

FCC DFS Test Report

FCC ID: OFJCW-F25-140401

This report concerns (check one): ☒ Original Grant ☐ Class II Change

Project No. : 1405C020
Equipment : Wireless Video Transmission System
Model Name : CW-F25; CW-F25 TX; CW-F25 RX
Applicant : IDX Company, Ltd.
Address : 6-28-11 Shukugawara, Tama-ku, Kawasaki-shi
Kanagawa-ken, Japan

Date of Receipt : May 06, 2014
Date of Test : May 06, 2014~ Nov. 11, 2014
Issued Date : Nov. 12, 2014
Tested by : BTL Inc.

Testing Engineer : David Mao
(David Mao)

Technical Manager : Leo Hung
(Leo Hung)

Authorized Signatory : Steven Lu
(Steven Lu)

B T L I N C .

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan,
Guangdong, China.

TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-3-1405C020	Original Report.	Nov. 12, 2014

1. CERTIFICATION

Equipment : Wireless Video Transmission System
Brand Name : CAM~WAVE
Model Name : CW-F25; CW-F25 TX;CW-F25 RX
Applicant : IDX Company, Ltd.
Manufacturer : Shenzhen Crystal Video Technology Co.,LTD.
Address : F13,F518 Idea Land, Baoyuan Road, Baoan Central Area, Shenzhen, China
Factory : Shenzhen Crystal Video Technology Co.,LTD.
Address : F13,F518 Idea Land, Baoyuan Road, Baoan Central Area, Shenzhen, China
Date of Test : May 06, 2014~ Nov. 12, 2014
Test Sample : ENGINEERING SAMPLE
Standard(s) : FCC Part 15, Subpart E (Section 15.407) FCC 06-96

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-3-1405C020) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. EUT INFORMATION

2.1 EUT SPECIFICATION TABLE

Table 1: Specification of EUT

Product name	Wireless Video Transmission System
Brand Name	CAM~WAVE
Model	CW-F25;CW-F25 TX;CW-F25 RX
FCC ID	OFJCW-F25-140401
Software Version	B9911-U4.0
Firmware Version	U4.0
Operational Mode	Master
Operating Frequency Range	5250~5350MHz&5470~5725MHz
Modulation	OFDM

Note: This device was functioned as a ☒ Master ☐ Slave device during the DFS

2.2 DESCRIPTION OF AVAILABLE ANTENNAS TO THE EUT

Group 1 of Dipole Antenna

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
A	Wanshih Electronic Co., Ltd.	WA1R5847A	Dipole	N/A	2.0	
B	Wanshih Electronic Co., Ltd.	WA1R5847A	Dipole	N/A	2.0	
C	Wanshih Electronic Co., Ltd.	WA1R5847A	Dipole	N/A	2.0	
D	Wanshih Electronic Co., Ltd.	WA1R5847A	Dipole	N/A	2.0	

Group 2 of MIMO Panel Antenna

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
A	IDX	TCTD5800-18M20M	MIMO Panel Antenna	N/A	18	Note(2)
B	IDX	TCTD5800-18M20M	MIMO Panel Antenna	N/A	18	Note(2)
C	IDX	TCTD5800-18M20M	MIMO Panel Antenna	N/A	18	Note(2)
D	IDX	TCTD5800-18M20M	MIMO Panel Antenna	N/A	18	Note(2)

Note:(1) The EUT incorporates a MIMO function. Physically, the EUT provides four completed four transmitters and four receivers (4T4R).

(2) For Group 2 of MIMO Panel Antenna gain, customer sells product with attenuating pad and 3 meter of cable, attenuating pad will loss 20dBi gain, 3 meter of cable will loss 3 dBi gain, so the final evaluated of gain is -5dBi.

2.3 CONDUCTED OUTPUT POWER AND EIRP POWER

TABLE 3: THE CONDUCTED OUTPUT POWER LIST

TX (11n 40MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER(dBm)	OUTPUT POWER(mW)
5270~5310	16.18	41.495
5510~5670	17.59	57.412

2.4 EUT MAXIMUM AND MINIMUM E.I.R.P. POWER

TABLE 4: THE MAX EIRP LIST

TX (11n 40MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER(dBm)	OUTPUT POWER(mW)
5270~5310	18.18	65.766
5510~5670	19.59	90.991

3. U-NII DFS RULE REQUIREMENTS

3.1 WORKING MODES AND REQUIRED TEST ITEMS

The manufacturer shall state whether the UUT is capable of operating as a Master and/or a Client. If the UUT is capable of operating in more than one operating mode then each operating mode shall be tested separately. See tables 1 and 2 for the applicability of DFS requirements for each of the operational modes.

Table 5: Applicability of DFS requirements prior to use a channel

Requirement	Operational Mode		
	Master	Client without radar detection	Client with radar detection
Non-Occupancy Period	✓	Not required	✓
DFS Detection Threshold	✓	Not required	✓
Channel Availability Check Time	✓	Not required	Not required
Uniform Spreading	✓	Not required	Not required
U-NII Detection Bandwidth	✓	Not required	✓

Table 6: Applicability of DFS requirements during normal operation.

Requirement	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	✓

3.2 TEST LIMITS AND RADAR SIGNAL PARAMETERS

DETECTION THRESHOLD VALUES

Table 7: DFS Detection Thresholds for Master Devices and Client Devices With Radar Detection.

Maximum Transmit Power	Value (See Notes 1 and 2)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Table 8: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 80% of the UNII 99% transmission power bandwidth. See Note 3.

Note 1: The instant that the Channel Move Time and the Channel Closing Transmission Time begins is as follows:

- For the Short Pulse Radar Test Signals this instant is the end of the Burst.
- For the Frequency Hopping radar Test Signal, this instant is the end of the last radar Burst generated.
- For the Long Pulse Radar Test Signal this instant is the end of the 12 second period defining the Radar Waveform.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 1 is used and for each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

PARAMETERS OF DFS TEST SIGNALS

Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Table 9: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
1	1	1428	18	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Table 10: Long Pulse Radar Test Waveform

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

Table 11: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

4. TEST INSTRUMENTS

Table 1: Test instruments list.

DESCRIPTION	MANUFACTURER	MODEL NO.	Serial No	Calibration Until
EXA Specturm Analyzer	Agilent	N9010A	MY50520044	2015-03-29
Signal Generator	Agilent	E4438C	My49071316	2015-03-29
POWER SPLITTER	Mini-Cicuits	ZFRSC-123-S+	331000910	2015-03-29
POWER SPLITTER	Mini-Cicuits	ZN4PD1-63-S+	SF933501045	2015-03-29
POWER SPLITTER	Mini-Cicuits	ZN2PD-9G-S+	SF012700714	2015-03-29
attenuator	Mini-Cicuits	VAT-30+	30912	2015-03-29
attenuator	Mini-Cicuits	VAT-10+	30909	2015-03-29
Specturm Analyzer	R&S	FSL6	1004423	2015-03-29
PC	Dell 745	DCSM	G7K832X	--
Netbook	Hp	HSTNN-I69C-3	CNU02203XG	--

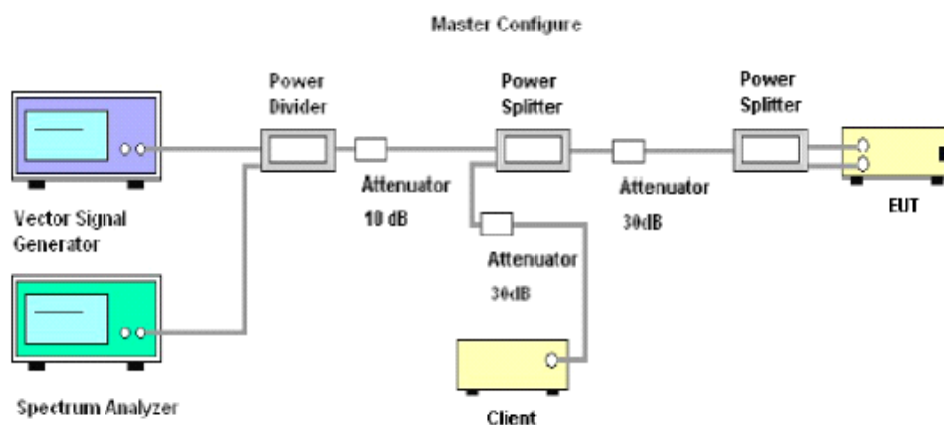
Note: Calibration interval of instruments listed above is one year.

5. EMC EMISSION TEST

5.1 DFS MEASUREMENT SYSTEM:

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM

Master Conducted Measurement



SYSTEM OVERVIEW

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

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

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

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), additional combiner/dividers are inserted between the Master Combiner/Divider and the pad connected to the Master Device (and/or between the Slave Combiner/Divider and the pad connected to the Slave Device). Additional pads are utilized such that there is one pad at each RF port on each EUT.

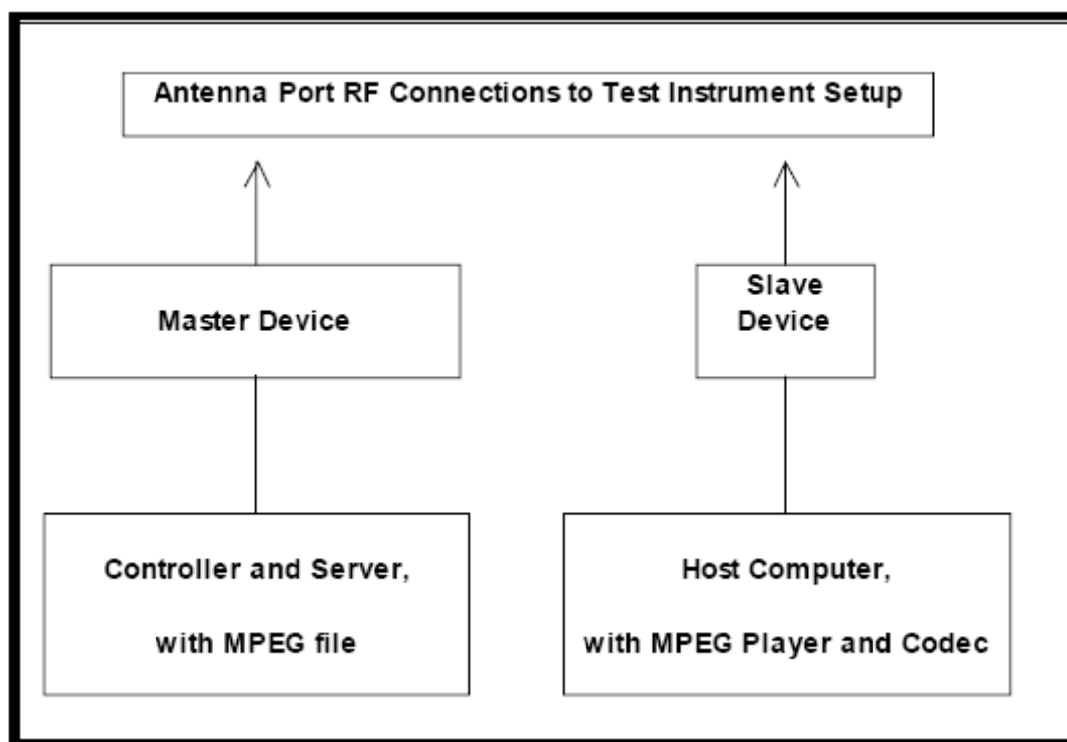
5.2 CALIBRATION OF DFS DETECTION THRESHOLD LEVEL:

A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected in place of the master device and the signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of -62 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. Measure the amplitude and calculate the difference from -62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of -62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.



