Shenzhen GUOREN Certification Technology Service Co., Ltd.
101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community, Fenghuang Street, Guangming District, Shenzhen, China

FCC PART 15 SUBPART C TEST REPORT
FCC CFR 47 PART 15E (15.407)

Report Reference No.....:	**GRCTR250802012-03**
FCC ID..... :	**2BLJV-R-W52508**
Compiled by (position+printed name+signature)..:	Testing Engineer Jimmy Wang
Supervised by (position+printed name+signature)..:	Project Engineer Kelley Zhang
Approved by (position+printed name+signature)..:	Manager Sam Wang
Date of issue.....:	Sep. 03, 2025

Testing Laboratory Name.....:	**Shenzhen GUOREN Certification Technology Service Co., Ltd.**
Address..... :	101#, Building K & Building T, The Second Industrial Zone, Jiazitang Community, Fenghuang Street, Guangming District, Shenzhen, China
Applicant's name.....:	**Shenzhen Dbit Network Equipment Co., Ltd**
Address..... :	4002, Phase II, Qianhai Shimao Financial Center, No. 3040 Xinghai Avenue, Nanshan Street, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, China
Test specification..... **:**	
Standard.....:	**FCC CFR 47 PART 15E (15.407)** **KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02**

Test item description.....:	AC1200 Dual Band Gigabit Wi-Fi Router
Trade Mark.....:	/
Manufacturer.....:	Shenzhen Dbit Network Equipment Co., Ltd
Model/Type reference..... :	T18-21K Pro
Listed Models ..... :	/
Firmware Version.....:	V1.0
Hardware Version..... :	V1.0

Modulation	.....	DSSS,OFDM
Frequency	.....	From 5260MHz to 5320MHz, 5500MHz to 5700MHz
Rating	.....	DC 12V From External Circuit
Result	.....	**PASS**

T E S T R E P O R T

Equipment under Test	:	AC1200 Dual Band Gigabit Wi-Fi Router
Model /Type	:	T18-21K Pro
Listed Models	:	/
Applicant	:	**Shenzhen Dbit Network Equipment Co., Ltd**
Address	:	4002, Phase II, Qianhai Shimao Financial Center, No. 3040 Xinghai Avenue, Nanshan Street, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, China
Manufacturer	:	**Shenzhen Dbit Network Equipment Co., Ltd**
Address	:	4002, Phase II, Qianhai Shimao Financial Center, No. 3040 Xinghai Avenue, Nanshan Street, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, China

Test Result:	**PASS**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. General Information about EUT

1.1. General Remarks

Date of receipt of test sample	:	Aug. 08, 2025
Testing commenced on	:	Aug. 08, 2025
Testing concluded on	:	Sep. 03, 2025

1.2. Product Description

Product Name:	AC1200 Dual Band Gigabit Wi-Fi Router
Model/Type reference:	T18-21K Pro
Listed Models:	/
Power supply:	DC 12V From External Circuit
Adapter information:	M/N:RD1201000-225MG Input:AC 100-240V 50/60Hz 0.6A Output:12V⎓1.0A
Testing sample ID:	GRCTR250802012-1# (Engineer sample), GRCTR250802012-2# (Normal sample)
5G WIFI:	
Supported type:	Supported 802.11 a/n/ac
Modulation:	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11acVHT20/VHT40/VHT80: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)
Operation frequency:	IEEE 802.11a:5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802.11n HT20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802.11n HT40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802.11acVHT20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz

	IEEE 802.11acVHT40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802.11acVHT80:5210MHz,5290MHz,5530MHz,5610MHz,5775MHz
Channel number:	4 Channels for 20MHz bandwidth(5180-5240MHz) 4 Channels for 20MHz bandwidth(5260-5320MHz) 11 Channels for 20MHz bandwidth(5500-5700MHz) 5 channels for 20MHz bandwidth(5745-5825MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 2 channels for 40MHz bandwidth(5270~5310MHz) 5 Channels for 40MHz bandwidth(5510-5670MHz) 2 channels for 40MHz bandwidth(5755~5795MHz) 1 channel for 80MHz bandwidth(5210MHz) 1 channel for 80MHz bandwidth(5290MHz) 1 Channel for 80MHz bandwidth(5530Hz) 1 Channel for 80MHz bandwidth(5610Hz) 1 channel for 80MHz bandwidth(5775MHz)
TPC	☒ No ☐ Yes
Antenna type:	External antenna
Antenna gain* (Supplied by the customer):	Ant 1: 5.17 dBi Ant 2: 5.17 dBi Directional gain:8.18

According to KDB 662911 D01 Multiple Transmitter Output,Directional Gain Calculations for In-Band Measurements:

If transmit signals are correlated, then

Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \ldots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

1.3. Short description of the Equipment under Test (EUT)

This is a AC1200 Dual Band Gigabit Wi-Fi Router.

For more details, refer to the user's manual of the EUT.

1.4. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 920798 Designation Number: CN1304

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6202.01

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

ISED#: 27264CAB identifier: CN0115

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

CNAS-Lab Code: L15631

Shenzhen GUOREN Certification Technology Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories for the Competence of Testing and Calibration Laboratories.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

2. Test Equipment

Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	GRCTEE009	2024/09/19	2025/09/18
LISN	R&S	ENV216	GRCTEE010	2024/09/19	2025/09/18
EMI Test Receiver	R&S	ESPI	GRCTEE017	2024/09/19	2025/09/18
EMI Test Receiver	R&S	ESCI	GRCTEE008	2024/09/19	2025/09/18
Spectrum Analyzer	Agilent	N9020A	GRCTEE002	2024/09/19	2025/09/18
Spectrum Analyzer	R&S	FSP	GRCTEE003	2024/09/20	2025/09/19
Vector Signal generator	Agilent	N5181A	GRCTEE007	2024/09/19	2025/09/18
Analog Signal Generator	R&S	SML03	GRCTEE006	2024/09/19	2025/09/18
Climate Chamber	QIYA	LCD-9530	GRCTES016	2024/09/19	2025/09/18
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	GRCTEE018	2023/09/28	2026/09/27
Horn Antenna	Schwarzbeck	BBHA 9120D	GRCTEE019	2023/09/28	2026/09/27
Loop Antenna	Zhinan	ZN30900C	GRCTEE020	2023/10/15	2026/10/14
Horn Antenna	Beijing Hangwei Dayang	OBH100400	GRCTEE049	2023/09/28	2026/09/27
Amplifier	Schwarzbeck	BBV 9745	GRCTEE021	2024/09/19	2025/09/18
Amplifier	Taiwan chengyi	EMC051845B	GRCTEE022	2024/09/19	2025/09/18
Temperature/Humidity Meter	Huaguan	HG-308	GRCTES037	2024/09/19	2025/09/18
Directional coupler	NARDA	4226-10	GRCTEE004	2024/09/19	2025/09/18
High-Pass Filter	XingBo	XBLBQ-GTA18	GRCTEE053	2024/09/19	2025/09/18
High-Pass Filter	XingBo	XBLBQ-GTA27	GRCTEE054	2024/09/19	2025/09/18
Automated filter bank	Tonscend	JS0806-F	GRCTEE055	2024/09/19	2025/09/18
Power Sensor	Agilent	U2021XA	GRCTEE070	2024/09/19	2025/09/18
Cable	Times	Cable-CE	GRCTEE086	2024/09/19	2025/09/18
Cable	Times	Cable-RE-1	GRCTEE087	2024/09/19	2025/09/18
Cable	Times	Cable-RE-2	GRCTEE088	2024/09/19	2025/09/18
EMI Test Software	ROHDE & SCHWARZ	ESK1-V1.71	GRCTEE060	N/A	N/A
EMI Test Software	Fera	EZ-EMC	GRCTEE061	N/A	N/A

3. Summary of Test Results

Clause	Test Parameter	Remarks	Pass/Fail
§ 15.407	DFS Detection Threshold	Required	Pass
§ 15.407	Channel Availability Check Time	Required	Pass
§ 15.407	Channel Move Time	Required	Pass
§ 15.407	Channel Closing Transmission Time	Required	Pass
§ 15.407	Non- Occupancy Period	Required	Pass
§ 15.407	Statistical Performance Check	Required	Pass
§ 15.407	U-NII Detection Bandwidth	Required	Pass
Test Mode			
Device operating in master mode. Master with injection at the Master. (Radar Test Waveforms are injected into the Master)			

4. U-NII DFS Rule Requirements

Applicability of DFS requirements

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 1: Applicability of DFS requirements prior to use a channel

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

Table 2: Applicability of DFS requirements during normal operation

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

Additional requirements for devices with multiple bandwidth modes	☒ Master Device or Client with Radar Detection	☐ Client without Detection
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 widest BW mode available
All other tests	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 20MHz channels and the channel center frequency.		

Test Limits and Radar Signal Parameters

Table 5: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection.

Maximum Transmit Power	Value (See Notes 1 and 2)
EIRP≥ 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: E.I.R.P is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

Calibration:

For a detection threshold level of -62dBm.

To meet the stringent requirement, the DFS test used the detection threshold level of -62dBm.

Note: EIRP < 200 milliwatt and Power pectral density < 10 dBm/MHz in this report, so detection threshold level is -62dBm.

Table 6: 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 100% of the UNII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

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 0 should be used. 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 7: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu sec}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A			
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
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

Table 7a: Pulse Repetition Intervals Values for Test A.

Pulse Repetition Frequency Number	**Pulse Repetition Frequency (Pulses Per Second)**	**Pulse Repetition Interval (Microseconds)**
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738
13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

Table 8: 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

The parameters for this waveform are randomly chosen（The center frequency for each of the 30 trials of the Bin 5 radar shall be randomly selected within 80% of the Occupied Bandwidth.）Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

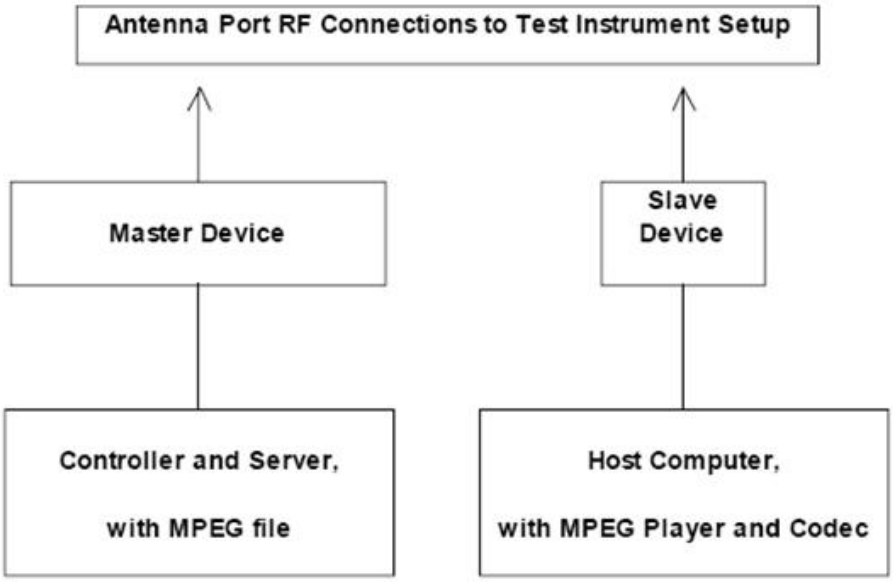
Table 9: Frequency Hopping Radar Test Waveform

