



FCC DFS TEST REPORT

Applicant : Ring LLC

Address : 1523 26th Street, Santa Monica, CA 90404 United States

Equipment : Chime Pro (2nd Generation)

Model No. : 5UM2E5

Trade Name : Ring

FCC ID : 2AEUPBHACP021

I HEREBY CERTIFY THAT :

The sample was received on Aug. 14, 2019 and the testing was completed on Oct. 25, 2019 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





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History of this test report

Report No.	Issue Date	Description
TEFS1908104	Nov. 12, 2019	Original



1. Summary of Test Procedure and Test Results

1.1. Applicable Standards

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart E §15.407

KDB789033

KDB905462

FCC Rule	Description of Test	Result
15.407	Dynamic Frequency Selection	PASS

*The lab has lowered the uncertainty risk of test equipment, environment, and staff technicians according to ISO-IEC17025. Therefore we define test result as compliant when it complies with the standard without further evaluation of test result uncertainty.



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Frequency Range	BLE: 2400-2483.5MHz 802.11b/g/n: 2400-2483.5MHz 802.11a/n/ac: 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
Modulation Type	BLE: GFSK 802.11b: CCK, DQPSK, DBPSK 802.11g/n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	DSSS, OFDM, DTS
Data Rate	BLE: GFSK: 1Mbps WLAN: 2.4G 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40, VHT20, VHT40 5G 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80
Antenna Type	FPC Antenna(BLE) FPCB Antenna(WLAN)
Antenna Gain	BLE: 2400-2483.5MHz: ANT A: 2.69dBi WLAN: 2400-2483.5MHz: ANT A: 3.55dBi, ANT B: 3.37dBi 5150-5250MHz: ANT A: 4.67dBi, ANT B: 2.49dBi 5250-5350MHz: ANT A: 3.97dBi, ANT B: 4.40dBi 5470-5725MHz: ANT A: 4.54dBi, ANT B: 5.00dBi 5725-5850MHz: ANT A: 4.20dBi, ANT B: 4.99dBi

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. 802.11ac VHT20, VHT40 and VHT80 support beamforming.
3. VHT20, VHT40 support beamforming.
4. EUT support Master / Repeater / Client Mode
5. EUT FW: US_with_DFS_fw

2.2. Description of Test System

Equipment	Brand	Model	Length/Type	Power cord/Length/Type	Network adapter Brand/ Model	FCC ID
Notebook	ASUS	P2430U	N/A	Adapter / 1.8m / NS		
Notebook	DELL	Latitude E5450	N/A	Adapter / 1.8m / NS	Intel Dual band Wireless-AC 7265	PD97265N GU
Network cable	N/A	N/A	15m / NS	N/A		

**2.3. General Information of Test**

Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881	
	FCC	TW1439, TW1079
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication test C-4663 for Conducted emission test R-4218 for Radiated emission test G-10812, G-10813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

Test Item	Test Site	Finish Date	Environmental Conditions	Tested By
DFS	RFDFS01-NK	2019/10/25	25°C / 67%	Dian Chen

2.4. Measurement Uncertainty

Measurement Item	Uncertainty
Channel Move Time	±5.4%
Channel Closing Transmission Time	±6.79%
Threshold	±1.875dB



3. Test Equipment and Ancillaries Used for Tests

Test Item	DFS				
Test Site	RFDFS01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Horn Antenna	EMCO	3115	31589	2019/04/01	2020/03/31
Horn Antenna	EMCO	3115	31601	2019/10/07	2020/10/06
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200207	2019/04/12	2020/04/11
CAX Signal Analyzer	KEYSIGHT	N9000B	MY57100339	2018/11/20	2019/11/19
MXG Vector Signal Generator	KEYSIGHT	N5182A	MY50141551	2019/10/07	2020/10/06
N7607B Signal Studio	KEYSIGHT	v3.2.0.0	NA	NA	NA
InServiceMonitorUtility	Theda	v10.0.0.0	NA	NA	NA



4. Antenna Requirements

4.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.



4.2. Antenna Construction and Directional Gain

Antenna Type	FPCB Antenna
Antenna Gain	2412-2462MHz: ANT A: 3.55dBi, ANT B: 3.37dBi 5150-5250MHz: ANT A: 4.67dBi, ANT B: 2.49dBi 5250-5350MHz: ANT A: 3.97dBi, ANT B: 4.40dBi 5470-5725MHz: ANT A: 4.54dBi, ANT B: 5.00dBi 5725-5850MHz: ANT A: 4.20dBi, ANT B: 4.99dBi

(Non-Beamforming)

2412-2462MHz
For Power directional gain= $G_{ant} = 3.55$ dBi For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.47$ (dBi)
5150MHz-5250MHz
For Power directional gain= $G_{ant} = 4.67$ dBi For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.66$ (dBi)
5250MHz-5350MHz
For Power directional gain= $G_{ant} = 4.40$ dBi For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 7.20$ (dBi)
5470MHz-5725MHz
For Power directional gain= $G_{ant} = 5.00$ dBi For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 7.78$ (dBi)
5725MHz -5850MHz
For Power directional gain= $G_{ant} = 4.99$ dBi For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 7.61$ (dBi)

(Beamforming)

2412-2462MHz
For Power directional gain= $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.47$ (dBi) For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.47$ (dBi)
5150MHz -5250MHz
For Power directional gain= $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.66$ (dBi) For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.66$ (dBi)
5250MHz-5350MHz
For Power directional gain= $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 7.20$ (dBi) For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 7.20$ (dBi)
5470MHz-5725MHz
For Power directional gain= $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 7.78$ (dBi) For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 7.78$ (dBi)
5725MHz -5850MHz
For Power directional gain= $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 7.61$ (dBi) For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 7.61$ (dBi)



5. Dynamic Frequency Selection

5.1. List of Measurement and Examinations

EUT Applicability of DFS requirements and Frequency Range

Operation Mode		Operating Frequency Range	
		5250-5350MHz	5470-5725MHz (Support 5600MHz-5650MHz)
Master	√	√	√
Client without radar detection	--	--	--
Client with radar detection	--	--	--

DEVICES WITH RADAR DETECTION

MAXIMUM TRANSMIT POWER	VALUE (SEE Note 1 and 2)
≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 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.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911

Table1: Applicability of DFS requirements prior to use of a channel

REQUIREMENT RADAR	OPERATIONAL MODE		
	MASTER	CLIENT WITHOUT RADAR DETECTION	CLIENT WITH RADAR DETECTION
Non-Occupancy Period	V	V _{Note}	V
DFS Detection Threshold	V	Not required	V
Channel Availability Check Time	V	Not required	Not required
U-NII Detection Bandwidth	V	Not required	V

Note: Regarding KDB 905462 D03 Client Without DFS New Rules section (b)(5/6),

If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear. An analyzer plot that contains a single 30-minute sweep on the original channel.



Table2: Applicability of DFS requirements during normal operation

REQUIREMENT RADAR	OPERATIONAL MODE		
	MASTER	CLIENT WITHOUT RADAR DETECTION	CLIENT WITH RADAR DETECTION
DFS Detection Threshold	√	Not required	√
Channel Closing Transmission Time	√	√	√
Channel Move Time	√	√	√
U-NII Detection Bandwidth	√	Not required	√

Additional requirements for devices with multiple bandwidth modes	Master or Client with radar detection	Client without radar detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.



5.2. Test Setup

Setup for Master with injection at the Master

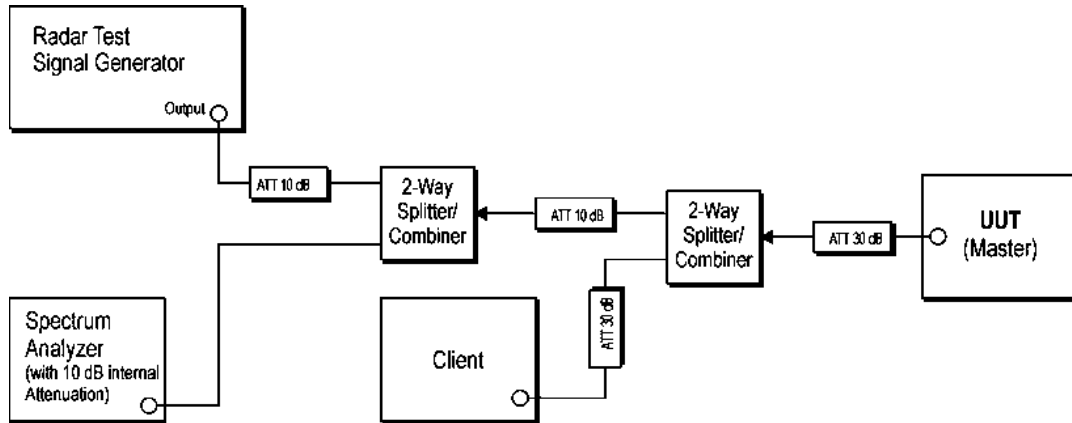


Figure 1: Example Conducted Setup where UUT is a Master and Radar Test Waveforms are injected into the Master

Setup for Client with injection at the Master

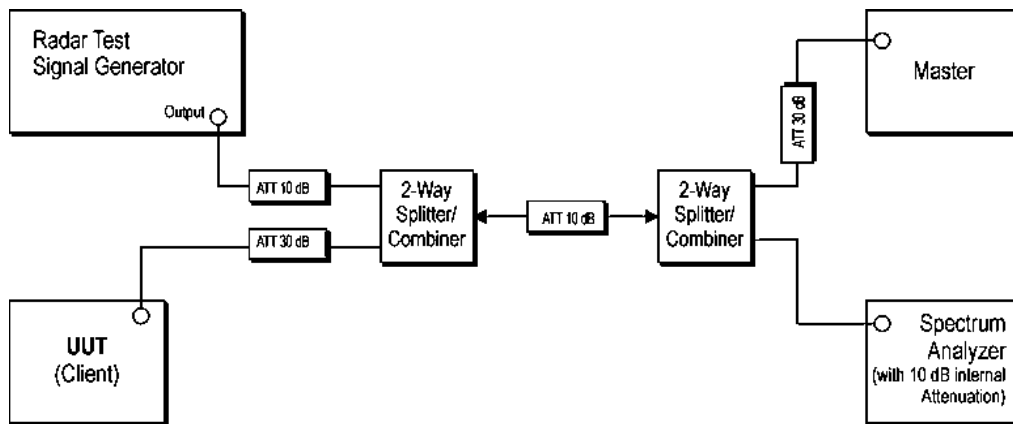


Figure 2: Example Conducted Setup where UUT is a Client and Radar Test Waveforms are injected into the Master



Setup for Client with injection at the Client

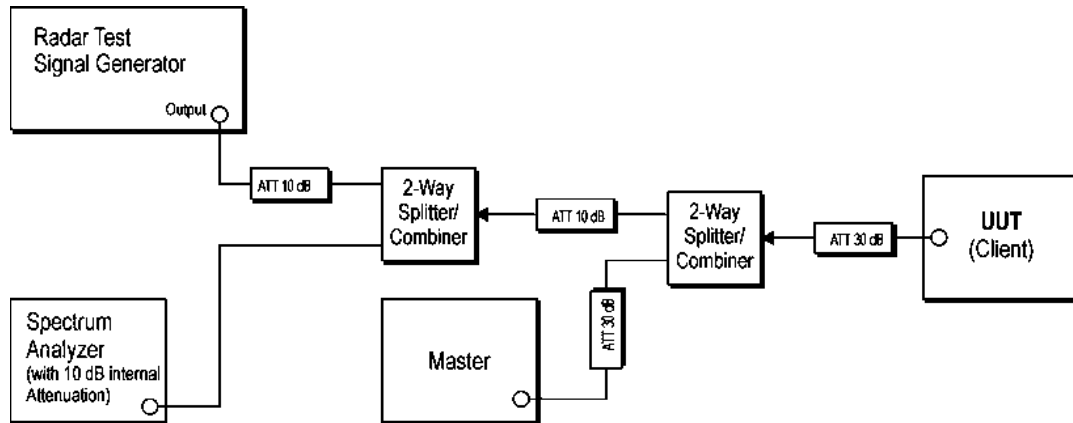


Figure 3: Example Conducted Setup where UUT is a Client and Radar Test Waveforms are injected into the Client



5.3. DFS Detection Threshold

DFS Detection Threshold is the level used by the DFS mechanism to detect radar interference.