5.3 DEVIATION FROM TEST STANDARD

No deviation.

6. TEST RESULTS

6.1 SUMMARY OF TEST RESULT

Clause	Test Parameter	Remarks	Pass/Fail
15.407	DFS Detection Threshold	Applicable	Pass
15.407	Channel Availability Check Time	Applicable	Pass
15.407	Channel Move Time	Applicable	Pass
15.407	Channel Closing Transmission Time	Applicable	Pass
15.407	Non- Occupancy Period	Applicable	Pass
15.407	Uniform Spreading	Applicable	Pass
15.407	U-NII Detection Bandwidth	Applicable	Pass

6.2 DETELED TEST RESULTS

Clause	Test Parameter	Remarks	Pass/Fail
15.407	DFS Detection Threshold	Applicable	Pass
15.407	Channel Availability Check Time	Applicable	Pass
15.407	Channel Move Time	Applicable	Pass
15.407	Channel Closing Transmission Time	Applicable	Pass
15.407	Non- Occupancy Period	Applicable	Pass
15.407	Uniform Spreading	Applicable	Pass
15.407	U-NII Detection Bandwidth	Applicable	Pass

6.2.1 TEST MODE: DEVICE OPERATING IN MASTER MODE.

Master with injection at the Master. (Radar Test Waveforms are injected into the Master)

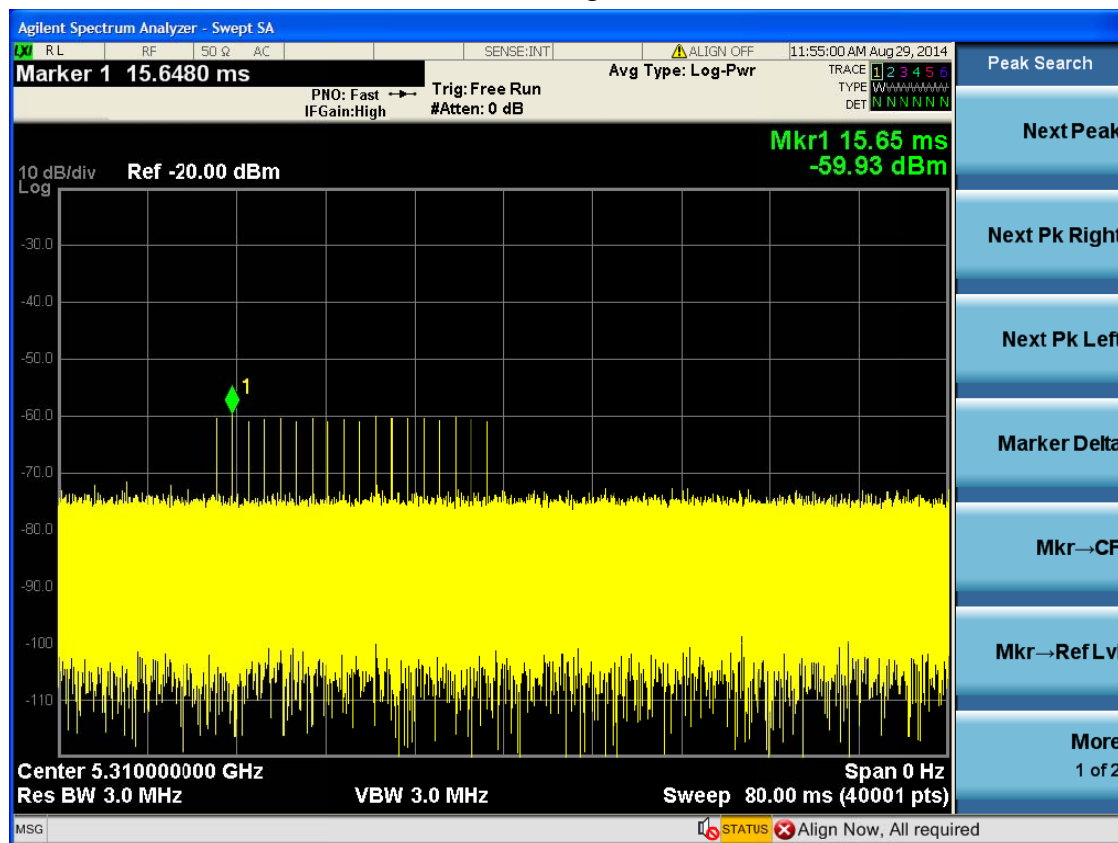
6.2.2 DFS DETECTION THRESHOLD

Calibration:

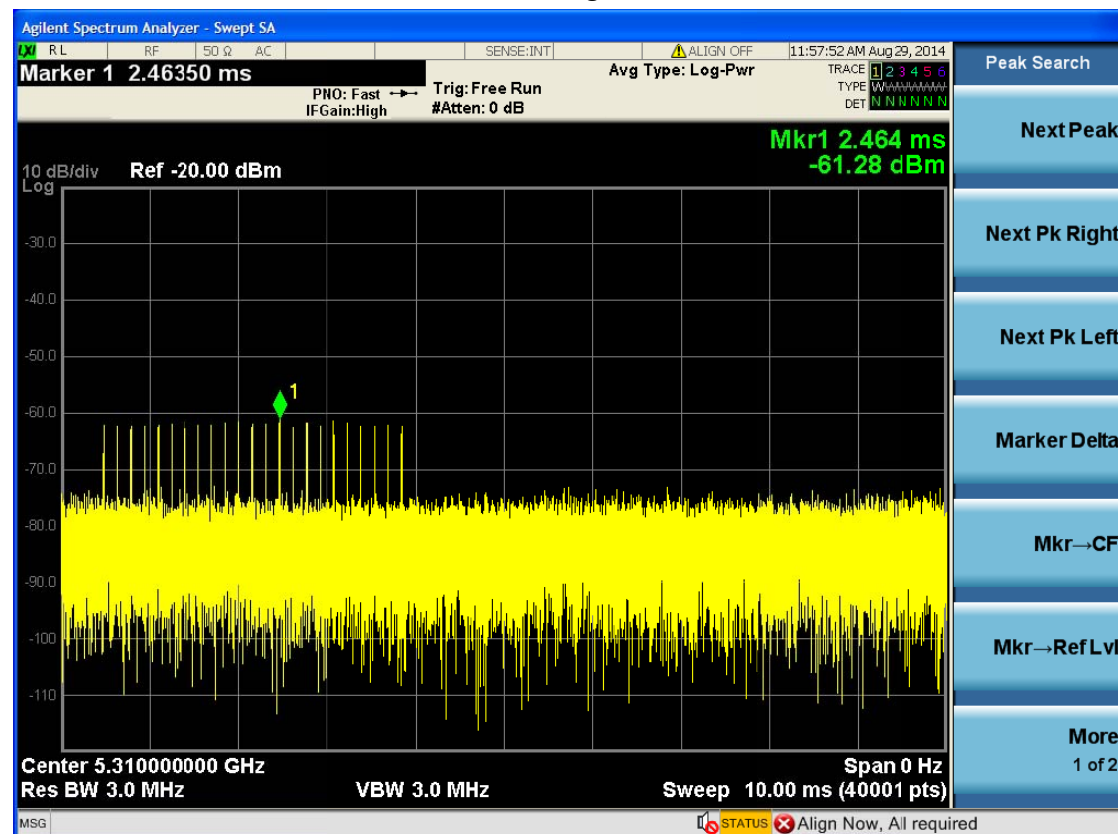
For a detection threshold level of -64dBm, required detection threshold is -62 dBm ($= -64+2$).

Note: Maximum Transmit Power is more than 200 milliwatt in this report, so detection threshold level is -62dBm (please refer to Table 7 [page 9]).

