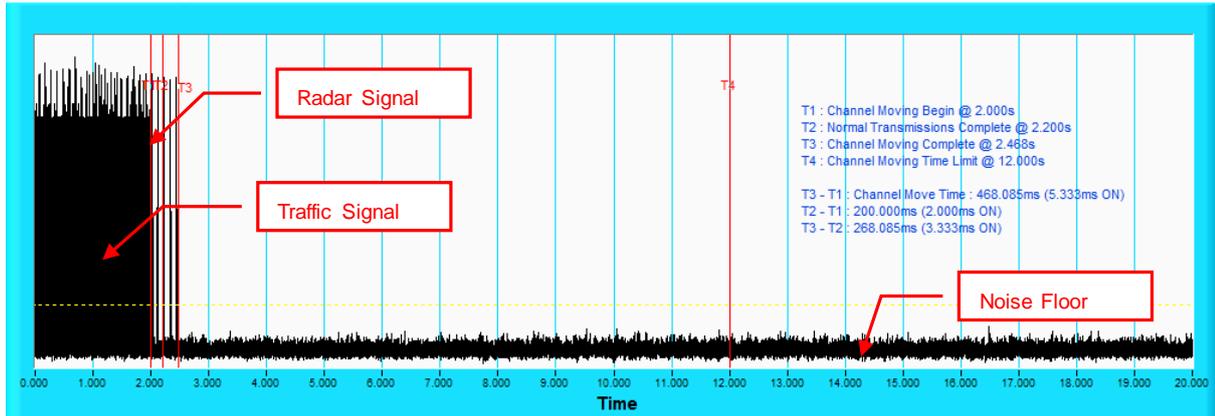
### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### DFS-US-3

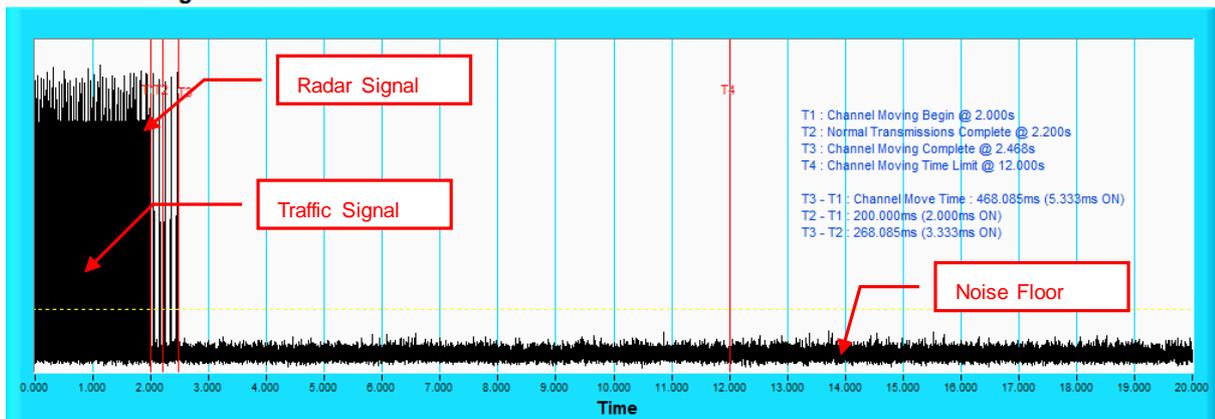
#### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### DFS-US-4

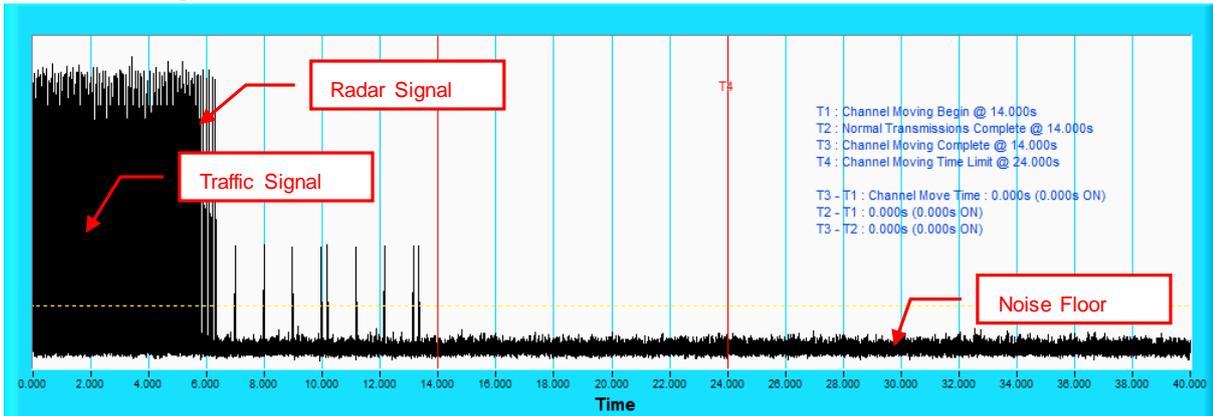
#### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### Long pulse radar signal