5.3.1. Test Limit

Limits Clause 4.7.2.1.2

DFS Detection Thresholds for Master Devices and Client Devices with Radar

Detection

MAXIMUM TRANSMIT POWER	VALUE (SEE Note 1 and 2)
≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 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.
 Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911

Max. output power	Non-Beamforming
	Band: 5250MHz ~ 5350MHz
	802.11a: 20.81dBm
	802.11n HT20: 21.25dBm
	802.11n HT40: 23.48dBm
	802.11ac VHT20: 21.29dBm
	802.11ac VHT40: 23.53dBm
	802.11ac VHT80: 19.29dBm
	Band: 5470MHz ~ 5725MHz
	802.11a: 19.84dBm
	802.11n HT20: 20.28dBm
	802.11n HT40: 22.07dBm
	802.11ac VHT20: 20.31dBm
	802.11ac VHT40: 22.10dBm
802.11ac VHT80: 21.99Bm	



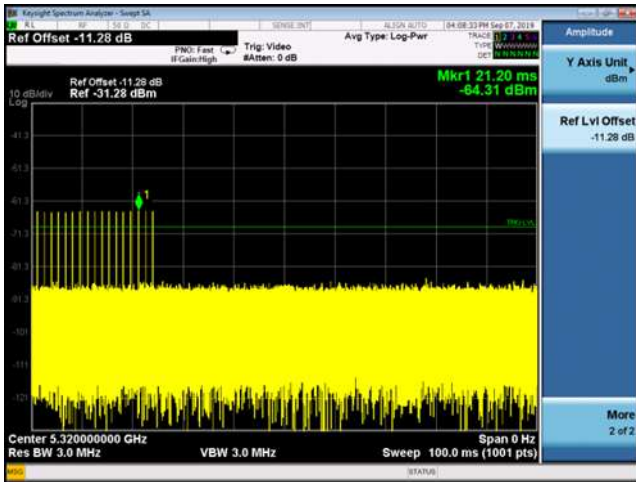
5.3.2. Test Result of DFS Detection Threshold

EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz, The device installed with 2*Tx and 2*Rx antenna delivery. Antenna corresponding gains are 0dBi for 5GHz. 0dBi gain was used to set the -62dBm threshold level during calibration of the test setup.
Radar VALUE -62dBm

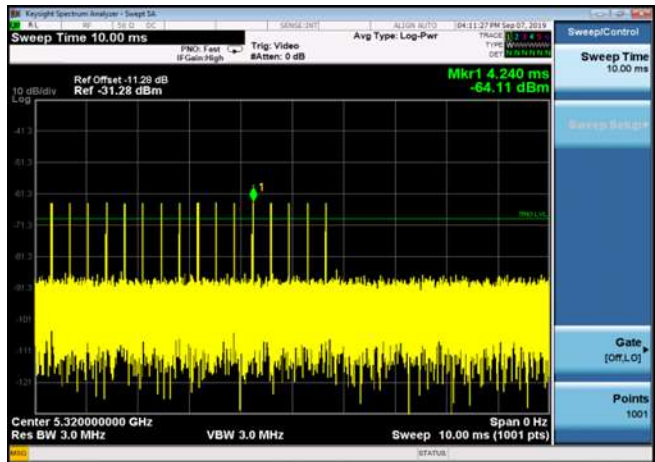


(Master)

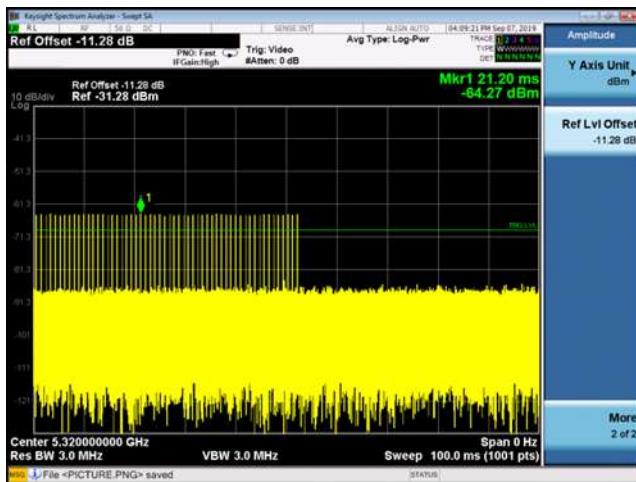
Radar Type 0 Calibration Plot



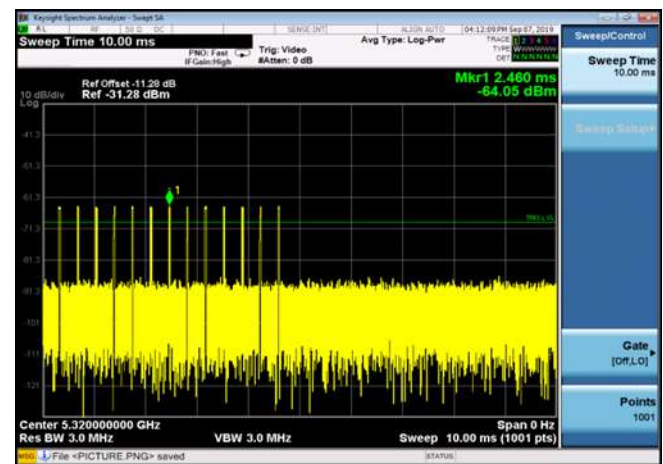
Radar Type 3 Calibration Plot



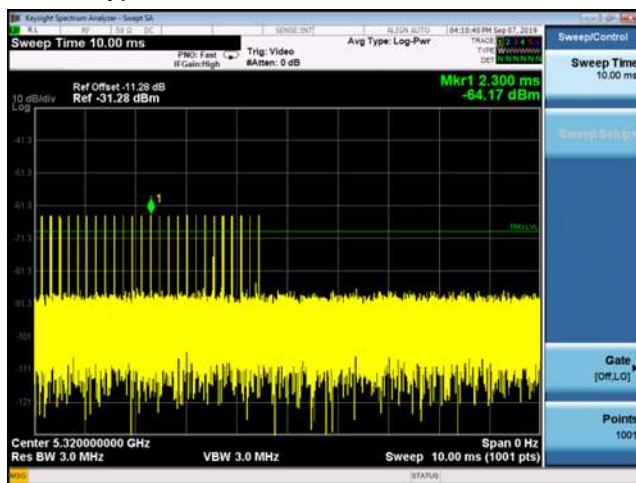
Radar Type 1 Calibration Plot



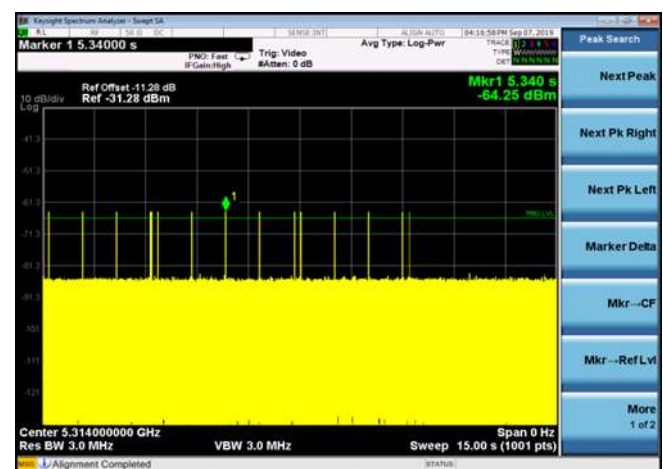
Radar Type 4 Calibration Plot



Radar Type 2 Calibration Plot

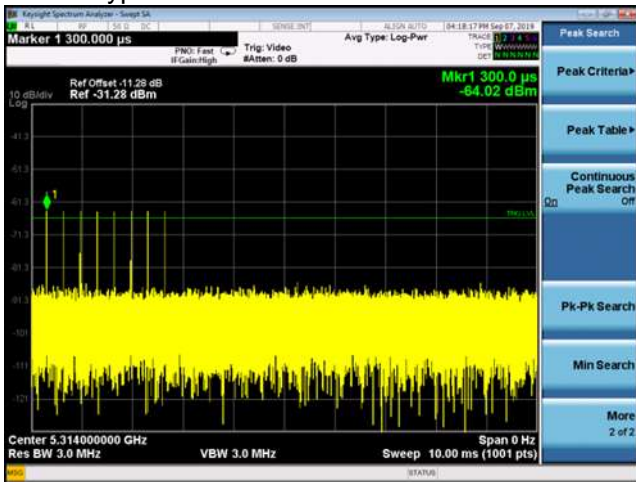


Radar Type 5 Calibration Plot





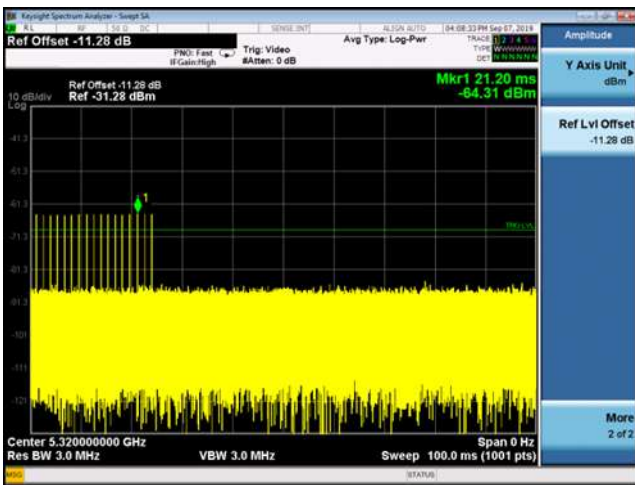
Radar Type 6 Calibration Plot



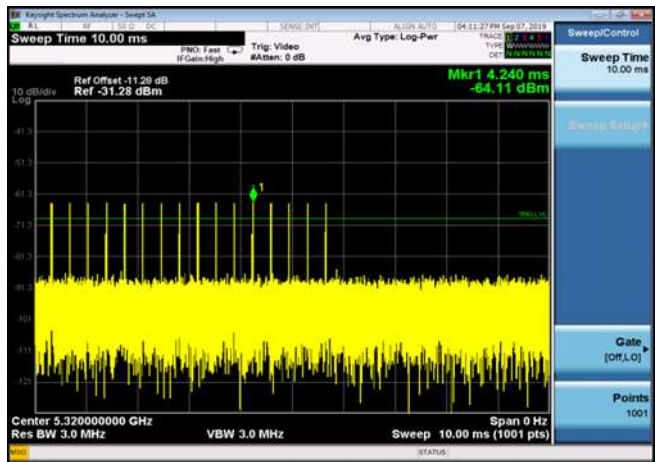


(Repeater)

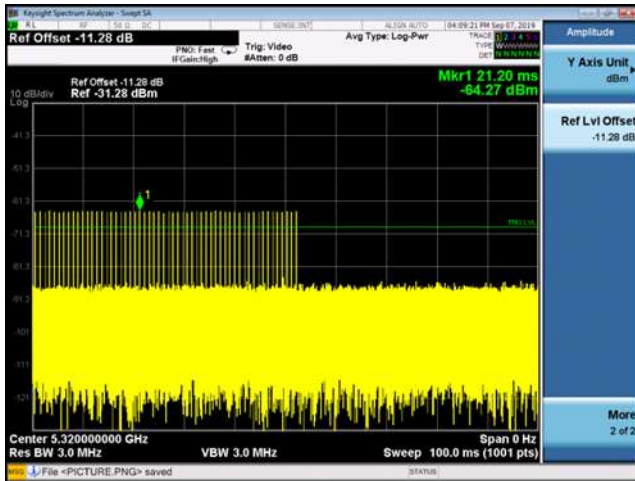
Radar Type 0 Calibration Plot



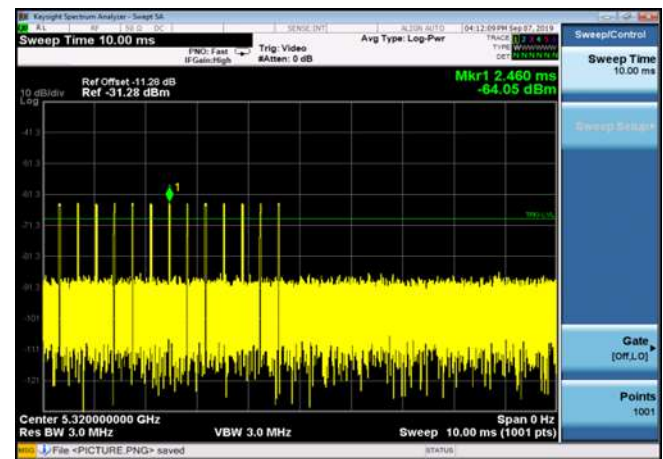
Radar Type 3 Calibration Plot



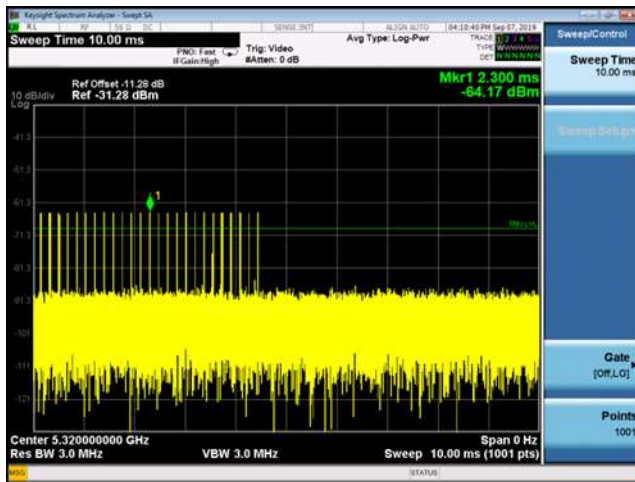
Radar Type 1 Calibration Plot



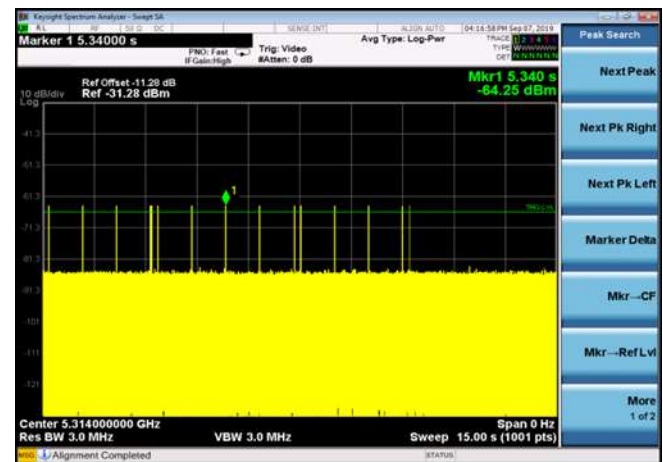
Radar Type 4 Calibration Plot



Radar Type 2 Calibration Plot

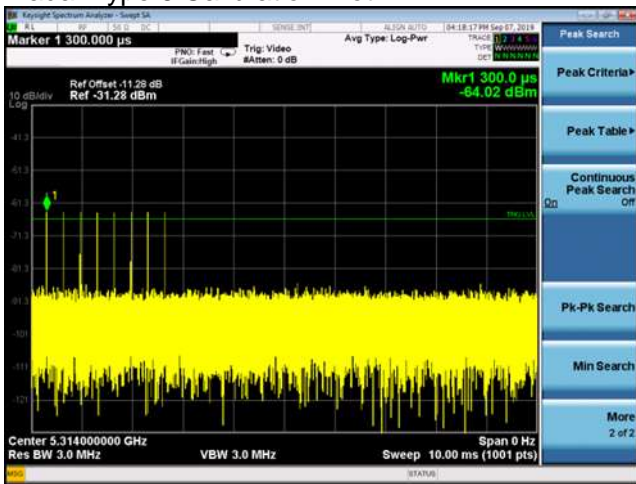


Radar Type 5 Calibration Plot





Radar Type 6 Calibration Plot





5.4. Channel Availability Check Time

The Channel Availability Check is defined as the mechanism by which an RLAN device checks a channel for the presence of radar signals.

