

ETSI EN 301 893 V2.1.1 (2017-05)  
DYNAMIC FREQUENCY SELECTION  
TEST REPORT

For

**SHENZHEN TENDA TECHNOLOGY CO.,LTD**

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**Test Model: O8**

<b>Report Type:</b> Original Report	<b>Product Type:</b> 5GHz 23dBi 11ac Outdoor CPE
<b>Report Number:</b>	DG2210607-21788E-22B
<b>Report Date:</b>	2021-07-16
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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

<b>EUT Name:</b>		5GHz 23dBi 11ac Outdoor CPE
<b>Test Model:</b>		O8
<b>Rated Input Voltage:</b>		DC 12V from adapter
<b>EU Adapter Information</b>	<b>Model:</b>	BN073-A12012E
	<b>Input:</b>	AC 100-240V, 50/60Hz, 0.4A
	<b>Output:</b>	DC 12.0V, 1.0A
<b>Serial Number:</b>		DG2210607-21788E-RF-S-8SY
<b>EUT Received Date:</b>		2021.06.08
<b>EUT Received Status:</b>		Good

### Objective

The following type approved report of radio equipment is prepared on behalf of **SHENZHEN TENDA TECHNOLOGY CO.,LTD** in accordance with ETSI EN 301 893 V2.1.1 (2017-05), Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering the essential requirements of article 3.2 of Directive 2014/53/EU.

The objective of the manufacturer is to determine compliance with ETSI EN 301 893 V2.1.1 (2017-05) for the following tests:

Dynamic Frequency Selection (DFS)

In order to determine compliance, the manufacturer or a contracted laboratory makes measurements and takes the necessary steps to ensure that the equipment complies with the appropriate technical standards.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in lowering the immunity should be checked to ensure that compliance has been maintained (i.e., harnessing and/or I/O cable change, etc.).

### Related Submittal(s)/Chain (s)

No Related Submittals.

### Test Methodology

All measurement contained in this report were conducted in accordance with EN 301 893 V2.1.1 (2017-05) §4.2.6.

**Declarations**

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '▲'. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

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## SYSTEM TEST CONFIGURATION

### Justification

The system was configured for testing according to EN 301 893.

### EUT Exercise Software

N/A

### Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	E450	PF-OMRADG 16/08
Apple	Phone	A1863	2017011606002400

### External Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
RJ45	NO	NO	10	PoE	EUT
RJ45	NO	NO	1.2	Laptop	PoE

## SUMMARY OF TEST RESULTS

The following result table represents the list of measurements required under the EN 301 893 V2.1.1 (2017-05).

Items	Description of Test	Result
Channel Available Check	Initial Channel Availability Check Time (CAC)	Compliant
	Radar Burst at the Beginning of the CAC	Compliant
	Radar Burst at the End of the CAC	Compliant
In-Service Monitoring	Channel Move Time	Compliant
	Channel Closing Transmission Time	Compliant
Non-Occupancy Period	Statistical Performance Check	Compliant
Uniform Spreading	Probability and Availability of the Usable Channels	Compliant*

Note: EUT is a master device.

Compliant\*: It's declared by manufacturer.

## APPLICABLE STANDARDS

### DFS Requirement

EN 301 893 V2.1.1 §4.2.6; Annex D

**Table 1: Applicability of DFS Requirements**

Requirement	DFS Operational mode		
	Master	Slave without radar detection (see table D.2, note 2)	Slave with radar detection (see table D.2, note 2)
Channel Availability Check	✓	Not required	✓ (see note 2)
Off-Channel CAC (see note 1)	✓	Not required	✓ (see note 2)
In-Service Monitoring	✓	Not required	✓
Channel Shutdown	✓	✓	✓
Non-Occupancy Period	✓	Not required	✓
Uniform Spreading	✓	Not required	Not required
NOTE 1: Where implemented by the manufacturer.			
NOTE 2: A slave with radar detection is not required to perform a CAC or <i>Off-Channel CAC</i> at initial use of the channel but only after the slave has detected a radar signal on the <i>Operating Channel</i> by <i>In-Service Monitoring</i> .			

**Table 2: DFS Requirement values**

Parameter	Value
Channel Availability Check Time	60 s (see note 1)
Minimum Off-Channel CAC Time	6 minutes (see note 2)
Maximum Off-Channel CAC Time	4 hours (see note 2)
Channel Move Time	10 s
Channel Closing Transmission Time	1 s
Non-Occupancy Period	30 minutes
NOTE 1: For channels whose nominal bandwidth falls completely or partly within the band 5 600 MHz to 5 650 MHz, the <i>Channel Availability Check Time</i> shall be 10 minutes.	
NOTE 2: For channels whose nominal bandwidth falls completely or partly within the band 5 600 MHz to 5 650 MHz, the <i>Off-Channel CAC Time</i> shall be within the range 1 to 24 hours.	

**Table 3: Interference Threshold values, Master**

<b>e.i.r.p. Spectral Density (dBm/MHz)</b>	<b>Value (see note 1 and note 2)</b>
10	-62 dBm
<p>NOTE 1: This is the level at the input of the receiver of an RLAN device with a maximum e.i.r.p. density of 10 dBm/MHz and assuming a 0 dBi receive antenna. For devices employing different e.i.r.p. spectral density and/or a different receive antenna gain G (dBi) the Radar Detection Threshold Level at the receiver input follows the following relationship:  DFS Detection Threshold (dBm) = <math>-62 + 10 - \text{e.i.r.p. Spectral Density (dBm/MHz)} + G \text{ (dBi)}</math>; however the Radar Detection Threshold Level shall not be less than -64 dBm assuming a 0 dBi receive antenna gain.</p> <p>NOTE 2: Slave devices with a maximum e.i.r.p. of less than 23 dBm do not have to implement radar detection unless these devices are used in fixed outdoor point to point or fixed outdoor point to multipoint applications (see clause 4.2.6.1.3).</p>	

**Table 4: Interference Threshold values, Master**

<b>Pulse width W (μs)</b>	<b>Pulse repetition frequency PRF (PPS)</b>	<b>Pulses per burst (PPB)</b>
1	700	18

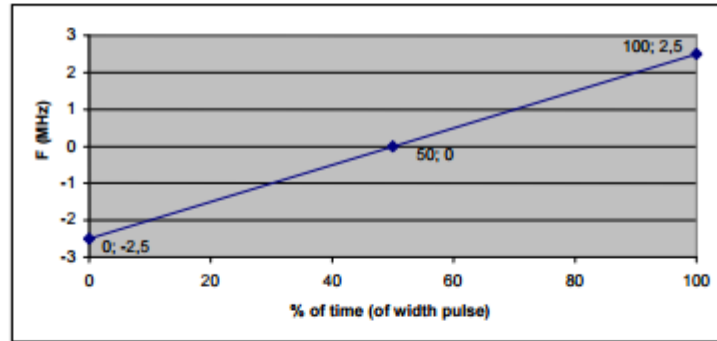


**Table 5: Parameters of DSF Test Signals**

Radar test signal # (see note 1 to note 3)	Pulse width W (μs)		Pulse repetition frequency PRF (PPS)		Number of different PRFs	Pulses per burst for each PRF (PPB) (see note 5)
	Min	Max	Min	Max		
1	0,5	5	200	1 000	1	10 (see note 6)
2	0,5	15	200	1 600	1	15 (see note 6)
3	0,5	15	2 300	4 000	1	25
4	20	30	2 000	4 000	1	20
5	0,5	2	300	400	2/3	10 (see note 6)
6	0,5	2	400	1 200	2/3	15 (see note 6)

NOTE 1: Radar test signals #1 to #4 are constant PRF based signals. See figure D.1. These radar test signals are intended to simulate also radars using a packet based Staggered PRF. See figure D.2.

NOTE 2: Radar test signal #4 is a modulated radar test signal. The modulation to be used is a chirp modulation with a  $\pm 2,5$  MHz frequency deviation which is described below.



NOTE 3: Radar test signals #5 and #6 are single pulse based Staggered PRF radar test signals using 2 or 3 different PRF values. For radar test signal #5, the difference between the PRF values chosen shall be between 20 PPS and 50 PPS. For radar test signal #6, the difference between the PRF values chosen shall be between 80 PPS and 400 PPS. See figure D.3.

NOTE 4: Apart for the Off-Channel CAC testing, the radar test signals above shall only contain a single burst of pulses. See figure D.1, figure D.3 and figure D.4. For the Off-Channel CAC testing, repetitive bursts shall be used for the total duration of the test. See figure D.2 and figure D.5. See also clause 4.2.6.2.3, clause 5.4.8.2.1.4.2 and clause 5.4.8.2.1.4.3.

NOTE 5: The total number of pulses in a burst is equal to the number of pulses for a single PRF multiplied by the number of different PRFs used.

NOTE 6: For the CAC and Off-Channel CAC requirements, the minimum number of pulses (for each PRF) for any of the radar test signals to be detected in the band 5 600 MHz to 5 650 MHz shall be 18.

**Table 6: Detection probability**

Parameter	Detection Probability ( $P_d$ )	
	Channels whose nominal bandwidth falls partly or completely within the 5 600 MHz to 5 650 MHz band	Other channels
CAC, Off-Channel CAC	99,99 %	60 %
In-Service Monitoring	60 %	60 %
NOTE: $P_d$ gives the probability of detection per simulated radar burst and represents a minimum level of detection performance under defined conditions. Therefore $P_d$ does not represent the overall detection probability for any particular radar under real life conditions.		

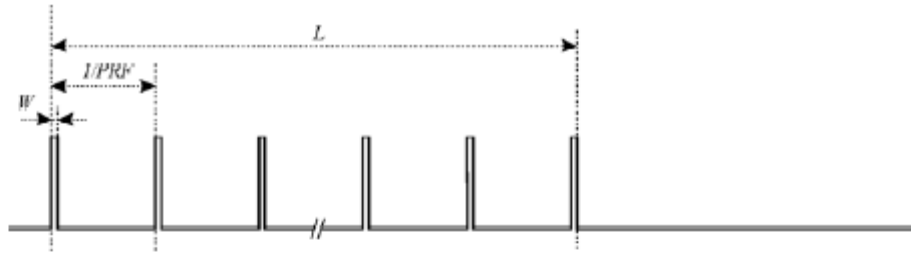


Figure D.1: General structure of a single burst/constant PRF based radar test signal

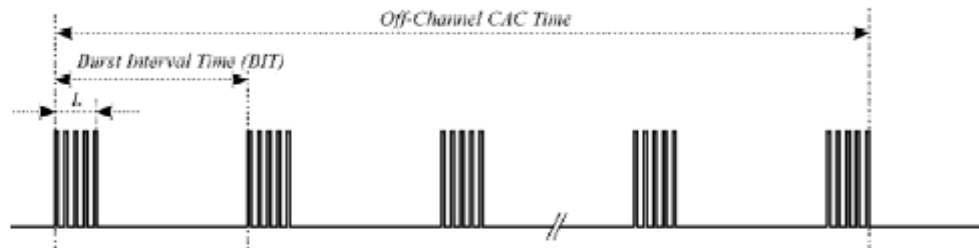


Figure D.2: General structure of a multiple burst/constant PRF based radar test signal

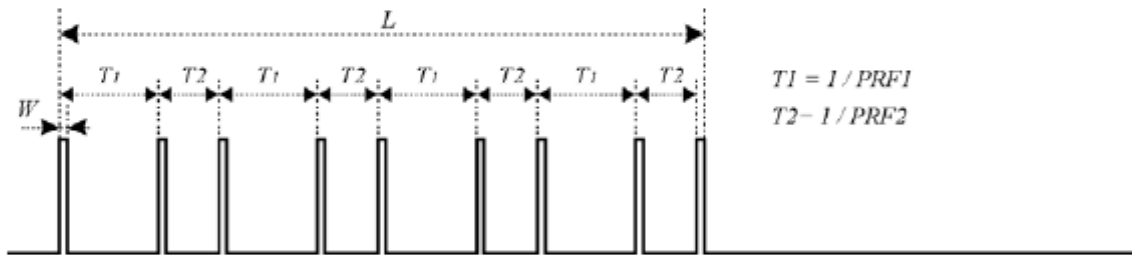


Figure D.3: General structure of a single burst/single pulse based staggered PRF radar test signal

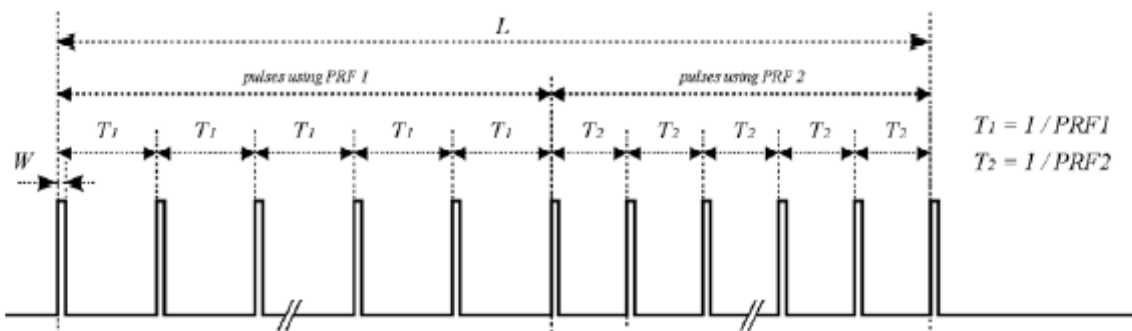


Figure D.4: General structure of a single burst/packet based staggered PRF radar test signal

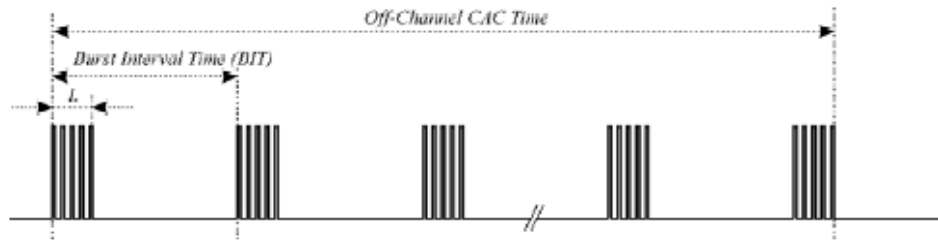


Figure D.5: General structure of a multiple burst/packet based staggered PRF based radar test signal

## DFS Definition

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

**Off-Channel CAC:** The Off-Channel CAC is defined as a mechanism by which a RLAN monitors channel(s), different from the Operating Channel, for the presence of radar signals.

**In-Service Monitoring:** The In-Service Monitoring is defined as the process by which an RLAN monitors the Operating Channel for the presence of radar signals.

**Channel Shutdown:** The Channel Shutdown is defined as the process initiated by the RLAN device immediately after a radar signal has been detected on an Operating Channel.

**Channel Move Time:** The time to cease all transmissions on the current Channel upon detection of a Radar Waveform above the DFS Detection Threshold.

**Channel Closing Transmission Time:** The total duration of transmissions, consisting of data signals and the aggregate of control signals, by a WLAN device during the Channel Move Time.

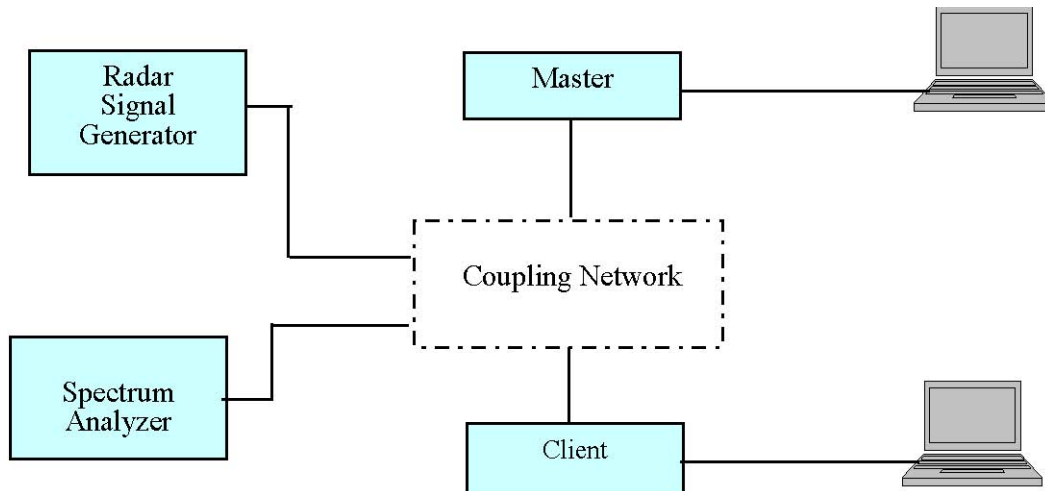
**Non-Occupancy Period:** The Non-Occupancy Period is defined as the time during which the RLAN device shall not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.