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

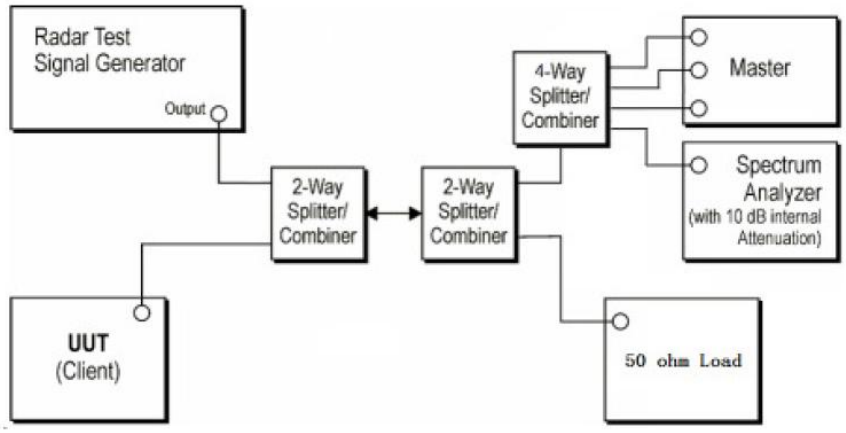
5. Calibration of Radar Waveform

Test Procedure

1. 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 –62dBm as measured on the spectrum analyzer.
2. 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 –62dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference.
3. 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 –62dBm and the spectrum analyzer will still indicate the level as received by the Master Device.
4. 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.



Conducted Calibration Test Setup



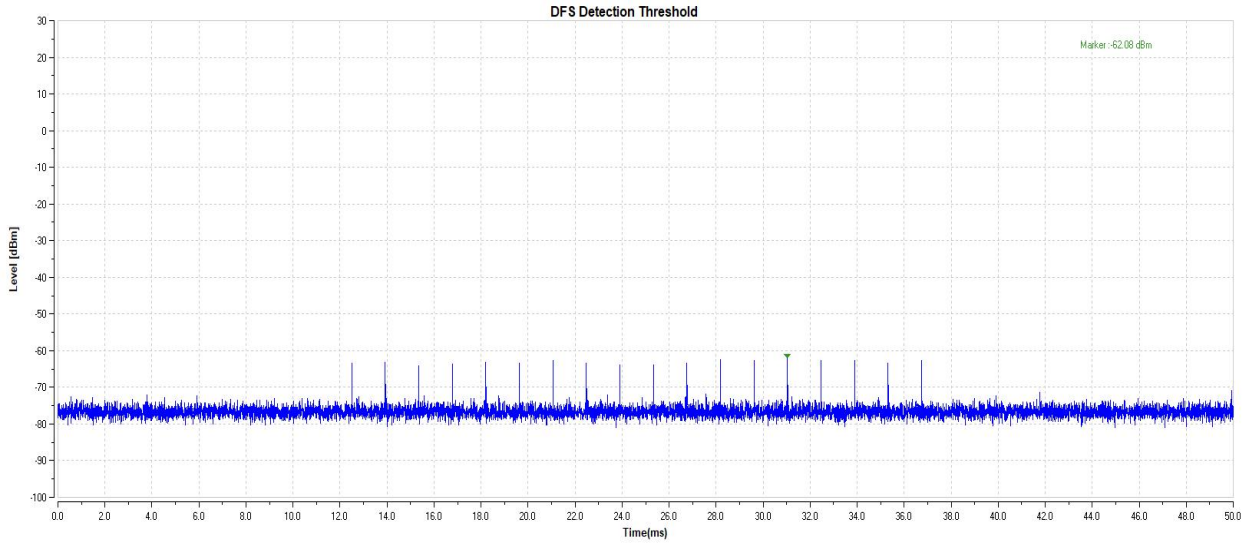
Deviation from Test Standard

No Deviation

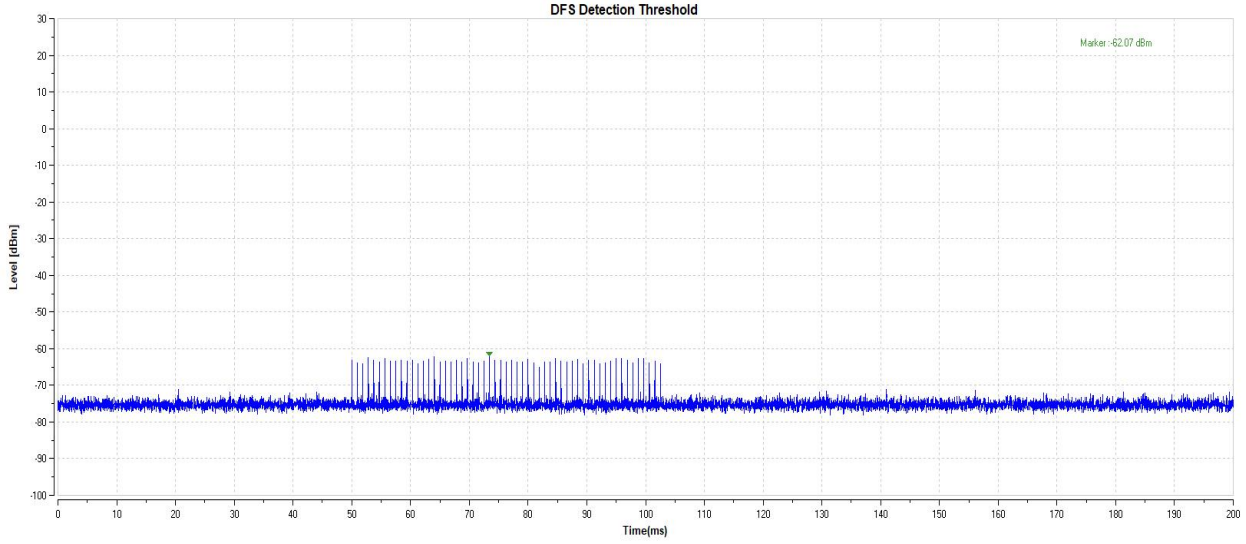
Radar Waveform Calibration Result

Test Mode	Frequency[dbm]	Radar Type	Result	Limit[dbm]	Verdict
11AC20SISO	5260	Type0	-62.08	-62.00	PASS
		Type1	-62.07	-62.00	PASS
		Type2	-62.17	-62.00	PASS
		Type3	-62.03	-62.00	PASS
		Type4	-62.39	-62.00	PASS
		Type5	-62.02	-62.00	PASS
		Type6	-62.15	-62.00	PASS
	5500	Type0	-62.05	-62.00	PASS
		Type1	-62.24	-62.00	PASS
		Type2	-62.21	-62.00	PASS
		Type3	-62.46	-62.00	PASS
		Type4	-62.23	-62.00	PASS
		Type5	-62.41	-62.00	PASS
		Type6	-62.38	-62.00	PASS
11AC40SISO	5270	Type0	-62.33	-62.00	PASS
		Type1	-62.40	-62.00	PASS
		Type2	-62.18	-62.00	PASS
		Type3	-62.06	-62.00	PASS
		Type4	-62.18	-62.00	PASS
		Type5	-62.38	-62.00	PASS
		Type6	-62.16	-62.00	PASS
	5510	Type0	-62.07	-62.00	PASS

		Type1	-62.10	-62.00	PASS
		Type2	-62.06	-62.00	PASS
		Type3	-62.25	-62.00	PASS
		Type4	-62.20	-62.00	PASS
		Type5	-62.39	-62.00	PASS
		Type6	-62.40	-62.00	PASS
11AC80SISO	5290	Type0	-62.17	-62.00	PASS
		Type1	-62.11	-62.00	PASS
		Type2	-62.32	-62.00	PASS
		Type3	-62.13	-62.00	PASS
		Type4	-62.19	-62.00	PASS
		Type5	-62.30	-62.00	PASS
		Type6	-62.50	-62.00	PASS
	5530	Type0	-62.12	-62.00	PASS
		Type1	-62.10	-62.00	PASS
		Type2	-62.01	-62.00	PASS
		Type3	-62.13	-62.00	PASS
		Type4	-62.18	-62.00	PASS
		Type5	-62.41	-62.00	PASS
		Type6	-62.35	-62.00	PASS



11A-5260-Type0-PASS



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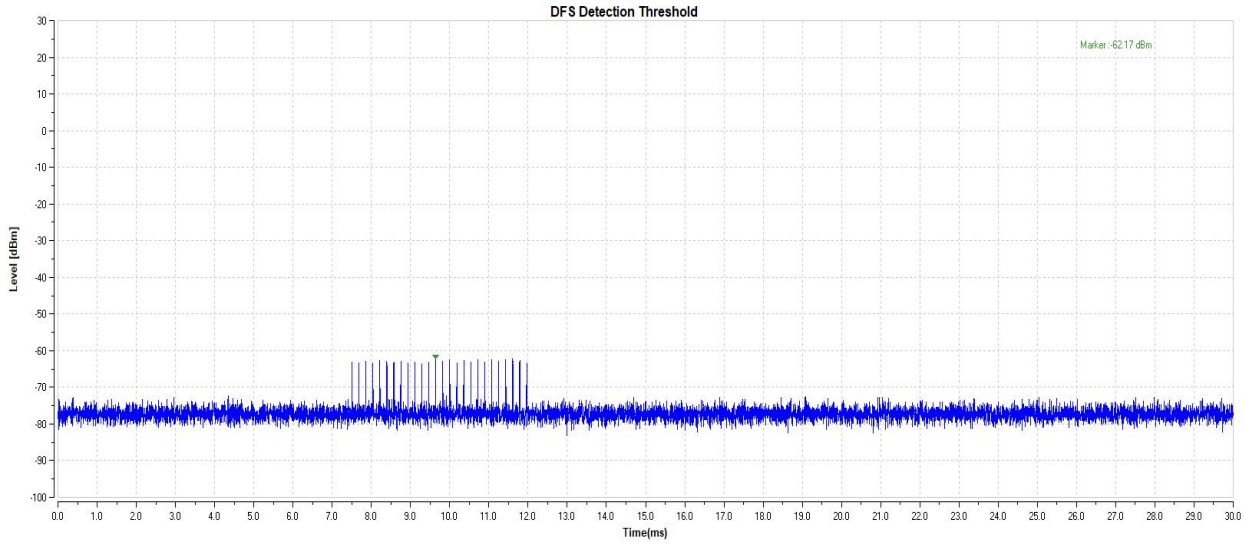