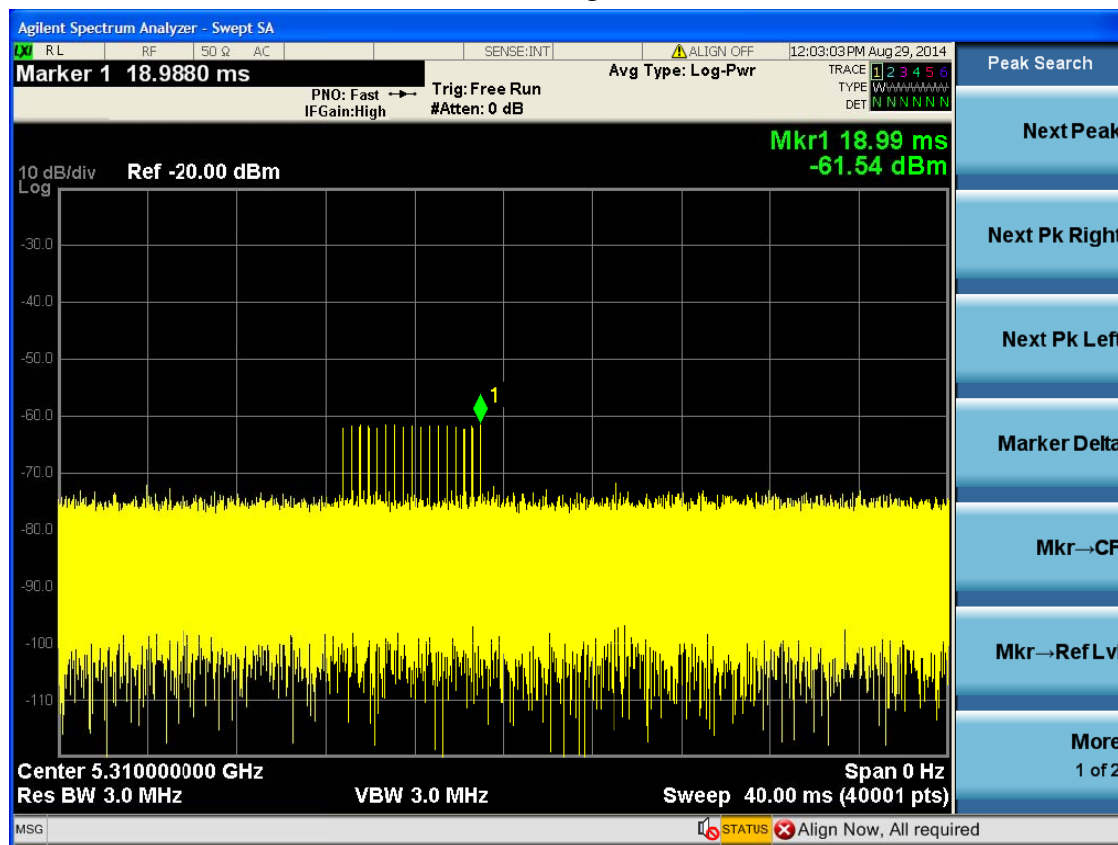
Radar Signal 1



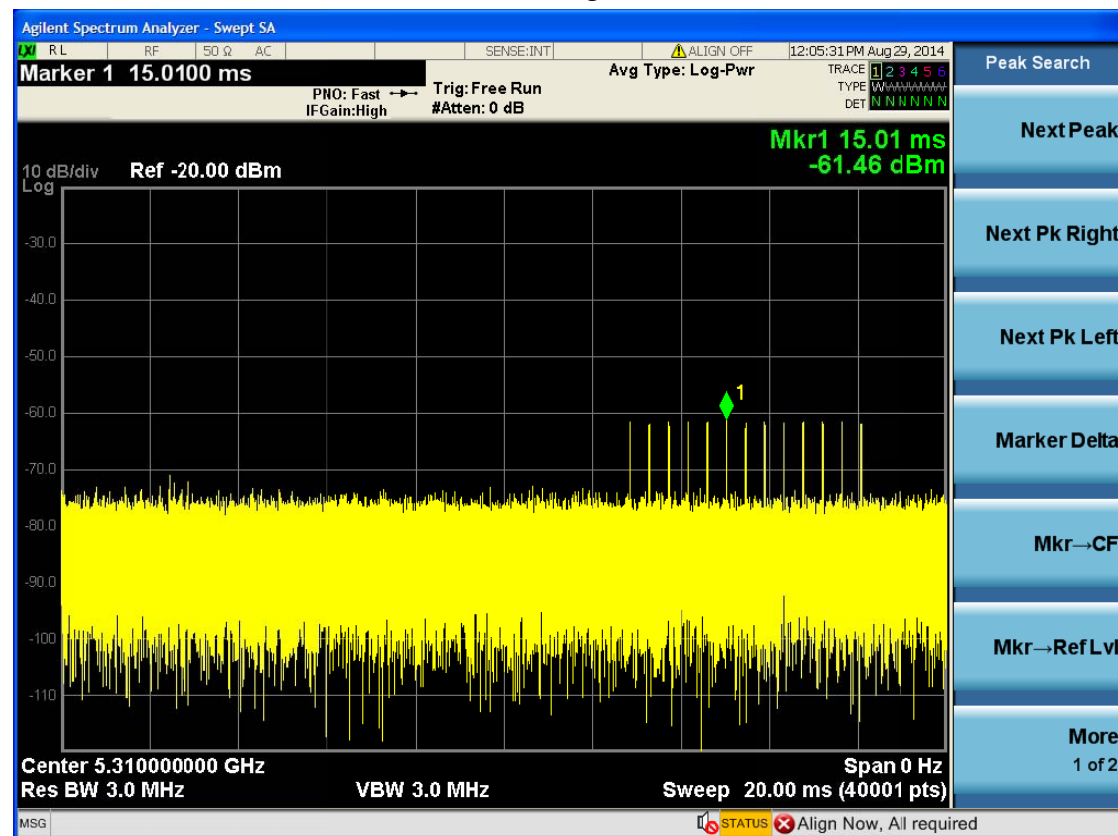
Radar Signal 2



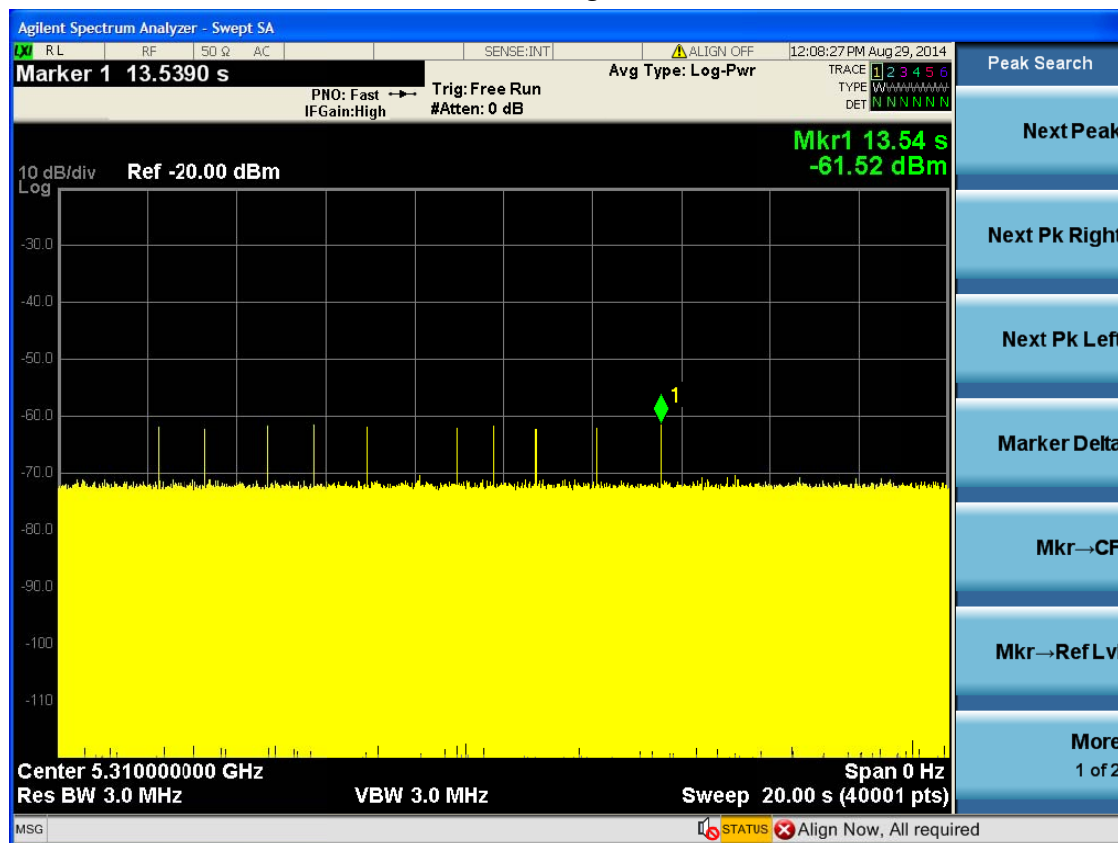
Radar Signal 3



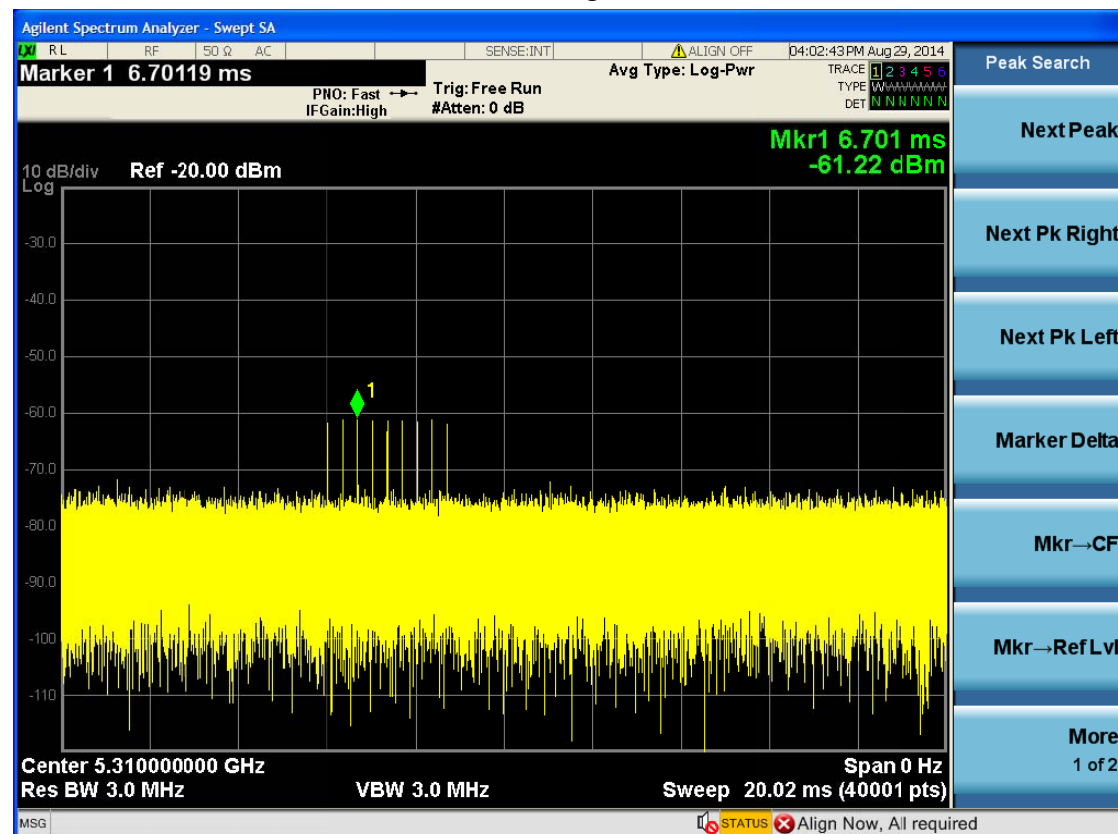
Radar Signal 4



Radar Signal 5



Radar Signal 6



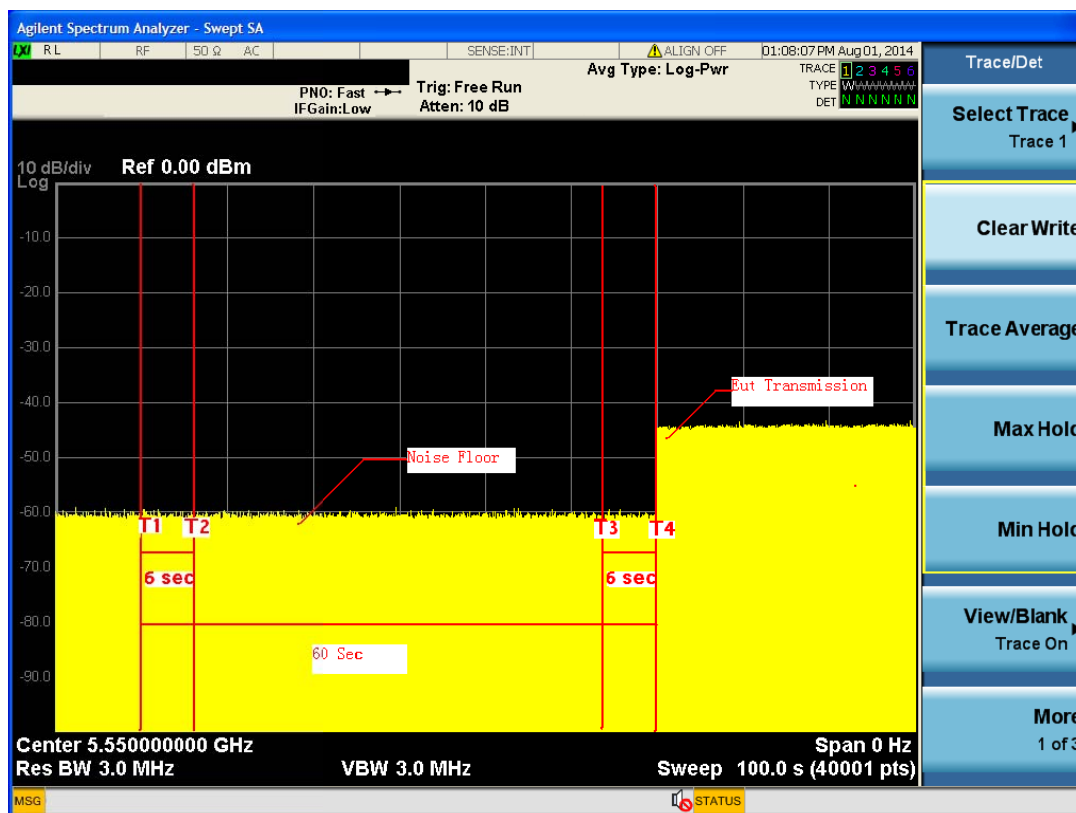
6.2.3 CHANNEL AVAILABILITY CHECK TIME

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

Timing of Radar Signal	Observation	
	UUT	Spectrum Analyzer
Spectrum Analyzer	Spectrum Analyzer	Spectrum Analyzer
Spectrum Analyzer	Spectrum Analyzer	Spectrum Analyzer

11n 40MHz Mode

Initial Channel Availability Check Time

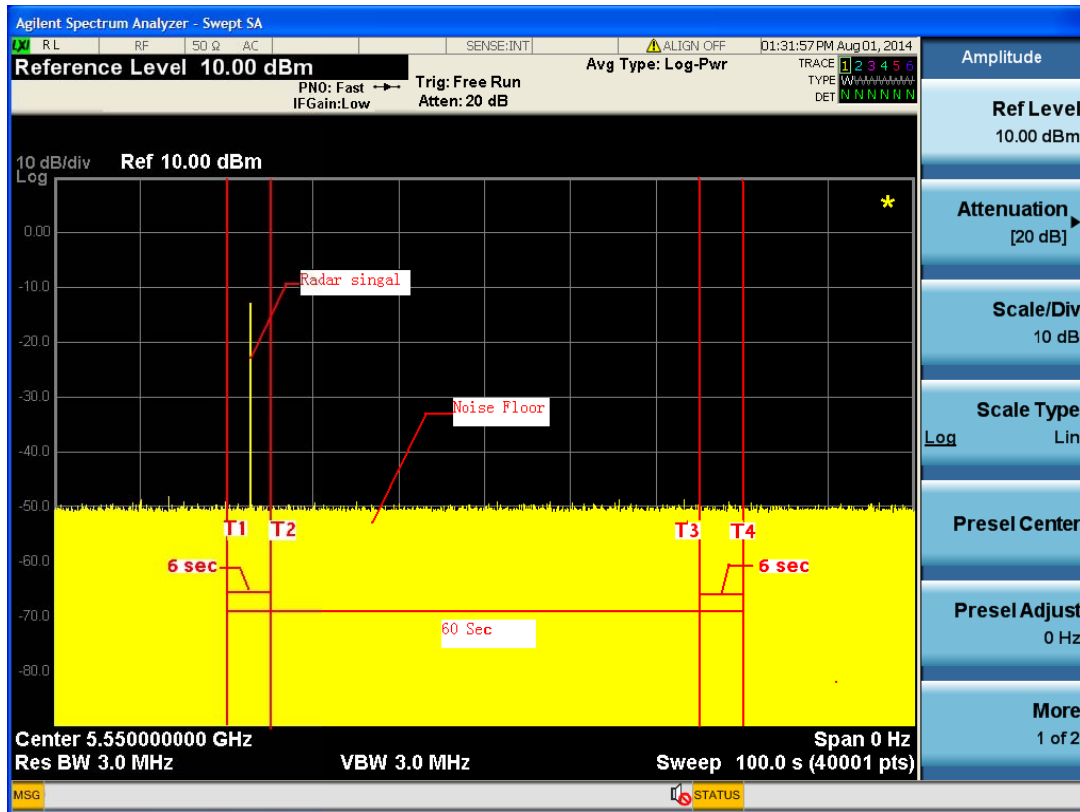


Note: T1 denotes the end of power-up time period is 14 second.