**Detection Threshold:** Received signal level, above which the device must be able to detect radar.

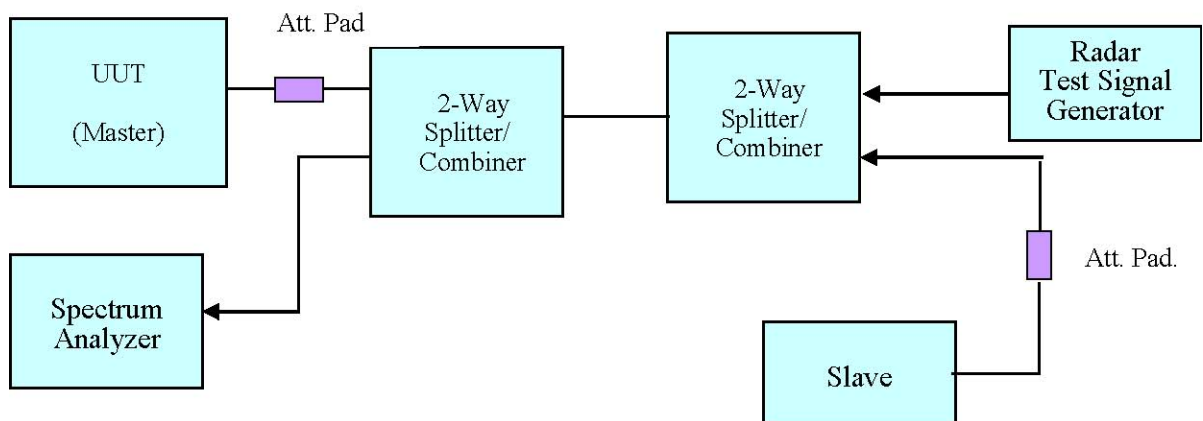
## DFS MEASUREMENT SYSTEM

BACL DFS measurement system consists of two subsystems: (1) The radar signal generating subsystem and (2) the traffic monitoring subsystem.

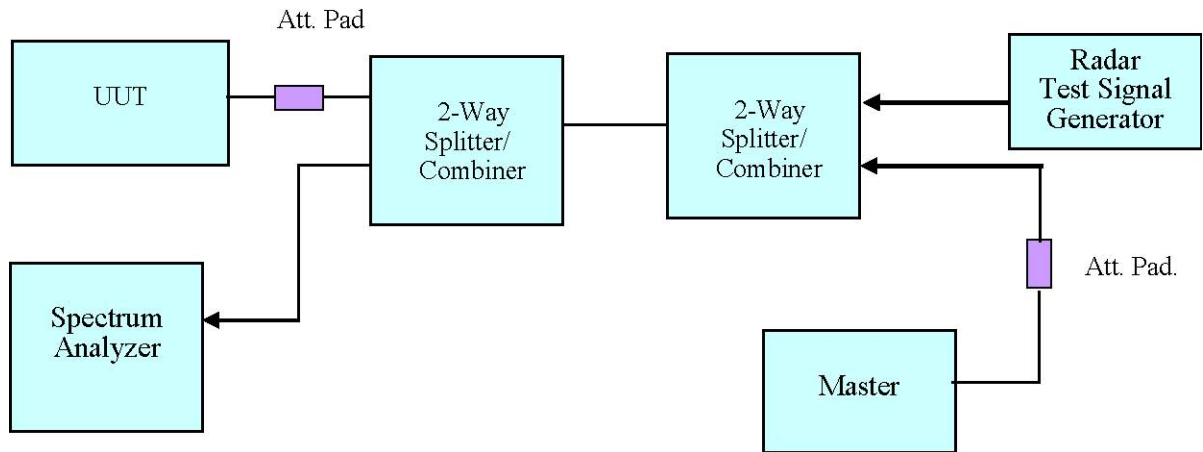
### System Block Diagram



### Conducted Method

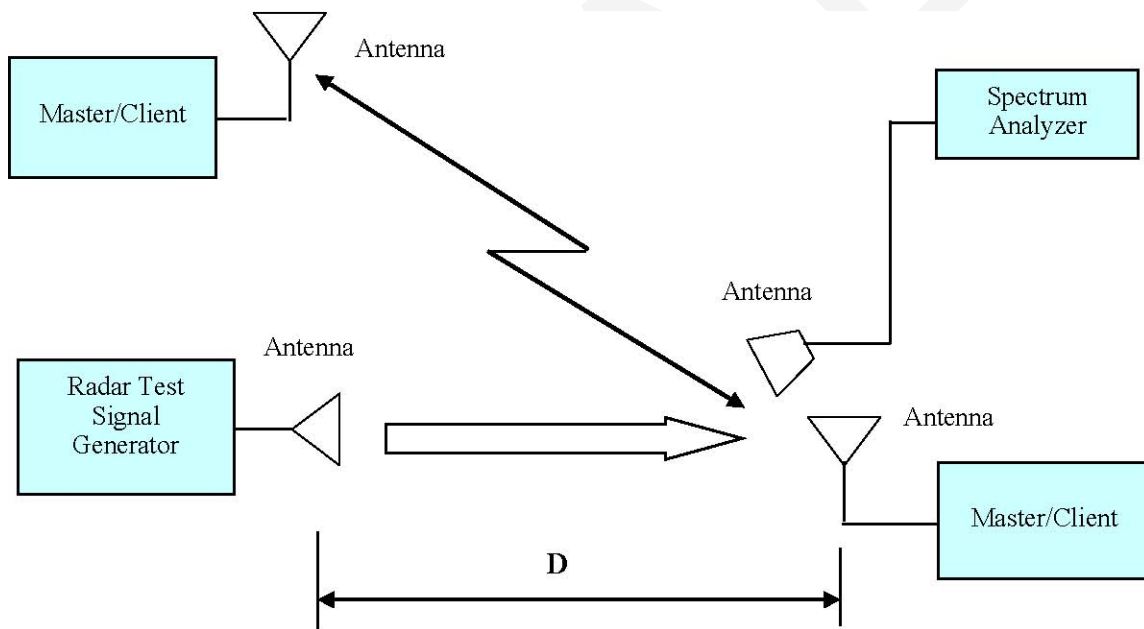


Setup for Master with injection at the Master



**Setup for Client with injection at the Master**

### Radiated Method



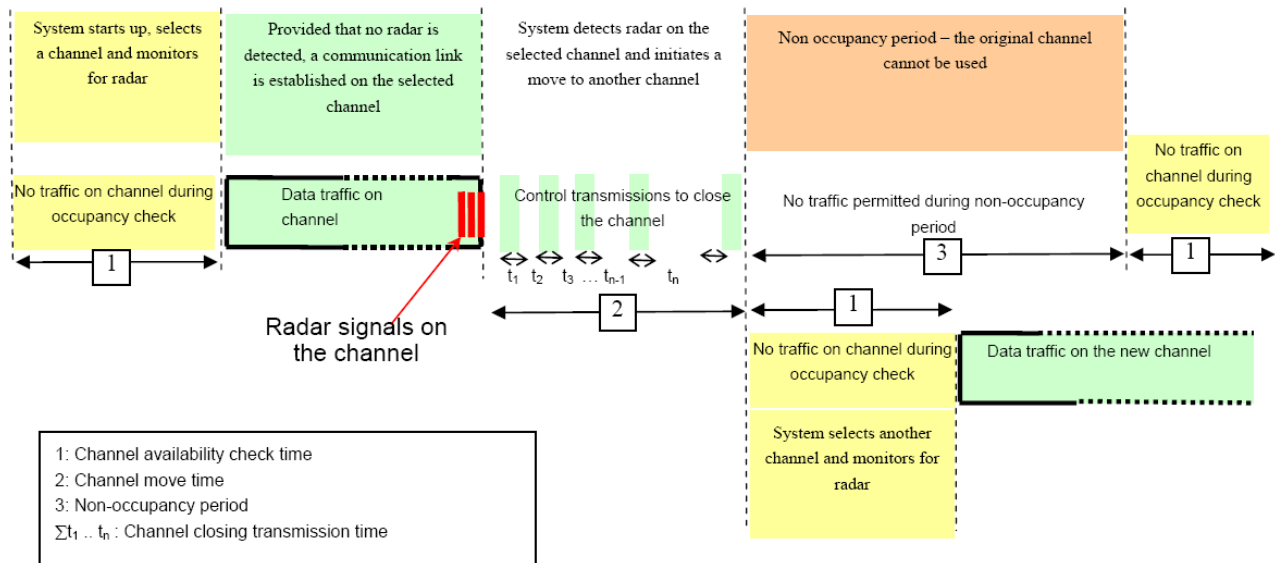
**Setup for Radiated Method**

## Test Procedure

A spectrum analyzer is used as a monitor verifies that the EUT status including Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and Channel move. It is also used to monitor EUT transmissions during the Channel Availability Check Time.

## DFS Implementation

Please refer to the block diagram:



## TEST RESULTS

### Description of EUT

The EUT operates in 5470-5725 MHz (without 5600-5650MHz) range when performing DFS testing.

The calibrated radiated DFS detection threshold level is set to -64 dBm for this band.

WLAN traffic is generated by streaming the video file “Test File.mpg”, this file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. The file is streamed from the Access Point to the Client in full motion video mode using the media player with the V2.61 Codec package.

### Test Equipment List and Details

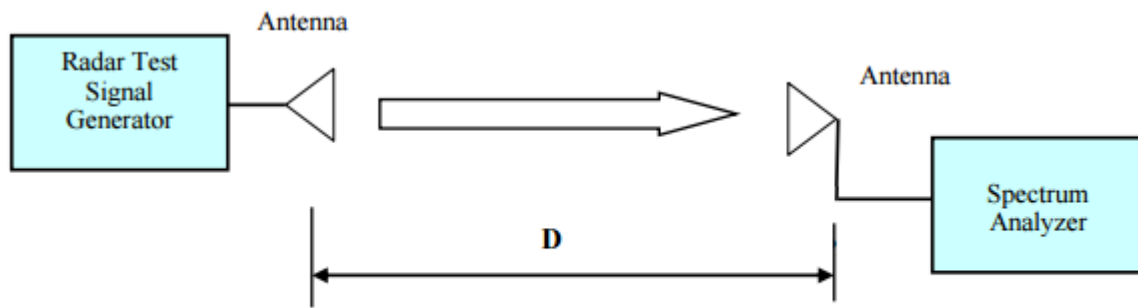
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
National Instruments	NI PXI-1042 8-Slot chassis	PXI-1042	VOBX40FBD	N/A	N/A
National Instruments	Arbitrary Waveform Generator	PXI-5421	N/A	N/A	N/A
National Instruments	RF Upconverter	PXI-5610	N/A	N/A	N/A
ASCOR	Upconverter	AS-7202	N/A	N/A	N/A
Agilent	Spectrum Analyzer	E4440A	SG43360054	2020-07-07	2021-07-07
Ditorn	Splitter/Combiner	D3C4080	SN2244	N/A	N/A
TDK RF	horn antenna	HRN-0118	130 084	2018-10-12	2021-10-12
ETS LINDGREN	horn antenna	3115	000 527 35	2018-10-12	2021-10-12

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Environmental Conditions

<b>Temperature:</b>	26.6~26.8℃
<b>Relative Humidity:</b>	47~49 %
<b>ATM Pressure:</b>	100.8~101.1kPa
<b>Tester:</b>	Theshy Xie
<b>Test Date:</b>	2021-07-07~2021-07-07

## Radar Waveform Calibration



**Radiated Calibration Setup Block Diagram**

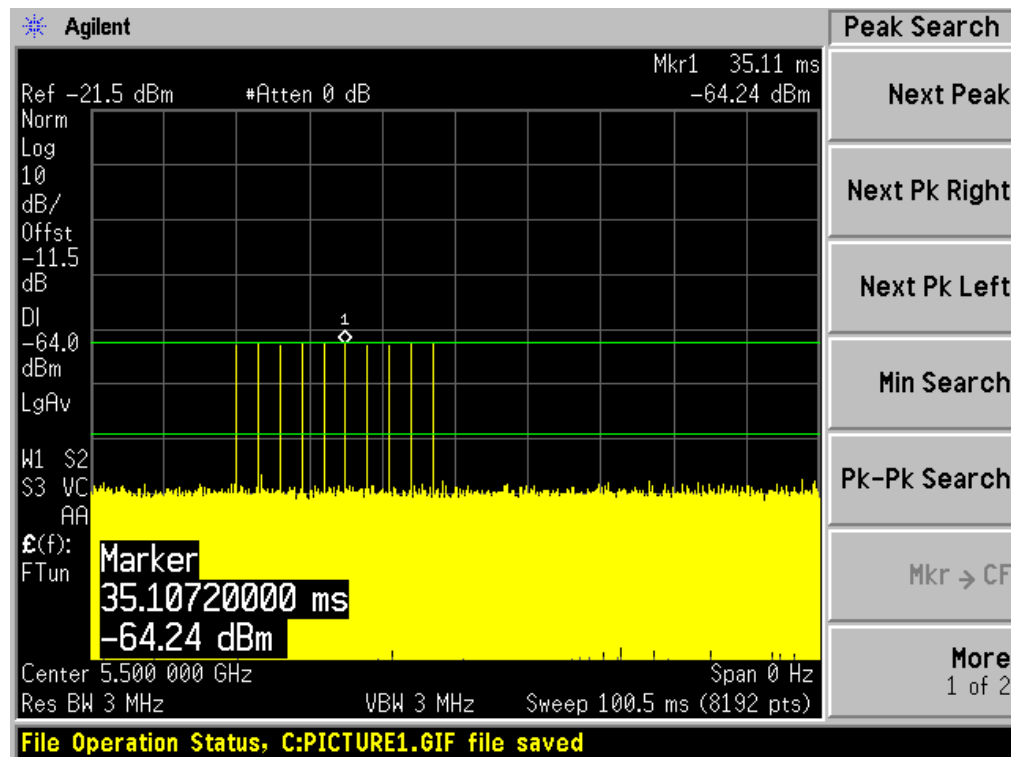
*Note: the calibration distance(D) was 3 meter.*



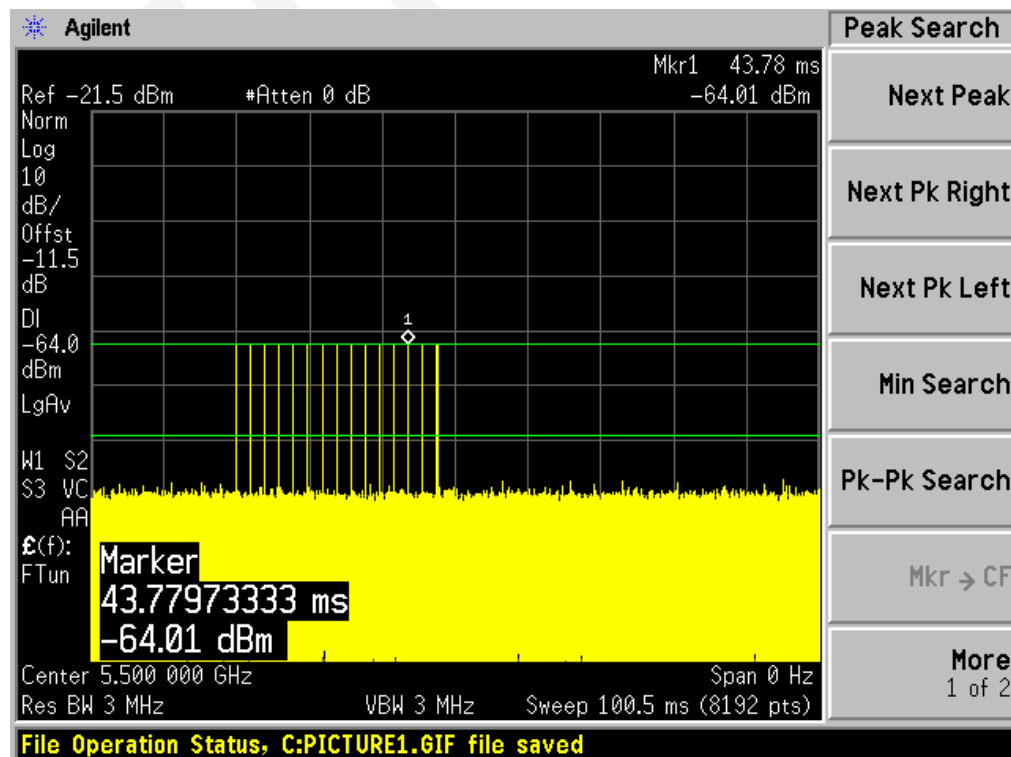
## Plots of Radar Waveforms

5500MHz:

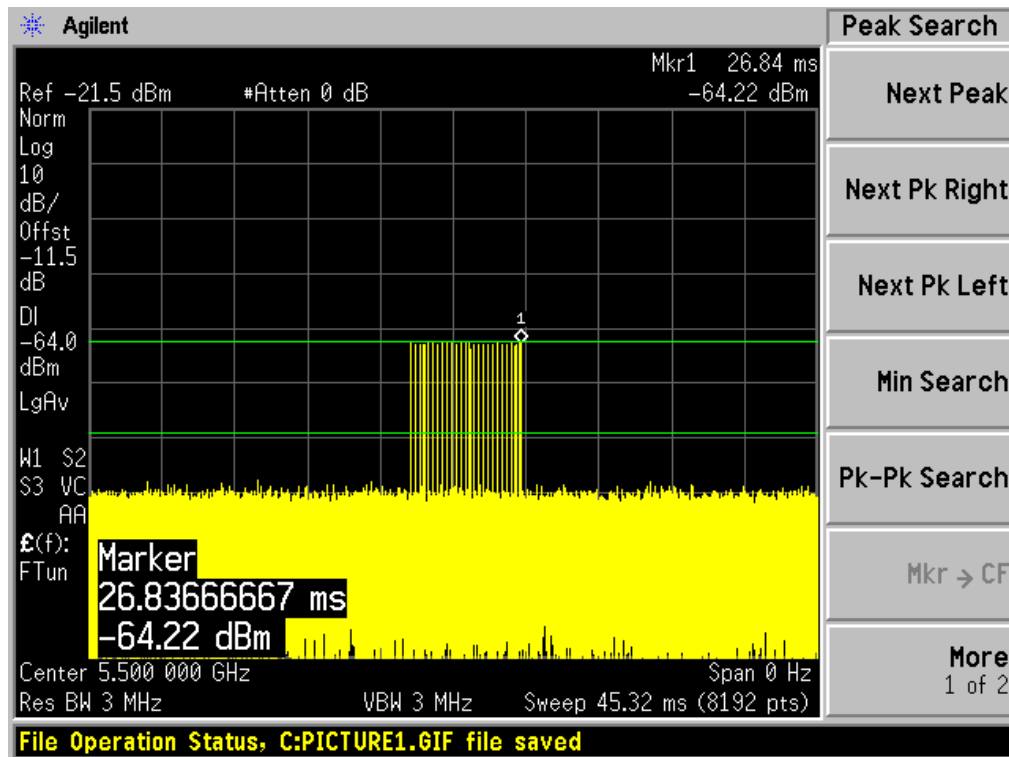
Radar Type 1



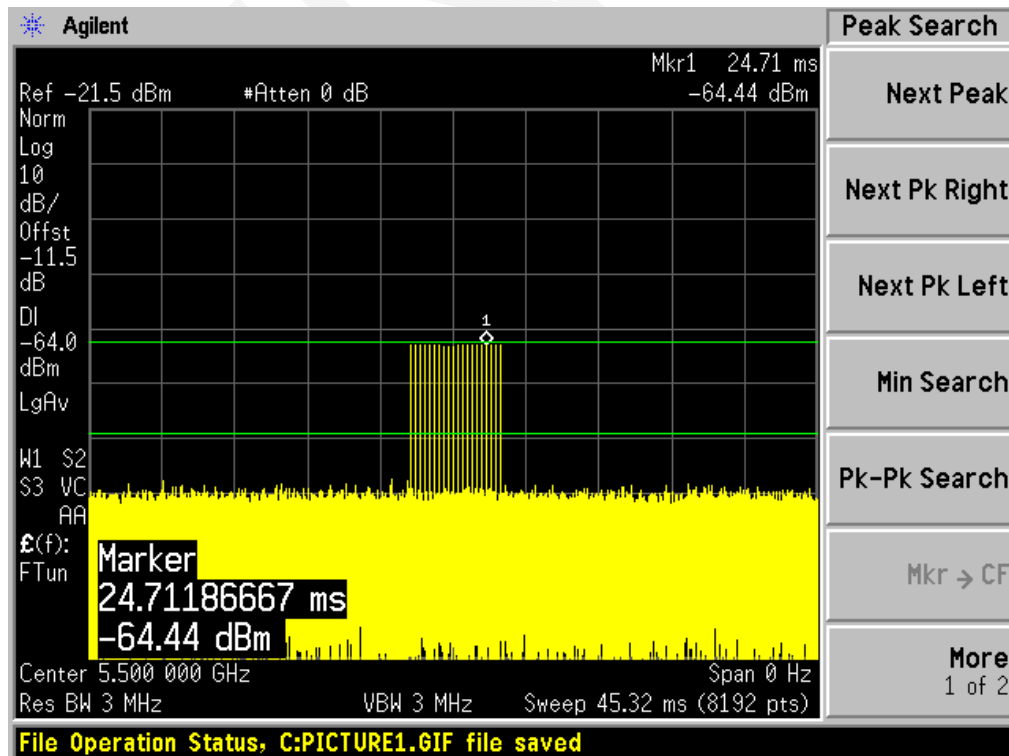
Radar Type 2



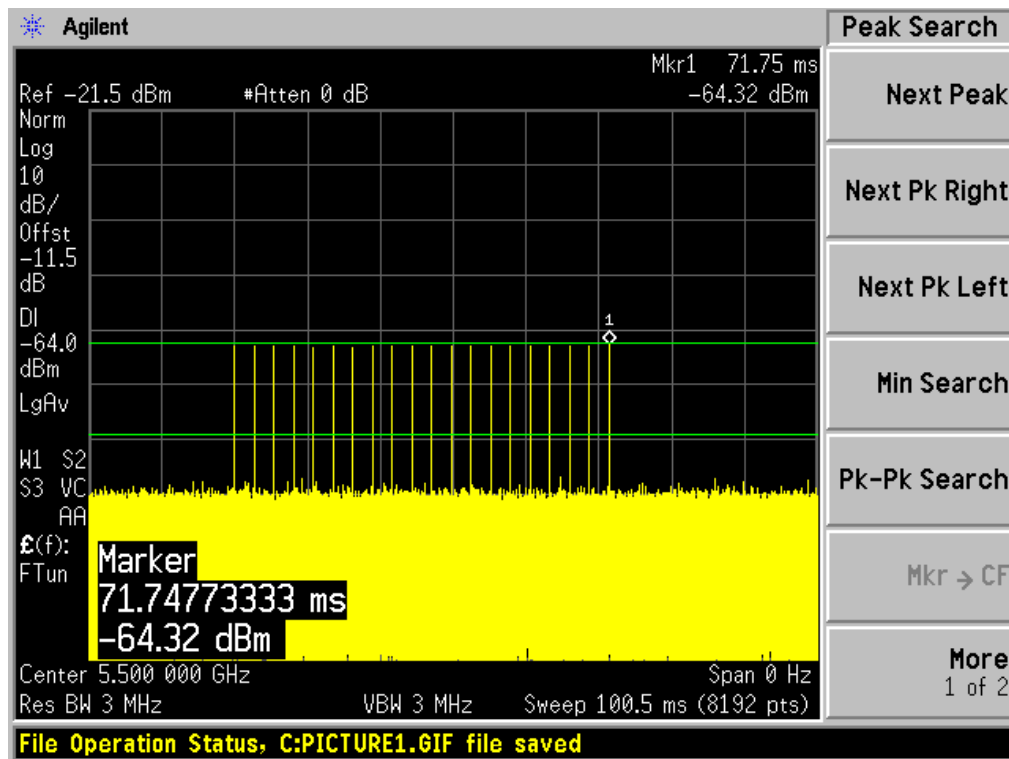
## Radar Type 3



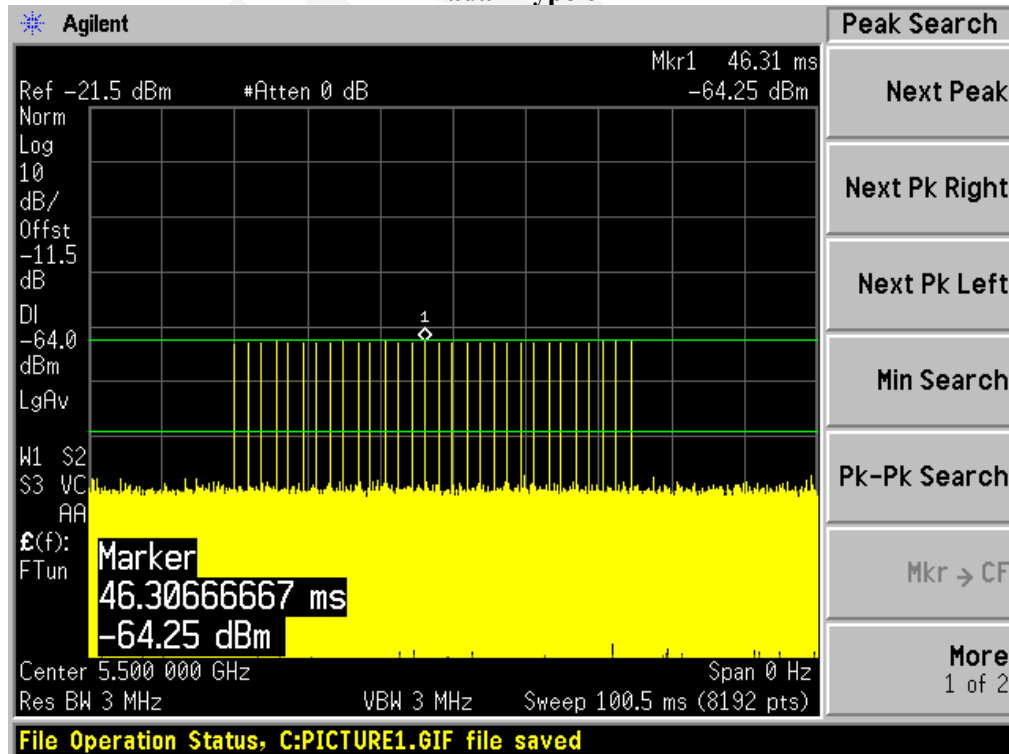
## Radar Type 4

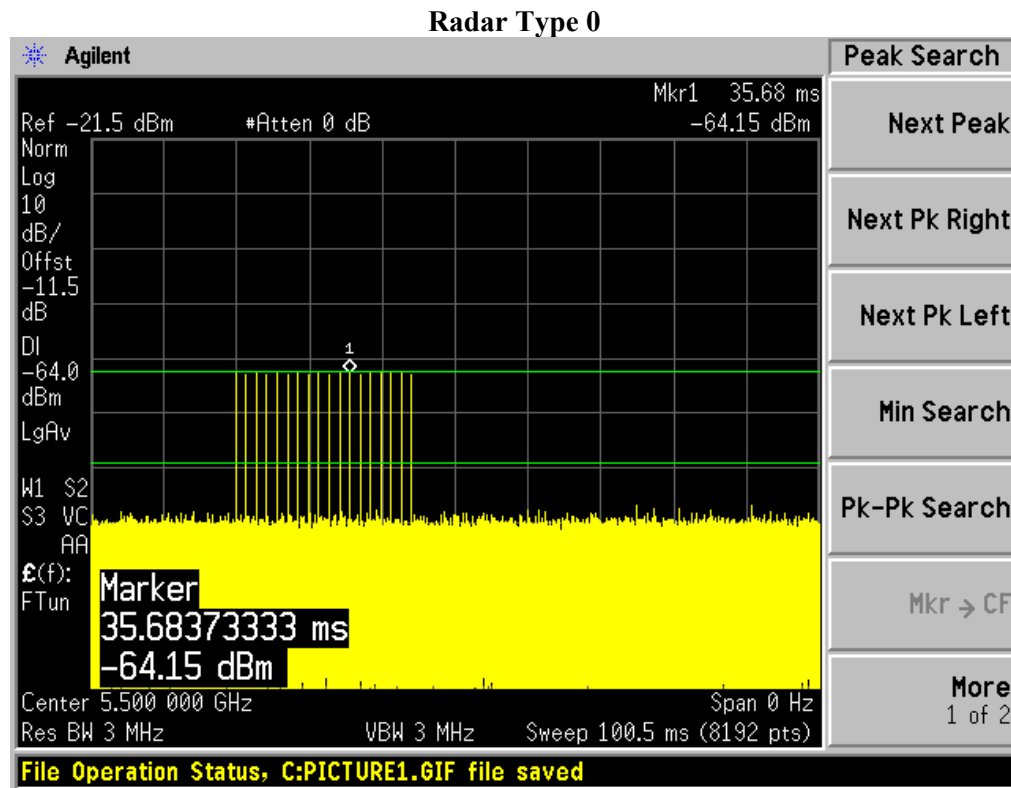


## Radar Type 5



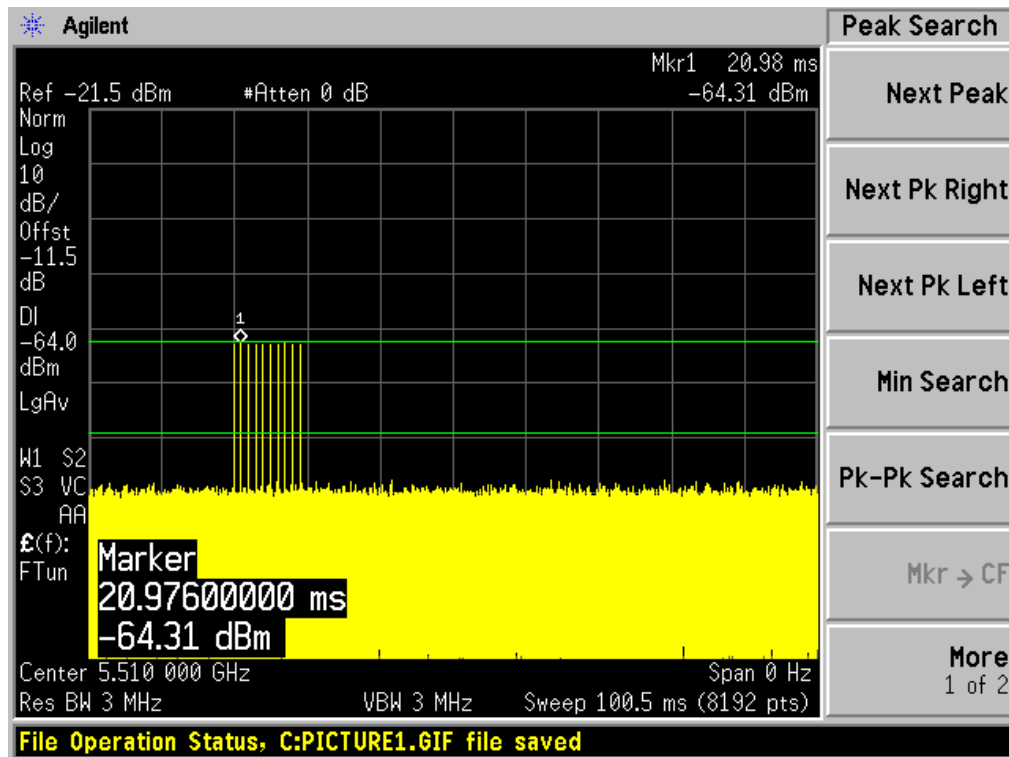
## Radar Type 6



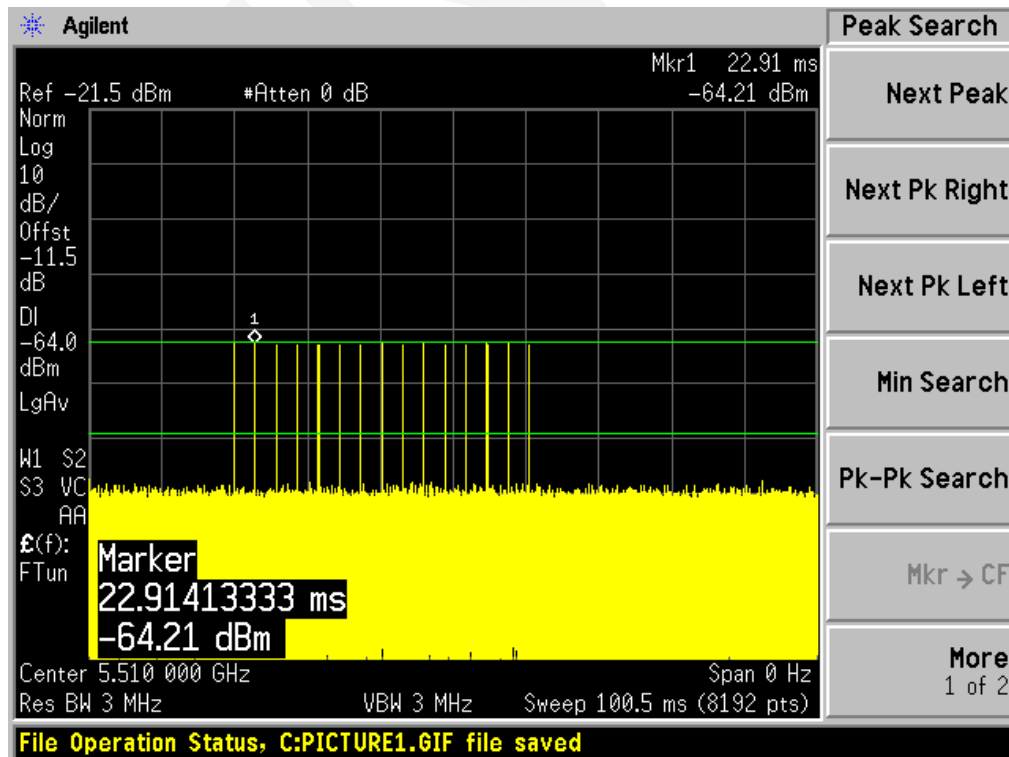


5510MHz:

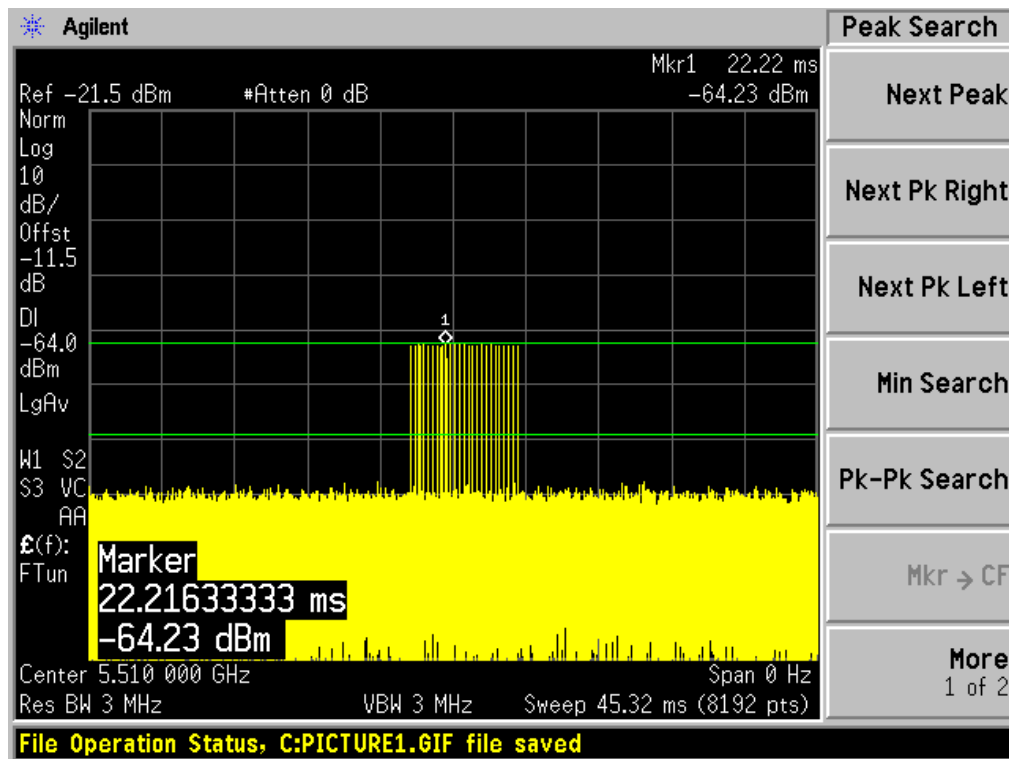
## Radar Type 1



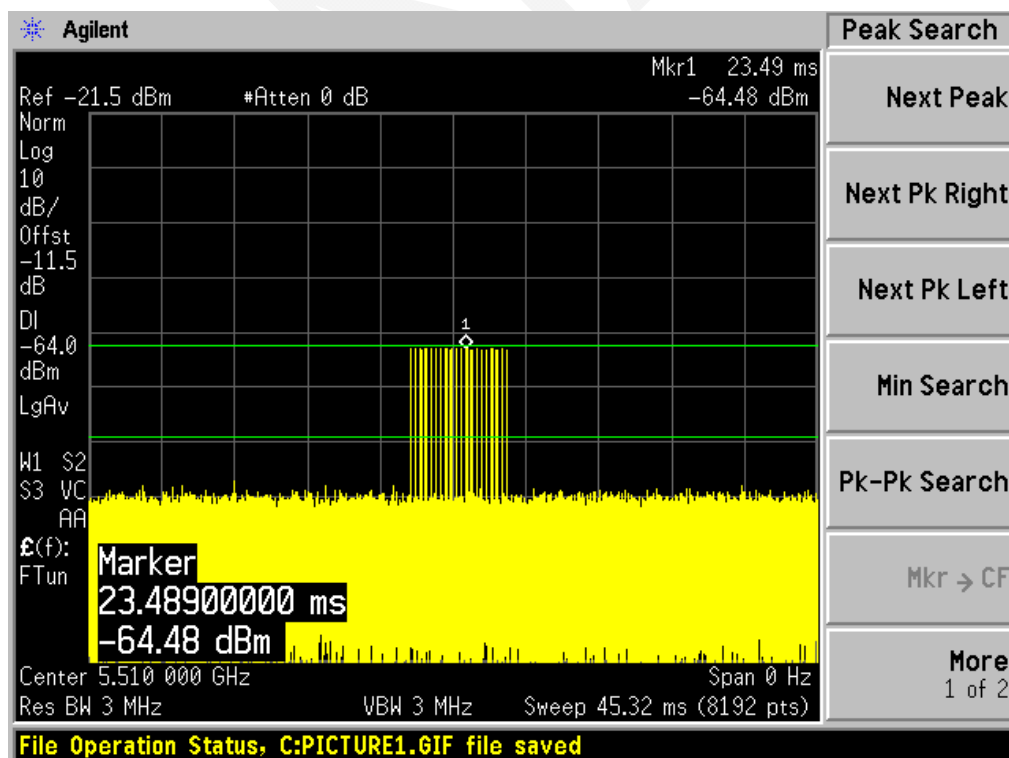
## Radar Type 2



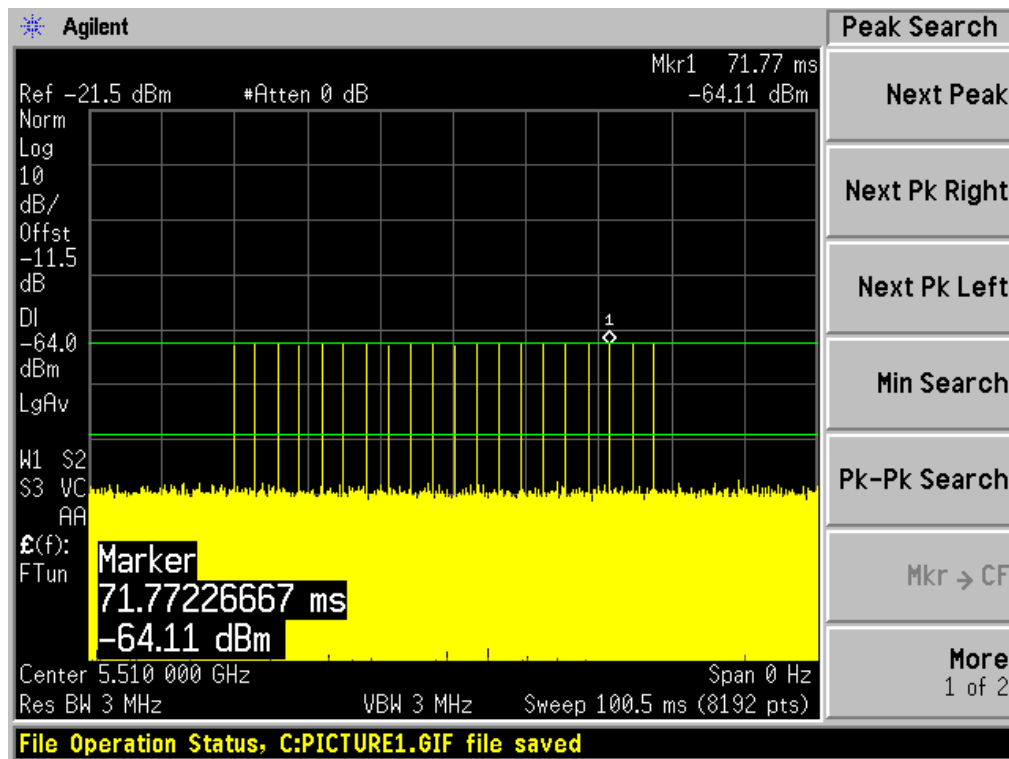
## Radar Type 3



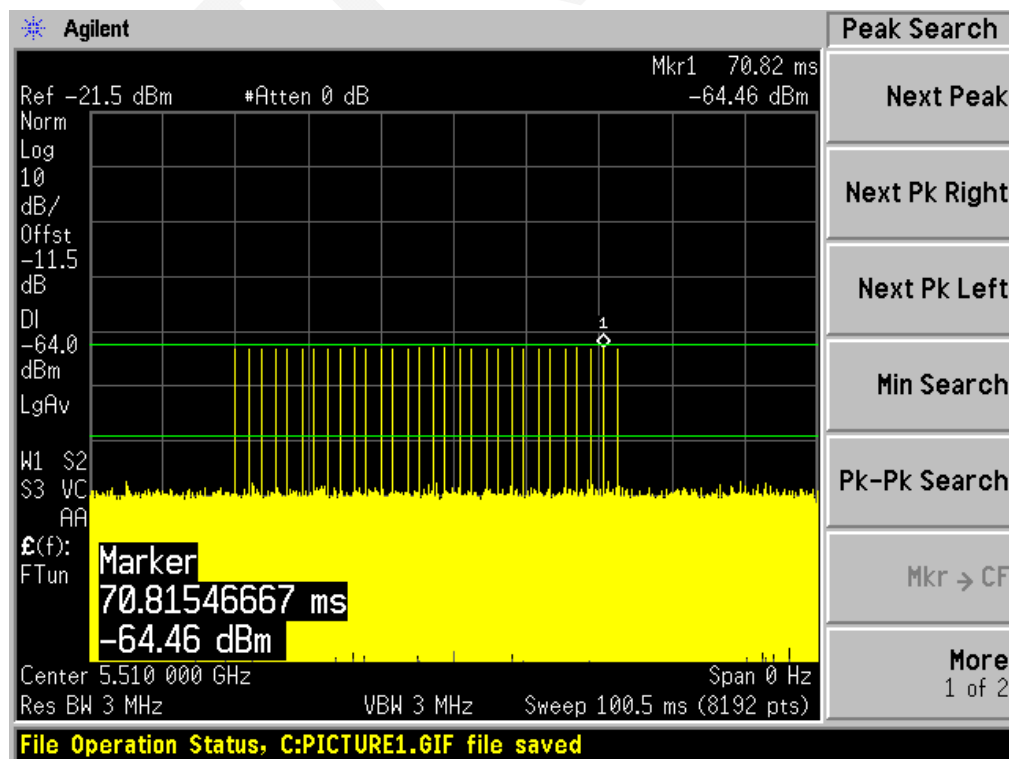
## Radar Type 4



## Radar Type 5

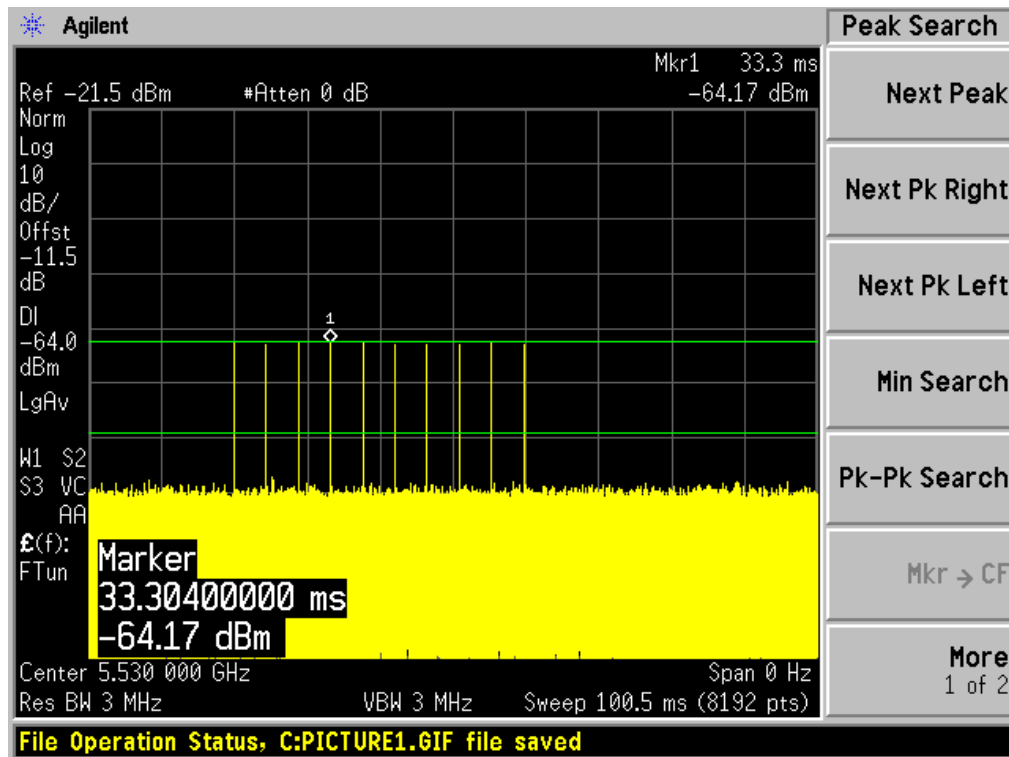


## Radar Type 6

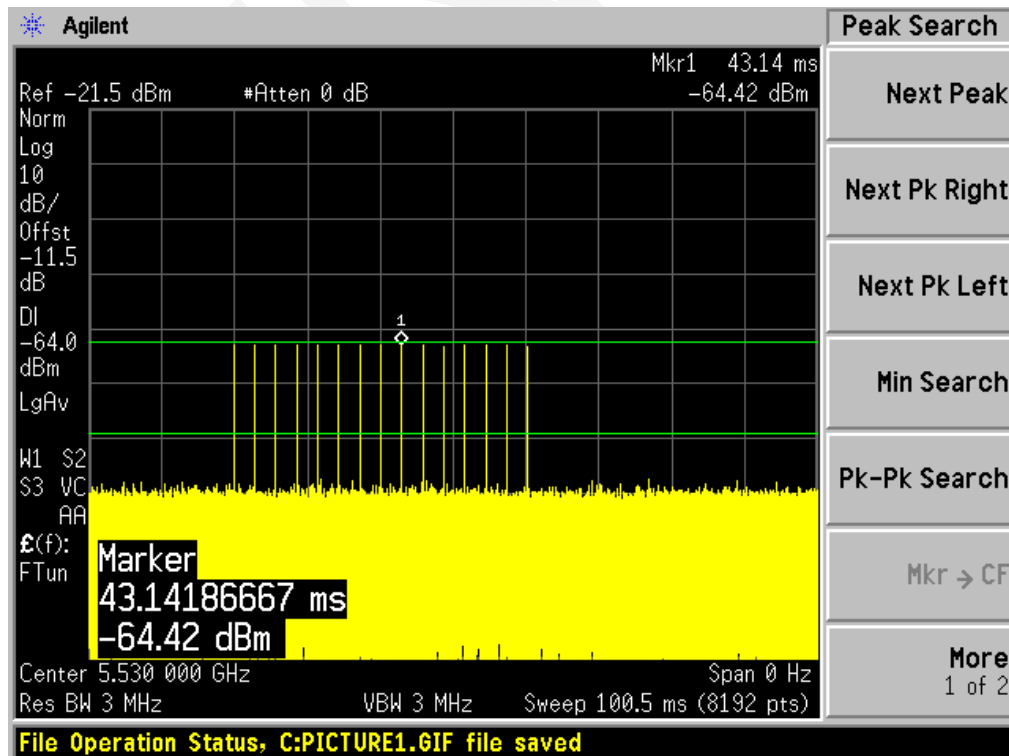


5530MHz:

## Radar Type 1

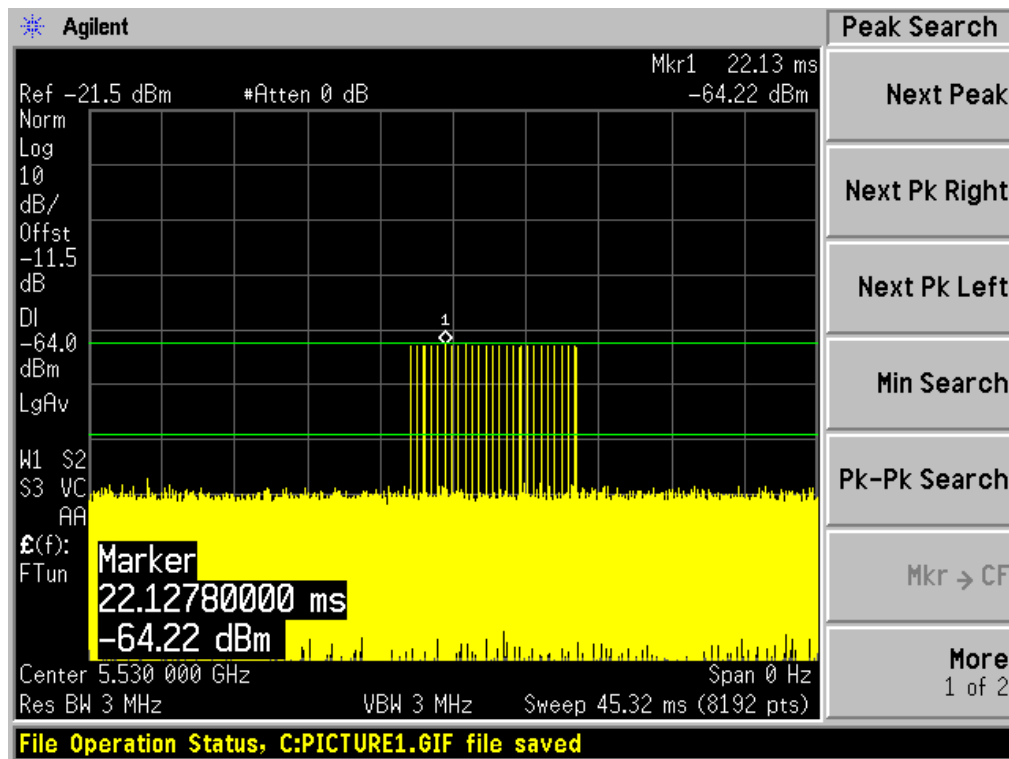


## Radar Type 2

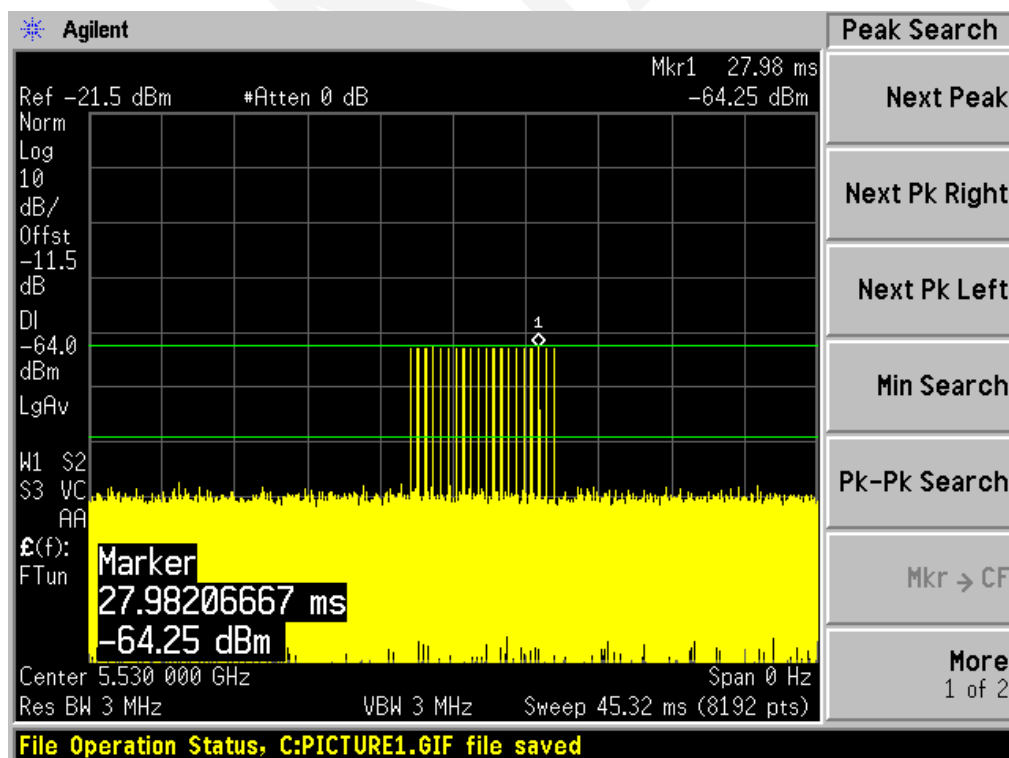




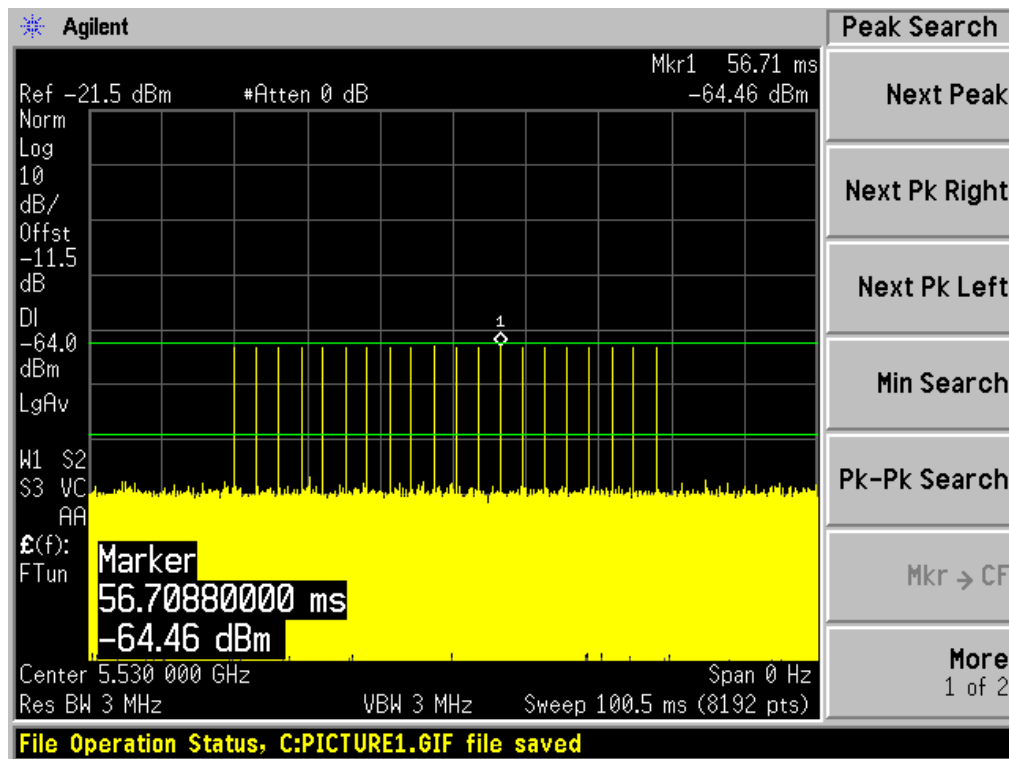
## Radar Type 3



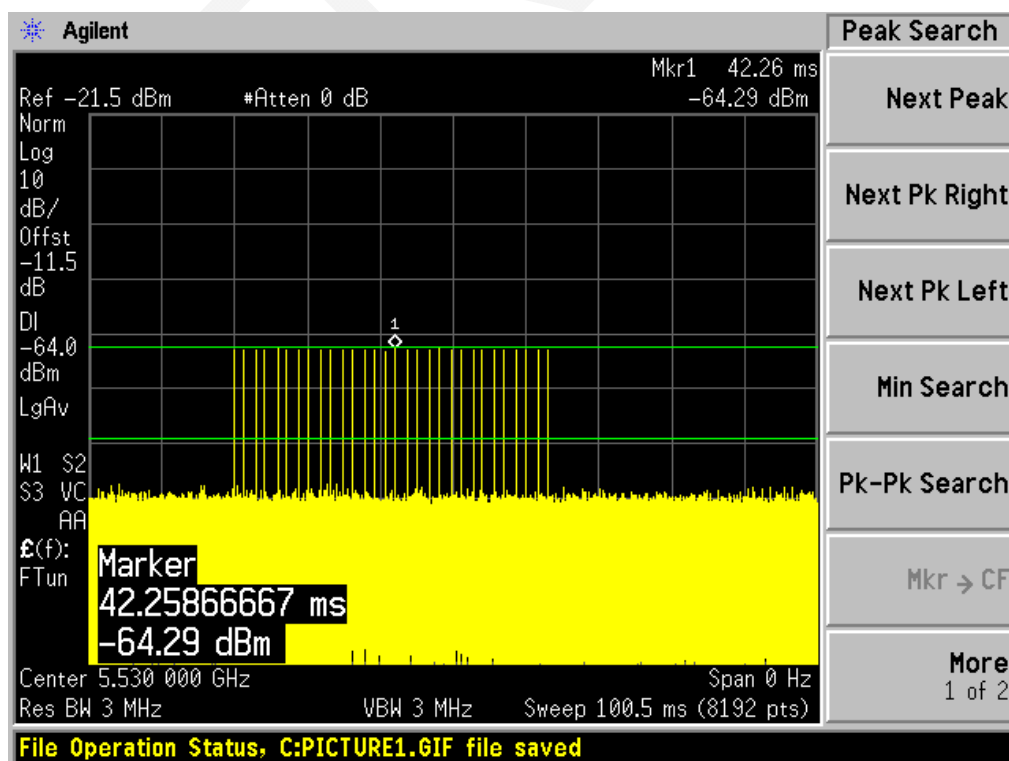
## Radar Type 4



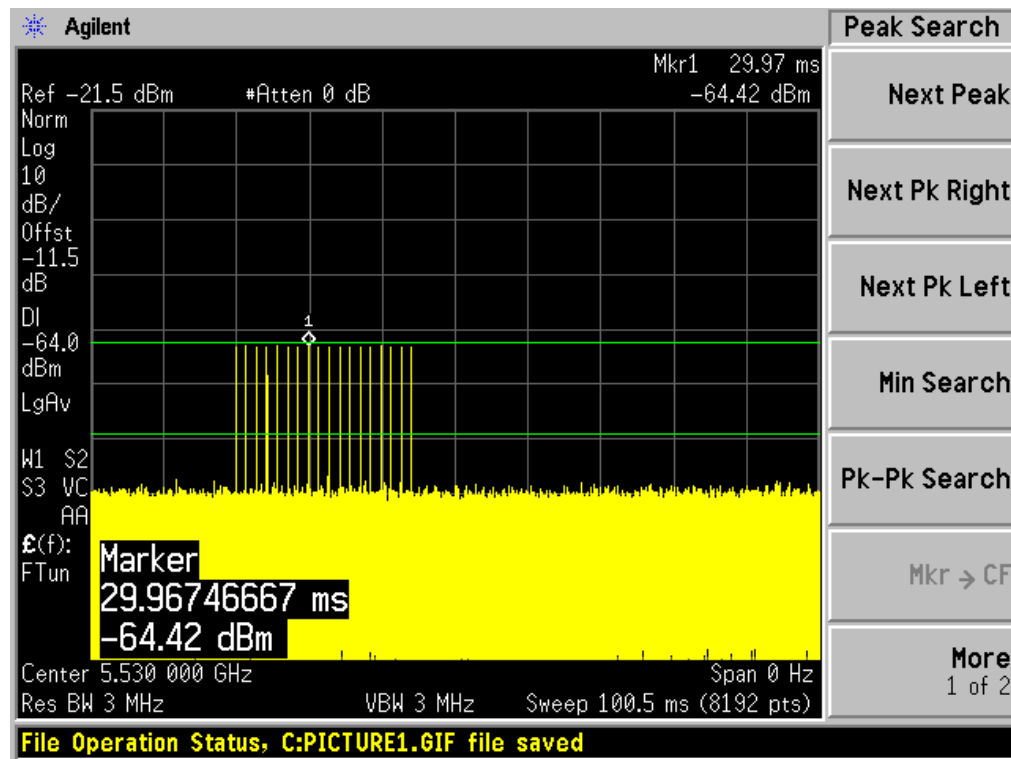
### Radar Type 5



### Radar Type 6



### Radar Type 0



**Channel Availability Check Time (CAC)**

Test Procedure:

- 1) Measure the initial power-up time of EUT.
- 2) With link established on channel, apply a radar signal within 0~2 seconds after the initial power-up period; monitor the transmissions on channel from the spectrum analyzer.
- 3) Reboot EUT, with a link established on channel, except for 5600-5650MHz, apply a radar signal within 58~60 seconds after the initial power-up period, and monitor the transmission on channel from the spectrum analyzer. For 5600-5650 apply a radar signal within 598~600 seconds after the initial power-up period, and monitor the transmission on channel from the spectrum analyzer.

**EUT Initial power-up Cycle Time**

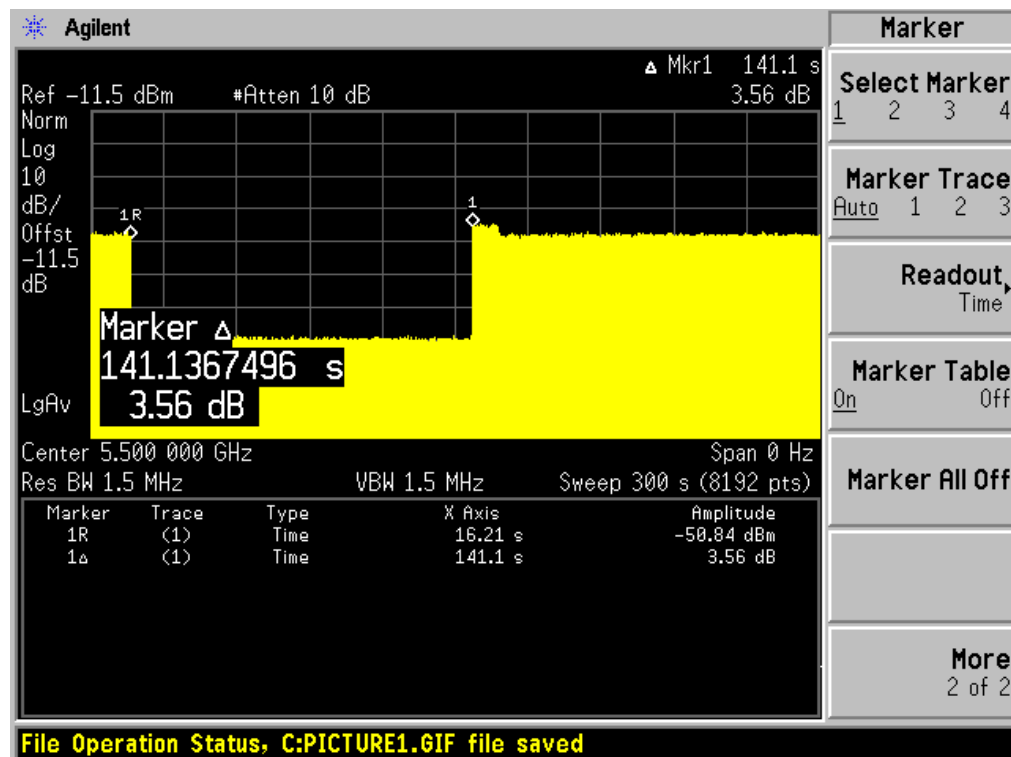
Frequency Bands (MHz)	Mode	EUT initial Power-up cycle (Second)
5470-5725 (Except 5600-5650MHz)	20MHz	81.1
	80MHz	81.6

Note: The device doesn't support 5600~5650MHz.

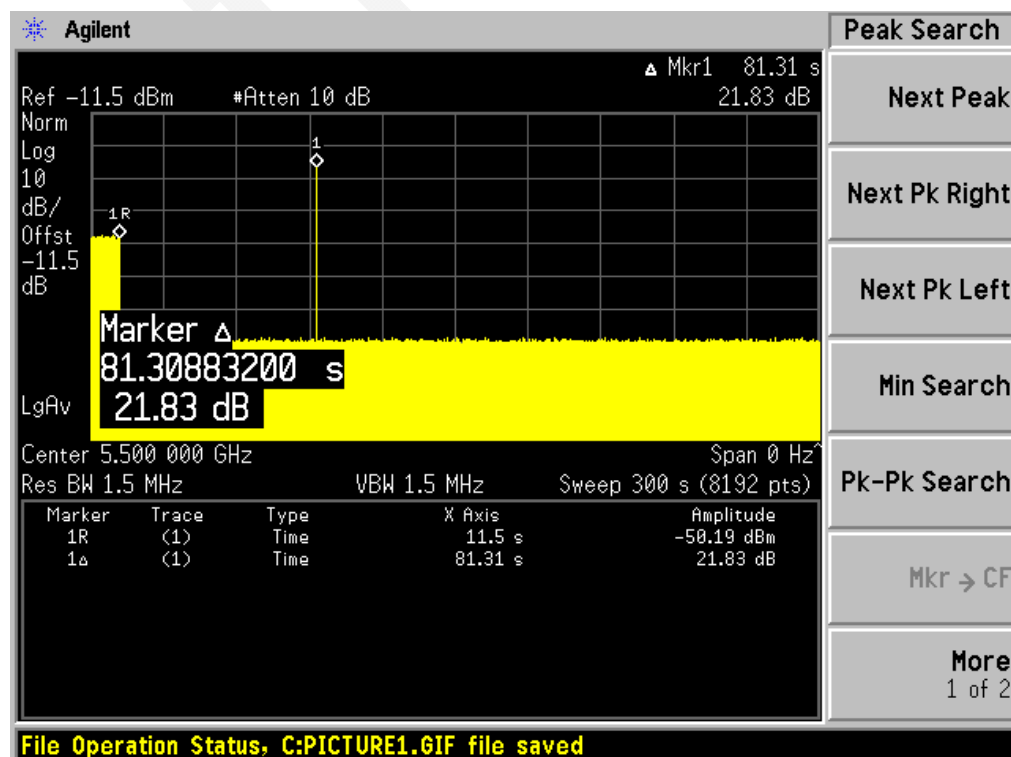
**Results:**

Timing of Radar Burst	Spectrum Analyzer Display
No Radar Triggered	Transmission begin after power-up cycle +60 seconds (except 5600-5650MHz) CAC
Within 2 seconds of the CAC starting	No transmission
Within 2 seconds of the CAC end	No transmission

Please refer to the following plots.