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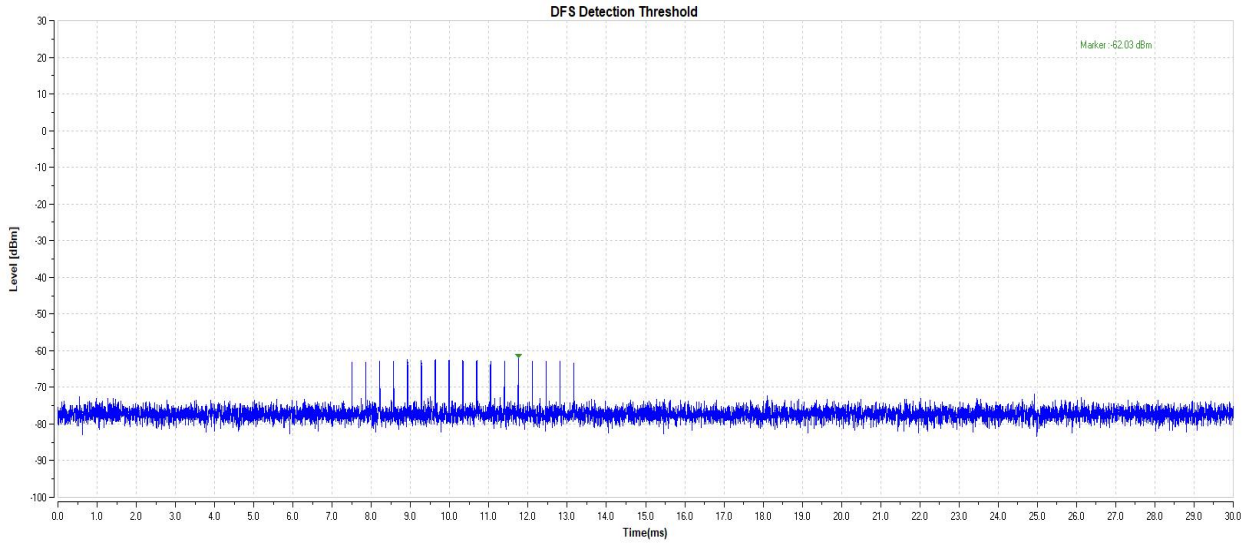

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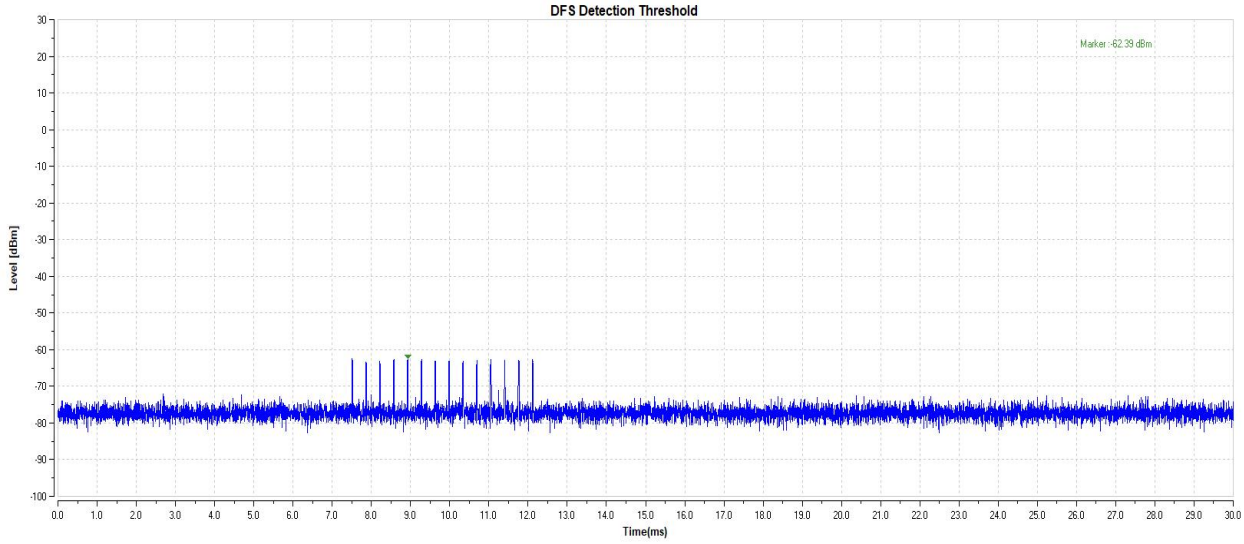

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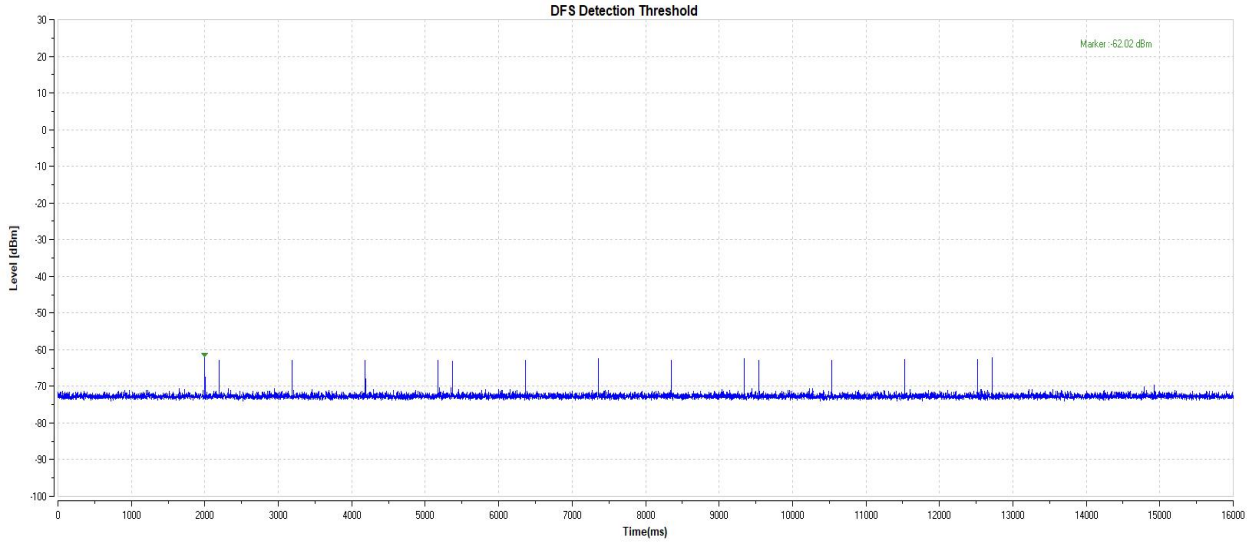

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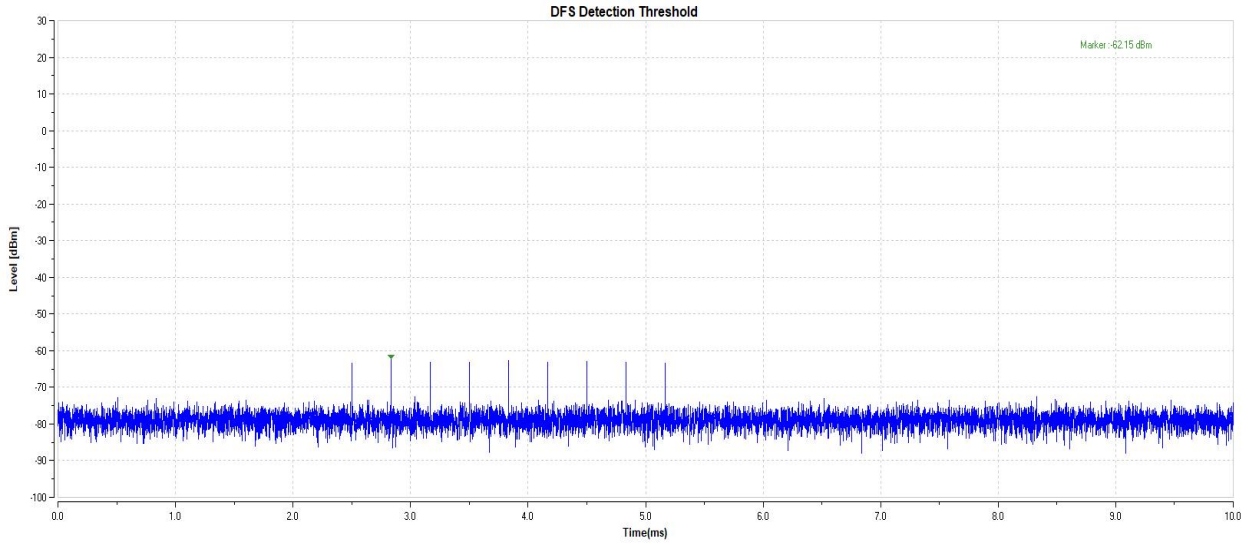

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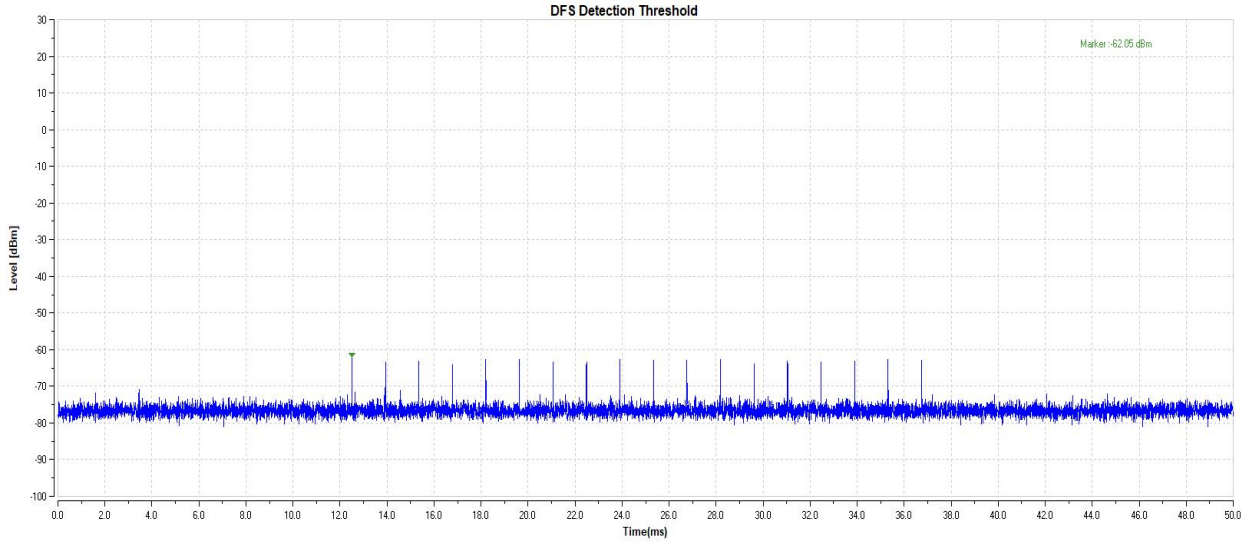