T4 denotes the end of Channel Availability Check time is 74 second. Channel Availability Check time is equal to (T4 – T1) 60 seconds.

11n 40MHz Mode

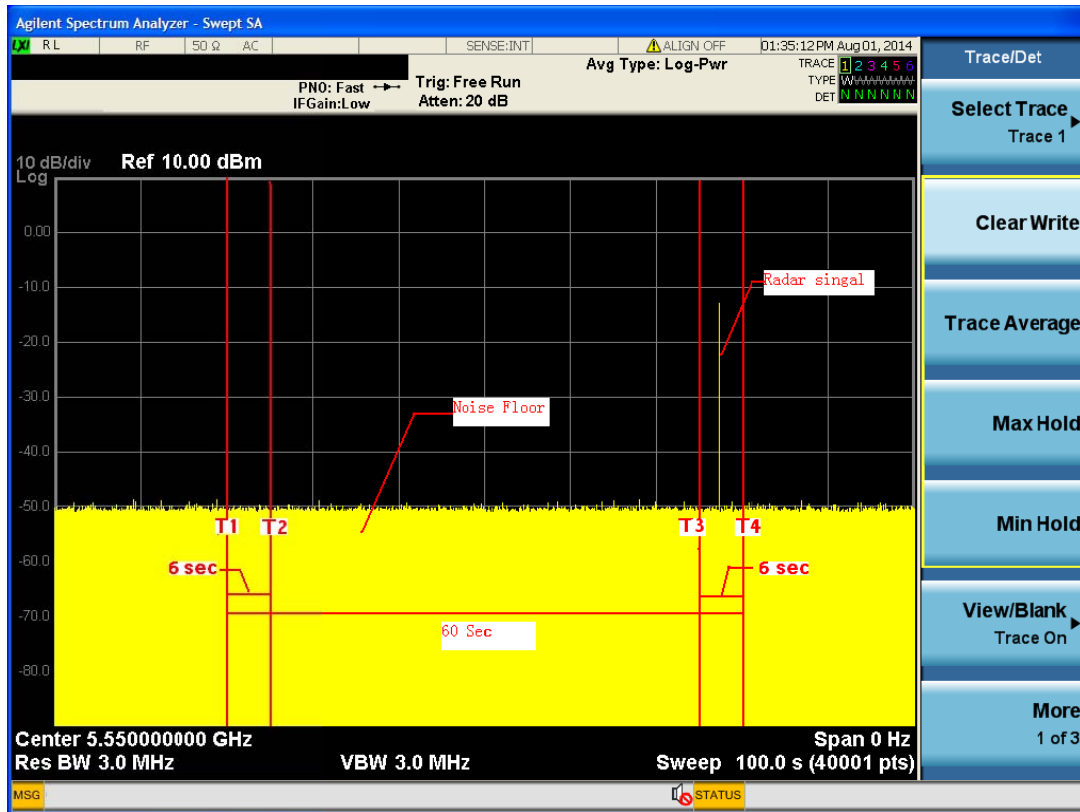
Radar Burst at the Beginning of the Channel Availability Check Time



Note: T1 denotes the end of power up time period is 14 second.
T2 denotes 20 second. the radar burst was commenced within 6 second window starting from the end of power-up sequence.
T4 denotes the 74 second.

11n 40MHz Mode

Radar Burst at the End of the Channel Availability Check Time



Note: T1 denotes the end of power up time period is 14 second.

T3denotes 68 second and radar burst was commenced within 54th second to 60th second indow starting from the end of power-up sequence.