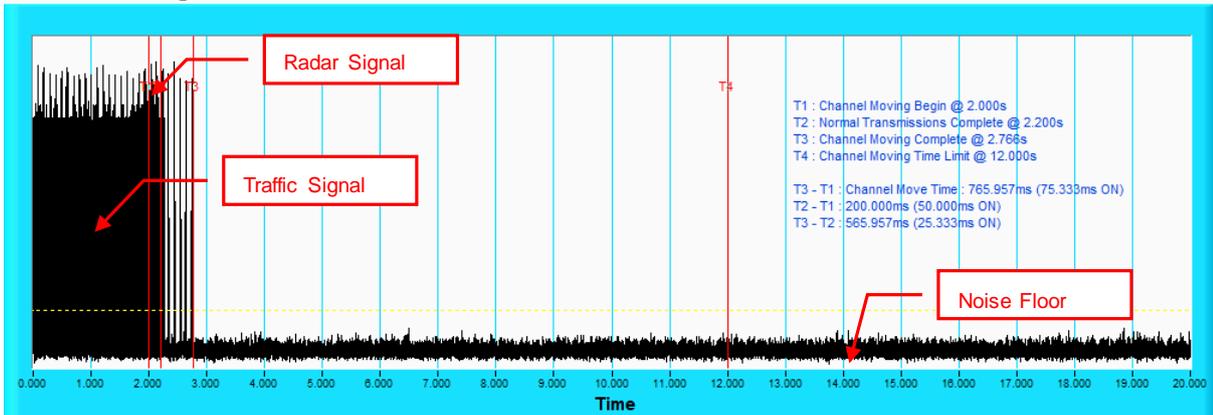
#### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### Frequency hopping radar signal

#### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

**W56 802.11a**

<b>DFS-J2-1 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5580	Yes
2	5680	Yes
3	5600	Yes
4	5500	Yes
5	5580	Yes
6	5500	Yes
7	5620	Yes
8	5540	Yes
9	5580	Yes
10	5660	Yes
11	5660	Yes
12	5680	Yes
13	5580	Yes
14	5540	Yes
15	5540	Yes
16	5660	Yes
17	5700	Yes
18	5500	Yes
19	5700	Yes
20	5560	Yes
<b>Detection Rate</b>		<b>100%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>

**W56 802.11a**

<b>DFS-J2-2 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5580	Yes
2	5660	Yes
3	5560	Yes
4	5700	Yes
5	5540	Yes
6	5500	Yes
7	5660	Yes
8	5580	Yes
9	5520	Yes
10	5660	Yes
11	5660	Yes
12	5640	Yes
13	5700	Yes
14	5640	Yes
15	5680	Yes
16	5500	Yes
17	5580	Yes
18	5540	Yes
19	5680	Yes
20	5620	Yes
<b>Detection Rate</b>		<b>100%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>

**W56 802.11a**

<b>DFS-US-1 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5500	Yes
2	5620	Yes
3	5520	Yes
4	5700	Yes
5	5700	Yes
6	5600	Yes
7	5520	Yes
8	5700	Yes
9	5640	Yes
10	5700	Yes
11	5700	Yes
12	5640	Yes
13	5600	Yes
14	5660	Yes
15	5620	Yes
16	5700	Yes
17	5640	Yes
18	5660	Yes
19	5580	Yes
20	5500	Yes
<b>Detection Rate</b>		<b>100%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>



**W56 802.11a**

<b>DFS-US-2 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5560	Yes
2	5580	Yes
3	5660	No
4	5580	Yes
5	5560	Yes
6	5700	Yes
7	5580	Yes
8	5540	Yes
9	5700	Yes
10	5540	Yes
11	5700	Yes
12	5640	Yes
13	5660	Yes
14	5680	Yes
15	5600	Yes
16	5700	Yes
17	5520	Yes
18	5560	Yes
19	5540	Yes
20	5700	Yes
<b>Detection Rate</b>		<b>95%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>