There shall be no transmissions by the device within the channel being checked during this process. If no radars have been detected, the channel becomes an Available Channel valid for a period of time.

The RLAN shall only start transmissions on Available Channels.

At power-up, the RLAN is assumed to have no Available Channels.

5.4.1. Test Limit

Limits Clause 4.7.2.1.2

Table D.2: DFS requirement values

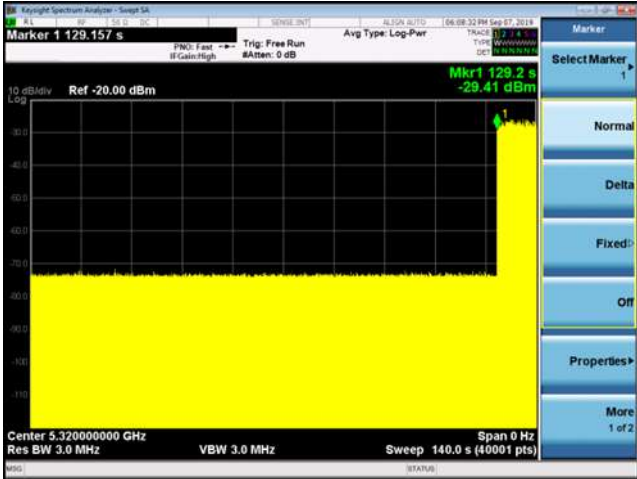
Parameter	Value
Channel Availability Check	> 60s



5.4.2. Test Result of Channel Availability Check

(Master)

Modulation Standard: 802.11ac VHT20

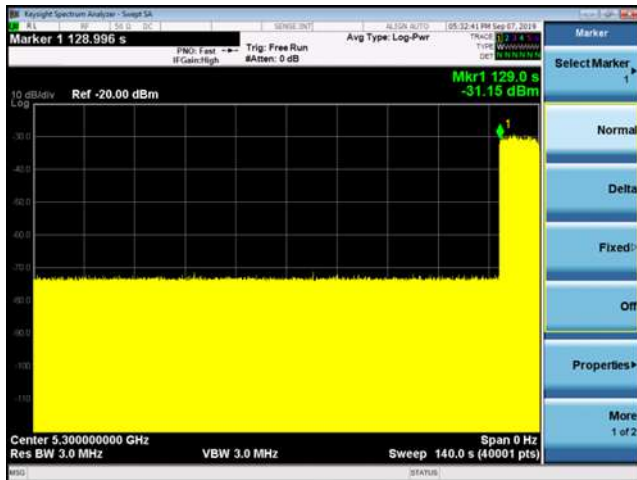


(Repeater)

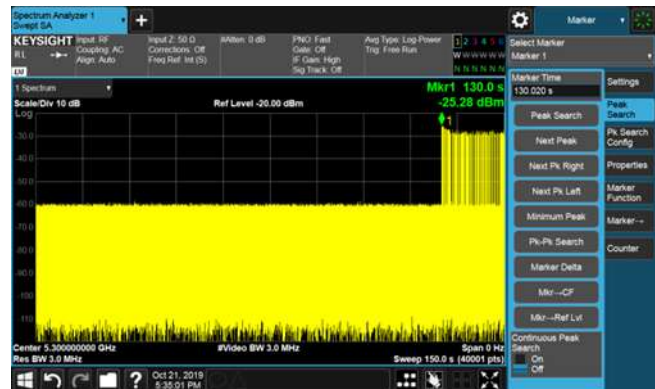
Modulation Standard: 802.11ac VHT20



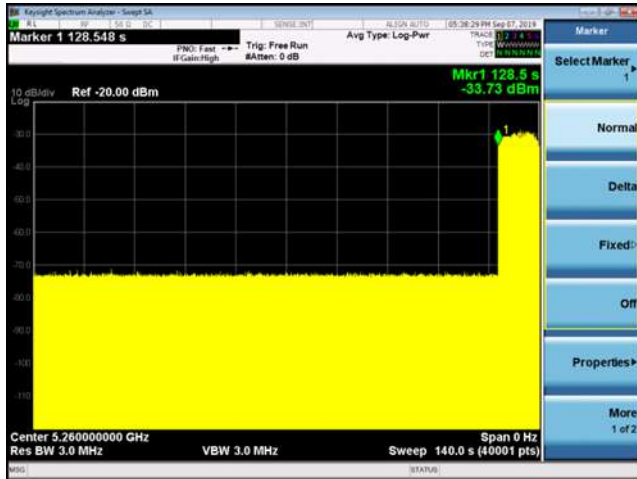
Modulation Standard: 802.11ac VHT40



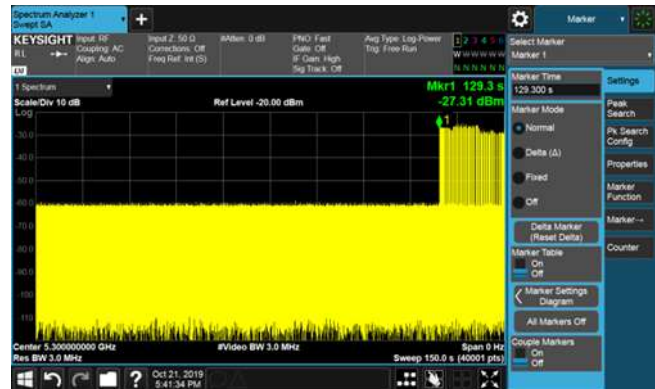
Modulation Standard: 802.11ac VHT40



Modulation Standard: 802.11ac VHT80



Modulation Standard: 802.11ac VHT80





5.5. Radar Burst at the Beginning of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the test Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time. This is illustrated in **Figure 15**.

- a) The Radar Waveform generator and UUT are connected using the applicable test setup described in the sections on configuration for Conducted Tests or Radiated Tests and the power of the UUT is switched off.
- b) The UUT is powered on at T₀. T₁ denotes the instant when the UUT has completed its power-up sequence (T_{power_up}). The Channel Availability Check Time commences on Chr at instant T₁ and will end no sooner than T₁ + T_{ch_avail_check}.
- c) A single Burst of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at T₁. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- d) Visual indication or measured results on the UUT of successful detection of the radar

Burst

will be recorded and reported. Observation of Chr for UUT emissions will continue for 2.5 minutes after the radar Burst has been generated.

on

- e) Verify that during the 2.5 minute measurement window no UUT transmissions occurred on Chr. The Channel Availability Check results will be recorded.

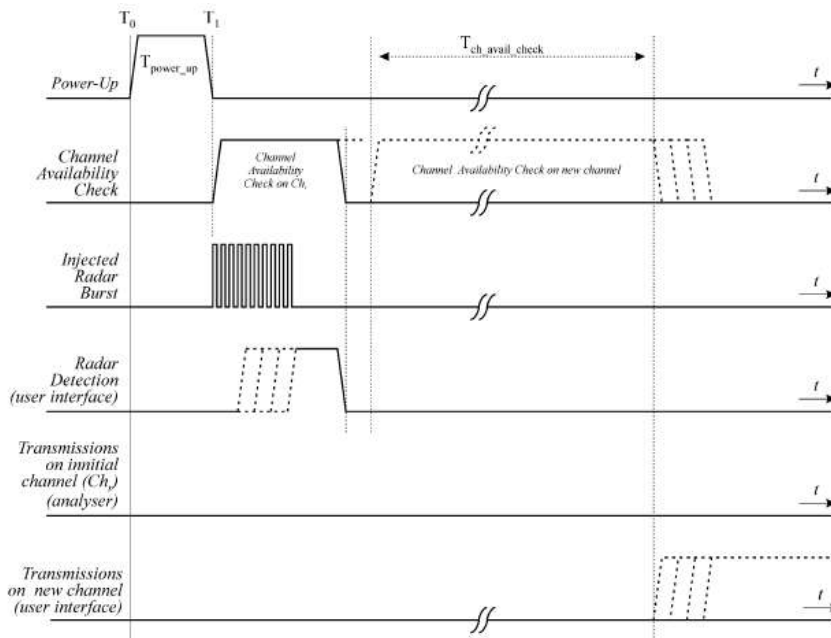


Figure 15: Example of timing for radar testing at the beginning of the Channel Availability Check Time



5.5.1. Test Result of radar burst at the beginning of the Channel Availability Check Time

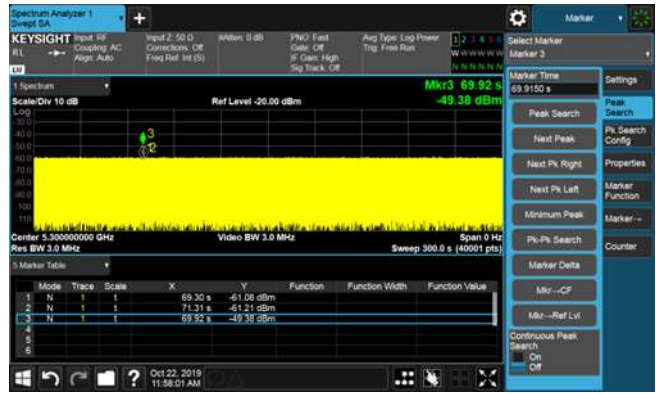
(Master)

Modulation Standard: 802.11ac VHT80, 5260MHz

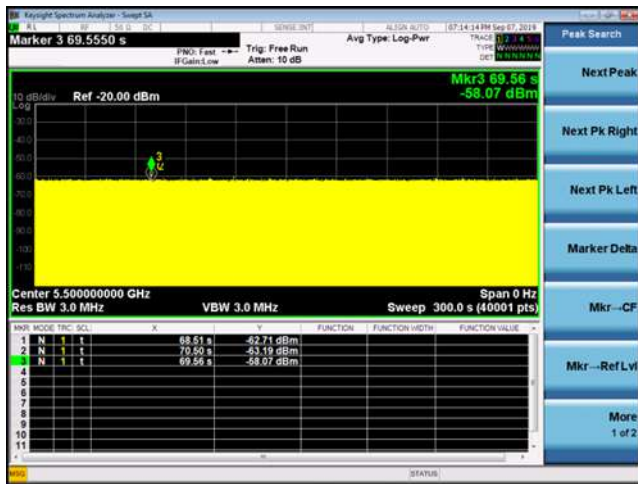


(Repeater)

Modulation Standard: 802.11ac VHT80, 5300MHz



Modulation Standard: 802.11ac VHT80, 5500MHz



Modulation Standard: 802.11ac VHT80, 5500MHz





5.6. Radar Burst at the End of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the test Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1dB occurs at the end of the Channel Availability Check Time. This is illustrated in **Figure 16**.

- a) The Radar Waveform generator and UUT are connected using the applicable test setup described in the sections for Conducted Tests or Radiated Tests and the power of the UUT is switched off.
- b) The UUT is powered on at T_0 . T_1 denotes the instant when the UUT has completed its power-up sequence (T_{power_up}). The Channel Availability Check Time commences on Chr at instant T_1 and will end no sooner than $T_1 + T_{ch_avail_check}$.
- c) A single Burst of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at $T_1 + 54$ seconds. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- d) Visual indication or measured results on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of Chr for UUT emissions will continue for 2.5 minutes after the radar Burst has been generated.
- e) Verify that during the 2.5 minute measurement window no UUT transmissions occurred on Chr. The Channel Availability Check results will be recorded.