T3 denotes the 74 second

6.2.4 CHANNEL CLOSING TRANSMISSION AND CHANNEL MOVE TIME WLAN TRAFFIC

TX (N40 Mode)

Table 1: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Pass times	Fail times	Percentage of Successful Detection (%)
1	1	1428	18	28	2	93
2	1-5	150-230	23-29	28	2	93
3	6-10	200-500	16-18	27	3	90
4	11-20	200-500	12-16	28	2	93
Aggregate (Radar Types 1-4)			-	111	9	93

Table 2: Long Pulse Radar Test Waveform

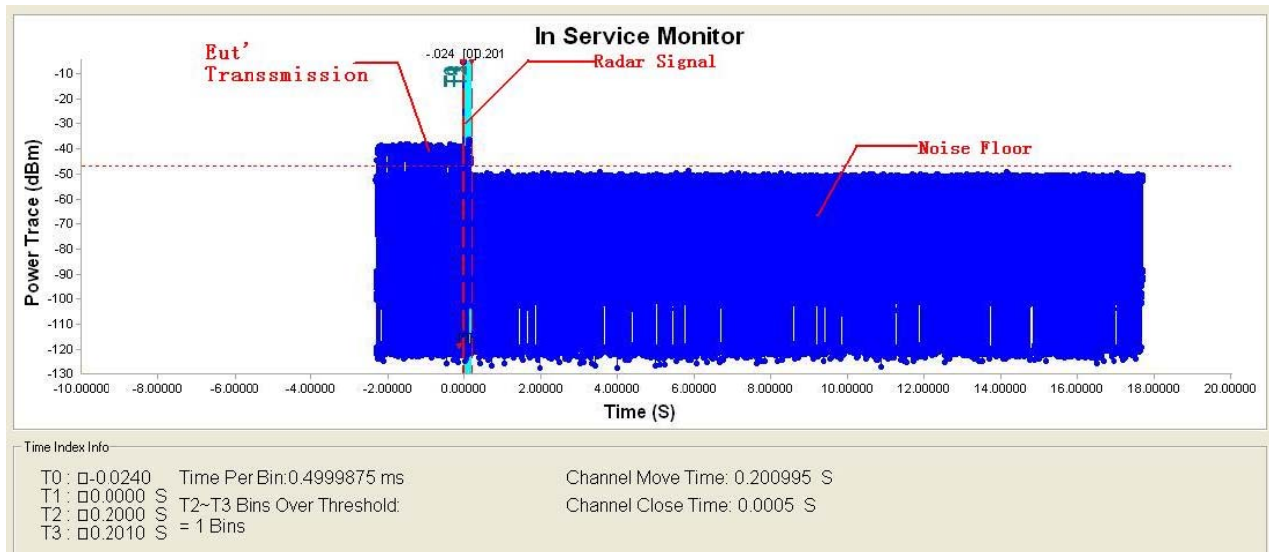
Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses Per Burst	Number of Bursts	Pass times	Fail times	Percentage of Successful Detection (%)
5	50-100	5-20	1000-2000	1-3	8-20	30	0	100

Table 3: Frequency Hopping Radar Test Waveform

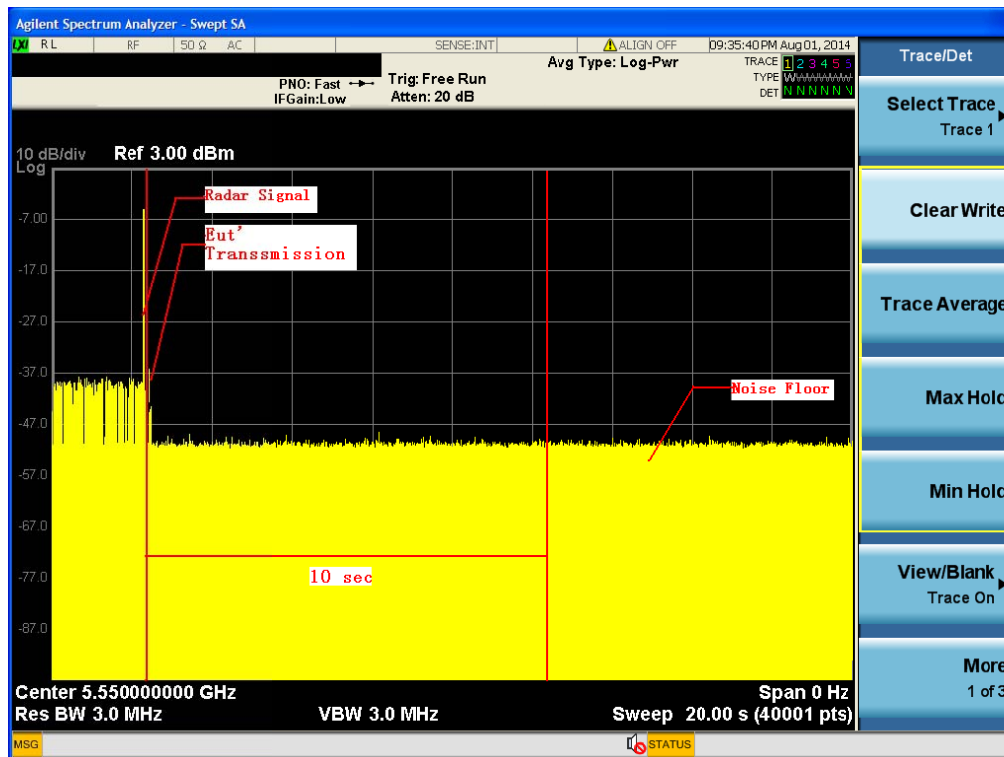
Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Pass times	Fail times	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	29	1	97

TX (N40 Mode)

Radar signal 1



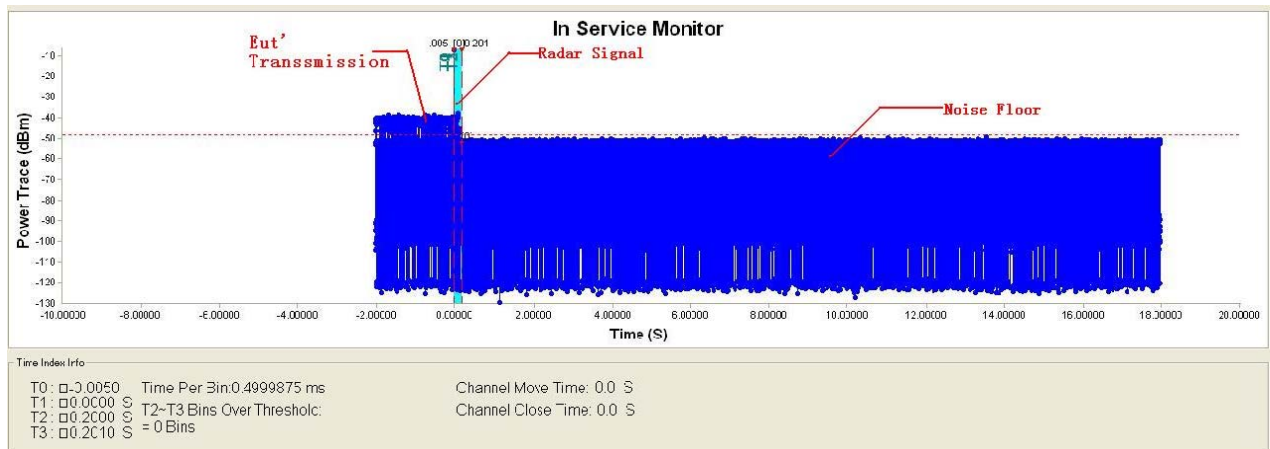
Note: T0 denotes the start of Channel Move Time upon the end of the last Radar burst.
T1 denotes the data transmission time of 200ms from T0.
T2 denotes the end of Channel Move Time.
T3 denotes the 10 second from T0 to observe the aggregate duration of transmissions.



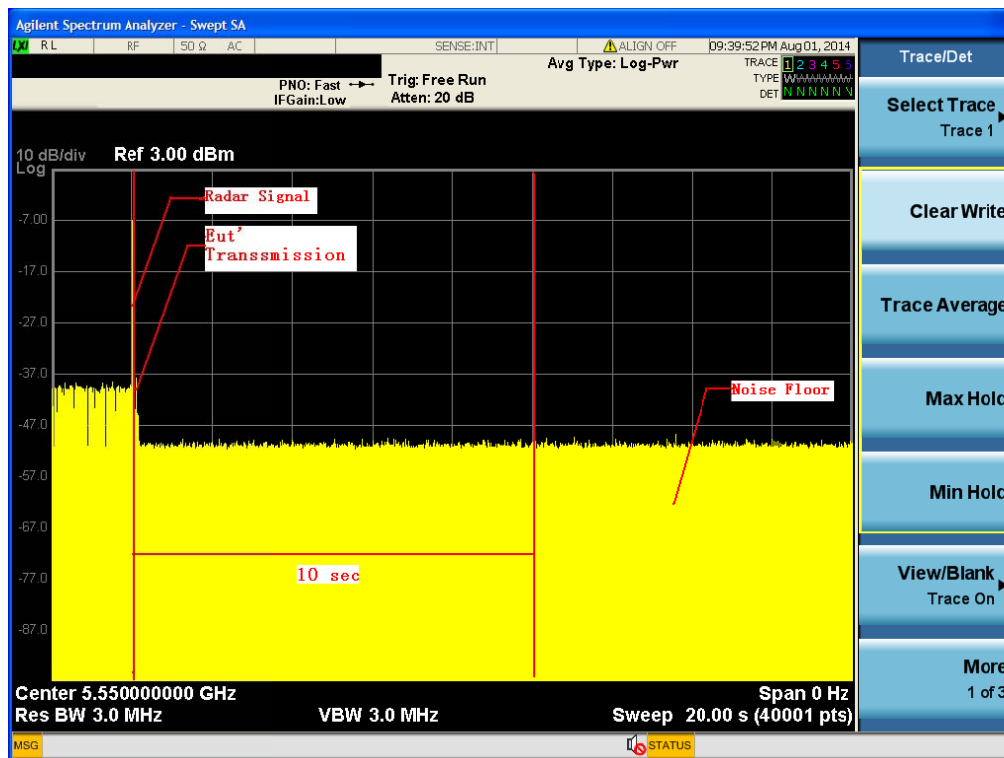
Note: An expanded plot for the device vacates the channel in the required 500ms

TX (N40 Mode)

Radar signal 2



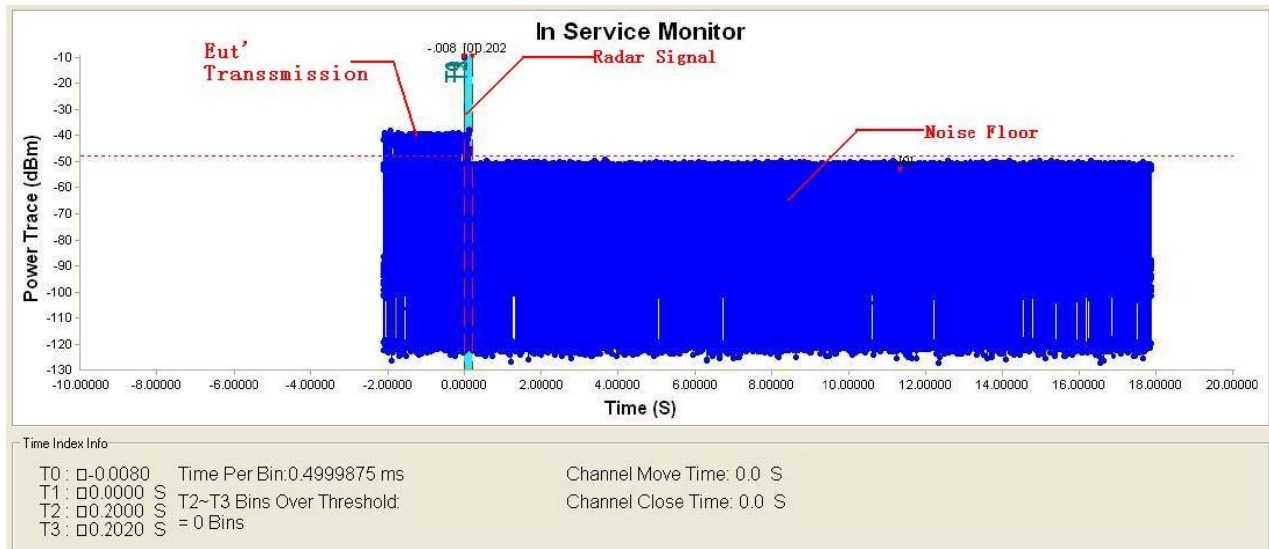
Note: T0 denotes the start of Channel Move Time upon the end of the last Radar burst.
T1 denotes the data transmission time of 200ms from T0.
T2 denotes the end of Channel Move Time.
T3 denotes the 10 second from T0 to observe the aggregate duration of transmissions.