**W56 802.11a**

<b>DFS-US-3 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5640	Yes
2	5620	Yes
3	5700	Yes
4	5700	Yes
5	5600	Yes
6	5680	Yes
7	5540	Yes
8	5620	Yes
9	5680	NO
10	5640	Yes
11	5660	Yes
12	5520	Yes
13	5620	Yes
14	5520	NO
15	5540	Yes
16	5580	Yes
17	5620	Yes
18	5500	Yes
19	5540	Yes
20	5500	Yes
<b>Detection Rate</b>		<b>90%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>

**W56 802.11a**

<b>DFS-US-4 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5540	Yes
2	5620	Yes
3	5680	Yes
4	5500	Yes
5	5500	Yes
6	5520	Yes
7	5600	Yes
8	5560	Yes
9	5700	Yes
10	5600	Yes
11	5640	Yes
12	5660	Yes
13	5600	Yes
14	5500	Yes
15	5500	Yes
16	5500	Yes
17	5700	Yes
18	5620	Yes
19	5620	Yes
20	5700	Yes
<b>Detection Rate</b>		<b>100%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>60 %</b>
<b>RESULT</b>		<b>Pass</b>

**W56 802.11a**

<b>DFS-US-5 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5520	Yes
2	5540	Yes
3	5500	Yes
4	5620	Yes
5	5680	Yes
6	5540	Yes
7	5640	No
8	5560	Yes
9	5560	Yes
10	5620	Yes
11	5540	Yes
12	5660	No
13	5640	Yes
14	5500	Yes
15	5560	Yes
16	5560	Yes
17	5540	Yes
18	5580	Yes
19	5680	Yes
20	5580	Yes
<b>Detection Rate</b>		<b>90%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>80 %</b>
<b>RESULT</b>		<b>Pass</b>

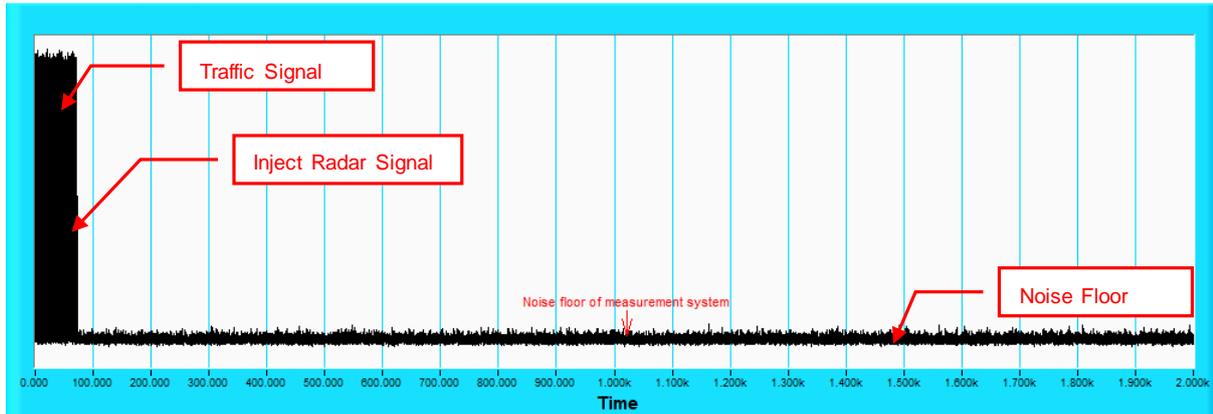
**W56 802.11a**

<b>DFS-US-6 Radar Statistical Performances</b>		
<b>Trial #</b>	<b>Channel (MHz)</b>	<b>Channel Closing Transmission Time &amp; Channel move Time</b>
1	5700	Yes
2	5620	No
3	5560	Yes
4	5580	Yes
5	5700	Yes
6	5620	Yes
7	5700	Yes
8	5640	Yes
9	5600	Yes
10	5500	Yes
11	5700	Yes
12	5700	Yes
13	5580	Yes
14	5560	Yes
15	5700	Yes
16	5620	Yes
17	5640	Yes
18	5640	Yes
19	5640	Yes
20	5520	Yes
<b>Detection Rate</b>		<b>95%</b>
<b>Minimum Percentage of Successful Detection</b>		<b>70 %</b>
<b>RESULT</b>		<b>Pass</b>

## NON-OCCUPANCY PERIOD

During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.