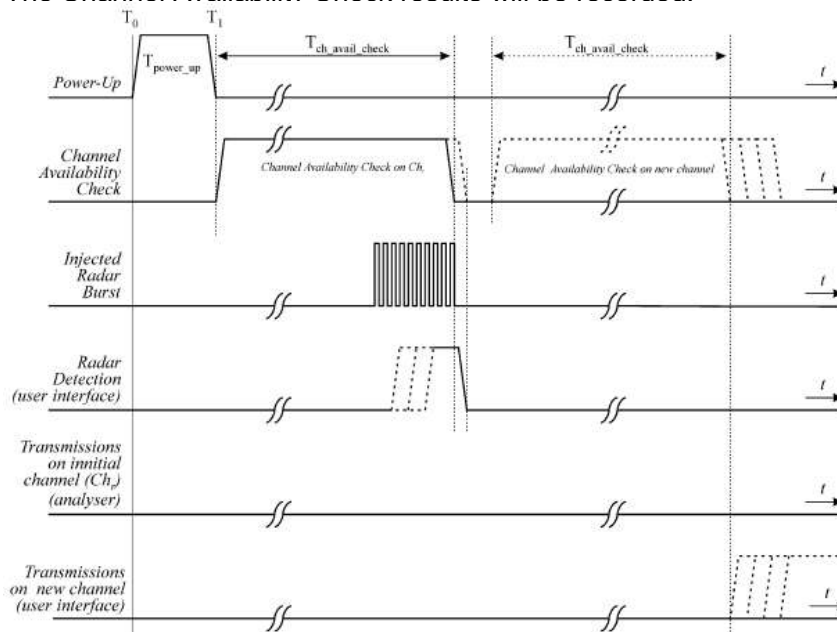


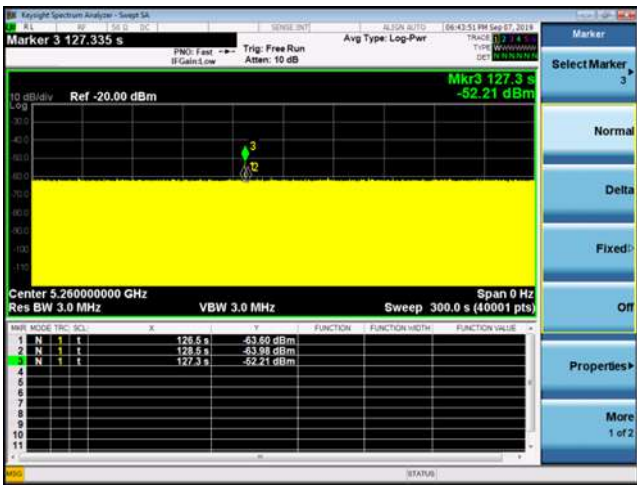
Figure 16: Example of timing for radar testing towards the end of the Channel Availability Check Time



5.6.1. Test Result of radar burst at the end of the Channel Availability Check Time

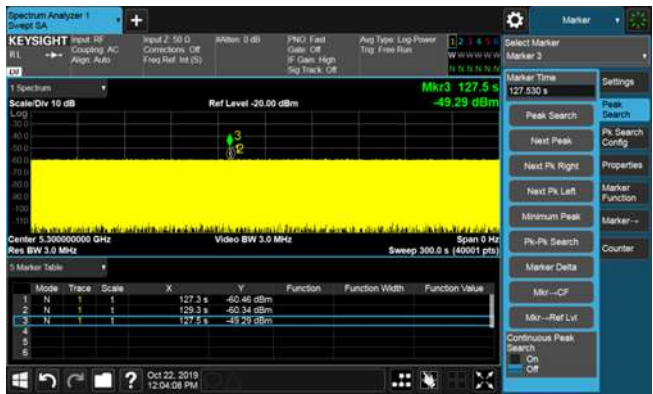
(Master)

Modulation Standard: 802.11ac VHT80, 5260MHz

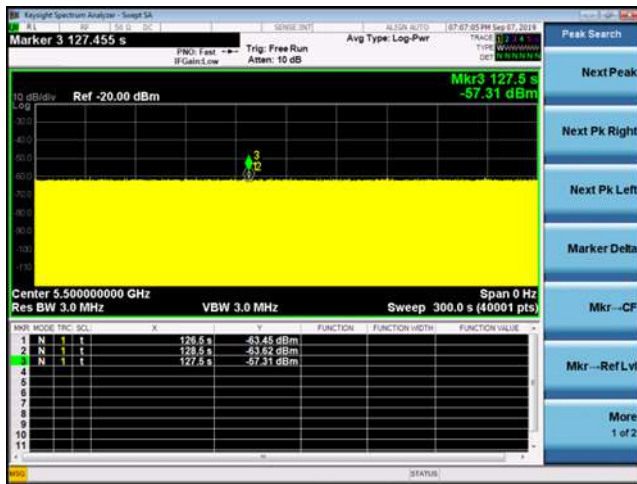


(Repeater)

Modulation Standard: 802.11ac VHT80, 5300MHz



Modulation Standard: 802.11ac VHT80, 5500MHz



Modulation Standard: 802.11ac VHT80, 5500MHz





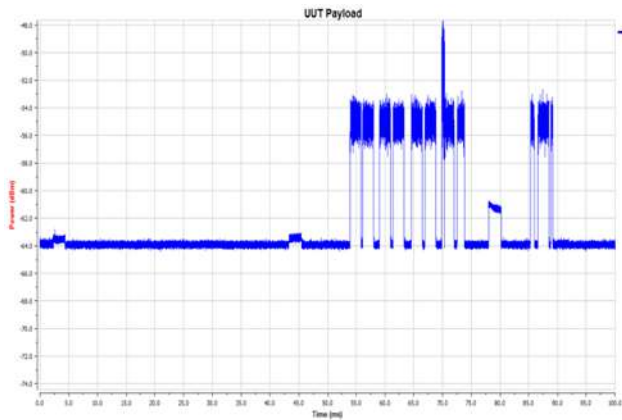
5.7. Channel Loading

Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater. For example, channel loading can be estimated by setting the spectrum analyzer for zero span and approximate the Time On/ (Time On + Off Time). This can be done with any appropriate channel BW and modulation type



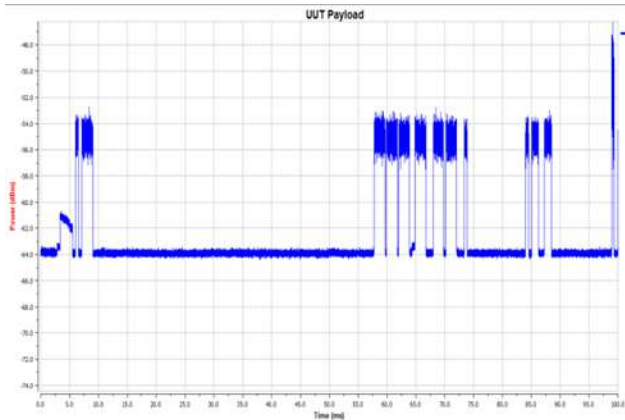
(Master)

5320MHz, 802.11ac VHT20, Band 2
Time On/ (Time On + Off Time) =17.83%



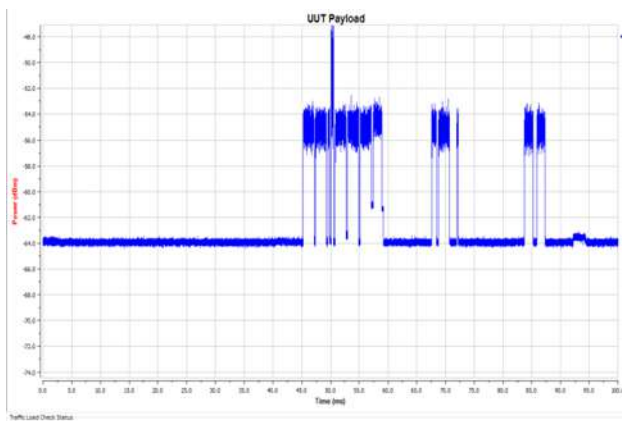
Traffic Load Check Status
Duty Cycle (%) : 17.83

5500MHz, 802.11ac VHT20, Band 3
Time On/ (Time On + Off Time) =17.72%



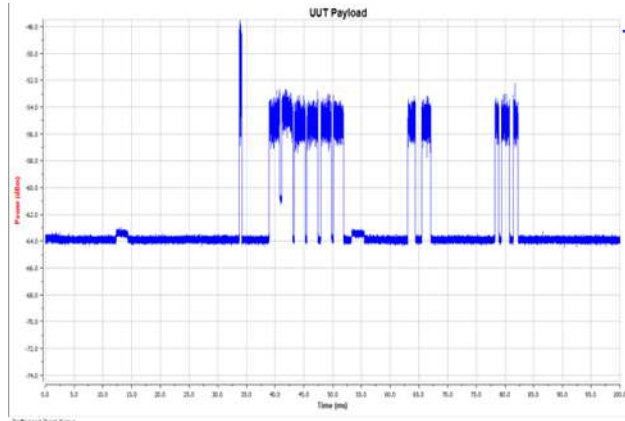
Traffic Load Check Status
Duty Cycle (%) : 17.72

5310MHz, 802.11ac VHT40, Band 2
Time On/ (Time On + Off Time) =17.72%



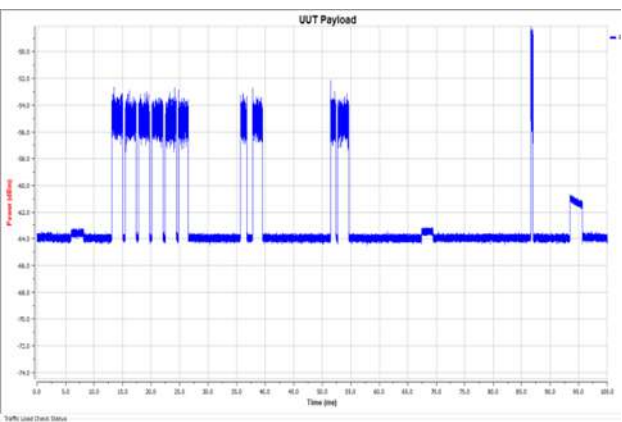
Traffic Load Check Status
Duty Cycle (%) : 17.72

5510MHz, 802.11ac VHT40, Band 3
Time On/ (Time On + Off Time) =17.67%



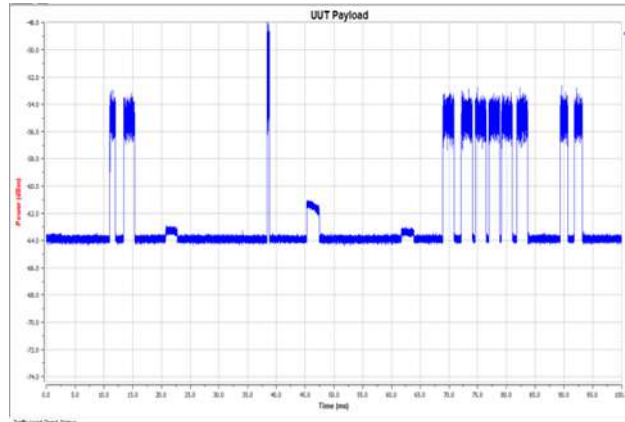
Traffic Load Check Status
Duty Cycle (%) : 17.67

5290MHz, 802.11ac VHT80, Band 2
Time On/ (Time On + Off Time) =17.63%



Traffic Load Check Status
Duty Cycle (%) : 17.63

5530MHz, 802.11ac VHT80, Band 3
Time On/ (Time On + Off Time) =17.63%

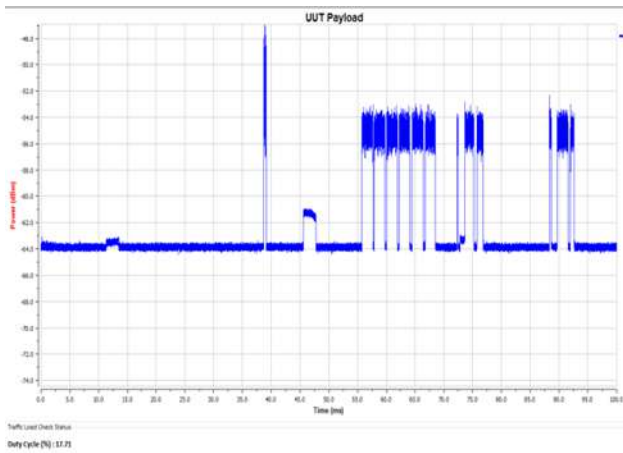


Traffic Load Check Status
Duty Cycle (%) : 17.63

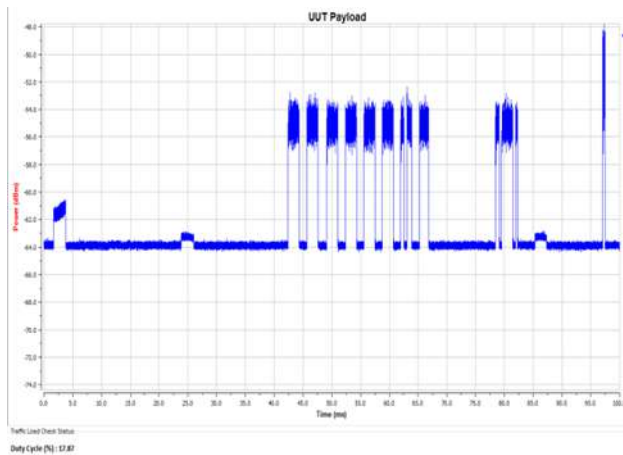


(Master)