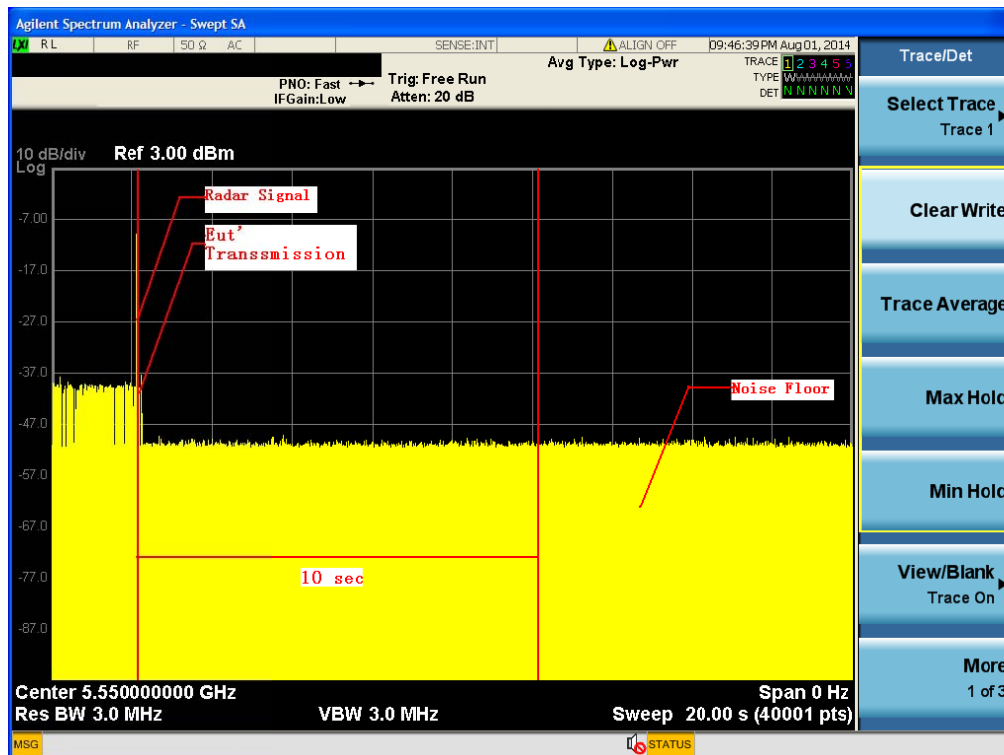
Note: An expanded plot for the device vacates the channel in the required 500ms

TX (N40 Mode)

Radar signal 3



Note: T0 denotes the start of Channel Move Time upon the end of the last Radar burst.
T1 denotes the data transmission time of 200ms from T0.
T2 denotes the end of Channel Move Time.
T3 denotes the 10 second from T0 to observe the aggregate duration of transmissions.



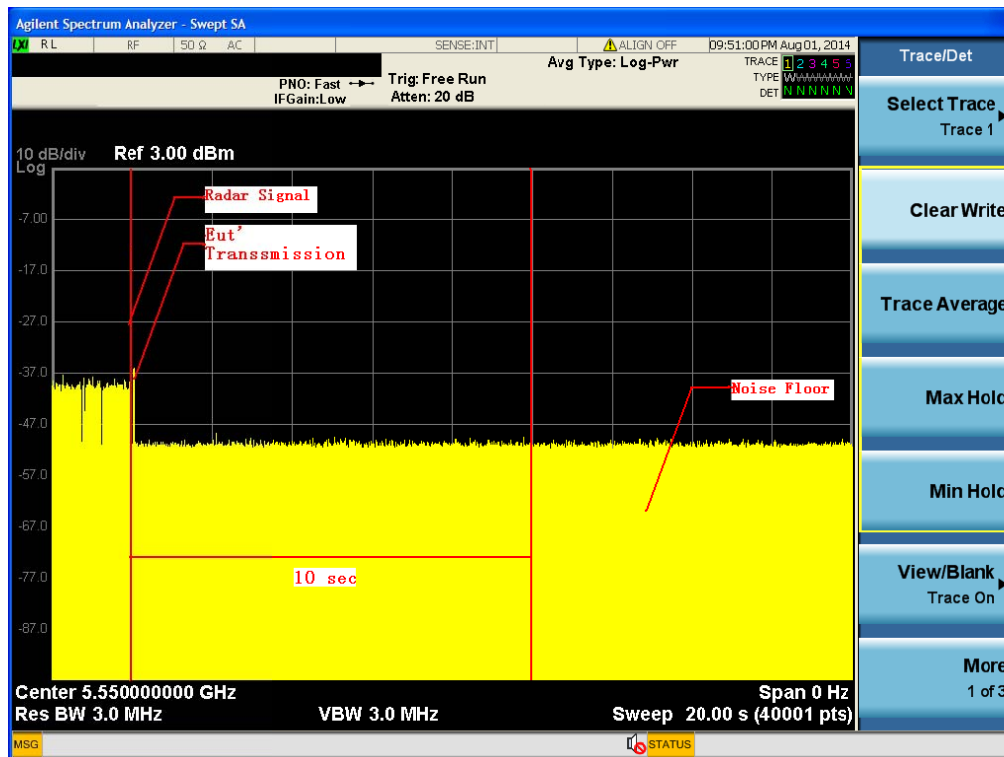
Note: An expanded plot for the device vacates the channel in the required 500ms

TX (N40 Mode)

Radar signal 4



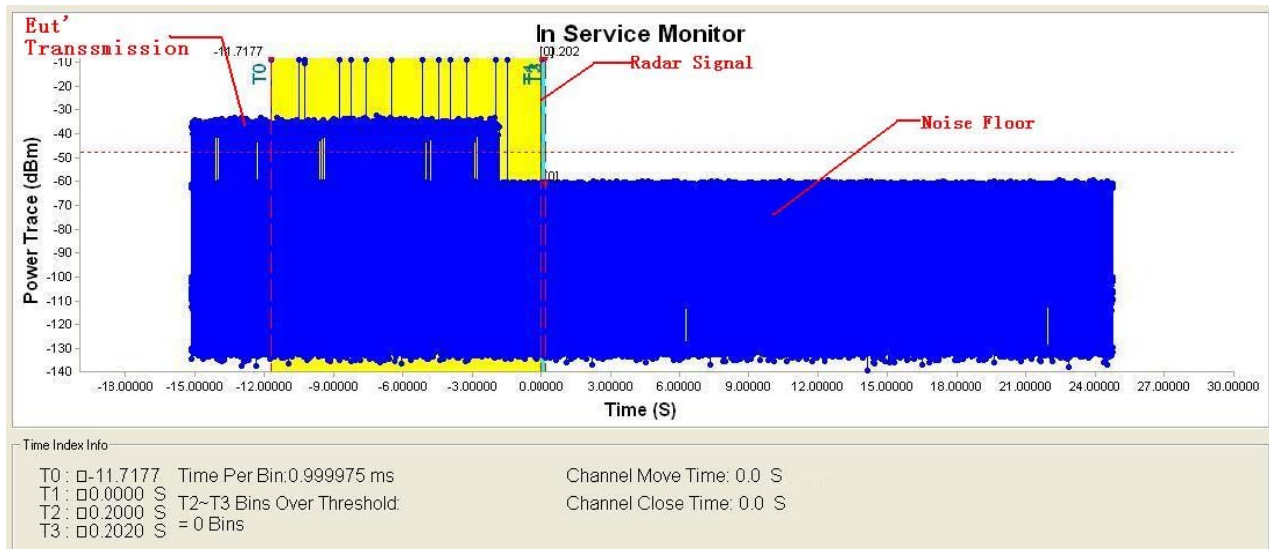
Note: T0 denotes the start of Channel Move Time upon the end of the last Radar burst.
T1 denotes the data transmission time of 200ms from T0.
T2 denotes the end of Channel Move Time.
T3 denotes the 10 second from T0 to observe the aggregate duration of transmissions.