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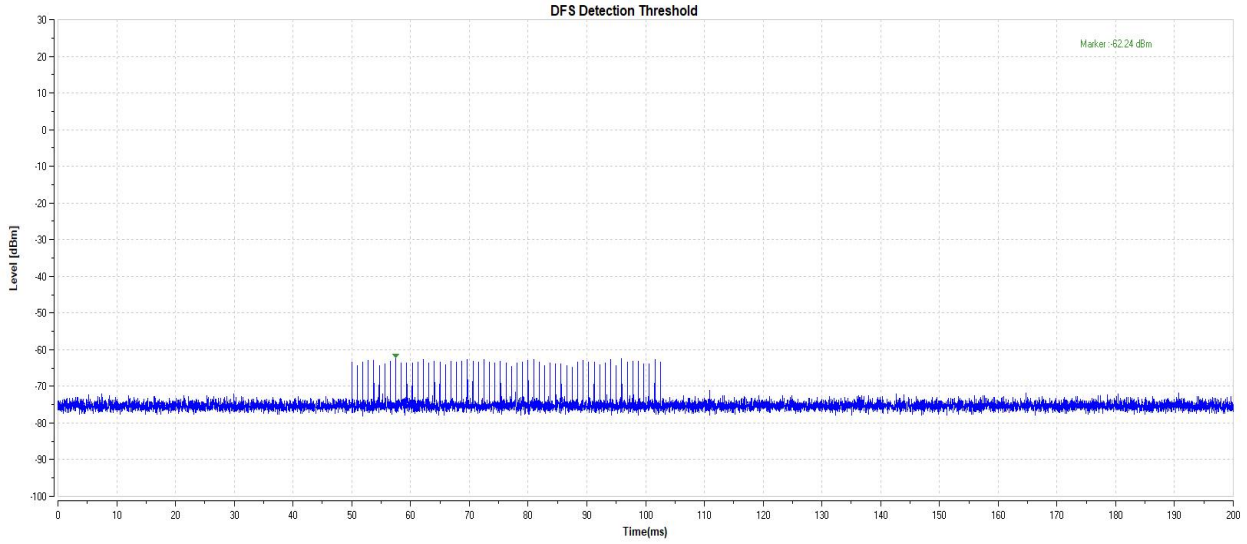

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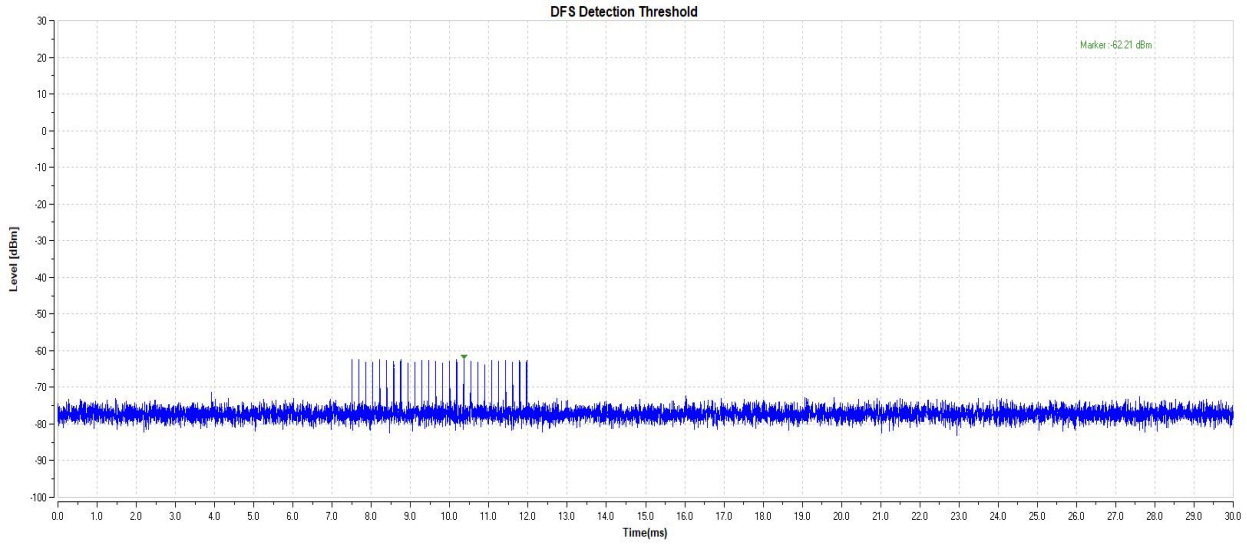

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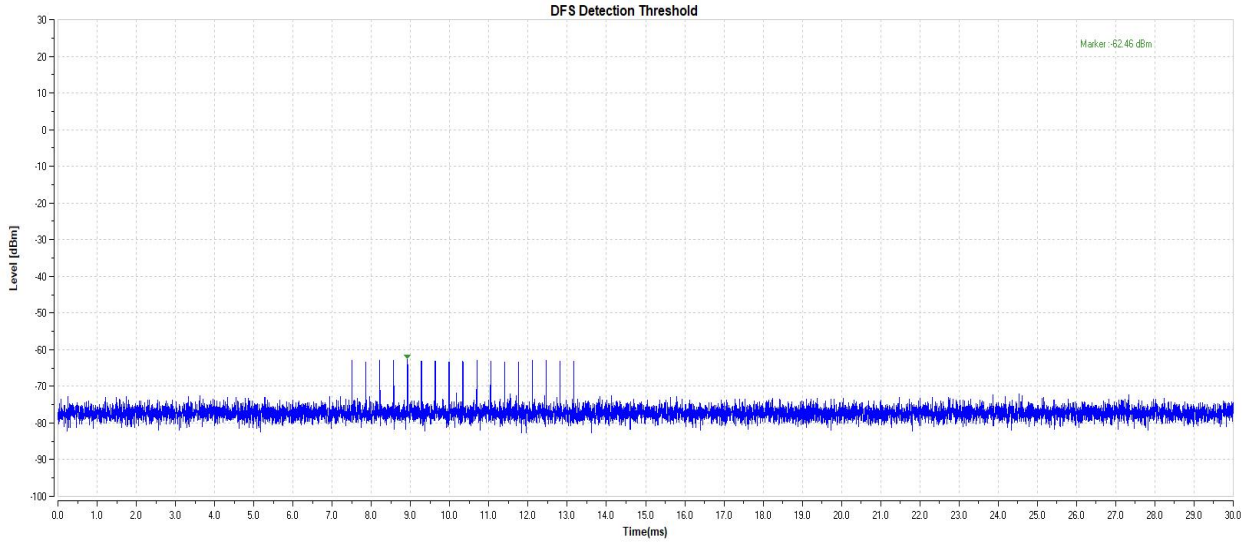
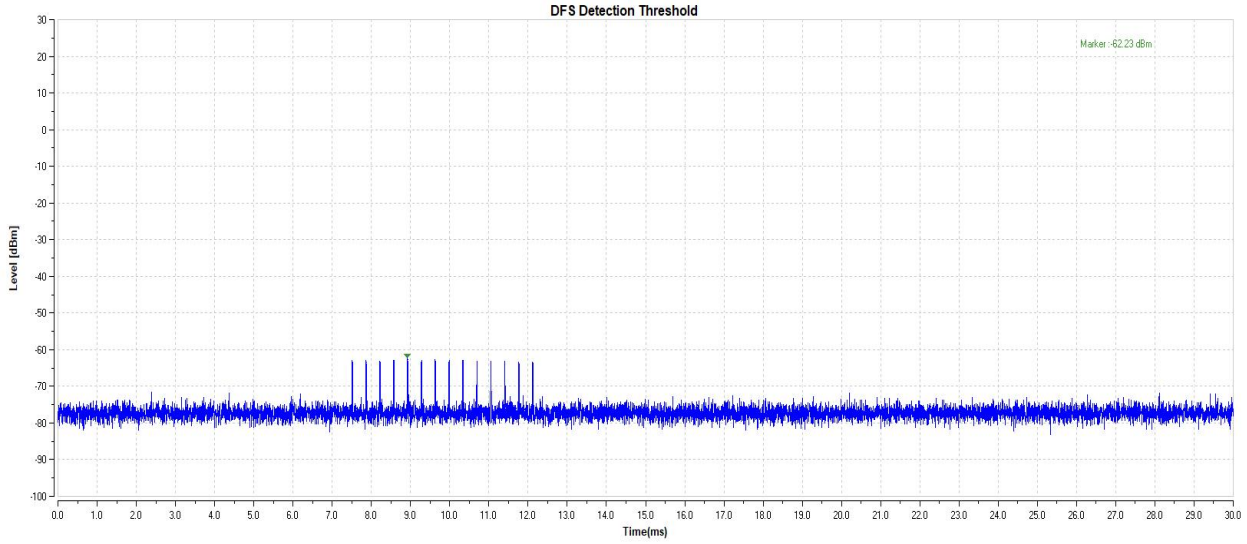
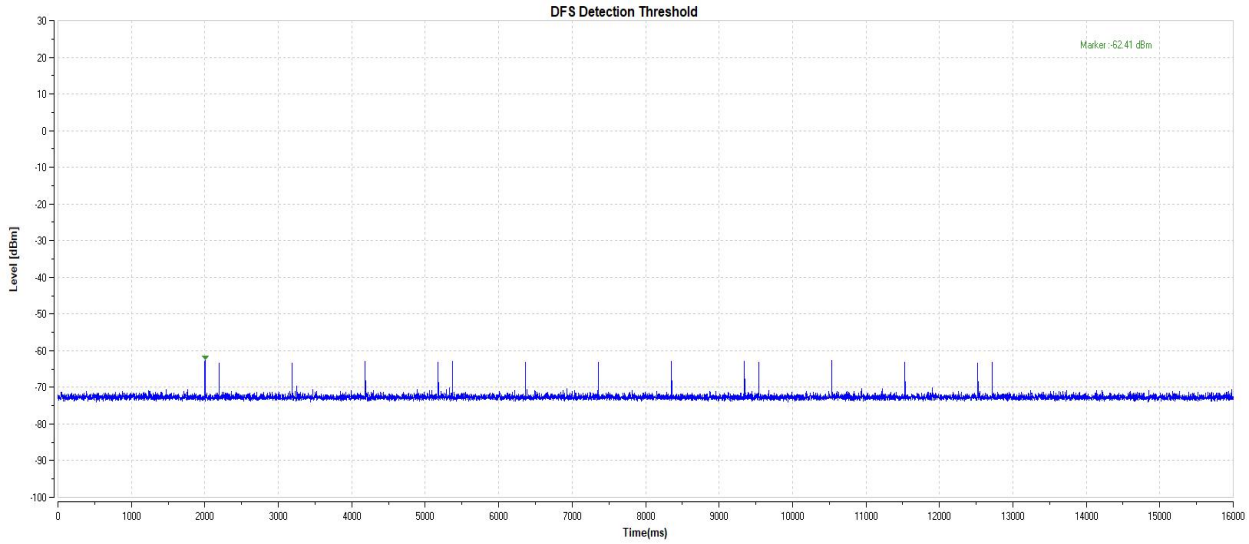