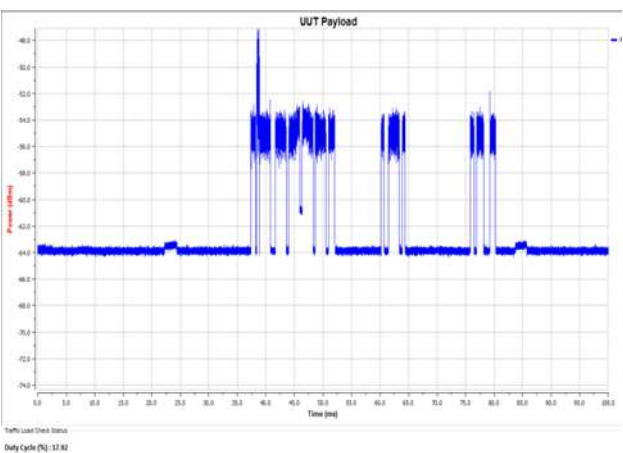
5600MHz, 802.11ac VHT20, TDWR Band
Time On/ (Time On + Off Time) =17.71%



5590MHz, 802.11ac VHT40, TDWR Band
Time On/ (Time On + Off Time) =17.87%



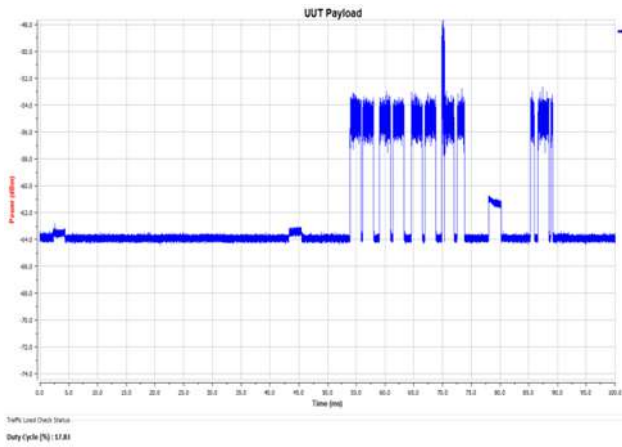
5610MHz, 802.11ac VHT80, TDWR Band
Time On/ (Time On + Off Time) =17.92%



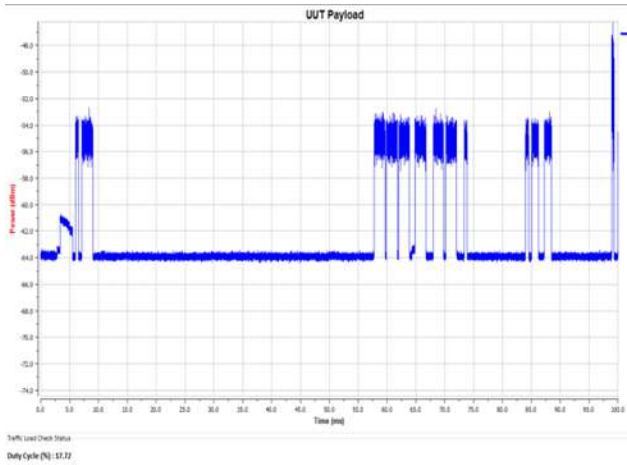


(Repeater)

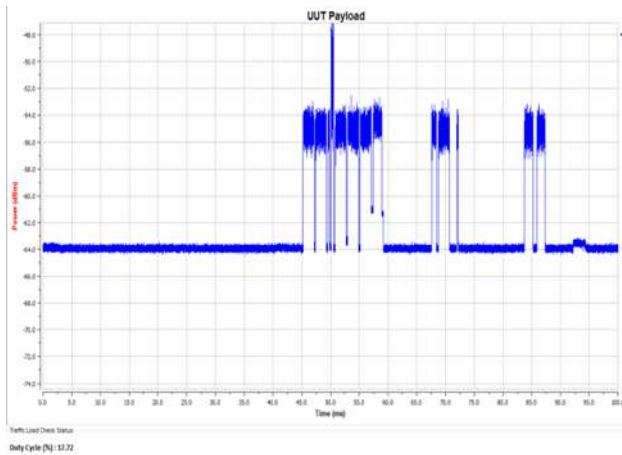
5320MHz, 802.11ac VHT20, Band 2
Time On/ (Time On + Off Time) =17.83%



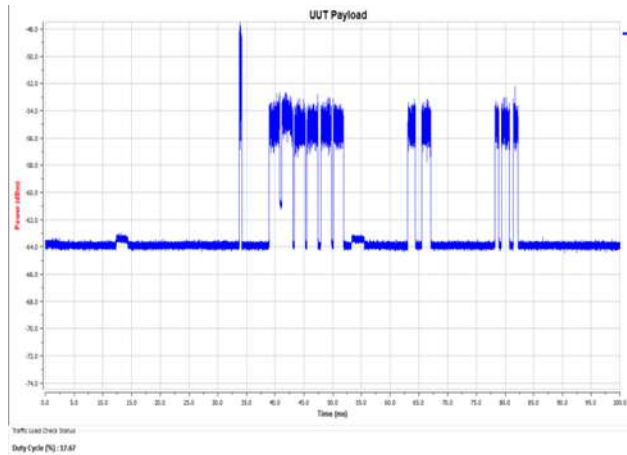
5500MHz, 802.11ac VHT20, Band 3
Time On/ (Time On + Off Time) =17.72%



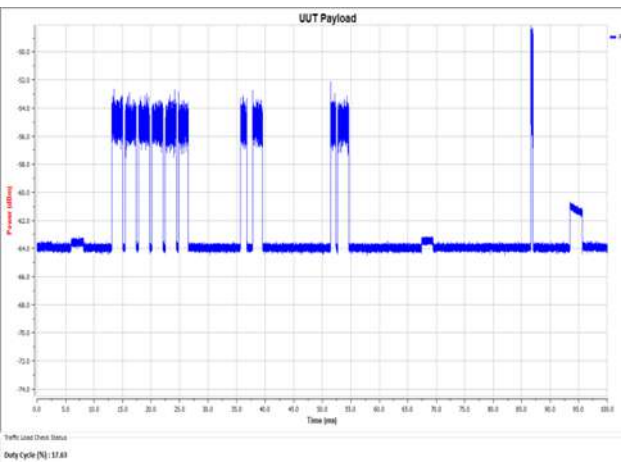
5310MHz, 802.11ac VHT40, Band 2
Time On/ (Time On + Off Time) =17.72%



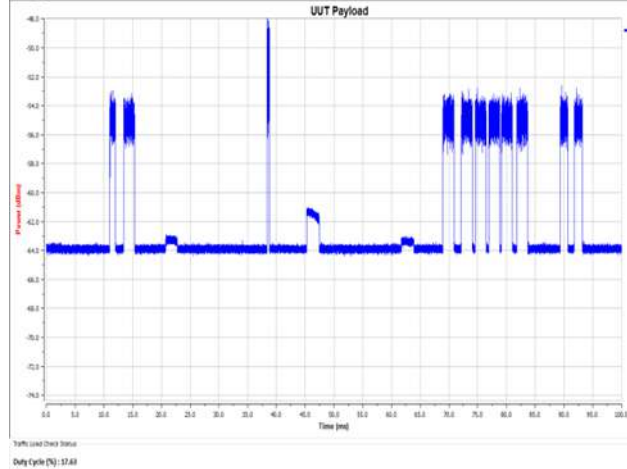
5510MHz, 802.11ac VHT40, Band 3
Time On/ (Time On + Off Time) =17.67%



5290MHz, 802.11ac VHT80, Band 2
Time On/ (Time On + Off Time) =17.63%



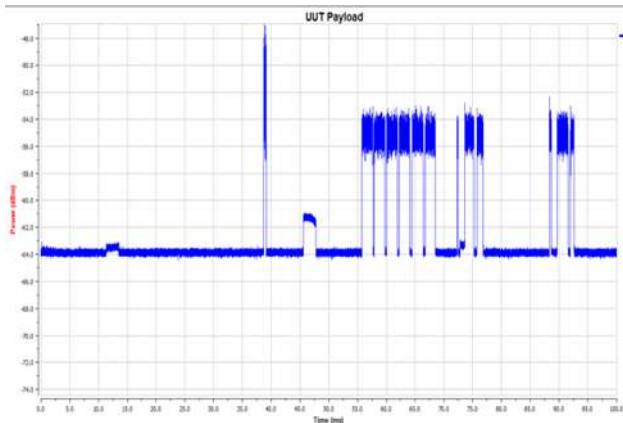
5530MHz, 802.11ac VHT80, Band 3
Time On/ (Time On + Off Time) =17.63%





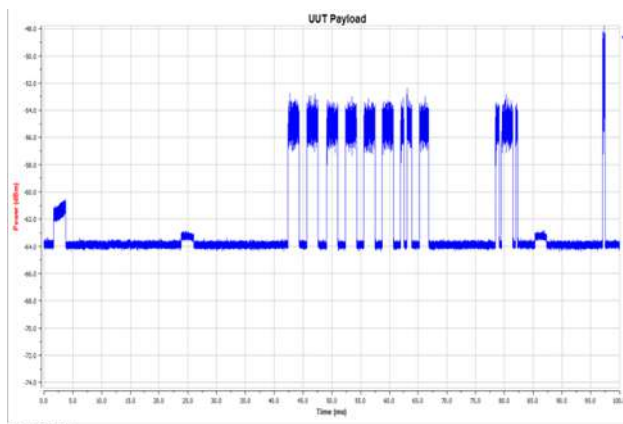
(Repeater)

5600MHz, 802.11ac VHT20, TDWR Band
Time On/ (Time On + Off Time) =17.71%



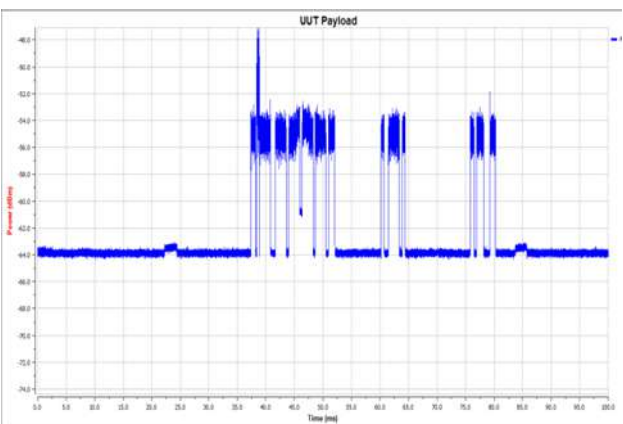
Traffic Load Check Status
Duty Cycle (%) : 17.71

5590MHz, 802.11ac VHT40, TDWR Band
Time On/ (Time On + Off Time) =17.87%



Traffic Load Check Status
Duty Cycle (%) : 17.87

5610MHz, 802.11ac VHT80, TDWR Band
Time On/ (Time On + Off Time) =17.92%



Traffic Load Check Status
Duty Cycle (%) : 17.92



5.8. U-NII Detection Bandwidth

Additional requirements for devices with multiple bandwidth modes	Master or Client with radar detection	Client without radar detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

5.8.1. Test Limit

Limits Clause 4.7.2.1.2 Table D.2: DFS requirement values

Parameter	Value
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission
Note : During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	



5.8.2. Test Result of U-NII Detection Bandwidth

(Master)

20 MHz Signal Bandwidth											
EUT Frequency = 5320MHz											
Radar	DFS Detection Trials (1=Detection, Blank= No Detection)										
Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5310(FL)	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329	1	1	1	1	1	1	1	1	1	1	100%
5330(FH)	1	1	1	1	1	1	1	1	1	1	100%
20 MHz Detection Bandwidth = Fh - Fl = 5330MHz - 5310MHz = 20MHz											
EUT 99% Bandwidth = 18.31MHz											



20 MHz Signal Bandwidth											
EUT Frequency = 5500MHz											
Radar	DFS Detection Trials (1=Detection, Blank= No Detection)										
Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5490(FL)	1	1	1	1	1	1	1	1	1	1	100%
5491	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510(FH)	1	1	1	1	1	1	1	1	1	1	100%
20 MHz Detection Bandwidth = Fh - Fl = 5510MHz - 5490MHz = 20MHz											
EUT 99% Bandwidth = 18.31MHz											



40 MHz Signal Bandwidth											
EUT Frequency = 5310MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5291(F.L)	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%



40 MHz Signal Bandwidth											
EUT Frequency = 5310MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329(FH)	1	1	1	1	1	1	1	1	1	1	100%
40 MHz Detection Bandwidth = Fh - Fl = 5329MHz - 5291MHz = 38MHz											
EUT 99% Bandwidth = 36.421MHz											



40 MHz Signal Bandwidth											
EUT Frequency = 5510MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5491(FL)	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%
5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%



40 MHz Signal Bandwidth											
EUT Frequency = 5510MHz											
Radar	DFS Detection Trials (1=Detection, Blank= No Detection)										
Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529(FH)	1	1	1	1	1	1	1	1	1	1	100%
40 MHz Detection Bandwidth = $F_h - F_l = 5529\text{MHz} - 5491\text{MHz} = 38\text{MHz}$											
EUT 99% Bandwidth = 36.421MHz											