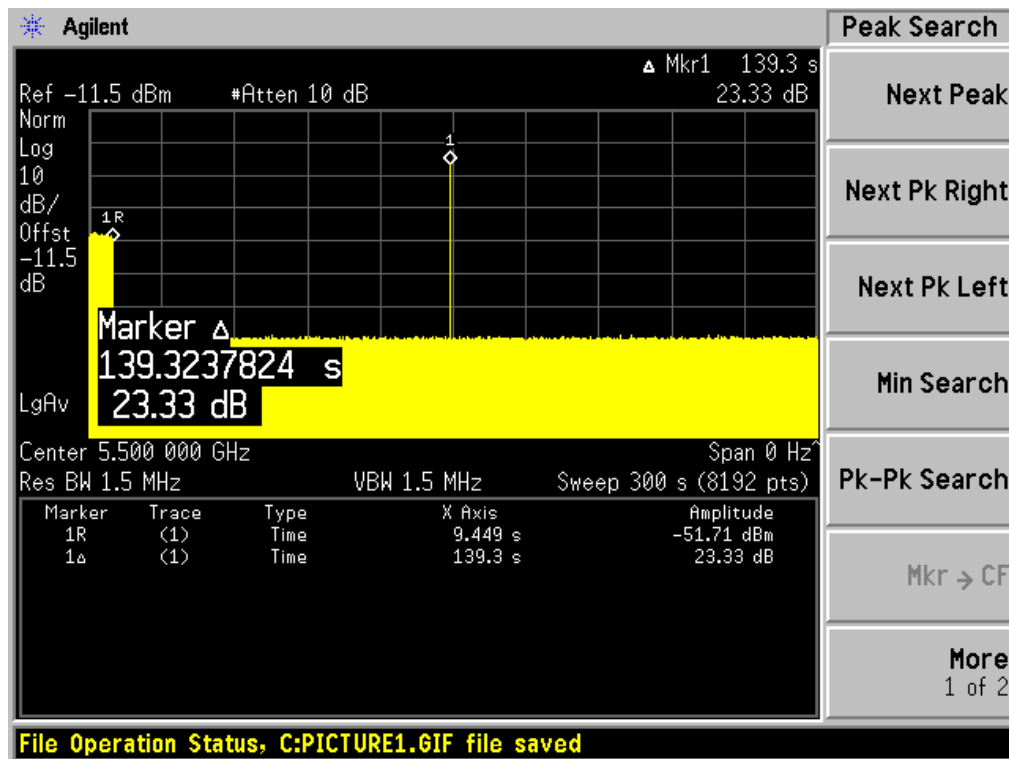
**5500MHz Bandwidth 20 MHz:****Plot of without Radar signal applied**

Note: The power-up cycle is 81.1 seconds

**Plot of Radar signal applied within 2 seconds of start of CAC**

No transmissions found after radar signal applied.

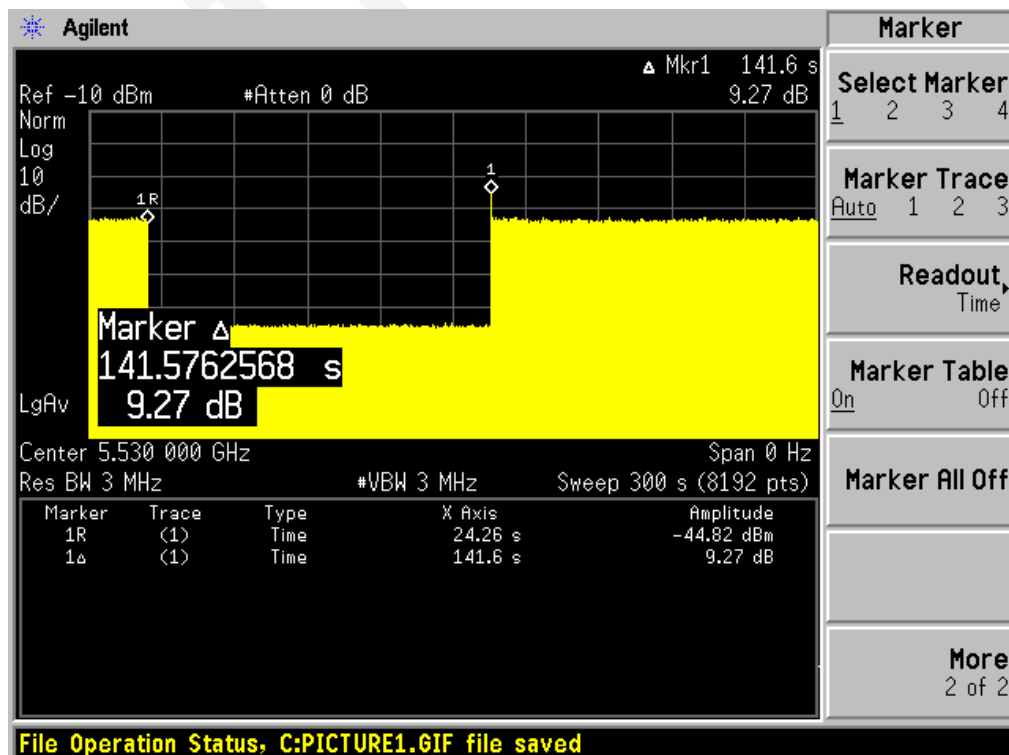
## Plot of Radar signal applied at the end of 2 seconds of CAC



No transmissions found after radar signal applied.

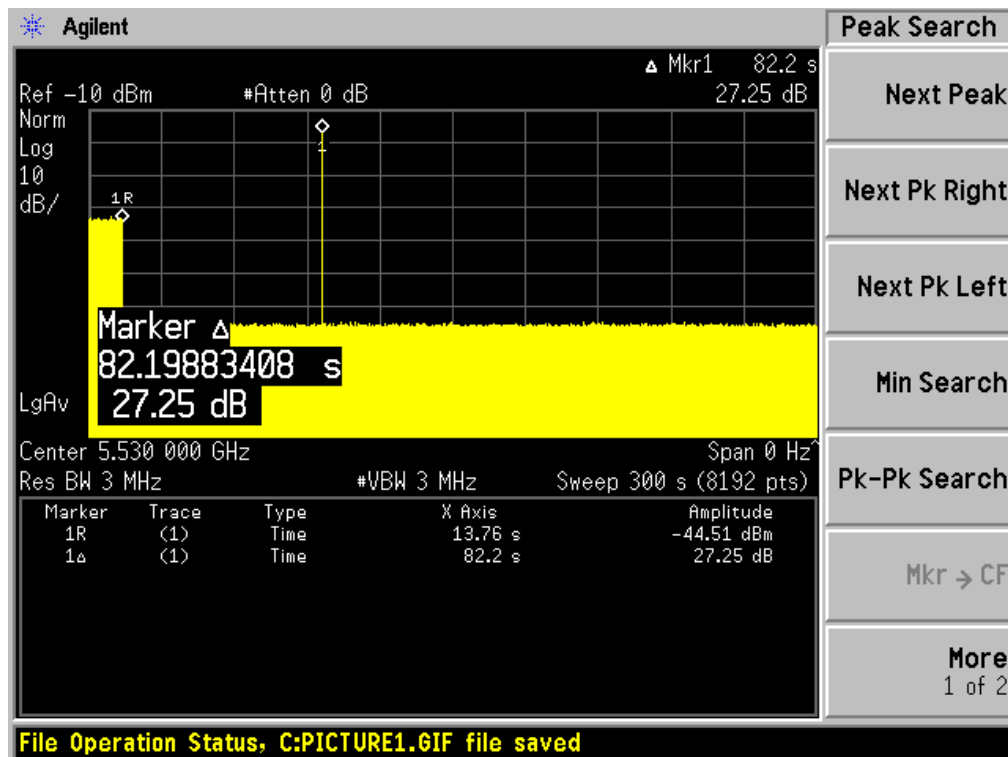
## 5530MHz Bandwidth 80 MHz:

## Plot of without Radar signal applied



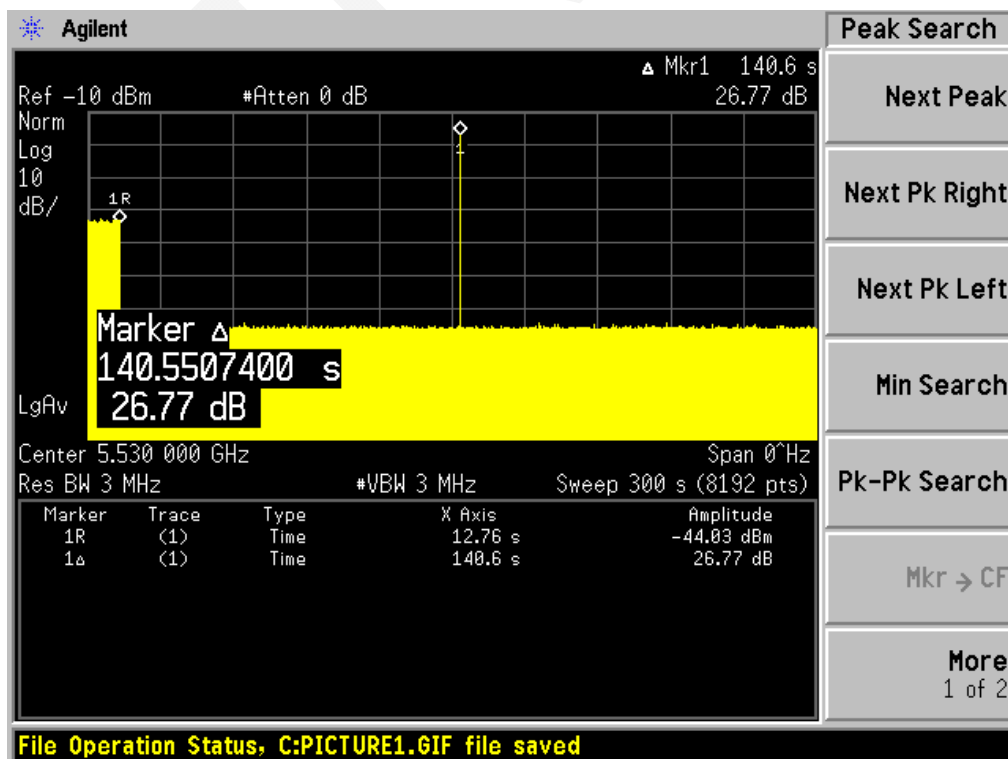
Note: The power-up cycle is 81.6seconds

## Plot of Radar signal applied within 2 seconds of start of CAC



No transmissions found after radar signal applied.

## Plot of Radar signal applied at the end of 2 seconds of CAC



No transmissions found after radar signal applied.

**Channel Move Time and Channel Closing Transmission Time****Test Procedure:**

Perform radar at a level of 10 dB above the level defined in clause 5.3.8.2.1 on the selected channel.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =  $N * \text{Dwell Time}$

N is the number of spectrum analyzer bins showing a device transmission

Dwell Time is the dwell time per bin (i.e.  $\text{Dwell Time} = S/B$ , S is the sweep time and B is the number of bin, i.e. 8192)

**Results:**

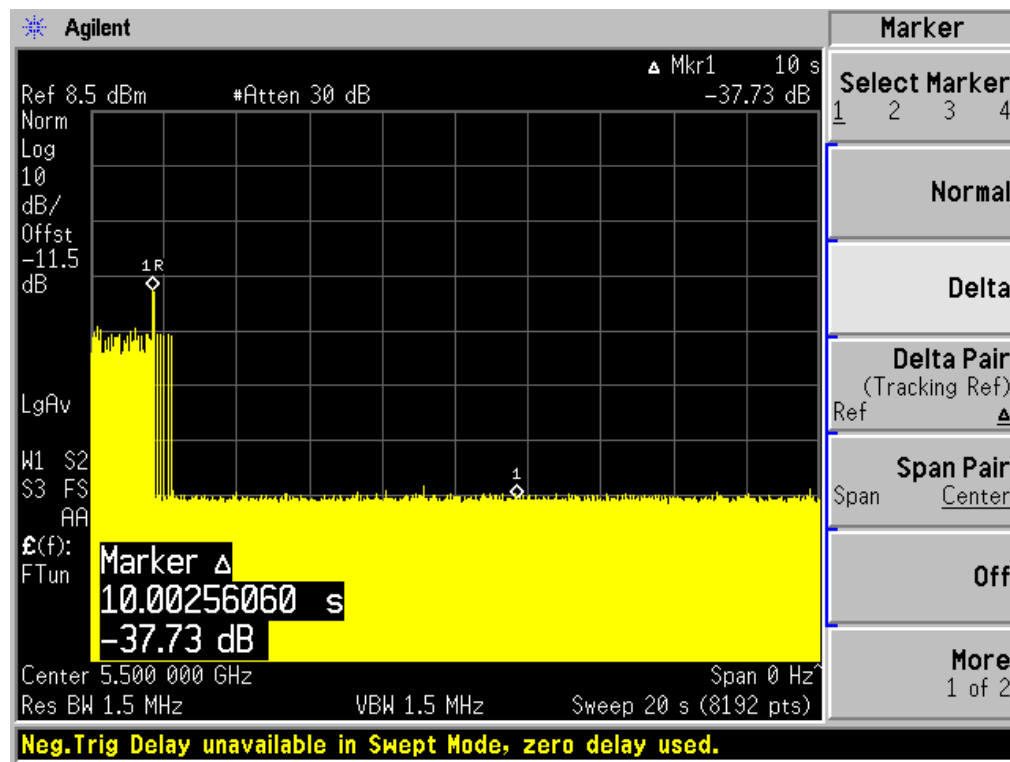
Frequency(MHz)	Bandwidth (MHz)	Radar Type	Results
5500	20	Type table D.3	Compliant
5530	80	Type table D.3	Compliant

Please refer to the following tables and plots.



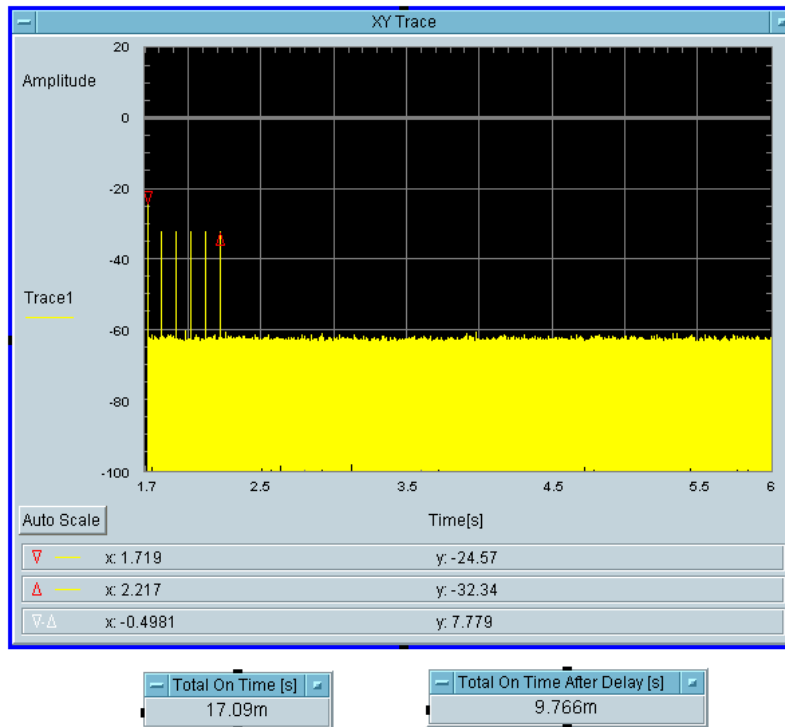
**5500 MHz Bandwidth 20 MHz**Type table D.3 radar channel move time result:

Limit (sec.)	Test Results
10	Pass



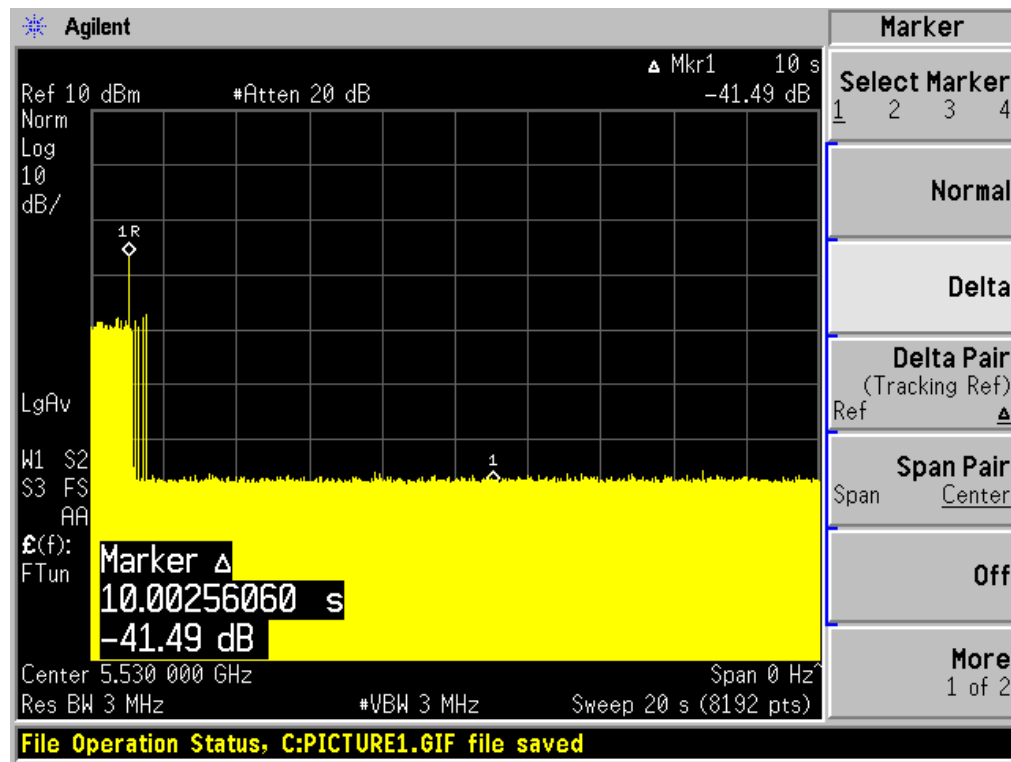
Type table D.3 radar channel closing transmission time result:

Aggregate Transmission Time (ms)	Limit (ms)
17.09	1000



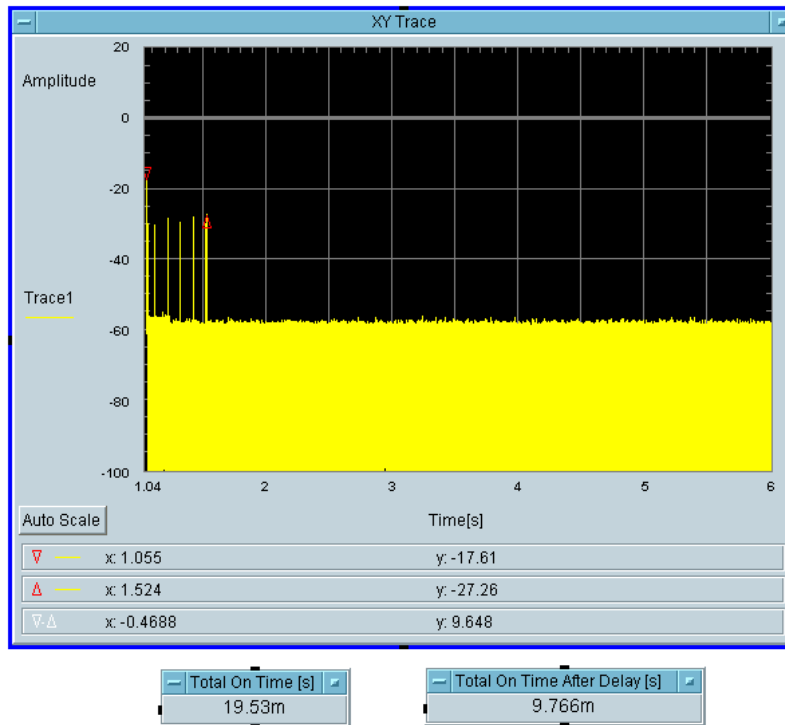
**5530 MHz Bandwidth 80 MHz**Type table D.3 radar channel move time result:

Limit (sec.)	Test Results
10	Pass



Type table D.3 radar channel closing transmission time result:

Aggregate Transmission Time (ms)	Limit (ms)
19.53	1000



## Non-Occupancy Period

### Test Procedure

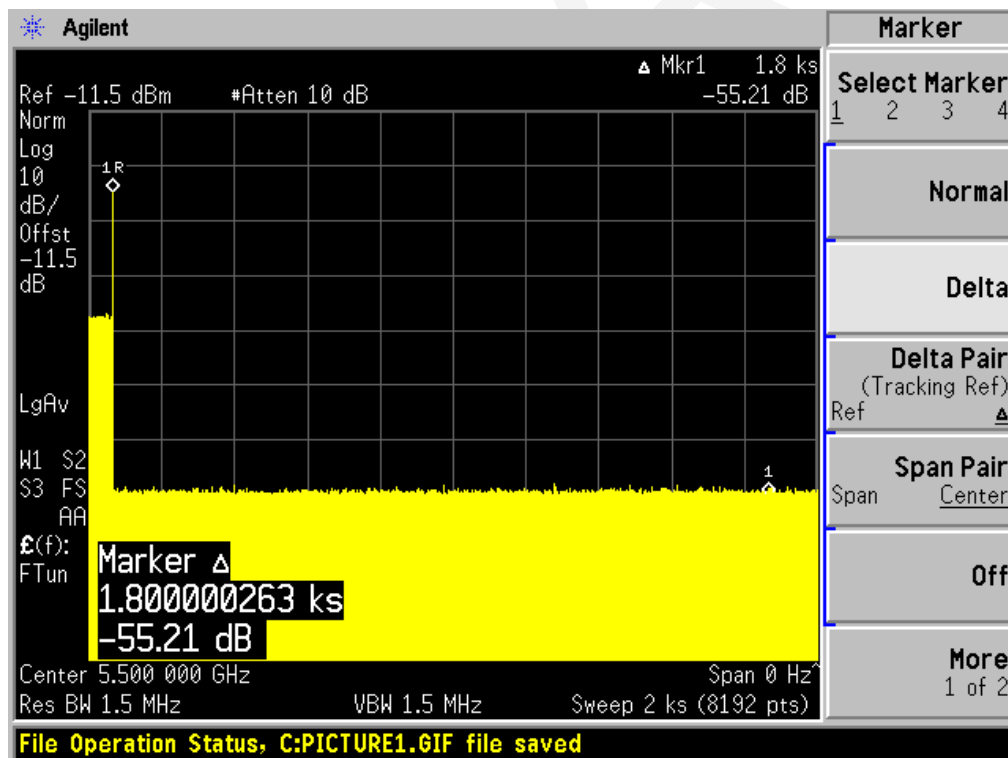
Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this channel. Provide one plot to demonstrate no transmission on the channel for the non-occupancy period (30 minutes observation time)

### Results:

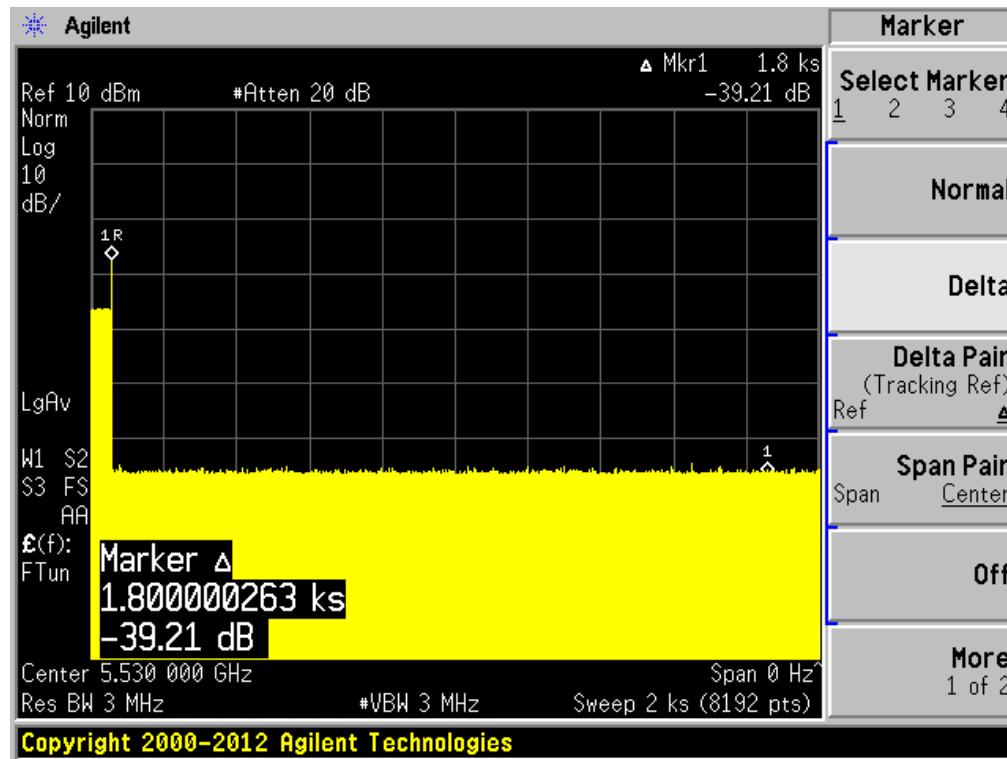
Frequency (MHz)	Bandwidth (MHz)	Spectrum Analyzer Display
5500	20	No transmission within 30 minutes
5530	80	No transmission within 30 minutes

Please refer to the following plots.

5500 MHz Bandwidth 20 MHz



5530 MHz Bandwidth 80 MHz



## Interference Detection Threshold

### Procedure:

The different steps below define the procedure to verify the Interference Detection Threshold during the Channel Availability Check Time.

- a) The signal generator and UUT are connected using Set-up A described in clause 5.3.8.1.2.1. 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<sub>power\_up</sub>) and is ready to start the radar detection. The channel Availability Check is expected to commence on Chr at instant T1 and is expected to end no sooner than T1+T<sub>ch\_avail\_check</sub> unless radar is detected sooner.

NOTE 1: Additional verification may be needed to define T1 in case it is not exactly known or indicated by the UUT.

- c) A single burst radar test signal is generated on Chr using any of the radar test signals defined in table D.4 at a level defined in clause 5.3.8.2.1. This single-burst radar test signal may commence at any time within the applicable Channel Availability Check Time.

NOTE 2: For the purpose of reducing test time, it is recommended that the single-burst test signal starts approximately 10 s after T1.

- d) It shall be recorded if the radar test signal was detected.
- e) The steps c) to d) shall be performed 20 times and each time a different radar test signal shall be generated from options provided in table D.4. The radar test signal shall be detected at least 12 times out of the 20 trials in order to comply with the detection probability specified for this frequency range in table D.5.

Where the declared channel plan includes channels whose nominal bandwidth falls completely or partly within the 5600 MHz to 5650 MHz band, additional testing as described in the steps below shall be performed on a channel within this band.

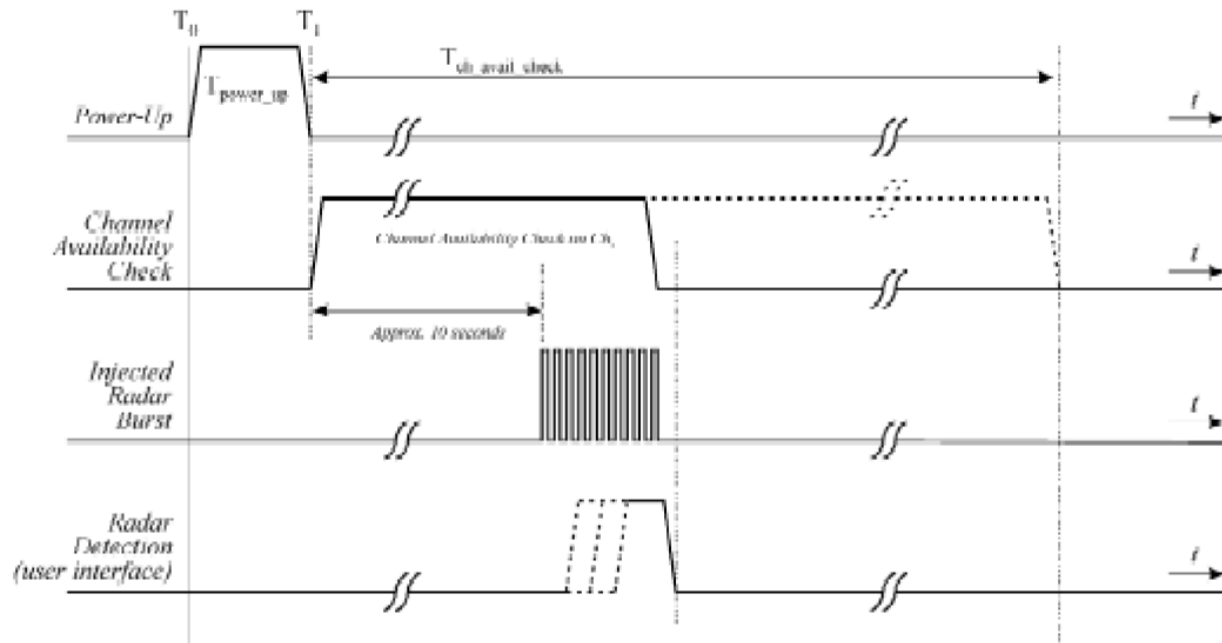
- f) A single burst radar test signal is generated on Chr using any of the radar test signals defined in table D.4 (except signals #3 and #4) at a level of 10 dB above the level defined in clause 5.3.8.2.1. This single burst radar test signal may commence at any time within the applicable Channel Availability Check Time.

NOTE 3: For the purpose of reducing test time, it is recommended that the single burst radar test signal starts approximately 10 s after T1.

- g) Step f) shall be performed 20 times, each time a different radar test signal shall be generated from options provided in table D.4 (except signals #3 and #4). The radar test signal shall be detected during each of these trials and this shall be recorded.

$$\text{Detection Ratio} = \frac{\text{Total Waveform Detections}}{\text{Total Waveform Trials}} \times 100$$

### Example of timing for radar testing during the Channel Availability Check





**Result:****5500 MHz 20MHz****Radar Test Signal-1**

Radar Signal Frequency=5500 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-2**

Radar Signal Frequency=5500 MHz																					
DFS Detection Trials (1=Detected, Blank=No Detected)																					
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass					
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																					

**Radar Test Signal-3**

Radar Signal Frequency=5500 MHz																					
DFS Detection Trials (1=Detected, Blank=No Detected)																					
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass					
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																					

**Radar Test Signal-4**

Radar Signal Frequency=5500 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%						Result: Pass					
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-5**

Radar Signal Frequency=5500 MHz																					
DFS Detection Trials (1=Detected, Blank=No Detected)																					
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass					
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																					

**Radar Test Signal-6**

Radar Signal Frequency=5500 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**5510 MHz 40MHz****Radar Test Signal-1**

Radar Signal Frequency=5510 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%						Result: Pass					
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-2**

Radar Signal Frequency=5510 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-3**

Radar Signal Frequency=5510 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-4**

Radar Signal Frequency=5510 MHz																					
DFS Detection Trials (1=Detected, Blank=No Detected)																					
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass					
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																					

**Radar Test Signal-5**

Radar Signal Frequency=5510 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-6**

Radar Signal Frequency=5510 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**5530 MHz 80MHz****Radar Test Signal-1**

Radar Signal Frequency=5530 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%						Result: Pass					
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-2**

Radar Signal Frequency=5530 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-3**

Radar Signal Frequency=5530 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-4**

Radar Signal Frequency=5530 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-5**

Radar Signal Frequency=5530 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

**Radar Test Signal-6**

Radar Signal Frequency=5530 MHz																				
DFS Detection Trials (1=Detected, Blank=No Detected)																				
Trials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Detection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Detection Rate(%)	100%								Limit: >99.99%							Result: Pass				
Note: Radar Signal type has been applied at approximately 10 seconds after T1 and repeated 20 times.																				

## In-Service Monitoring

### Procedure:

The steps below define the procedure to verify the In-Service Monitoring and Interference Detection Threshold during the In-Service Monitoring.

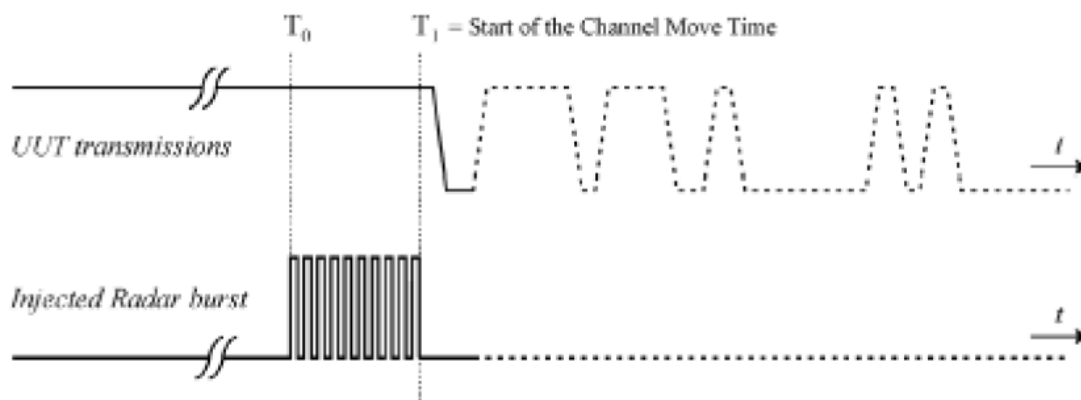
- a) When the UUT is a master device, a slave device will be used that associates with the UUT. The signal generator and the UUT are connected using Set-up A described in clause 5.3.8.1.2.1.

When the UUT is a slave device with a Radar Interference Detection function, the UUT shall associate with a master device. The signal generator and the UUT are connected using Set-up C described in clause 5.3.8.1.2.3.