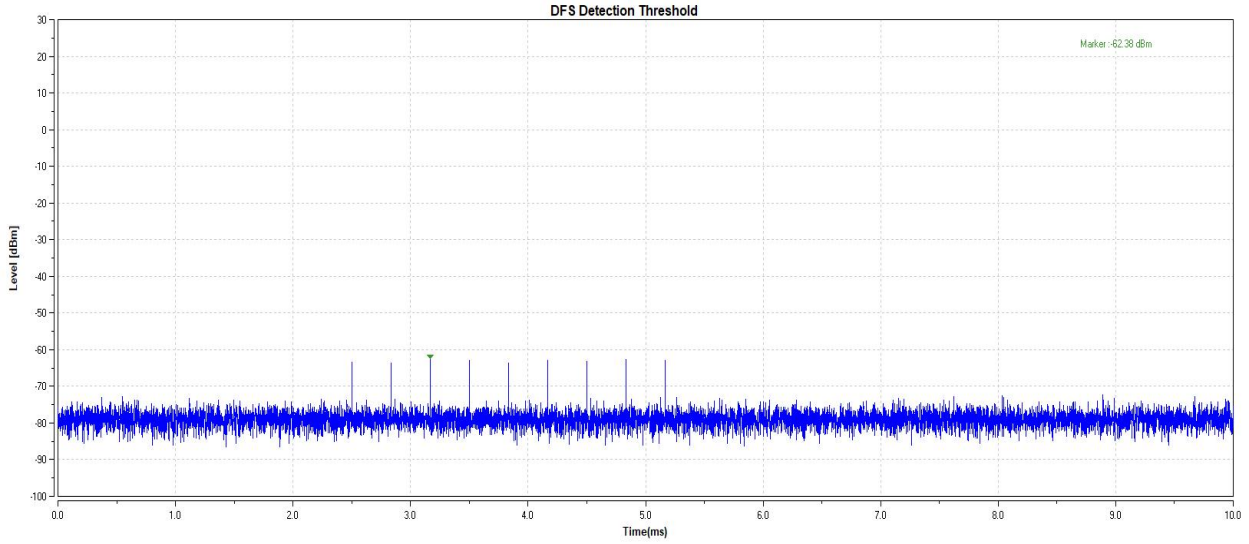
11A-5500-Type3-PASS



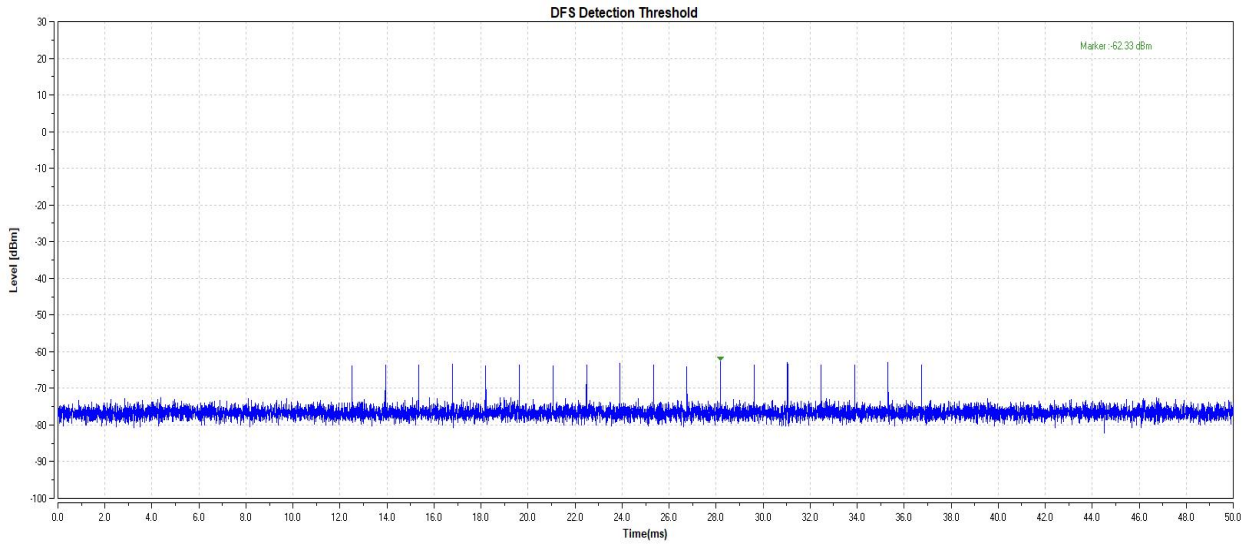
11A-5500-Type4-PASS



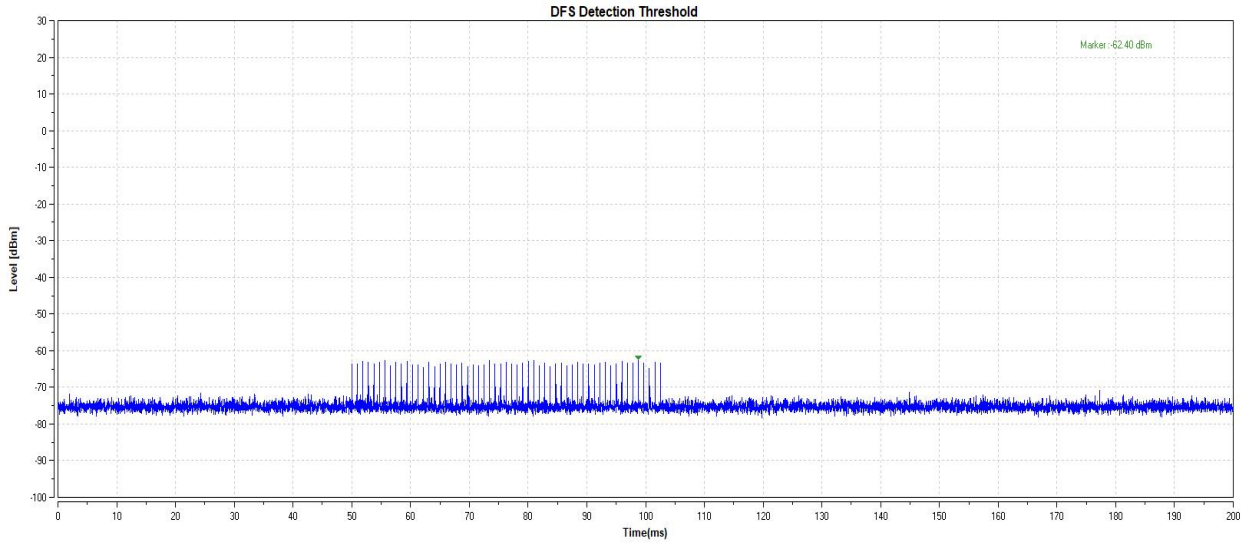
11A-5500-Type5-PASS



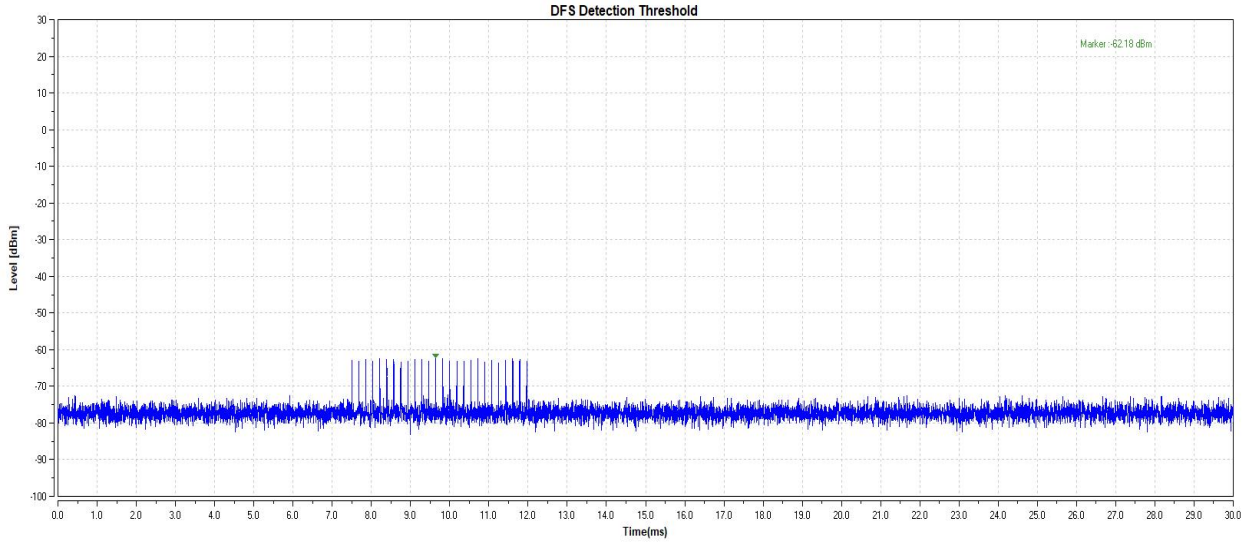
11A-5500-Type6-PASS



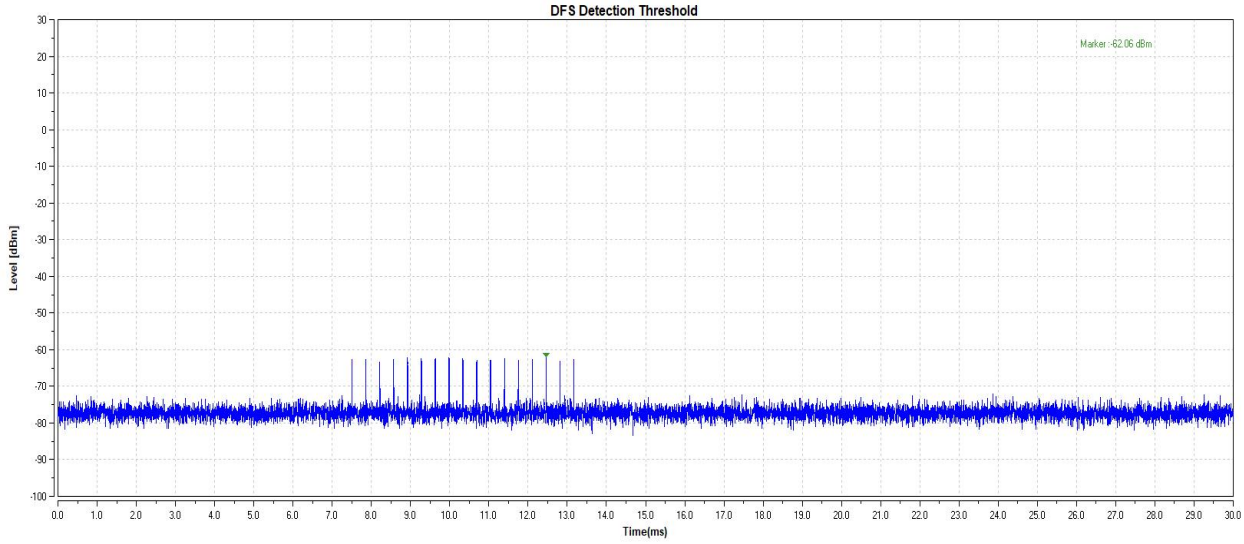
11N40-5270-Type0-PASS



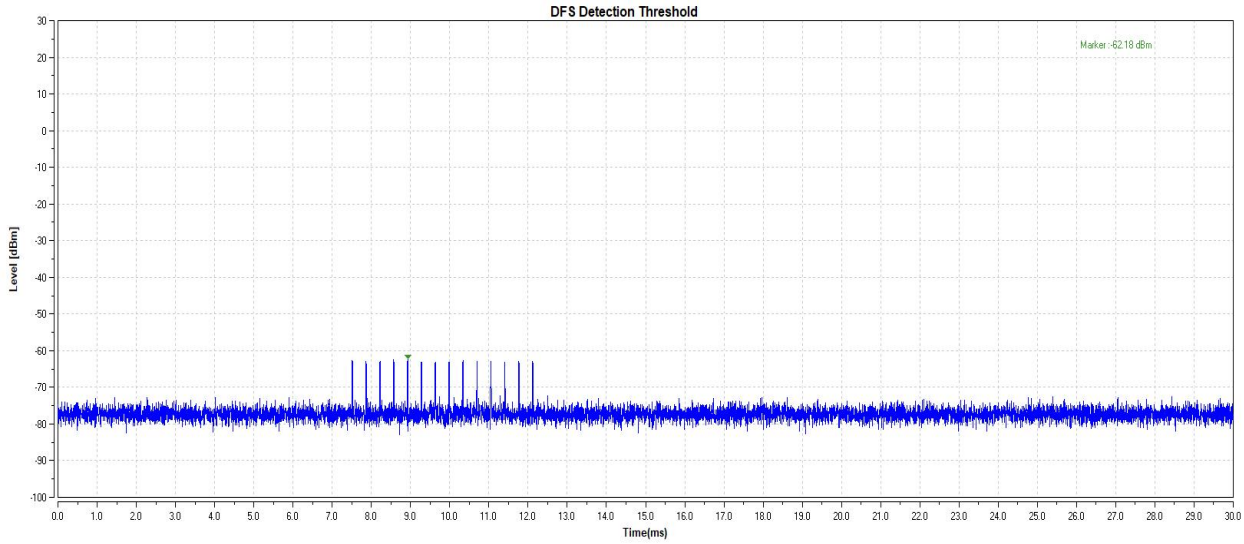