80 MHz Signal Bandwidth											
EUT Frequency = 5290MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5253(FL)	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5256	1	1	1	1	1	1	1	1	1	1	100%
5257	1	1	1	1	1	1	1	1	1	1	100%
5258	1	1	1	1	1	1	1	1	1	1	100%
5259	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5261	1	1	1	1	1	1	1	1	1	1	100%
5262	1	1	1	1	1	1	1	1	1	1	100%
5263	1	1	1	1	1	1	1	1	1	1	100%
5264	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5266	1	1	1	1	1	1	1	1	1	1	100%
5267	1	1	1	1	1	1	1	1	1	1	100%
5268	1	1	1	1	1	1	1	1	1	1	100%
5269	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5271	1	1	1	1	1	1	1	1	1	1	100%
5272	1	1	1	1	1	1	1	1	1	1	100%
5273	1	1	1	1	1	1	1	1	1	1	100%
5274	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5276	1	1	1	1	1	1	1	1	1	1	100%
5277	1	1	1	1	1	1	1	1	1	1	100%
5278	1	1	1	1	1	1	1	1	1	1	100%
5279	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5281	1	1	1	1	1	1	1	1	1	1	100%
5282	1	1	1	1	1	1	1	1	1	1	100%
5283	1	1	1	1	1	1	1	1	1	1	100%
5284	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5286	1	1	1	1	1	1	1	1	1	1	100%
5287	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5290MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5288	1	1	1	1	1	1	1	1	1	1	100%
5289	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5291	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5290MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327(FH)	1	1	1	1	1	1	1	1	1	1	100%
80 MHz Detection Bandwidth = $F_h - F_l = 5327\text{MHz} - 5253\text{MHz} = 74\text{MHz}$											
EUT 99% Bandwidth = 73.994MHz											



80 MHz Signal Bandwidth											
EUT Frequency = 5530MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5493(FL)	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%
5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5530MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5528	1	1	1	1	1	1	1	1	1	1	100%
5529	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5531	1	1	1	1	1	1	1	1	1	1	100%
5532	1	1	1	1	1	1	1	1	1	1	100%
5533	1	1	1	1	1	1	1	1	1	1	100%
5534	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5536	1	1	1	1	1	1	1	1	1	1	100%
5537	1	1	1	1	1	1	1	1	1	1	100%
5538	1	1	1	1	1	1	1	1	1	1	100%
5539	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5541	1	1	1	1	1	1	1	1	1	1	100%
5542	1	1	1	1	1	1	1	1	1	1	100%
5543	1	1	1	1	1	1	1	1	1	1	100%
5544	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5546	1	1	1	1	1	1	1	1	1	1	100%
5547	1	1	1	1	1	1	1	1	1	1	100%
5548	1	1	1	1	1	1	1	1	1	1	100%
5549	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5551	1	1	1	1	1	1	1	1	1	1	100%
5552	1	1	1	1	1	1	1	1	1	1	100%
5553	1	1	1	1	1	1	1	1	1	1	100%
5554	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5556	1	1	1	1	1	1	1	1	1	1	100%
5557	1	1	1	1	1	1	1	1	1	1	100%
5558	1	1	1	1	1	1	1	1	1	1	100%
5559	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5561	1	1	1	1	1	1	1	1	1	1	100%
5562	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5530MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5563	1	1	1	1	1	1	1	1	1	1	100%
5564	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567(FH)	1	1	1	1	1	1	1	1	1	1	100%
80 MHz Detection Bandwidth = $F_h - F_l = 5567\text{MHz} - 5493\text{MHz} = 74\text{MHz}$											
EUT 99% Bandwidth = 73.994MHz											



(Repeater)

20 MHz Signal Bandwidth											
EUT Frequency = 5320MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5310(FL)	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329	1	1	1	1	1	1	1	1	1	1	100%
5330(FH)	1	1	1	1	1	1	1	1	1	1	100%
20 MHz Detection Bandwidth = Fh - Fl = 5330MHz - 5310MHz = 20MHz											
EUT 99% Bandwidth = 18.31MHz											



20 MHz Signal Bandwidth											
EUT Frequency = 5500MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490(FL)	1	1	1	1	1	1	1	1	1	1	100%
5491	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510(FH)	1	1	1	1	1	1	1	1	1	1	100%
20 MHz Detection Bandwidth = Fh - Fl = 5510MHz - 5490MHz = 20MHz											
EUT 99% Bandwidth = 18.31MHz											



40 MHz Signal Bandwidth											
EUT Frequency = 5310MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5291(F.L)	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%



40 MHz Signal Bandwidth											
EUT Frequency = 5310MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329(FH)	1	1	1	1	1	1	1	1	1	1	100%
40 MHz Detection Bandwidth = Fh - Fl = 5329MHz - 5291MHz = 38MHz											
EUT 99% Bandwidth = 36.421MHz											



40 MHz Signal Bandwidth											
EUT Frequency = 5510MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5491(FL)	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%
5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%



40 MHz Signal Bandwidth											
EUT Frequency = 5510MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529(FH)	1	1	1	1	1	1	1	1	1	1	100%
40 MHz Detection Bandwidth = $F_h - F_l = 5529\text{MHz} - 5491\text{MHz} = 38\text{MHz}$											
EUT 99% Bandwidth = 36.421MHz											



80 MHz Signal Bandwidth											
EUT Frequency = 5290MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5253(FL)	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5256	1	1	1	1	1	1	1	1	1	1	100%
5257	1	1	1	1	1	1	1	1	1	1	100%
5258	1	1	1	1	1	1	1	1	1	1	100%
5259	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5261	1	1	1	1	1	1	1	1	1	1	100%
5262	1	1	1	1	1	1	1	1	1	1	100%
5263	1	1	1	1	1	1	1	1	1	1	100%
5264	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5266	1	1	1	1	1	1	1	1	1	1	100%
5267	1	1	1	1	1	1	1	1	1	1	100%
5268	1	1	1	1	1	1	1	1	1	1	100%
5269	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5271	1	1	1	1	1	1	1	1	1	1	100%
5272	1	1	1	1	1	1	1	1	1	1	100%
5273	1	1	1	1	1	1	1	1	1	1	100%
5274	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5276	1	1	1	1	1	1	1	1	1	1	100%
5277	1	1	1	1	1	1	1	1	1	1	100%
5278	1	1	1	1	1	1	1	1	1	1	100%
5279	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5281	1	1	1	1	1	1	1	1	1	1	100%
5282	1	1	1	1	1	1	1	1	1	1	100%
5283	1	1	1	1	1	1	1	1	1	1	100%
5284	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5290MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5286	1	1	1	1	1	1	1	1	1	1	100%
5287	1	1	1	1	1	1	1	1	1	1	100%
5288	1	1	1	1	1	1	1	1	1	1	100%
5289	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5291	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5290MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327(FH)	1	1	1	1	1	1	1	1	1	1	100%
80 MHz Detection Bandwidth = Fh - Fl = 5327MHz - 5253MHz = 74MHz											
EUT 99% Bandwidth = 73.994MHz											



80 MHz Signal Bandwidth											
EUT Frequency = 5530MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5493(FL)	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%
5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5530MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5531	1	1	1	1	1	1	1	1	1	1	100%
5532	1	1	1	1	1	1	1	1	1	1	100%
5533	1	1	1	1	1	1	1	1	1	1	100%
5534	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5536	1	1	1	1	1	1	1	1	1	1	100%
5537	1	1	1	1	1	1	1	1	1	1	100%
5538	1	1	1	1	1	1	1	1	1	1	100%
5539	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5541	1	1	1	1	1	1	1	1	1	1	100%
5542	1	1	1	1	1	1	1	1	1	1	100%
5543	1	1	1	1	1	1	1	1	1	1	100%
5544	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5546	1	1	1	1	1	1	1	1	1	1	100%
5547	1	1	1	1	1	1	1	1	1	1	100%
5548	1	1	1	1	1	1	1	1	1	1	100%
5549	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5551	1	1	1	1	1	1	1	1	1	1	100%
5552	1	1	1	1	1	1	1	1	1	1	100%
5553	1	1	1	1	1	1	1	1	1	1	100%
5554	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5556	1	1	1	1	1	1	1	1	1	1	100%
5557	1	1	1	1	1	1	1	1	1	1	100%
5558	1	1	1	1	1	1	1	1	1	1	100%
5559	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%



80 MHz Signal Bandwidth											
EUT Frequency = 5530MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5561	1	1	1	1	1	1	1	1	1	1	100%
5562	1	1	1	1	1	1	1	1	1	1	100%
5563	1	1	1	1	1	1	1	1	1	1	100%
5564	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567(FH)	1	1	1	1	1	1	1	1	1	1	100%
80 MHz Detection Bandwidth = Fh - Fl = 5567MHz - 5493MHz = 74MHz											
EUT 99% Bandwidth = 73.994MHz											



5.9. Statistical Performance Check

Additional requirements for devices with multiple bandwidth modes	Master or Client with radar detection	Client without radar detection
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		



5.9.1. Test Result of Uniform Spreading

For 802.11ac VHT20, Band 2

(Master)

Type 1 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRF (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	938	57	53466	0
2	1	698	76	53048	1
3	1	618	86	53148	1
4	1	538	99	53262	1
5	1	878	61	53558	1
6	1	3066	18	55188	1
7	1	638	83	52954	1
8	1	918	58	53244	1
9	1	838	63	52794	1
10	1	858	62	53196	1
11	1	798	67	53466	1
12	1	718	74	53132	1
13	1	578	92	53176	1
14	1	598	89	53222	1
15	1	558	95	53010	1
16	1	2536	21	53256	1
17	1	966	55	53130	1
18	1	827	64	52928	1
19	1	2501	22	55022	1
20	1	2595	21	54495	1
21	1	1114	48	53472	1
22	1	1302	41	53382	1
23	1	3045	18	54810	1
24	1	1624	33	53592	1
25	1	2878	19	54682	1
26	1	1027	52	53404	1
27	1	2485	22	54670	0
28	1	1600	33	52800	1
29	1	1172	46	53912	1
30	1	1177	45	52965	1
Detection Percentage				Limit >60%	93%



Type 2 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	3.2	179	26	4654	0
2	1.1	207	23	4761	1
3	2.1	230	24	5520	1
4	4.8	200	29	5800	1
5	3.9	214	28	5992	1
6	2.9	222	26	5772	1
7	3.2	204	26	5304	1
8	2.5	192	25	4800	1
9	3.1	164	26	4264	1
10	1.2	156	23	3588	1
11	3.9	210	27	5670	1
12	4.6	201	29	5829	1
13	3.2	162	26	4212	1
14	2.2	197	25	4925	1
15	4.5	163	29	4727	1
16	3	203	26	5278	1
17	5	168	29	4872	1
18	2.4	217	25	5425	1
19	2.9	191	26	4966	1
20	2.3	166	25	4150	1
21	3.7	150	27	4050	1
22	2.2	176	25	4400	1
23	4.9	195	29	5655	1
24	2.9	202	26	5252	1
25	2.5	178	25	4450	1
26	1.1	206	23	4738	1
27	3.8	155	27	4185	1
28	4.7	157	29	4553	1
29	2.4	224	25	5600	1
30	4.2	159	28	4452	1
Detection Percentage				Limit >60%	97%



Type 3 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	8.2	355	17	6035	0
2	6.1	487	16	7792	0
3	7.1	344	16	5504	1
4	9.8	288	18	5184	1
5	8.9	230	18	4140	1
6	7.9	432	17	7344	1
7	8.2	207	17	3519	1
8	7.5	443	17	7531	1
9	8.1	439	17	7463	1
10	6.2	223	16	3568	1
11	8.9	208	18	3744	1
12	9.6	463	18	8334	1
13	8.2	441	17	7497	1
14	7.2	323	16	5168	1
15	9.5	297	18	5346	1
16	8	412	17	7004	1
17	10	324	18	5832	1
18	7.4	271	17	4607	1
19	7.9	349	17	5933	1
20	7.3	409	16	6544	1
21	8.7	373	18	6714	1
22	7.2	254	16	4064	1
23	9.9	274	18	4932	1
24	7.9	278	17	4726	1
25	7.5	317	17	5389	1
26	6.1	260	16	4160	1
27	8.8	211	18	3798	1
28	9.7	272	18	4896	1
29	7.4	264	17	4488	1
30	9.2	284	18	5112	1
Detection Percentage				Limit >60%	93%



Type 4 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	16	355	14	4970	0
2	11.3	487	12	5844	1
3	13.5	344	13	4472	1
4	19.4	288	16	4608	1
5	17.5	230	15	3450	1
6	15.3	432	14	6048	1
7	15.9	207	14	2898	1
8	14.3	443	13	5759	1
9	15.8	439	14	6146	1
10	11.5	223	12	2676	1
11	17.4	208	15	3120	1
12	19	463	16	7408	1
13	16	441	14	6174	1
14	13.8	323	13	4199	1
15	18.9	297	16	4752	1
16	15.5	412	14	5768	1
17	19.9	324	16	5184	1
18	14.1	271	13	3523	1
19	15.2	349	14	4886	1
20	13.8	409	13	5317	1
21	17.1	373	15	5595	1
22	13.8	254	13	3302	1
23	19.8	274	16	4384	1
24	15.3	278	14	3892	1
25	14.5	317	13	4121	1
26	11.3	260	12	3120	1
27	17.3	211	15	3165	1
28	19.2	272	16	4352	1
29	14.2	264	13	3432	1
30	18.2	284	15	4260	1
Detection Percentage				Limit >60%	97%

