DFS Test Report

Report No.:	RF191209E01-3
FCC ID:	RSE-FGA5330
Equipment Name:	Gateway
Trade Name:	Technicolor
Model Number:	FGA5330
Product Code:	FGA5330TCH2
Received Date:	Dec. 09, 2019
Test Date:	May 19 to June 08, 2020
Issued Date:	June 17, 2020
Applicant:	Technicolor Delivery Technologies Belgium
Address:	Prins Boudewijnlaan 47 Edegem B-2650 Belgium
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
RF191209E01-3	Original release.	June 17, 2020

1 Certificate of Conformity

Equipment Name:	Gateway
Trade Name:	Technicolor
Test Model:	FGA5330
Product Code:	FGA5330TCH2
Sample Status:	LAB2A
Applicant:	Technicolor Delivery Technologies Belgium
Test Date:	May 19 to June 08, 2020
Standards:	FCC Part 15, Subpart E (Section 15.407) KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

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

Prepared by : _____ , **Date:** June 17, 2020

Claire Kuan / Specialist

Approved by : _____ , **Date:** June 17, 2020

Clark Lin / Technical Manager

2 Summary of Test Results

Applied Standard: KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02, 04/08/2016				
Part	Clause	Test Parameter	Remarks	Pass/Fail
7.6	7.8.1	U-NII Detection Bandwidth	Applicable	Pass
7.7	7.8.2.1 7.8.2.2 7.8.2.3	Channel Availability Check Time	Applicable	Pass
7.8	7.8.3	In-Service Monitoring for Channel Move Time (CMT).	Applicable	Pass
7.8	7.8.3	In-Service Monitoring for Channel Closing Transmission Time (CCTT).	Applicable	Pass
7.9	7.8.3	In-Service Monitoring for Non-Occupancy Period (NOP).	Applicable	Pass
7.10	7.8.4	Statistical Performance Check	Applicable	Pass

3 General Information

3.1 General Description of EUT (DFS Band)

Items	Description		
Equipment Name	Gateway		
Trade Name	Technicolor		
Model Number	FGA5330		
Product Code	FGA5330TCH2		
FCC ID	RSE-FGA5330		
Power Type	From power adapter		
Antenna	Refer section 3.10		
EUT Stage	■ Product Unit	☐	Pre-Sample
Operating Band and Conducted Output Power	**U-NII-1** 5150~5250MHz	☐	IEEE 802.11ax (20MHz):
		☐	IEEE 802.11ax (40MHz):
		☐	IEEE 802.11ax (80MHz)
		■	IEEE 802.11ax (160MHz) 1S4T CDD: 18.00 dBm 1S4T TxBF: 17.97 dBm 2S4T TxBF: 17.95 dBm 3S4T TxBF: 16.24 dBm
	U-NII-2A 5250~5350MHz	■	IEEE 802.11ax (20MHz): 1S4T CDD: 23.89 dBms 1S4T TxBF: 23.84 dBm 2S4T TxBF: 23.82 dBm 3S4T TxBF: 23.80 dBm
		■	IEEE 802.11ax (40MHz): 1S4T CDD: 23.94 dBm 1S4T TxBF: 23.87 dBm 2S4T TxBF: 23.92 dBm 3S4T TxBF: 23.91 dBm
		■	IEEE 802.11ax (80MHz): 1S4T CDD: 23.83 dBm 1S4T TxBF: 23.89 dBm 2S4T TxBF: 22.57 dBm 3S4T TxBF: 23.87 dBm
		■	IEEE 802.11ax (160MHz): 1S4T CDD: 17.91 dBm 1S4T TxBF: 18.08 dBm 2S4T TxBF: 17.85 dBm 3S4T TxBF: 16.20 dBm