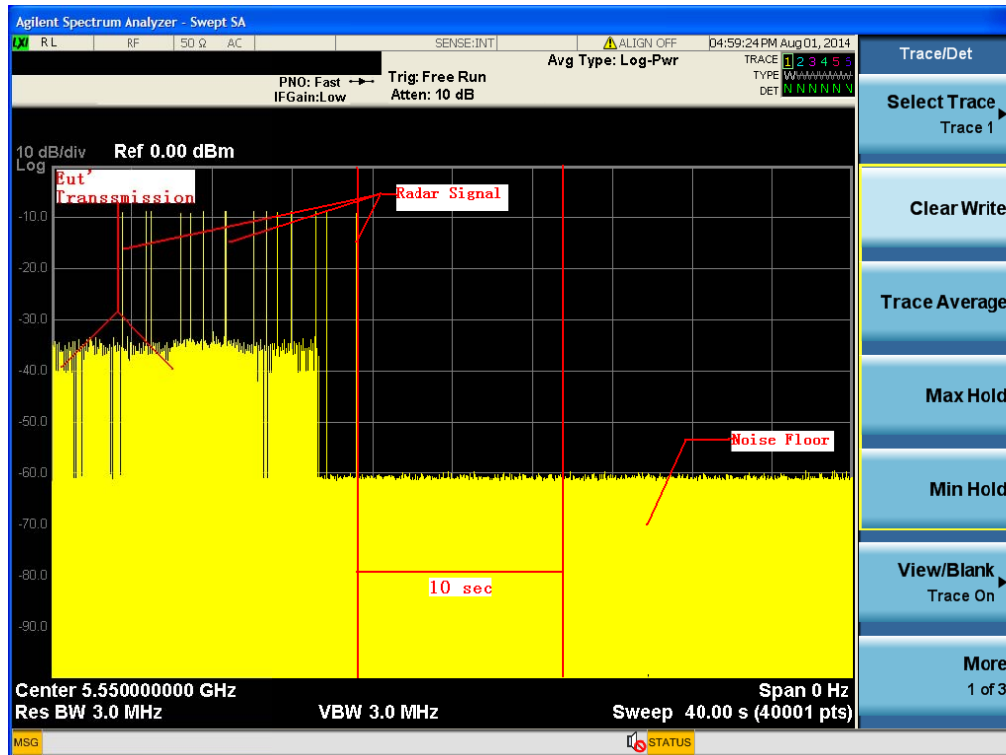
Note: An expanded plot for the device vacates the channel in the required 500ms

TX (N40 Mode)

Radar signal 5



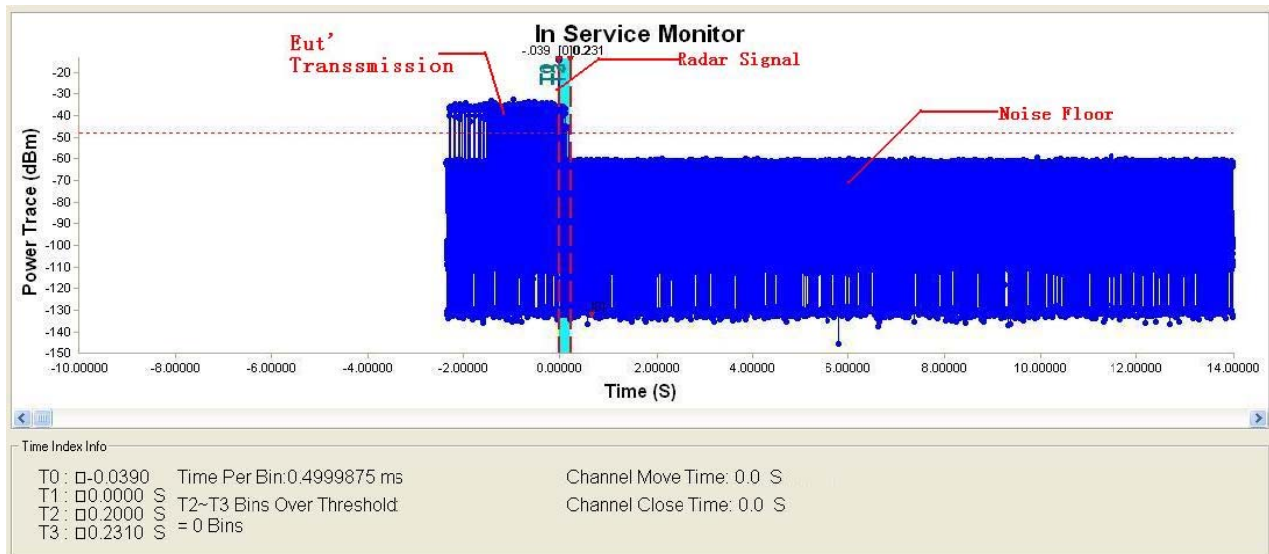
Note: T0 denotes the start of Channel Move Time upon the end of the last Radar burst.
T1 denotes the data transmission time of 200ms from T0.
T2 denotes the end of Channel Move Time.
T3 denotes the 10 second from T0 to observe the aggregate duration of transmissions.



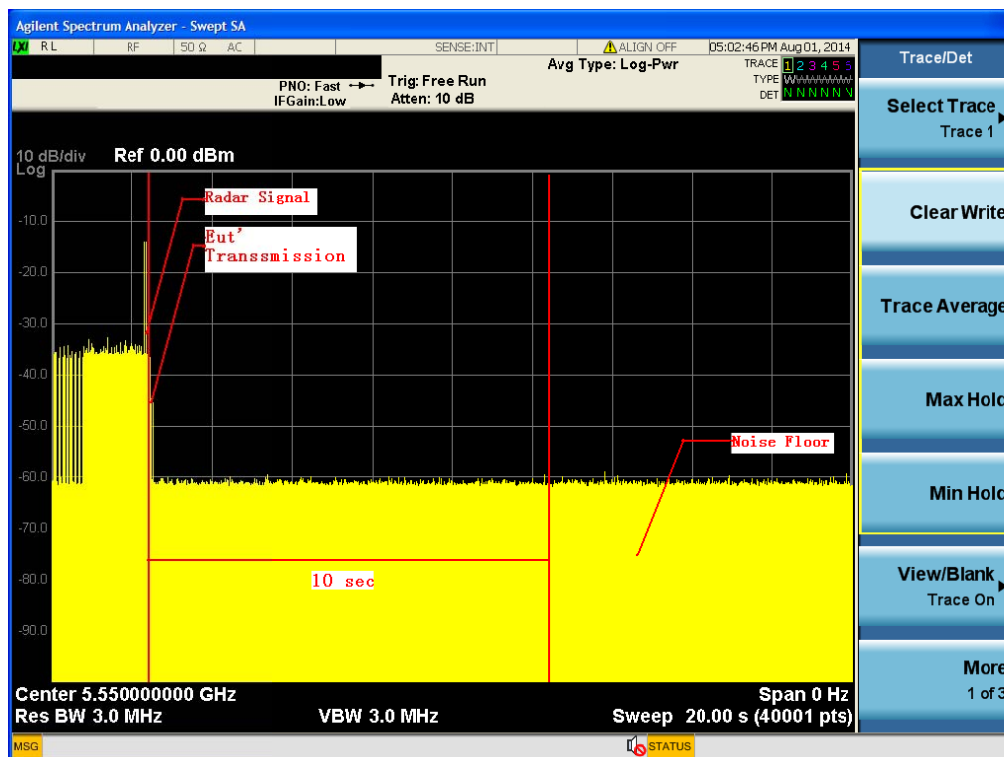
Note: An expanded plot for the device vacates the channel in the required 500ms

TX (N40 Mode)

Radar signal 6



Note: T0 denotes the start of Channel Move Time upon the end of the last Radar burst.
T1 denotes the data transmission time of 200ms from T0.
T2 denotes the end of Channel Move Time.
T3 denotes the 10 second from T0 to observe the aggregate duration of transmissions.



Note: An expanded plot for the device vacates the channel in the required 500ms

TX (N40 Mode)

Radar1 Statical Performances				
Trial #	Pluse per Burst	Pluse Width(us)	PRI(us)	Detection(Yes / No)
1	18	1.0u	1.428	YES
2	18	1.0u	1.428	YES
3	18	1.0u	1.428	YES
4	18	1.0u	1.428	YES
5	18	1.0u	1.428	YES
6	18	1.0u	1.428	NO
7	18	1.0u	1.428	YES
8	18	1.0u	1.428	YES
9	18	1.0u	1.428	YES
10	18	1.0u	1.428	YES
11	18	1.0u	1.428	YES
12	18	1.0u	1.428	YES
13	18	1.0u	1.428	YES
14	18	1.0u	1.428	YES
15	18	1.0u	1.428	YES
16	18	1.0u	1.428	YES
17	18	1.0u	1.428	YES
18	18	1.0u	1.428	YES
19	18	1.0u	1.428	YES
20	18	1.0u	1.428	YES
21	18	1.0u	1.428	YES
22	18	1.0u	1.428	NO
23	18	1.0u	1.428	YES
24	18	1.0u	1.428	YES
25	18	1.0u	1.428	YES
26	18	1.0u	1.428	YES
27	18	1.0u	1.428	YES
28	18	1.0u	1.428	YES
29	18	1.0u	1.428	YES
30	18	1.0u	1.428	YES
				Detection Rate 93%

Radar2 Statical Performances				
Trial #	Pluse per Burst	Pluse Width(us)	PRI(us)	Detection(Yes / No)
1	23	4.0u	208	YES
2	24	3.9u	160	YES
3	26	2.4u	218	YES
4	27	3.8u	220	NO
5	27	1.4u	168	YES
6	23	4.5u	209	YES
7	24	3.3u	190	YES
8	24	2.4u	198	YES
9	25	3.8u	224	YES
10	26	3.2u	207	YES
11	26	1.1u	158	YES
12	23	3.0u	157	YES
13	28	1.9u	168	YES
14	26	1.8u	192	YES
15	26	2.8u	228	YES
16	27	3.8u	216	YES
17	28	2.7u	228	YES
18	27	3.2u	221	YES
19	29	4.3u	227	YES
20	29	3.1u	186	YES
21	24	2.2u	172	YES
22	26	1.3u	170	YES
23	25	1.4u	166	YES
24	27	4.5u	221	YES
25	28	2.5u	135	YES
26	28	4.9u	220	NO
27	25	2.7u	204	YES
28	24	2.9u	229	YES
29	28	2.8u	220	YES
30	29	2.6u	198	YES
				Detection Rate 93%

Radar3 Statical Performances				
Trial #	Pluse per Burst	Pluse Width(s)	PRI(us)	Detection(Yes / No)
1	17	9.5u	269	YES
2	16	9.8u	431	YES
3	17	8.5u	436	YES
4	18	9.9u	447	YES
5	18	8.5u	477	YES
6	16	8.0u	206	YES
7	16	6.5u	477	YES
8	17	8.2u	206	YES
9	16	8.7u	218	YES
10	16	9.5u	482	YES
11	16	6.0u	436	NO
12	16	7.0u	463	YES
13	18	9.5u	492	YES
14	17	9.8u	463	YES
15	18	8.0u	431	YES
16	16	9.6u	330	YES
17	17	6.0u	230	YES
18	17	9.5u	269	YES
19	18	9.8u	431	YES
20	17	8.5u	436	NO
21	16	9.9u	447	YES
22	18	8.5u	477	YES
23	16	8.0u	206	YES
24	16	8.6u	440	YES
25	17	9.9u	442	YES
26	18	8.5u	405	YES
27	16	8.0u	364	YES
28	17	6.0u	366	NO
29	17	9.5u	364	YES
30	18	6.0u	366	YES
Detection Rate 90%				