11N40-5270-Type1-PASS



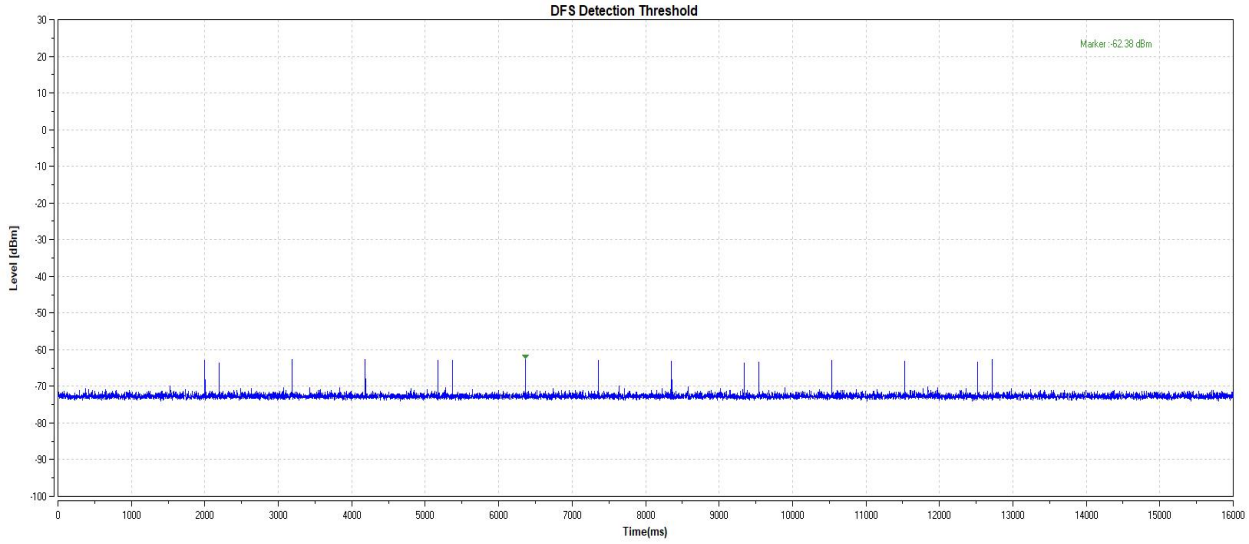
11N40-5270-Type2-PASS



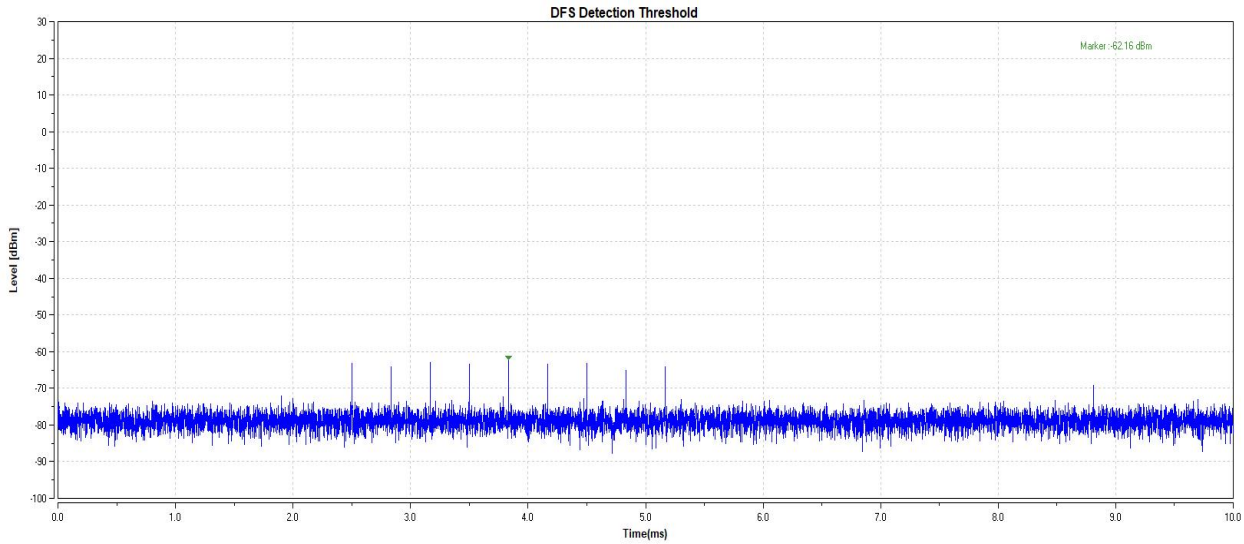
11N40-5270-Type3-PASS



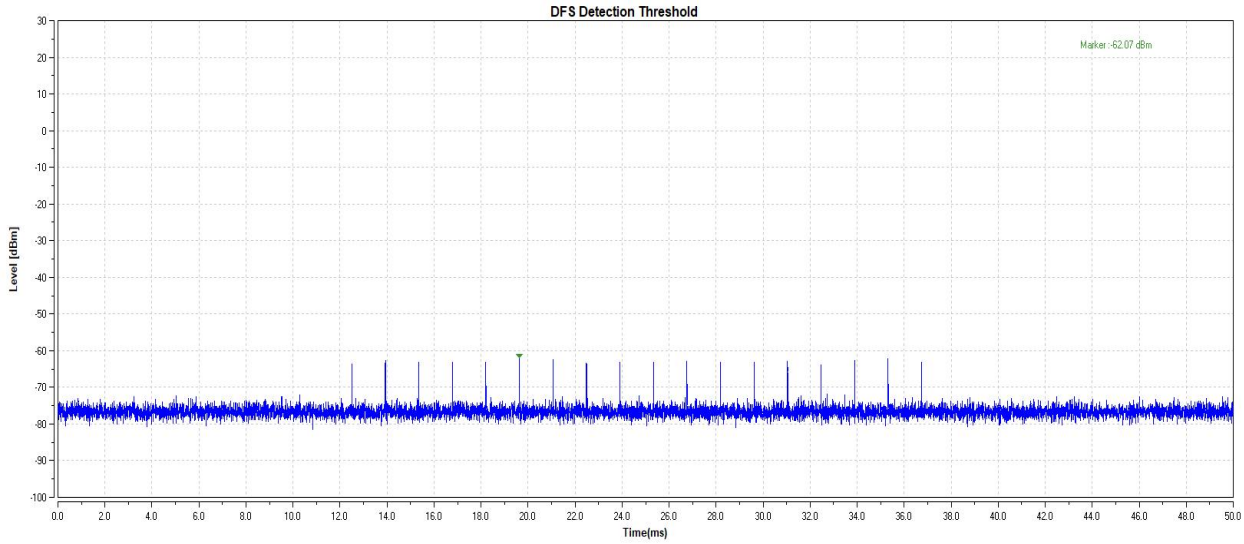
11N40-5270-Type4-PASS



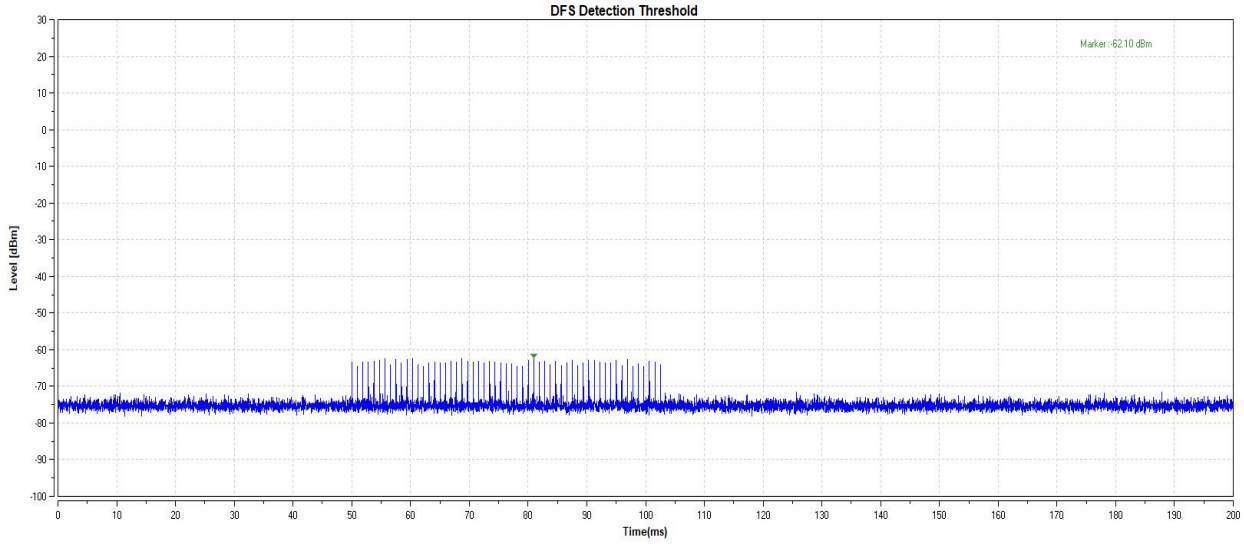
11N40-5270-Type5-PASS



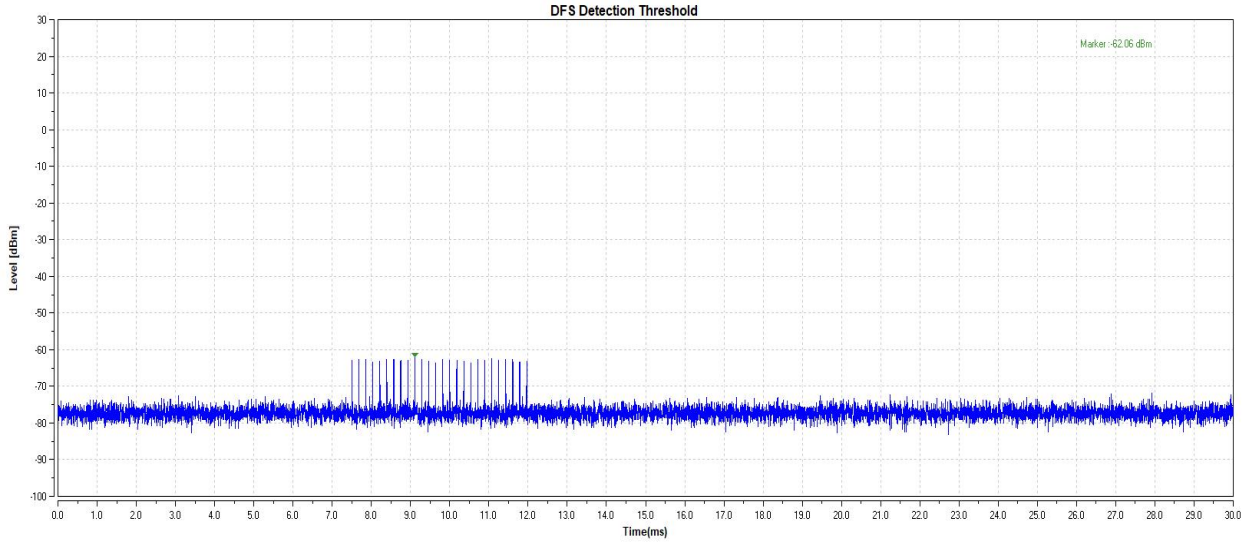