Operating Band and Conducted Output Power	**U-NII-2C** 5470~ 5725 MHz	■	IEEE 802.11ax (20MHz): 1S4T CDD: 23.93 dBm 1S4T TxBF: 23.81 dBm 2S4T TxBF: 23.79 dBm 3S4T TxBF: 23.81 dBm
		■	IEEE 802.11ax (40MHz): 1S4T CDD: 23.89 dBm 1S4T TxBF: 23.84 dBm 2S4T TxBF: 23.72 dBm 3S4T TxBF: 23.83 dBm
		■	IEEE 802.11ax (80MHz): 1S4T CDD: 23.55 dBm 1S4T TxBF: 23.56 dBm 2S4T TxBF: 23.54 dBm 3S4T TxBF: 23.52 dBm
		■	IEEE 802.11ax (160MHz): 1S4T CDD: 23.61 dBm 1S4T TxBF: 23.37 dBm 2S4T TxBF: 23.57 dBm 3S4T TxBF: 22.15 dBm
	U-NII-3 5725~ 5850 MHz	□	IEEE 802.11ax (20MHz):
		□	IEEE 802.11ax (40MHz):
		□	IEEE 802.11ax (80MHz)
Product Type	For IEEE 802.11a: WLAN(4TX, 4RX) For IEEE 802.11n: WLAN(4TX, 4RX) For IEEE 802.11ac: WLAN (4TX, 4RX) For IEEE 802.11ax: WLAN (4TX, 4RX)		
Nominal Bandwidth	20MHz / 40MHz / 80MHz /160MHz		
Modulation	802.11a: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM/ 256QAM) 802.11ax: OFDMA (BPSK / QPSK / 16QAM / 64QAM/ 256QAM/ 1024QAM)		
Data Rate (Mbps)	11a mode : OFDM (6/9/12/18/24/36/48/54) 11n(20MHz) mode : MCS0~MCS31 11n(40MHz) mode : MCS0~MCS31 11ac(20MHz) mode : MCS0~MCS9 for NSS1~NSS4 See the below table 11ac(40MHz) mode : MCS0~MCS9 for NSS1~NSS4 See the below table 11ac(80MHz) mode : MCS0~MCS9 for NSS1~NSS4 See the below table 11ac(160MHz) mode : MCS0~MCS9 for NSS1~NSS4 See the below table 11ax(20MHz) mode : MCS0~MCS11 for NSS1~NSS4 See the below table 11ax(40MHz) mode : MCS0~MCS11 for NSS1~NSS4 See the below table 11ax(80MHz) mode : MCS0~MCS11 for NSS1~NSS4 See the below table 11ax(160MHz) mode : MCS0~MCS11 for NSS1~NSS4 See the below table		
TPC Function	■	With TPC	□ Without TPC
Beam forming Function	■	With Beam forming	□ Without Beam forming
DFS Operating Mode(s)	■	Master	□ Slave without radar detection
DFS Function	■	5250~5350MHz	
	■	5470~5725MHz	
	■	5600~5650MHz	
Off Channel CAC Feature Implemented	■	No	

Ad-hoc/Hotspot Mode	■	No Ad-hoc/Hotspot operation in 5150 - 5350 MHz and 5470 - 5725 MHz.
User Access Restrictions	■	DFS controls (hardware or software) related to radar detection are NOT accessible to the user.
I/O Ports	LAN 1G Port x 3 LAN 10G Port x 1 WAN Port x 1 USB 3.0 Port x 1 SFP Port x1 FXS Port x 1	
Hardware Version	LAB2A	
Software Version	19.4.0290-5249001-20200511135940-accb9aeb37fd7827c52ce3fa4c0adefd5a8b3121	

802.11n Data Rate spec

Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11n 20MHz Nss=1	MCS0	6.5	7.2	11n 40MHz Nss=1	MCS0	13.5	15
	MCS1	13	14.4		MCS1	27	30
	MCS2	19.5	21.7		MCS2	40.5	45
	MCS3	26	28.9		MCS3	54	60
	MCS4	39	43.3		MCS4	81	90
	MCS5	52	57.8		MCS5	108	120
	MCS6	58.5	65		MCS6	121.5	135
	MCS7	65	72.2		MCS7	135	150
11n 20MHz Nss=2	MCS8	13	14.4	11n 40MHz Nss=2	MCS8	27	30
	MCS9	26	28.9		MCS9	54	60
	MCS10	39	43.3		MCS10	81	90
	MCS11	52	57.8		MCS11	108	120
	MCS12	78	86.7		MCS12	162	180
	MCS13	104	115.6		MCS13	216	240
	MCS14	117	130		MCS14	243	270
	MCS15	130	144.4		MCS15	270	300
11n 20MHz Nss=3	MCS16	19.5	21.7	11n 40MHz Nss=3	MCS16	40.5	45
	MCS17	39	43.3		MCS17	81	90
	MCS18	58.5	65		MCS18	121.5	135
	MCS19	78	86.7		MCS19	162	180
	MCS20	117	130		MCS20	243	270
	MCS21	156	173.3		MCS21	324	360
	MCS22	175.5	195		MCS22	364.5	405
	MCS23	195	216.7		MCS23	405	450
11n 20MHz Nss=4	MCS24	26	28.9	11n 40MHz Nss=4	MCS24	54	60
	MCS25	52	57.8		MCS25	108	120
	MCS26	78	86.7		MCS26	162	180
	MCS27	104	115.6		MCS27	216	240
	MCS28	156	173.3		MCS28	324	360
	MCS29	208	231.1		MCS29	432	480
	MCS30	234	260		MCS30	486	540
	MCS31	260	288.9		MCS31	540	600