- b) The UUT shall transmit a test transmission sequence in accordance with clause 5.1.2.2 on the selected channel Chr.
- c) At a certain time  $T_0$ , a single burst radar test signal is generated on Chr using radar test signal #1 defined in table D.4 and at a level defined in clause 5.3.8.2.1.  $T_1$  denotes the end of the radar burst.
- d) It shall be recorded if the radar test signal was detected.
- e) The steps b) to d) shall be performed 20 times. The radar test signal shall be detected at least 12 times out of the 20 trials in order to comply with the detection probability specified in table D.5.
- f) Step b) to e) shall be repeated for each of the radar test signals defined in table D.4 and as described in clause 5.3.8.1.1.

$$\text{Detection Ratio} = \frac{\text{Total Waveform Detections}}{\text{Total Waveform Trials}} \times 100$$

**Figure: Example of timing for radar testing during In-Service Monitoring**



**Result:****5500MHz Bandwidth 20 MHz**

Radar Signal Type	Waveform/Trial Number	Detection(%)	Limit(%)	Pass/Fail
Radar Test Signal-1	20	100%	60%	Pass
Radar Test Signal-2	20	100%	60%	Pass
Radar Test Signal-3	20	100%	60%	Pass
Radar Test Signal-4	20	100%	60%	Pass
Radar Test Signal-5	20	100%	60%	Pass
Radar Test Signal-6	20	100%	60%	Pass



**Table-1-1 Radar Test Signal-1**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5500	10	1.5	482	1
2	5500	10	2	348	1
3	5500	10	1.2	265	1
4	5500	10	4.8	252	1
5	5500	10	2.8	387	1
6	5500	10	1.1	234	1
7	5500	10	3.6	778	1
8	5500	10	1.6	567	1
9	5500	10	4.7	320	1
10	5500	10	4	358	1
11	5500	10	4.2	327	1
12	5500	10	2.4	280	1
13	5500	10	4.2	487	1
14	5500	10	2	226	1
15	5500	10	0.8	332	1
16	5500	10	3.3	210	1
17	5500	10	3.8	272	1
18	5500	10	3.6	681	1
19	5500	10	4.3	909	1
20	5500	10	1.8	227	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-2-1 Radar Test Signal-2**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5500	15	3.2	1271	1
2	5500	15	6.6	536	1
3	5500	15	13.2	327	1
4	5500	15	4.2	490	1
5	5500	15	9.3	292	1
6	5500	15	3.5	1067	1
7	5500	15	12	486	1
8	5500	15	11.1	392	1
9	5500	15	9.3	414	1
10	5500	15	4.7	1259	1
11	5500	15	0.8	716	1
12	5500	15	10.1	219	1
13	5500	15	6.7	219	1
14	5500	15	0.9	829	1
15	5500	15	2.5	272	1
16	5500	15	7.6	204	1
17	5500	15	3.5	358	1
18	5500	15	9.7	341	1
19	5500	15	6.2	293	1
20	5500	15	9.3	1565	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-3-1 Radar Test Signal-3**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5500	25	14.1	3378	1
2	5500	25	4.5	3077	1
3	5500	25	12.8	2500	1
4	5500	25	7.2	2469	1
5	5500	25	8.8	2725	1
6	5500	25	8.1	3195	1
7	5500	25	0.8	2639	1
8	5500	25	8.9	3774	1
9	5500	25	15	2703	1
10	5500	25	12.5	3215	1
11	5500	25	4.8	2564	1
12	5500	25	13.4	2488	1
13	5500	25	8.5	2653	1
14	5500	25	4.8	3484	1
15	5500	25	7.8	2577	1
16	5500	25	4.8	2786	1
17	5500	25	12.8	3356	1
18	5500	25	12.5	3497	1
19	5500	25	8.4	2639	1
20	5500	25	11.5	2564	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-4-1 Radar Test Signal-4**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5500	20	27.9	3279	1
2	5500	20	24.3	2101	1
3	5500	20	27.4	2353	1
4	5500	20	29.1	3215	1
5	5500	20	24	2809	1
6	5500	20	30	2053	1
7	5500	20	27.7	3610	1
8	5500	20	22.9	2070	1
9	5500	20	28.7	2463	1
10	5500	20	23.7	2890	1
11	5500	20	25.8	2551	1
12	5500	20	27.2	2183	1
13	5500	20	26.9	2646	1
14	5500	20	22.6	2667	1
15	5500	20	28.1	3049	1
16	5500	20	22.6	3745	1
17	5500	20	27.3	3049	1
18	5500	20	21.1	3378	1
19	5500	20	26.2	2475	1
20	5500	20	26.9	2494	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-5-1 Radar Test Signal-5**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5500	10	377	335		1
2	5500	10	304	332		1
3	5500	10	342	384	364	1
4	5500	10	389	365	340	1
5	5500	10	367	347		1
6	5500	10	318	363	338	1
7	5500	10	312	344		1
8	5500	10	306	351		1
9	5500	10	384	336		1
10	5500	10	336	368		1
11	5500	10	350	376		1
12	5500	10	332	311		1
13	5500	10	320	355		1
14	5500	10	353	315		1
15	5500	10	394	372		1
16	5500	10	392	356		1
17	5500	10	343	306		1
18	5500	10	400	361		1
19	5500	10	348	313		1
20	5500	10	361	333		1
<b>Detection Percentage:</b> 100 %		<b>Limit: 60%</b>			<b>Result: Pass</b>	

**Table-6-1 Radar Test Signal-6**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5500	15	624	797	1012	1
2	5500	15	564	447		1
3	5500	15	527	625		1
4	5500	15	488	408		1
5	5500	15	503	807		1
6	5500	15	445	596		1
7	5500	15	878	547	678	1
8	5500	15	1027	796		1
9	5500	15	622	436	522	1
10	5500	15	765	874		1
11	5500	15	913	801	572	1
12	5500	15	460	638	541	1
13	5500	15	450	590		1
14	5500	15	715	436	613	1
15	5500	15	408	551	641	1
16	5500	15	498	648	814	1
17	5500	15	981	809		1
18	5500	15	419	577		1
19	5500	15	431	779	625	1
20	5500	15	771	944	635	1
<b>Detection Percentage:</b> 100 %		<b>Limit: 60%</b>			<b>Result: Pass</b>	

**5510MHz Bandwidth 40 MHz**

<b>Radar Signal Type</b>	<b>Waveform/Trial Number</b>	<b>Detection(%)</b>	<b>Limit(%)</b>	<b>Pass/Fail</b>
<b>Radar Test Signal-1</b>	20	100%	60%	Pass
<b>Radar Test Signal-2</b>	20	100%	60%	Pass
<b>Radar Test Signal-3</b>	20	100%	60%	Pass
<b>Radar Test Signal-4</b>	20	100%	60%	Pass
<b>Radar Test Signal-5</b>	20	100%	60%	Pass
<b>Radar Test Signal-6</b>	20	100%	60%	Pass

**Table-1-1 Radar Test Signal-1**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5510	10	4.9	358	1
2	5510	10	2.4	581	1
3	5510	10	4.1	842	1
4	5510	10	4	295	1
5	5510	10	1.7	299	1
6	5510	10	1.4	317	1
7	5510	10	2.7	369	1
8	5510	10	1.2	227	1
9	5510	10	3.7	443	1
10	5510	10	2.7	212	1
11	5510	10	4.5	267	1
12	5510	10	4.6	319	1
13	5510	10	2.9	224	1
14	5510	10	4.8	444	1
15	5510	10	0.9	204	1
16	5510	10	3.5	237	1
17	5510	10	3.1	555	1
18	5510	10	2.8	274	1
19	5510	10	4.7	261	1
20	5510	10	1.4	248	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	



**Table-2-1 Radar Test Signal-2**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5510	15	9.4	299	1
2	5510	15	4.6	551	1
3	5510	15	1.1	943	1
4	5510	15	6.5	302	1
5	5510	15	13	216	1
6	5510	15	2	294	1
7	5510	15	13.2	275	1
8	5510	15	11.3	232	1
9	5510	15	12	350	1
10	5510	15	2.5	1066	1
11	5510	15	4.4	313	1
12	5510	15	12.3	486	1
13	5510	15	2.7	280	1
14	5510	15	14.6	213	1
15	5510	15	11.5	527	1
16	5510	15	5.8	450	1
17	5510	15	3	729	1
18	5510	15	9.2	230	1
19	5510	15	9.6	292	1
20	5510	15	1.8	404	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-3-1 Radar Test Signal-3**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5510	25	5.2	3390	1
2	5510	25	7.4	3759	1
3	5510	25	4.1	2907	1
4	5510	25	8.2	2941	1
5	5510	25	2.3	2353	1
6	5510	25	5	3690	1
7	5510	25	12.1	3322	1
8	5510	25	1.6	2315	1
9	5510	25	4.6	3559	1
10	5510	25	4.4	2538	1
11	5510	25	14.9	3521	1
12	5510	25	0.8	2469	1
13	5510	25	11.4	3390	1
14	5510	25	9.1	2500	1
15	5510	25	14.8	3984	1
16	5510	25	3.4	2591	1
17	5510	25	11.4	3676	1
18	5510	25	14.6	3460	1
19	5510	25	11.4	2825	1
20	5510	25	2.3	3322	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-4-1 Radar Test Signal-4**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5510	20	21	2024	1
2	5510	20	26.8	3289	1
3	5510	20	28.7	2825	1
4	5510	20	27.4	2320	1
5	5510	20	29.7	2632	1
6	5510	20	21.2	2227	1
7	5510	20	27.2	2410	1
8	5510	20	22.1	2985	1
9	5510	20	24.7	3774	1
10	5510	20	21.5	3521	1
11	5510	20	26.4	3247	1
12	5510	20	26.5	2062	1
13	5510	20	26.3	2710	1
14	5510	20	27.8	3125	1
15	5510	20	23.7	2174	1
16	5510	20	23.2	2398	1
17	5510	20	28.9	2469	1
18	5510	20	27.4	2994	1
19	5510	20	23.5	3040	1
20	5510	20	27.9	2146	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-5-1 Radar Test Signal-5**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5510	10	340	318		1
2	5510	10	312	337		1
3	5510	10	308	356		1
4	5510	10	350	327		1
5	5510	10	393	367	345	1
6	5510	10	321	360		1
7	5510	10	364	315	338	1
8	5510	10	352	374	397	1
9	5510	10	359	390		1
10	5510	10	355	322		1
11	5510	10	314	349		1
12	5510	10	396	369		1
13	5510	10	335	370		1
14	5510	10	302	351		1
15	5510	10	310	331		1
16	5510	10	354	320		1
17	5510	10	396	355		1
18	5510	10	338	365		1
19	5510	10	367	392	344	1
20	5510	10	357	330	308	1
<b>Detection Percentage:</b> 100 %		<b>Limit: 60%</b>			<b>Result: Pass</b>	

**Table-6-1 Radar Test Signal-6**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5510	15	905	1178	1066	1
2	5510	15	647	496		1
3	5510	15	450	579	682	1
4	5510	15	594	743		1
5	5510	15	923	587	706	1
6	5510	15	612	943		1
7	5510	15	908	1083	1183	1
8	5510	15	429	519	644	1
9	5510	15	712	405		1
10	5510	15	910	654		1
11	5510	15	684	812	451	1
12	5510	15	451	704	558	1
13	5510	15	436	805	617	1
14	5510	15	671	850		1
15	5510	15	467	651		1
16	5510	15	425	593	508	1
17	5510	15	608	699		1
18	5510	15	487	649		1
19	5510	15	486	650		1
20	5510	15	463	776	693	1
<b>Detection Percentage:</b> 100 %		<b>Limit: 60%</b>			<b>Result: Pass</b>	

**5530MHz Bandwidth 80 MHz**

Radar Signal Type	Waveform/Trial Number	Detection(%)	Limit(%)	Pass/Fail
Radar Test Signal-1	20	100%	60%	Pass
Radar Test Signal-2	20	100%	60%	Pass
Radar Test Signal-3	20	100%	60%	Pass
Radar Test Signal-4	20	100%	60%	Pass
Radar Test Signal-5	20	100%	60%	Pass
Radar Test Signal-6	20	100%	60%	Pass

**Table-1-1 Radar Test Signal-1**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5530	10	4.8	215	1
2	5530	10	2.5	393	1
3	5530	10	2.2	302	1
4	5530	10	3.9	252	1
5	5530	10	1.2	657	1
6	5530	10	1.7	337	1
7	5530	10	0.8	252	1
8	5530	10	2.7	263	1
9	5530	10	2.5	214	1
10	5530	10	3.7	206	1
11	5530	10	4.5	269	1
12	5530	10	0.9	688	1
13	5530	10	1.4	966	1
14	5530	10	1.8	531	1
15	5530	10	5	214	1
16	5530	10	1.4	243	1
17	5530	10	2.8	502	1
18	5530	10	1	994	1
19	5530	10	0.9	360	1
20	5530	10	3.2	203	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-2-1 Radar Test Signal-2**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5530	15	6.9	743	1
2	5530	15	9.7	323	1
3	5530	15	13.3	245	1
4	5530	15	10	325	1
5	5530	15	1.3	228	1
6	5530	15	6	208	1
7	5530	15	8.2	268	1
8	5530	15	9.9	582	1
9	5530	15	6.5	896	1
10	5530	15	3.5	302	1
11	5530	15	13.4	368	1
12	5530	15	8.2	435	1
13	5530	15	14.9	201	1
14	5530	15	7.8	440	1
15	5530	15	15	215	1
16	5530	15	11.6	1359	1
17	5530	15	5.5	669	1
18	5530	15	9.8	248	1
19	5530	15	11.9	306	1
20	5530	15	8.2	962	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	



**Table-3-1 Radar Test Signal-3**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5530	25	3	2950	1
2	5530	25	9.3	3636	1
3	5530	25	14.8	3115	1
4	5530	25	13.4	2433	1
5	5530	25	12.9	3584	1
6	5530	25	11.1	2646	1
7	5530	25	14.6	2315	1
8	5530	25	2.6	2874	1
9	5530	25	3.2	2625	1
10	5530	25	1.8	2985	1
11	5530	25	0.9	2611	1
12	5530	25	14.7	2786	1
13	5530	25	3.6	3484	1
14	5530	25	14.1	3226	1
15	5530	25	4.2	2315	1
16	5530	25	12.9	3717	1
17	5530	25	1.1	3077	1
18	5530	25	12.3	2381	1
19	5530	25	6.8	3378	1
20	5530	25	3.1	2950	1
<b>Detection Percentage:100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-4-1 Radar Test Signal-4**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse/Burst(PPB)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5530	20	21.9	3636	1
2	5530	20	26.6	3817	1
3	5530	20	27.8	2688	1
4	5530	20	28.7	3322	1
5	5530	20	29	2070	1
6	5530	20	23.8	2045	1
7	5530	20	29.2	2551	1
8	5530	20	25.4	3690	1
9	5530	20	21	2667	1
10	5530	20	26.9	3021	1
11	5530	20	22	3175	1
12	5530	20	27.4	2375	1
13	5530	20	30	3268	1
14	5530	20	21.7	2747	1
15	5530	20	22.1	2584	1
16	5530	20	22.5	2591	1
17	5530	20	26.4	3247	1
18	5530	20	21.1	3597	1
19	5530	20	22.5	2849	1
20	5530	20	22.4	3704	1
<b>Detection Percentage: 100 %</b>		<b>Limit: 60%</b>		<b>Result: Pass</b>	

**Table-5-1 Radar Test Signal-5**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5530	10	318	339	364	1
2	5530	10	334	355		1
3	5530	10	304	346		1
4	5530	10	340	373		1
5	5530	10	324	300		1
6	5530	10	360	318	340	1
7	5530	10	331	377		1
8	5530	10	380	333	354	1
9	5530	10	357	319		1
10	5530	10	324	349	370	1
11	5530	10	310	340		1
12	5530	10	387	367	347	1
13	5530	10	311	357		1
14	5530	10	320	353		1
15	5530	10	307	329	353	1
16	5530	10	380	346		1
17	5530	10	392	355		1
18	5530	10	372	323		1
19	5530	10	375	338		1
20	5530	10	323	302		1
<b>Detection Percentage:</b> 100 %		<b>Limit: 60%</b>			<b>Result: Pass</b>	

**Table-6-1 Radar Test Signal-6**

<b>Trial #</b>	<b>Fc (MHz)</b>	<b>Pulse Width (μS)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>PRF (pps)</b>	<b>Detection (1:yes; 0:no)</b>
1	5530	15	729	1086	839	1
2	5530	15	433	756		1
3	5530	15	545	685		1
4	5530	15	872	635		1
5	5530	15	675	405	535	1
6	5530	15	761	620	883	1
7	5530	15	1105	842		1
8	5530	15	1040	661		1
9	5530	15	723	425	598	1
10	5530	15	552	638		1
11	5530	15	707	420		1
12	5530	15	686	404		1
13	5530	15	514	699		1
14	5530	15	1070	884	777	1
15	5530	15	882	585	759	1
16	5530	15	567	881	701	1
17	5530	15	548	459		1
18	5530	15	466	853	580	1
19	5530	15	722	581		1
20	5530	15	464	544	792	1
<b>Detection Percentage:</b> 100 %		<b>Limit: 60%</b>			<b>Result: Pass</b>	

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## **EXHIBIT A - EUT PHOTOGRAPHS**

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For photos in this section, please refer to report No.: DG2210607-21778E-02 EXHIBIT A.

FINAL

## EXHIBIT B - TEST SETUP PHOTOGRAPHS



\*\*\*END OF REPORT\*\*\*