In addition an average minimum percentage of successful detection across all four

Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4} =$

$(93\%+97\%+93\%+97\%)/4 = 95\% (>80\%)$



Type 5 Radar Statistical Performance		
Trial Number	1=Detection Blank=No Detection	
1	0	
2	0	
3	0	
4	0	
5	0	
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	Limit >80%	83%

See the type 5 Radar Characteristics at the Section 5.9.2 of this report



Type 6 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	333.335	9	0.3333	1
2	1	333.335	9	0.3333	1
3	1	333.335	9	0.3333	1
4	1	333.335	9	0.3333	1
5	1	333.335	9	0.3333	1
6	1	333.335	9	0.3333	1
7	1	333.335	9	0.3333	1
8	1	333.335	9	0.3333	1
9	1	333.335	9	0.3333	1
10	1	333.335	9	0.3333	0
11	1	333.335	9	0.3333	1
12	1	333.335	9	0.3333	1
13	1	333.335	9	0.3333	1
14	1	333.335	9	0.3333	1
15	1	333.335	9	0.3333	1
16	1	333.335	9	0.3333	1
17	1	333.335	9	0.3333	1
18	1	333.335	9	0.3333	1
19	1	333.335	9	0.3333	1
20	1	333.335	9	0.3333	1
21	1	333.335	9	0.3333	1
22	1	333.335	9	0.3333	1
23	1	333.335	9	0.3333	1
24	1	333.335	9	0.3333	1
25	1	333.335	9	0.3333	1
26	1	333.335	9	0.3333	1
27	1	333.335	9	0.3333	1
28	1	333.335	9	0.3333	1
29	1	333.335	9	0.3333	1
30	1	333.335	9	0.3333	1
Detection Percentage				Limit >70%	97%



(Repeater)

Type 1 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	938	57	53466	1
2	1	698	76	53048	1
3	1	618	86	53148	1
4	1	538	99	53262	1
5	1	878	61	53558	1
6	1	3066	18	55188	1
7	1	638	83	52954	1
8	1	918	58	53244	1
9	1	838	63	52794	1
10	1	858	62	53196	1
11	1	798	67	53466	0
12	1	718	74	53132	1
13	1	578	92	53176	1
14	1	598	89	53222	0
15	1	558	95	53010	1
16	1	2536	21	53256	1
17	1	966	55	53130	0
18	1	827	64	52928	1
19	1	2501	22	55022	1
20	1	2595	21	54495	0
21	1	1114	48	53472	1
22	1	1302	41	53382	0
23	1	3045	18	54810	1
24	1	1624	33	53592	1
25	1	2878	19	54682	1
26	1	1027	52	53404	1
27	1	2485	22	54670	1
28	1	1600	33	52800	1
29	1	1172	46	53912	1
30	1	1177	45	52965	1
Detection Percentage				Limit >60%	83%



Type 2 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	3.2	179	26	4654	1
2	1.1	207	23	4761	1
3	2.1	230	24	5520	1
4	4.8	200	29	5800	1
5	3.9	214	28	5992	0
6	2.9	222	26	5772	1
7	3.2	204	26	5304	1
8	2.5	192	25	4800	1
9	3.1	164	26	4264	1
10	1.2	156	23	3588	1
11	3.9	210	27	5670	1
12	4.6	201	29	5829	1
13	3.2	162	26	4212	1
14	2.2	197	25	4925	1
15	4.5	163	29	4727	0
16	3	203	26	5278	0
17	5	168	29	4872	1
18	2.4	217	25	5425	1
19	2.9	191	26	4966	1
20	2.3	166	25	4150	1
21	3.7	150	27	4050	1
22	2.2	176	25	4400	1
23	4.9	195	29	5655	1
24	2.9	202	26	5252	0
25	2.5	178	25	4450	0
26	1.1	206	23	4738	1
27	3.8	155	27	4185	1
28	4.7	157	29	4553	1
29	2.4	224	25	5600	1
30	4.2	159	28	4452	1
Detection Percentage				Limit >60%	83%



Type 3 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	8.2	355	17	6035	1
2	6.1	487	16	7792	1
3	7.1	344	16	5504	1
4	9.8	288	18	5184	0
5	8.9	230	18	4140	1
6	7.9	432	17	7344	0
7	8.2	207	17	3519	1
8	7.5	443	17	7531	0
9	8.1	439	17	7463	1
10	6.2	223	16	3568	1
11	8.9	208	18	3744	1
12	9.6	463	18	8334	1
13	8.2	441	17	7497	1
14	7.2	323	16	5168	1
15	9.5	297	18	5346	1
16	8	412	17	7004	1
17	10	324	18	5832	0
18	7.4	271	17	4607	1
19	7.9	349	17	5933	1
20	7.3	409	16	6544	1
21	8.7	373	18	6714	1
22	7.2	254	16	4064	1
23	9.9	274	18	4932	0
24	7.9	278	17	4726	1
25	7.5	317	17	5389	1
26	6.1	260	16	4160	1
27	8.8	211	18	3798	1
28	9.7	272	18	4896	1
29	7.4	264	17	4488	1
30	9.2	284	18	5112	1
Detection Percentage				Limit >60%	83%



Type 4 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	16	355	14	4970	1
2	11.3	487	12	5844	0
3	13.5	344	13	4472	1
4	19.4	288	16	4608	1
5	17.5	230	15	3450	1
6	15.3	432	14	6048	1
7	15.9	207	14	2898	1
8	14.3	443	13	5759	1
9	15.8	439	14	6146	1
10	11.5	223	12	2676	0
11	17.4	208	15	3120	0
12	19	463	16	7408	1
13	16	441	14	6174	1
14	13.8	323	13	4199	0
15	18.9	297	16	4752	1
16	15.5	412	14	5768	1
17	19.9	324	16	5184	1
18	14.1	271	13	3523	0
19	15.2	349	14	4886	1
20	13.8	409	13	5317	1
21	17.1	373	15	5595	1
22	13.8	254	13	3302	1
23	19.8	274	16	4384	1
24	15.3	278	14	3892	1
25	14.5	317	13	4121	1
26	11.3	260	12	3120	1
27	17.3	211	15	3165	1
28	19.2	272	16	4352	1
29	14.2	264	13	3432	0
30	18.2	284	15	4260	1
Detection Percentage				Limit >60%	80%

In addition an average minimum percentage of successful detection across all four

Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4} =$

$(83\%+83\%+83\%+80\%)/4 = 83\% (>80\%)$



Type 5 Radar Statistical Performance		
Trial Number	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	0	
25	1	
26	1	
27	1	
28	1	
29	1	
30	1	
Detection Percentage	Limit >80%	97%

See the type 5 Radar Characteristics at the Section 5.9.2 of this report



Type 6 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	333.335	9	0.3333	1
2	1	333.335	9	0.3333	1
3	1	333.335	9	0.3333	1
4	1	333.335	9	0.3333	1
5	1	333.335	9	0.3333	1
6	1	333.335	9	0.3333	1
7	1	333.335	9	0.3333	1
8	1	333.335	9	0.3333	1
9	1	333.335	9	0.3333	1
10	1	333.335	9	0.3333	1
11	1	333.335	9	0.3333	1
12	1	333.335	9	0.3333	1
13	1	333.335	9	0.3333	1
14	1	333.335	9	0.3333	1
15	1	333.335	9	0.3333	1
16	1	333.335	9	0.3333	1
17	1	333.335	9	0.3333	1
18	1	333.335	9	0.3333	1
19	1	333.335	9	0.3333	1
20	1	333.335	9	0.3333	1
21	1	333.335	9	0.3333	1
22	1	333.335	9	0.3333	0
23	1	333.335	9	0.3333	1
24	1	333.335	9	0.3333	1
25	1	333.335	9	0.3333	1
26	1	333.335	9	0.3333	1
27	1	333.335	9	0.3333	1
28	1	333.335	9	0.3333	1
29	1	333.335	9	0.3333	1
30	1	333.335	9	0.3333	1
Detection Percentage				Limit >70%	97%



For 802.11ac VHT20, Band 3

(Master)

Type 1 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	938	57	53466	0
2	1	698	76	53048	1
3	1	618	86	53148	0
4	1	538	99	53262	1
5	1	878	61	53558	1
6	1	3066	18	55188	1
7	1	638	83	52954	1
8	1	918	58	53244	1
9	1	838	63	52794	1
10	1	858	62	53196	1
11	1	798	67	53466	1
12	1	718	74	53132	1
13	1	578	92	53176	1
14	1	598	89	53222	1
15	1	558	95	53010	1
16	1	2536	21	53256	1
17	1	966	55	53130	1
18	1	827	64	52928	1
19	1	2501	22	55022	1
20	1	2595	21	54495	1
21	1	1114	48	53472	1
22	1	1302	41	53382	1
23	1	3045	18	54810	1
24	1	1624	33	53592	1
25	1	2878	19	54682	1
26	1	1027	52	53404	1
27	1	2485	22	54670	1
28	1	1600	33	52800	1
29	1	1172	46	53912	1
30	1	1177	45	52965	1
Detection Percentage				Limit >60%	93%



Type 2 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	3.2	179	26	4654	0
2	1.1	207	23	4761	1
3	2.1	230	24	5520	1
4	4.8	200	29	5800	1
5	3.9	214	28	5992	1
6	2.9	222	26	5772	1
7	3.2	204	26	5304	1
8	2.5	192	25	4800	1
9	3.1	164	26	4264	1
10	1.2	156	23	3588	1
11	3.9	210	27	5670	1
12	4.6	201	29	5829	1
13	3.2	162	26	4212	1
14	2.2	197	25	4925	1
15	4.5	163	29	4727	1
16	3	203	26	5278	1
17	5	168	29	4872	1
18	2.4	217	25	5425	1
19	2.9	191	26	4966	1
20	2.3	166	25	4150	1
21	3.7	150	27	4050	1
22	2.2	176	25	4400	1
23	4.9	195	29	5655	1
24	2.9	202	26	5252	1
25	2.5	178	25	4450	1
26	1.1	206	23	4738	1
27	3.8	155	27	4185	1
28	4.7	157	29	4553	1
29	2.4	224	25	5600	1
30	4.2	159	28	4452	1
Detection Percentage				Limit >60%	97%



Type 3 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	8.2	355	17	6035	1
2	6.1	487	16	7792	1
3	7.1	344	16	5504	1
4	9.8	288	18	5184	1
5	8.9	230	18	4140	1
6	7.9	432	17	7344	1
7	8.2	207	17	3519	1
8	7.5	443	17	7531	0
9	8.1	439	17	7463	1
10	6.2	223	16	3568	1
11	8.9	208	18	3744	1
12	9.6	463	18	8334	1
13	8.2	441	17	7497	1
14	7.2	323	16	5168	1
15	9.5	297	18	5346	1
16	8	412	17	7004	1
17	10	324	18	5832	1
18	7.4	271	17	4607	1
19	7.9	349	17	5933	1
20	7.3	409	16	6544	1
21	8.7	373	18	6714	1
22	7.2	254	16	4064	0
23	9.9	274	18	4932	1
24	7.9	278	17	4726	1
25	7.5	317	17	5389	1
26	6.1	260	16	4160	1
27	8.8	211	18	3798	1
28	9.7	272	18	4896	1
29	7.4	264	17	4488	1
30	9.2	284	18	5112	1
Detection Percentage				Limit >60%	93%



Type 4 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	16	355	14	4970	1
2	11.3	487	12	5844	1
3	13.5	344	13	4472	0
4	19.4	288	16	4608	1
5	17.5	230	15	3450	1
6	15.3	432	14	6048	1
7	15.9	207	14	2898	1
8	14.3	443	13	5759	1
9	15.8	439	14	6146	1
10	11.5	223	12	2676	1
11	17.4	208	15	3120	1
12	19	463	16	7408	1
13	16	441	14	6174	1
14	13.8	323	13	4199	1
15	18.9	297	16	4752	1
16	15.5	412	14	5768	1
17	19.9	324	16	5184	1
18	14.1	271	13	3523	1
19	15.2	349	14	4886	1
20	13.8	409	13	5317	0
21	17.1	373	15	5595	1
22	13.8	254	13	3302	1
23	19.8	274	16	4384	1
24	15.3	278	14	3892	1
25	14.5	317	13	4121	1
26	11.3	260	12	3120	1
27	17.3	211	15	3165	1
28	19.2	272	16	4352	1
29	14.2	264	13	3432	1
30	18.2	284	15	4260	1
Detection Percentage				Limit >60%	93%

In addition an average minimum percentage of successful detection across all four

Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4} =$

$93\%+97\%+93\%+93\%/4 = 94\% (>80\%)$



Type 5 Radar Statistical Performance		
Trial Number	1=Detection Blank=No Detection	
1	1	
2	1	
3	1	
4	1	
5	1	
6	1	
7	0	
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	Limit >80%	97%