11N40-5270-Type6-PASS



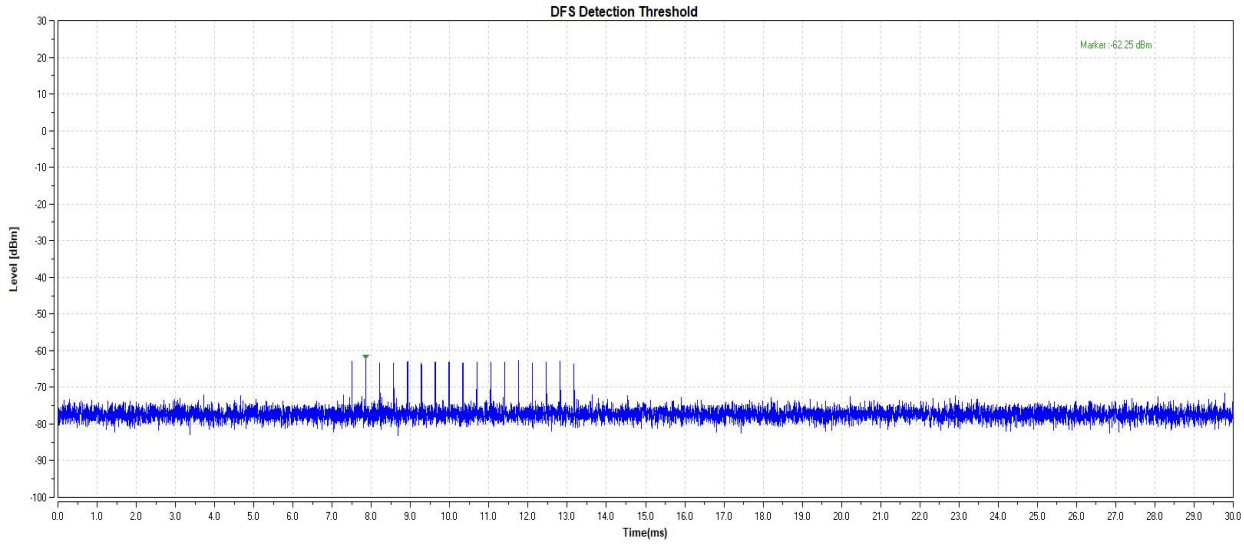
11N40-5510-Type0-PASS



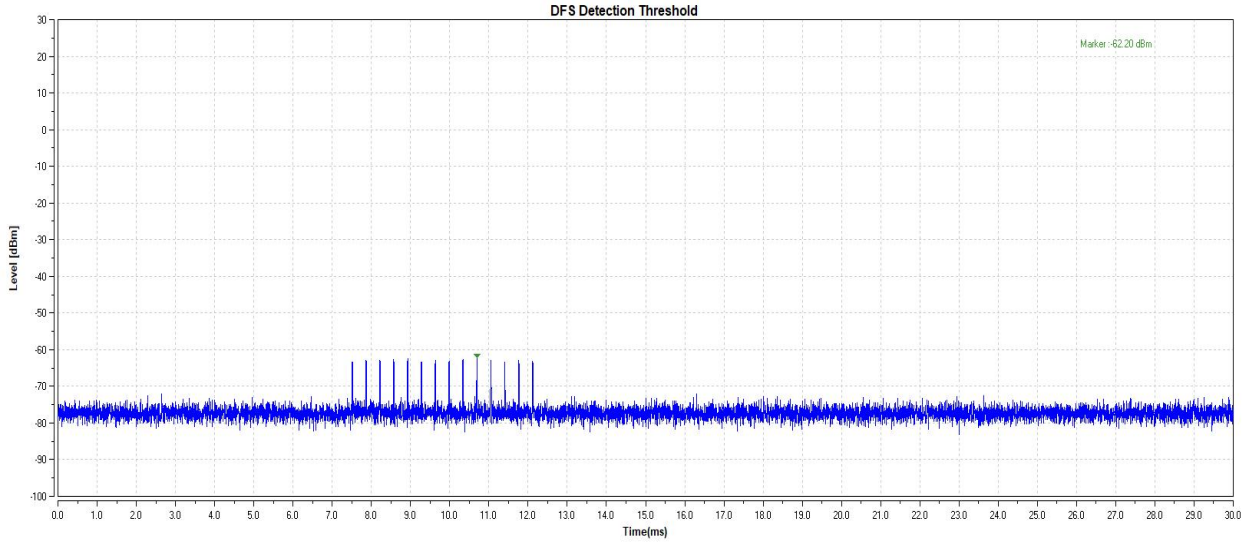
11N40-5510-Type1-PASS



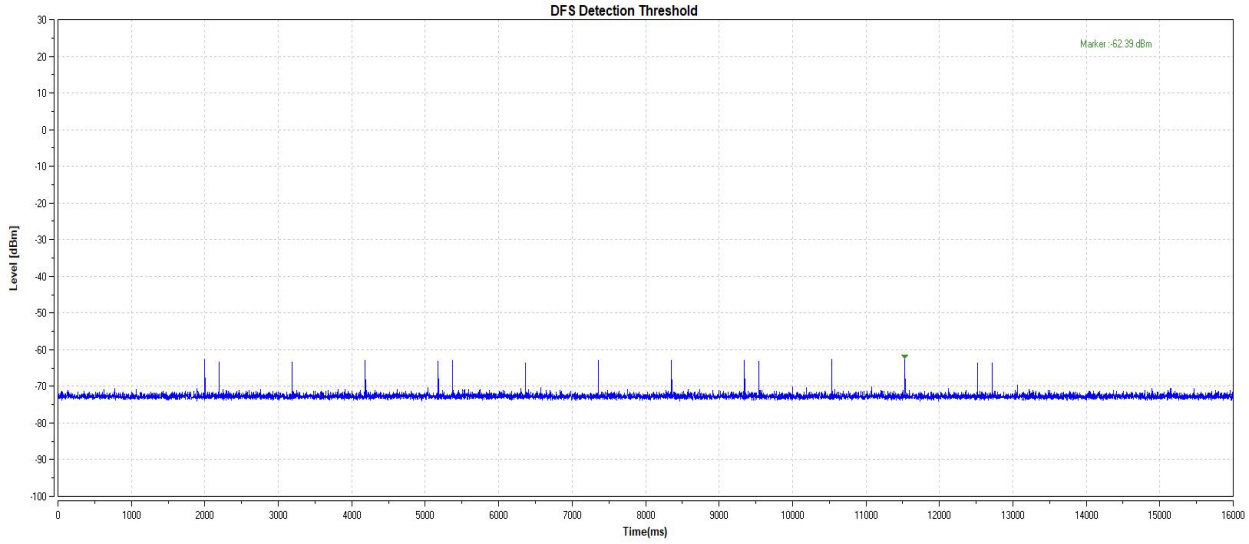
11N40-5510-Type2-PASS



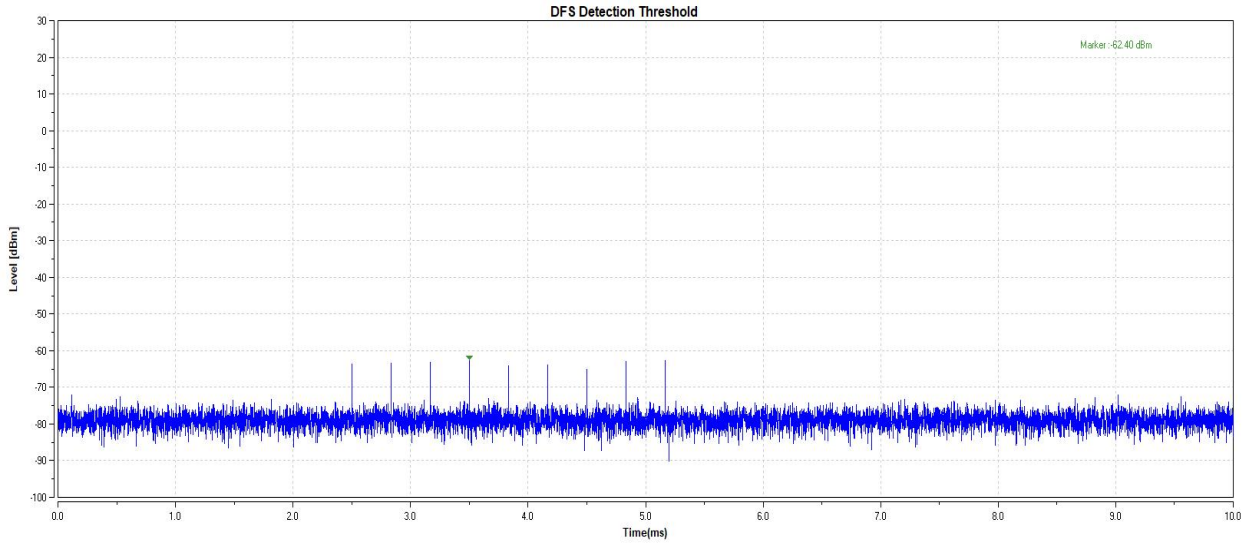
11N40-5510-Type3-PASS



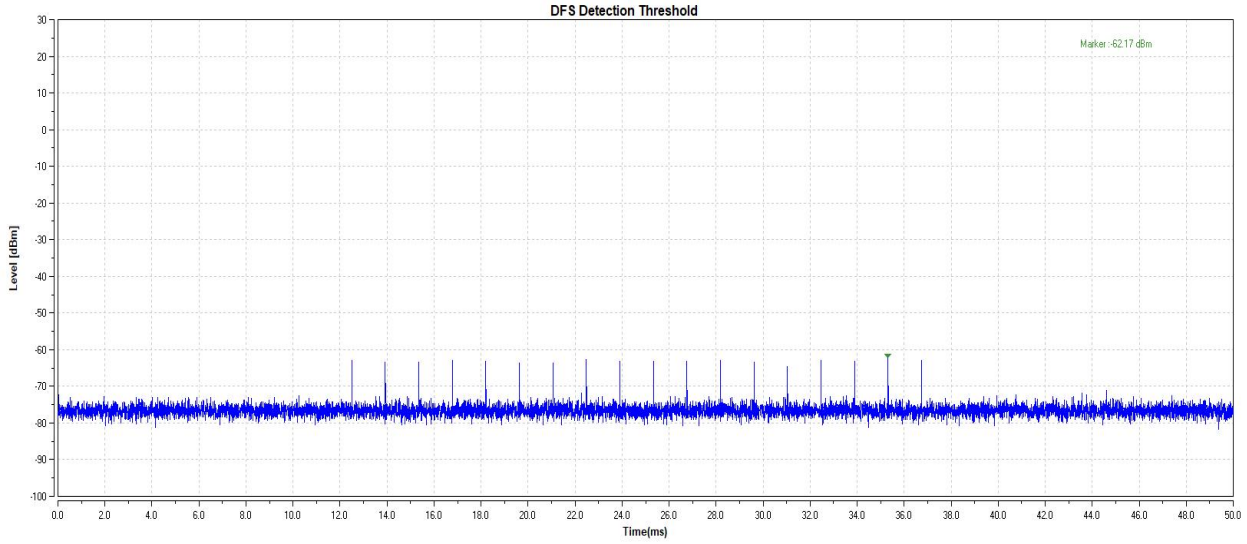
11N40-5510-Type4-PASS