### Non - Occupancy Period

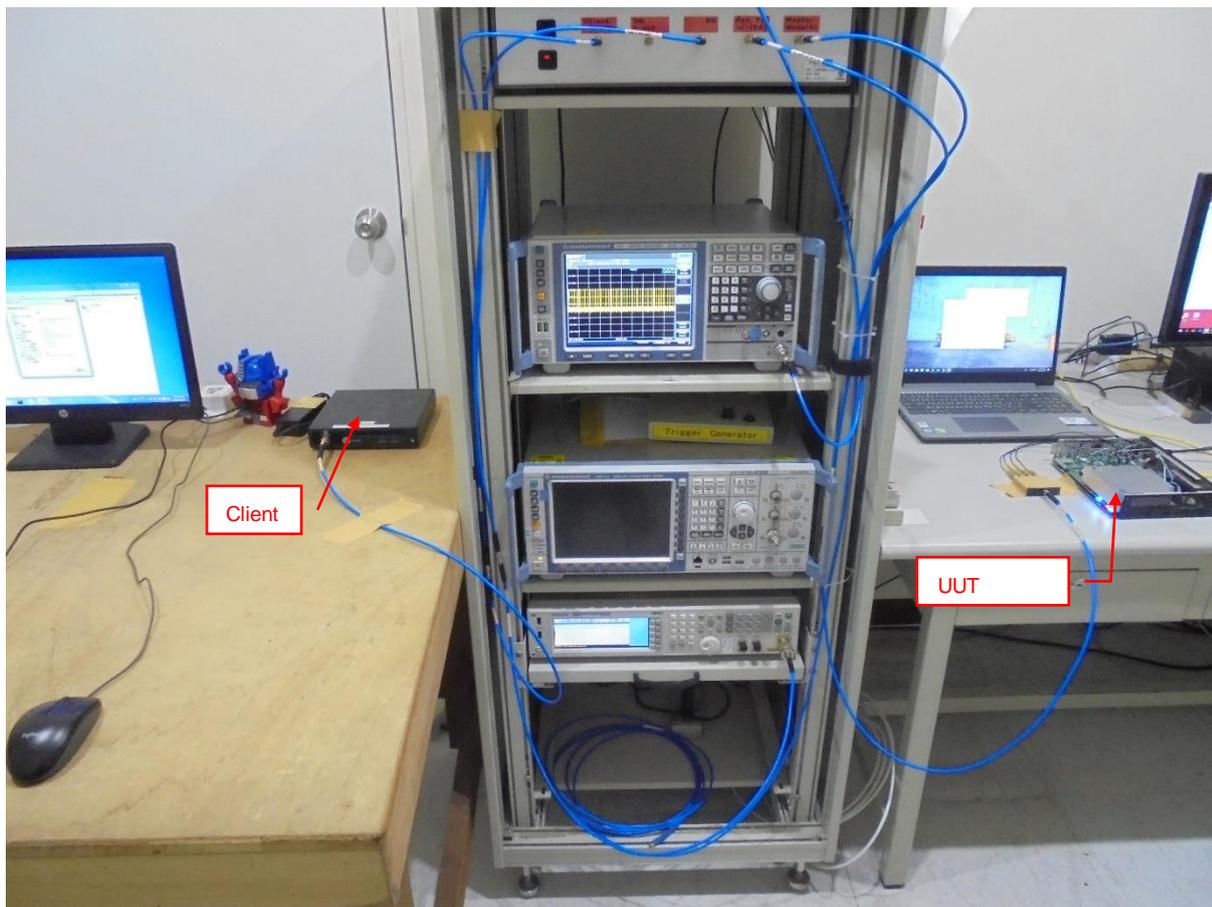


## UNIFORM SPREADING

The intention of the uniform spreading is to provide, on aggregate, a uniform loading of the spectrum. The UUT using the bands 5150 to 5725MHz shall select an operating channel out of the 19 channels, so that the probability of selecting a given channel shall be the same for all channels.

The UUT will select channel by random mode and remember this channel when detect radar signal, so that will select unused channel by random mode.

### 3 Photographs of the Test Configuration



## Appendix - Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

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