See the type 5 Radar Characteristics at the Section 5.9.2 of this report



Type 6 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	333.335	9	0.3333	1
2	1	333.335	9	0.3333	1
3	1	333.335	9	0.3333	1
4	1	333.335	9	0.3333	1
5	1	333.335	9	0.3333	1
6	1	333.335	9	0.3333	1
7	1	333.335	9	0.3333	1
8	1	333.335	9	0.3333	1
9	1	333.335	9	0.3333	1
10	1	333.335	9	0.3333	1
11	1	333.335	9	0.3333	1
12	1	333.335	9	0.3333	1
13	1	333.335	9	0.3333	1
14	1	333.335	9	0.3333	1
15	1	333.335	9	0.3333	1
16	1	333.335	9	0.3333	1
17	1	333.335	9	0.3333	1
18	1	333.335	9	0.3333	1
19	1	333.335	9	0.3333	1
20	1	333.335	9	0.3333	1
21	1	333.335	9	0.3333	1
22	1	333.335	9	0.3333	1
23	1	333.335	9	0.3333	1
24	1	333.335	9	0.3333	1
25	1	333.335	9	0.3333	1
26	1	333.335	9	0.3333	1
27	1	333.335	9	0.3333	1
28	1	333.335	9	0.3333	1
29	1	333.335	9	0.3333	1
30	1	333.335	9	0.3333	1
Detection Percentage				Limit >70%	100%



(Repeater)

Type 1 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	938	57	53466	1
2	1	698	76	53048	1
3	1	618	86	53148	0
4	1	538	99	53262	1
5	1	878	61	53558	0
6	1	3066	18	55188	1
7	1	638	83	52954	1
8	1	918	58	53244	1
9	1	838	63	52794	1
10	1	858	62	53196	0
11	1	798	67	53466	1
12	1	718	74	53132	1
13	1	578	92	53176	1
14	1	598	89	53222	1
15	1	558	95	53010	1
16	1	2536	21	53256	1
17	1	966	55	53130	1
18	1	827	64	52928	1
19	1	2501	22	55022	1
20	1	2595	21	54495	1
21	1	1114	48	53472	0
22	1	1302	41	53382	1
23	1	3045	18	54810	1
24	1	1624	33	53592	1
25	1	2878	19	54682	1
26	1	1027	52	53404	1
27	1	2485	22	54670	1
28	1	1600	33	52800	1
29	1	1172	46	53912	1
30	1	1177	45	52965	1
Detection Percentage				Limit >60%	87%



Type 2 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	3.2	179	26	4654	1
2	1.1	207	23	4761	1
3	2.1	230	24	5520	1
4	4.8	200	29	5800	1
5	3.9	214	28	5992	1
6	2.9	222	26	5772	1
7	3.2	204	26	5304	0
8	2.5	192	25	4800	1
9	3.1	164	26	4264	1
10	1.2	156	23	3588	1
11	3.9	210	27	5670	1
12	4.6	201	29	5829	1
13	3.2	162	26	4212	1
14	2.2	197	25	4925	1
15	4.5	163	29	4727	1
16	3	203	26	5278	1
17	5	168	29	4872	1
18	2.4	217	25	5425	1
19	2.9	191	26	4966	1
20	2.3	166	25	4150	1
21	3.7	150	27	4050	1
22	2.2	176	25	4400	0
23	4.9	195	29	5655	1
24	2.9	202	26	5252	0
25	2.5	178	25	4450	0
26	1.1	206	23	4738	1
27	3.8	155	27	4185	0
28	4.7	157	29	4553	1
29	2.4	224	25	5600	1
30	4.2	159	28	4452	1
Detection Percentage				Limit >60%	83%



Type 3 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	8.2	355	17	6035	1
2	6.1	487	16	7792	1
3	7.1	344	16	5504	1
4	9.8	288	18	5184	1
5	8.9	230	18	4140	1
6	7.9	432	17	7344	1
7	8.2	207	17	3519	1
8	7.5	443	17	7531	1
9	8.1	439	17	7463	0
10	6.2	223	16	3568	1
11	8.9	208	18	3744	1
12	9.6	463	18	8334	1
13	8.2	441	17	7497	0
14	7.2	323	16	5168	1
15	9.5	297	18	5346	1
16	8	412	17	7004	1
17	10	324	18	5832	1
18	7.4	271	17	4607	1
19	7.9	349	17	5933	0
20	7.3	409	16	6544	1
21	8.7	373	18	6714	1
22	7.2	254	16	4064	1
23	9.9	274	18	4932	0
24	7.9	278	17	4726	1
25	7.5	317	17	5389	1
26	6.1	260	16	4160	1
27	8.8	211	18	3798	1
28	9.7	272	18	4896	1
29	7.4	264	17	4488	1
30	9.2	284	18	5112	1
Detection Percentage				Limit >60%	87%



Type 4 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	16	355	14	4970	1
2	11.3	487	12	5844	1
3	13.5	344	13	4472	1
4	19.4	288	16	4608	0
5	17.5	230	15	3450	1
6	15.3	432	14	6048	1
7	15.9	207	14	2898	0
8	14.3	443	13	5759	1
9	15.8	439	14	6146	1
10	11.5	223	12	2676	1
11	17.4	208	15	3120	1
12	19	463	16	7408	0
13	16	441	14	6174	1
14	13.8	323	13	4199	0
15	18.9	297	16	4752	1
16	15.5	412	14	5768	1
17	19.9	324	16	5184	1
18	14.1	271	13	3523	0
19	15.2	349	14	4886	1
20	13.8	409	13	5317	1
21	17.1	373	15	5595	1
22	13.8	254	13	3302	1
23	19.8	274	16	4384	0
24	15.3	278	14	3892	1
25	14.5	317	13	4121	1
26	11.3	260	12	3120	0
27	17.3	211	15	3165	1
28	19.2	272	16	4352	1
29	14.2	264	13	3432	0
30	18.2	284	15	4260	1
Detection Percentage				Limit >60%	73%

In addition an average minimum percentage of successful detection across all four

Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4} =$

$(87\%+83\%+87\%+73\%)/4 = 83\% (>80\%)$



Type 5 Radar Statistical Performance		
Trial Number	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	Limit >80%	100%

See the type 5 Radar Characteristics at the Section 5.9.2 of this report



Type 6 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	333.335	9	0.3333	1
2	1	333.335	9	0.3333	0
3	1	333.335	9	0.3333	1
4	1	333.335	9	0.3333	1
5	1	333.335	9	0.3333	1
6	1	333.335	9	0.3333	1
7	1	333.335	9	0.3333	1
8	1	333.335	9	0.3333	1
9	1	333.335	9	0.3333	1
10	1	333.335	9	0.3333	1
11	1	333.335	9	0.3333	1
12	1	333.335	9	0.3333	1
13	1	333.335	9	0.3333	0
14	1	333.335	9	0.3333	1
15	1	333.335	9	0.3333	1
16	1	333.335	9	0.3333	1
17	1	333.335	9	0.3333	1
18	1	333.335	9	0.3333	1
19	1	333.335	9	0.3333	1
20	1	333.335	9	0.3333	1
21	1	333.335	9	0.3333	1
22	1	333.335	9	0.3333	1
23	1	333.335	9	0.3333	1
24	1	333.335	9	0.3333	1
25	1	333.335	9	0.3333	1
26	1	333.335	9	0.3333	1
27	1	333.335	9	0.3333	1
28	1	333.335	9	0.3333	1
29	1	333.335	9	0.3333	1
30	1	333.335	9	0.3333	0
Detection Percentage				Limit >70%	90%



For 802.11ac-VHT40, Band 2

(Master)

Type 1 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	938	57	53466	0
2	1	698	76	53048	1
3	1	618	86	53148	1
4	1	538	99	53262	1
5	1	878	61	53558	1
6	1	3066	18	55188	1
7	1	638	83	52954	1
8	1	918	58	53244	1
9	1	838	63	52794	1
10	1	858	62	53196	1
11	1	798	67	53466	1
12	1	718	74	53132	1
13	1	578	92	53176	1
14	1	598	89	53222	1
15	1	558	95	53010	1
16	1	2536	21	53256	1
17	1	966	55	53130	1
18	1	827	64	52928	1
19	1	2501	22	55022	1
20	1	2595	21	54495	1
21	1	1114	48	53472	1
22	1	1302	41	53382	1
23	1	3045	18	54810	1
24	1	1624	33	53592	1
25	1	2878	19	54682	1
26	1	1027	52	53404	1
27	1	2485	22	54670	1
28	1	1600	33	52800	1
29	1	1172	46	53912	1
30	1	1177	45	52965	1
Detection Percentage				Limit >60%	97%



Type 2 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	3.2	179	26	4654	1
2	1.1	207	23	4761	1
3	2.1	230	24	5520	1
4	4.8	200	29	5800	1
5	3.9	214	28	5992	1
6	2.9	222	26	5772	1
7	3.2	204	26	5304	1
8	2.5	192	25	4800	1
9	3.1	164	26	4264	1
10	1.2	156	23	3588	1
11	3.9	210	27	5670	1
12	4.6	201	29	5829	1
13	3.2	162	26	4212	1
14	2.2	197	25	4925	1
15	4.5	163	29	4727	1
16	3	203	26	5278	1
17	5	168	29	4872	1
18	2.4	217	25	5425	1
19	2.9	191	26	4966	1
20	2.3	166	25	4150	1
21	3.7	150	27	4050	1
22	2.2	176	25	4400	1
23	4.9	195	29	5655	1
24	2.9	202	26	5252	1
25	2.5	178	25	4450	1
26	1.1	206	23	4738	1
27	3.8	155	27	4185	0
28	4.7	157	29	4553	1
29	2.4	224	25	5600	0
30	4.2	159	28	4452	1
Detection Percentage				Limit >60%	93%



Type 3 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	8.2	355	17	6035	0
2	6.1	487	16	7792	1
3	7.1	344	16	5504	1
4	9.8	288	18	5184	1
5	8.9	230	18	4140	0
6	7.9	432	17	7344	1
7	8.2	207	17	3519	1
8	7.5	443	17	7531	1
9	8.1	439	17	7463	1
10	6.2	223	16	3568	1
11	8.9	208	18	3744	1
12	9.6	463	18	8334	1
13	8.2	441	17	7497	1
14	7.2	323	16	5168	1
15	9.5	297	18	5346	1
16	8	412	17	7004	1
17	10	324	18	5832	1
18	7.4	271	17	4607	1
19	7.9	349	17	5933	1
20	7.3	409	16	6544	1
21	8.7	373	18	6714	1
22	7.2	254	16	4064	1
23	9.9	274	18	4932	1
24	7.9	278	17	4726	1
25	7.5	317	17	5389	1
26	6.1	260	16	4160	1
27	8.8	211	18	3798	1
28	9.7	272	18	4896	1
29	7.4	264	17	4488	1
30	9.2	284	18	5112	1
Detection Percentage				Limit >60%	93%



Type 4 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	16	355	14	4970	1
2	11.3	487	12	5844	1
3	13.5	344	13	4472	1
4	19.4	288	16	4608	1
5	17.5	230	15	3450	1
6	15.3	432	14	6048	1
7	15.9	207	14	2898	0
8	14.3	443	13	5759	1
9	15.8	439	14	6146	1
10	11.5	223	12	2676	1
11	17.4	208	15	3120	1
12	19	463	16	7408	1
13	16	441	14	6174	1
14	13.8	323	13	4199	0
15	18.9	297	16	4752	1
16	15.5	412	14	5768	1
17	19.9	324	16	5184	1
18	14.1	271	13	3523	1
19	15.2	349	14	4886	1
20	13.8	409	13	5317	1
21	17.1	373	15	5595	1
22	13.8	254	13	3302	1
23	19.8	274	16	4384	1
24	15.3	278	14	3892	1
25	14.5	317	13	4121	1
26	11.3	260	12	3120	1
27	17.3	211	15	3165	1
28	19.2	272	16	4352	1
29	14.2	264	13	3432	1
30	18.2	284	15	4260	1
Detection Percentage				Limit >60%	93%

In addition an average minimum percentage of successful detection across all four

Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4} =$

$(97\%+93\%+93\%+93\%)/4 = 94\% (>80\%)$



Type 5 Radar Statistical Performance		
Trial Number	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	0	
20	1	
21	1	
22	1	
23	1	
24	1	
25	1	
26	1	
27	1	
28	1	
29	1	
30	1	
Detection Percentage	Limit >80%	97%

See the type 5 Radar Characteristics at the Section 5.9.2 of this report



Type 6 Radar Statistical Performance					
Trial Number	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length(us)	1=Detection Blank=No Detection
1	1	333.335	9	0.3333	1
2	1	333.335	9	0.3333	1
3	1	333.335	9	0.3333	1
4	1	333.335	9	0.3333	0
5	1	333.335	9	0.3333	1
6	1	333.335	9	0.3333	1
7	1	333.335	9	0.3333	1
8	1	333.335	9	0.3333	1
9	1	333.335	9	0.3333	1
10	1	333.335	9	0.3333	1
11	1	333.335	9	0.3333	1
12	1	333.335	9	0.3333	1
13	1	333.335	9	0.3333	1
14	1	333.335	9	0.3333	1
15	1	333.335	9	0.3333	1
16	1	333.335	9	0.3333	1
17	1	333.335	9	0.3333	1
18	1	333.335	9	0.3333	1
19	1	333.335	9	0.3333	1
20	1	333.335	9	0.3333	1
21	1	333.335	9	0.3333	1
22	1	333.335	9	0.3333	1
23	1	333.335	9	0.3333	1
24	1	333.335	9	0.3333	1
25	1	333.335	9	0.3333	1
26	1	333.335	9	0.3333	1
27	1	333.335	9	0.3333	1
28	1	333.335	9	0.3333	1
29	1	333.335	9	0.3333	1
30	1	333.335	9	0.3333	1
Detection Percentage				Limit >70%	97%