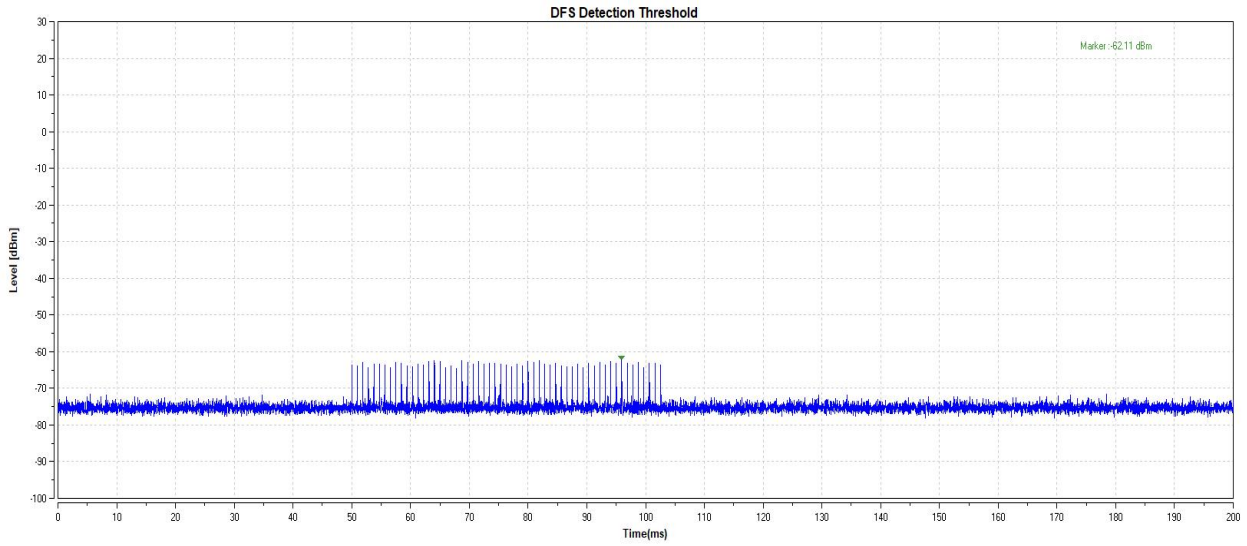
11N40-5510-Type5-PASS



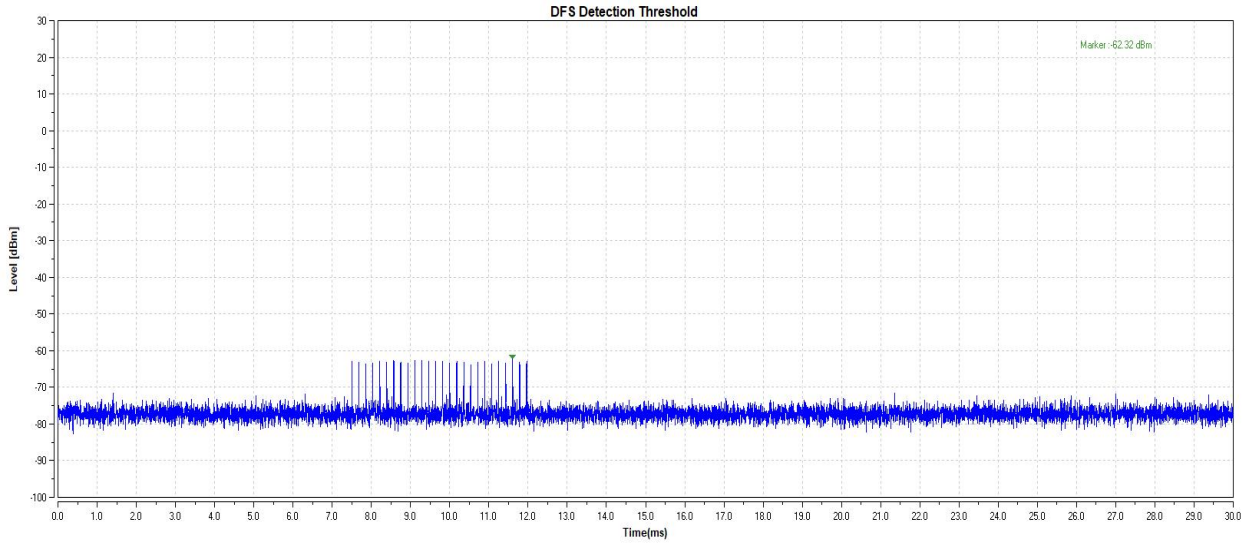
11N40-5510-Type6-PASS



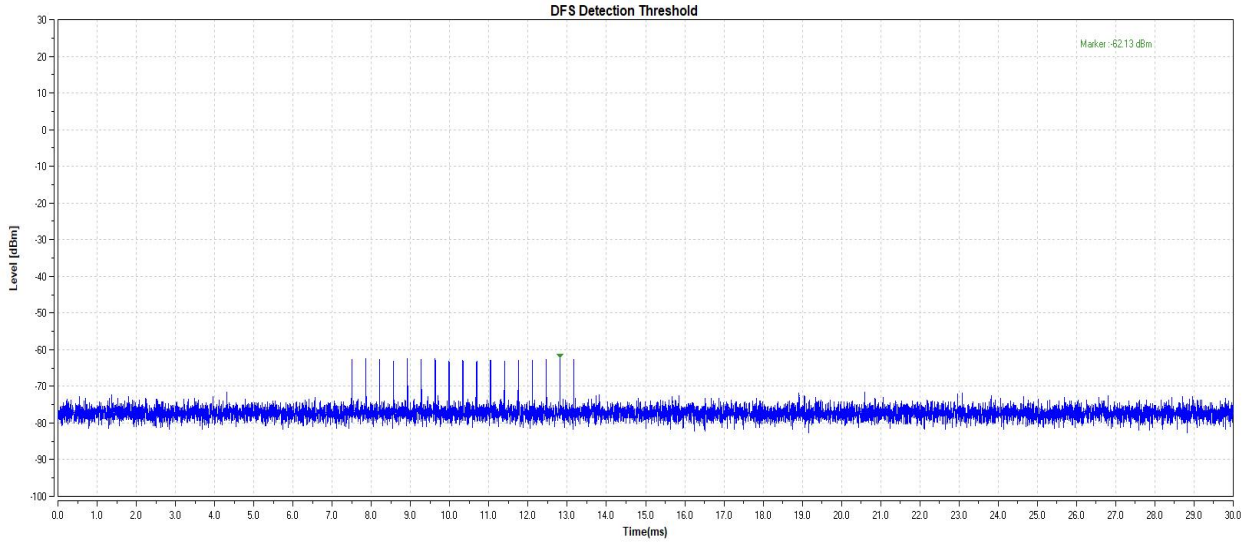
11AC80-5290-Type0-PASS



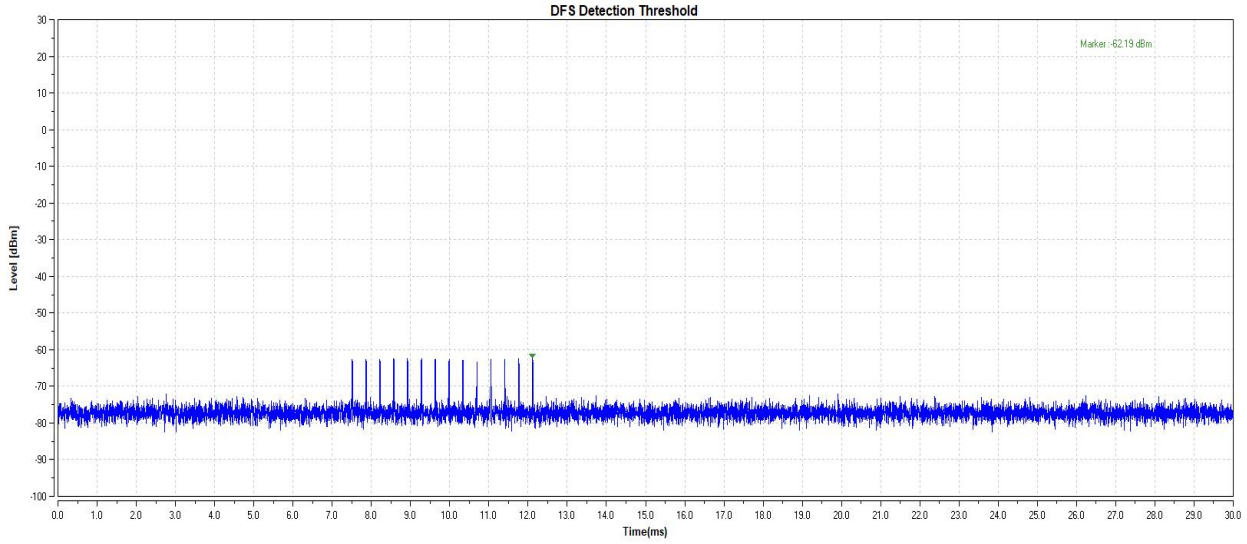
11AC80-5290-Type1-PASS



11AC80-5290-Type2-PASS



11AC80-5290-Type3-PASS



11AC80-5290-Type4-PASS