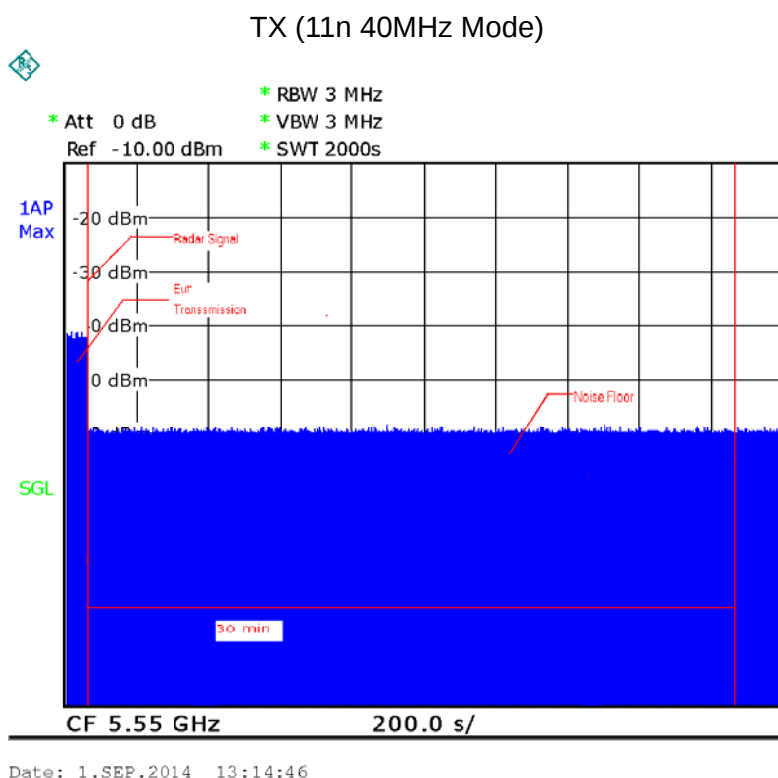
Radar4 Statical Performances				
Trial #	Pluse per Burst	Pluse Width(us)	PRI(us)	Detection(Yes / No)
1	16	15.8u	482	YES
2	16	14.6u	436	YES
3	14	13.9u	447	YES
4	14	16.5u	258	YES
5	13	14.0u	270	YES
6	16	15.6u	482	NO
7	15	17.0u	330	YES
8	12	19.3u	335	YES
9	14	18.2u	328	YES
10	15	15.3u	445	YES
11	15	19.0u	442	YES
12	13	13.8u	332	YES
13	13	14.9u	478	YES
14	14	15.8u	442	YES
15	14	19.6u	405	YES
16	15	13.9u	409	YES
17	16	16.0u	463	YES
18	12	11.5u	490	NO
19	13	12.0u	442	YES
20	13	13.8u	405	YES
21	12	14.9u	370	YES
22	12	19.8u	470	YES
23	16	14.6u	320	YES
24	15	13.9u	485	YES
25	15	18.0u	414	YES
26	14	13.2u	409	YES
27	15	12.0u	477	YES
28	16	12.0u	206	YES
29	12	13.8u	216	YES
30	13	15.0u	213	YES
				Detection Rate 93%

Radar5 Statical Performances		
Trial #	Test Signal name	Detection(Yes / No)
1	LP_Signal_01	Yes
2	LP_Signal_02	Yes
3	LP_Signal_03	Yes
4	LP_Signal_04	Yes
5	LP_Signal_05	Yes
6	LP_Signal_06	Yes
7	LP_Signal_07	Yes
8	LP_Signal_08	Yes
9	LP_Signal_09	Yes
10	LP_Signal_10	Yes
11	LP_Signal_11	Yes
12	LP_Signal_12	Yes
13	LP_Signal_13	Yes
14	LP_Signal_14	Yes
15	LP_Signal_15	Yes
16	LP_Signal_16	Yes
17	LP_Signal_17	Yes
18	LP_Signal_18	Yes
19	LP_Signal_19	Yes
20	LP_Signal_20	Yes
21	LP_Signal_21	Yes
22	LP_Signal_22	Yes
23	LP_Signal_23	Yes
24	LP_Signal_24	Yes
25	LP_Signal_25	Yes
26	LP_Signal_26	Yes
27	LP_Signal_27	Yes
28	LP_Signal_28	Yes
29	LP_Signal_29	Yes
30	LP_Signal_30	Yes
		Detection Rate 100%

Radar6 Statical Performances		
Trial #	Hoping Frequency Sequence Name	Detection(Yes / No)
1	HOP_FREQ_SEQ_01	Yes
2	HOP_FREQ_SEQ_02	Yes
3	HOP_FREQ_SEQ_03	Yes
4	HOP_FREQ_SEQ_04	Yes
5	HOP_FREQ_SEQ_05	Yes
6	HOP_FREQ_SEQ_06	Yes
7	HOP_FREQ_SEQ_07	Yes
8	HOP_FREQ_SEQ_08	Yes
9	HOP_FREQ_SEQ_09	Yes
10	HOP_FREQ_SEQ_10	Yes
11	HOP_FREQ_SEQ_11	Yes
12	HOP_FREQ_SEQ_12	Yes
13	HOP_FREQ_SEQ_13	Yes
14	HOP_FREQ_SEQ_14	Yes
15	HOP_FREQ_SEQ_15	NO
16	HOP_FREQ_SEQ_16	Yes
17	HOP_FREQ_SEQ_17	Yes
18	HOP_FREQ_SEQ_18	Yes
19	HOP_FREQ_SEQ_19	Yes
20	HOP_FREQ_SEQ_20	Yes
21	HOP_FREQ_SEQ_21	Yes
22	HOP_FREQ_SEQ_22	Yes
23	HOP_FREQ_SEQ_23	Yes
24	HOP_FREQ_SEQ_24	Yes
25	HOP_FREQ_SEQ_25	Yes
26	HOP_FREQ_SEQ_26	Yes
27	HOP_FREQ_SEQ_27	Yes
28	HOP_FREQ_SEQ_28	Yes
29	HOP_FREQ_SEQ_29	Yes
30	HOP_FREQ_SEQ_30	Yes
		Detection Rate 97%

6.2.5 NON- OCCUPANCY PERIOD

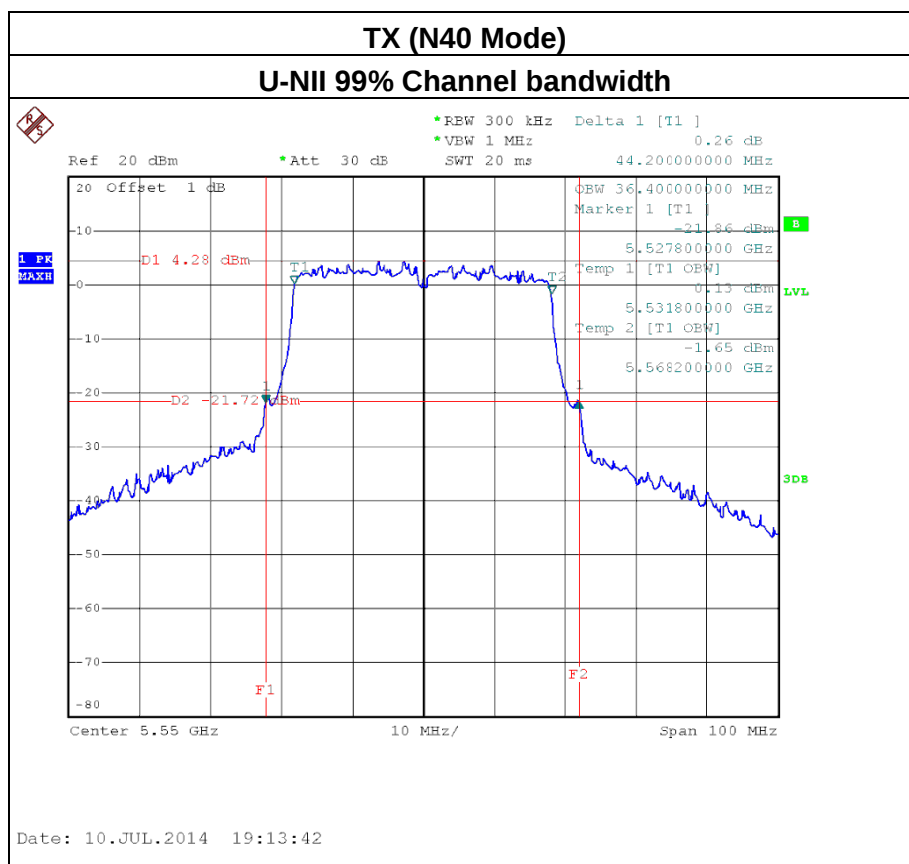
During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.



6.2.6 UNIFORM SPREADING

The intention of the uniform spreading is to provide, on aggregate, a uniform loading of the spectrum. The UUT using the bands 5250~5350MHz, 5470~5725MHz channels so that the probability of selecting a given channel shall be the same for channels. The UUT will select channel by random mode and remember this channel when detect radar signal, so that will select unused channel by random mode.

6.2.7 U-NII DETECTION BANDWIDTH



11n 40MHz Mode

Detection Bandwidth test transmission	40M										
EUT FREQUENCY	5550M										
EUT power bandwidth	38.4MHz										
Detection Bandwidth limit(80%of EUT 99% Power bandwidth)	29.12										
Detection Bandwidth(5565(FH)-5535(FL))	40										
Test Result	PASS										
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Freq (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5529	1	0	1	1	0	1	1	0	1	0	50
5530	1	1	1	0	1	0	1	0	1	0	60
5531	1	0	1	0	1	0	1	1	0	1	60
5532	1	0	0	1	0	1	0	0	1	1	50
5533	1	1	0	0	1	0	1	0	0	1	50
5534	1	0	1	0	1	0	1	1	0	1	60
5535(FL)	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
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(FH)	1	1	1	1	1	1	1	1	1	1	100
5566	1	0	1	0	0	1	1	0	1	1	60
5567	1	0	0	1	1	0	1	0	1	1	60
5568	1	0	0	1	0	0	1	0	0	1	40
5569	0	1	1	0	0	1	0	0	1	1	50
5570	1	0	1	1	0	1	0	0	1	0	50
5571	1	0	0	1	0	1	1	0	0	1	40