802.11ac Data Rate spec

Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11ac 20MHz NSS = 1	MCS0	6.5	7.2	11ac 40MHz NSS = 1	MCS0	13.5	15.0	11ac 80MHz NSS = 1	MCS0	29.3	32.5
	MCS1	13.0	14.4		MCS1	27	30.0		MCS1	58.5	65.0
	MCS2	19.5	21.7		MCS2	40.5	45.0		MCS2	87.8	97.5
	MCS3	26	28.9		MCS3	54	60.0		MCS3	117.0	130.0
	MCS4	39	43.3		MCS4	81	90.0		MCS4	175.5	195.0
	MCS5	52	57.8		MCS5	108	120.0		MCS5	234.0	260.0
	MCS6	58.5	65		MCS6	121.5	135.0		MCS6	263.3	292.5
	MCS7	65	72.2		MCS7	135.0	150.0		MCS7	292.5	325.0
	MCS8	78	86.7		MCS8	162.0	180.0		MCS8	351.0	390.0
	MCS9	Note	Note		MCS9	180.0	200.0		MCS9	390.0	433.3
Note: MCS 9 is invalid due to mod(NCBPS/NES, DR) not being equal to 0.											

Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11ac 20MHz NSS = 2	MCS0	13.0	14.4	11ac 40MHz NSS = 2	MCS0	27.0	30.0	11ac 80MHz NSS = 2	MCS0	58.5	65.0
	MCS1	26.0	28.9		MCS1	54.0	60.0		MCS1	117.0	130.0
	MCS2	39.0	43.3		MCS2	81.0	90.0		MCS2	175.5	195.0
	MCS3	52.0	57.8		MCS3	108.-0	120.0		MCS3	234.0	260.0
	MCS4	78.0	86.7		MCS4	162.0	180.0		MCS4	351.0	390.0
	MCS5	104.0	115.6		MCS5	216.0	240.0		MCS5	468.0	520.0
	MCS6	117.0	130.0		MCS6	243.0	270.0		MCS6	526.5	585.0
	MCS7	130.0	144.4		MCS7	270.0	300.0		MCS7	585.0	650.0
	MCS8	156.0	173.3		MCS8	324.0	360.0		MCS8	702.0	780.0
	MCS9	Note	Note		MCS9	360.0	400.0		MCS9	780.0	866.7
Note: MCS 9 is invalid due to mod(NCBPS/NES, DR) not being equal to 0.											

Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11ac 20MHz NSS = 3	MCS0	19.5	21.7	11ac 40MHz NSS = 3	MCS0	40.5	45.0	11ac 80MHz NSS = 3	MCS0	87.8	97.5
	MCS1	39.0	43.3		MCS1	81.0	90.0		MCS1	175.5	195.0
	MCS2	58.5	65.0		MCS2	121.5	135.0		MCS2	263.3	292.5
	MCS3	78.0	86.7		MCS3	162.0	180.0		MCS3	351.0	190.0
	MCS4	117.0	130		MCS4	243.0	270.0		MCS4	526.5	585.0
	MCS5	156.0	173.3		MCS5	324.0	360.0		MCS5	702.0	780.0
	MCS6	175.5	195.0		MCS6	364.5	405.0		MCS6	Note	Note
	MCS7	195.0	216.7		MCS7	405.0	450.0		MCS7	877.5	975.0
	MCS8	234.0	260.0		MCS8	486.0	540.0		MCS8	1053.0	1170.0
	MCS9	260.0	228.9		MCS9	540.0	600.0		MCS9	1170.0	1300.0
Note: MCS 9 is invalid due to mod(NCBPS/NES, DR) not being equal to 0.											

Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11ac 20MHz NSS = 4	MCS0	26.0	28.9	11ac 40MHz NSS = 4	MCS0	54.0	60.0	11ac 80MHz NSS = 4	MCS0	117.0	130.0
	MCS1	52.0	57.8		MCS1	108.0	120.0		MCS1	234.0	260.0
	MCS2	78.0	86.7		MCS2	162.0	180.0		MCS2	351.0	390.0
	MCS3	104.0	115.6		MCS3	216.0	240.0		MCS3	468.0	520.0
	MCS4	156.0	173.3		MCS4	324.0	360.0		MCS4	702.0	780.0
	MCS5	208.0	231.1		MCS5	432.0	480.0		MCS5	936.0	1040.0
	MCS6	234.0	260.0		MCS6	486.0	540.0		MCS6	1053.0	1170.0
	MCS7	260.0	288.9		MCS7	540.0	600.0		MCS7	1170.0	1300.0
	MCS8	312.0	346.7		MCS8	648.0	720.0		MCS8	1404.0	1560.0
	MCS9	Note	Note		MCS9	720.0	800.0		MCS9	1560.0	1733.3
Note: MCS 9 is invalid due to mod(NCBPS/NES, DR) not being equal to 0.											

Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11ac 160MHz NSS = 1	MCS0	58.5	65	11ac 160MHz NSS = 2	MCS0	117	130
	MCS1	117	130		MCS1	234	260
	MCS2	175.5	195		MCS2	351	390
	MCS3	234	260		MCS3	468	520
	MCS4	351	390		MCS4	702	780
	MCS5	468	520		MCS5	936	1040
	MCS6	526.5	585		MCS6	1053	1170
	MCS7	585	650		MCS7	1170	1300
	MCS8	702	780		MCS8	1404	1560
	MCS9	780	866.7		MCS9	1560	1733.3
Standard	Index	Data Rate (Mbps)		Standard	Index	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11ac 160MHz NSS = 3	MCS0	175.5	195	11ac 160MHz NSS = 4	MCS0	234	260
	MCS1	351	390		MCS1	468	520
	MCS2	526.5	585		MCS2	702	780
	MCS3	702	780		MCS3	936	1040
	MCS4	1053	1170		MCS4	1404	1560
	MCS5	1404	1560		MCS5	1872	2080
	MCS6	1579.5	1755		MCS6	2106	2340
	MCS7	1755	1950		MCS7	2340	2600
	MCS8	2106	2340		MCS8	2808	3120
	MCS9	N/A	N/A		MCS9	3120	3466.7
Note: MCS 9 is invalid due to mod (NCBPS/NES, DR) not being equal to 0.							

802.11ax Data Rate spec

Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)		
		SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)
11ax 20MH NSS=1	MCS0	8.6	8.1	7.3	11ax 40MHz NSS=1	MCS0	17.2	16.3	14.6	11ax 80MHz NSS=1	MCS0	36	34	30.6
	MCS1	17.2	16.3	14.6		MCS1	34.4	32.5	29.3		MCS1	72.1	68.1	61.3
	MCS2	25.8	24.4	21.9		MCS2	51.6	48.8	43.9		MCS2	108.1	102.1	91.9
	MCS3	34.4	32.5	29.3		MCS3	68.8	65	58.5		MCS3	144.1	136.1	122.5
	MCS4	51.6	48.8	43.9		MCS4	103.2	97.5	87.8		MCS4	216.2	204.2	183.8
	MCS5	68.8	65	58.5		MCS5	137.6	130	117		MCS5	288.2	272.2	245
	MCS6	77.4	73.1	65.8		MCS6	154.9	146.3	131.6		MCS6	324.3	306.3	275.6
	MCS7	86	81.3	73.1		MCS7	172.1	162.5	146.3		MCS7	360.3	340.3	306.3
	MCS8	103.2	97.5	87.8		MCS8	206.5	195	175.5		MCS8	432.4	408.3	367.5
	MCS9	114.7	108.3	97.5		MCS9	229.4	216.7	195		MCS9	480.4	453.7	408.3
	MCS10	129	121.9	109.7		MCS10	258.1	243.8	219.4		MCS10	540.4	510.4	459.4
	MCS11	143.4	135.4	121.9		MCS11	286.8	270.8	243.8		MCS11	600.5	567.1	510.4

Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)		
		SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)
11ax 20MHz NSS=2	MCS0	17.2	16.3	14.6	11ax 40MHz NSS=2	MCS0	34.4	32.5	29.3	11ax 80MHz NSS=2	MCS0	72.1	68.1	61.3
	MCS1	34.4	32.5	29.3		MCS1	68.8	65	58.5		MCS1	144.1	136.1	122.5
	MCS2	51.6	48.8	43.9		MCS2	103.2	97.5	87.8		MCS2	216.2	204.2	183.8
	MCS3	68.8	65	58.5		MCS3	137.6	130	117		MCS3	288.2	272.2	245
	MCS4	103.2	97.5	87.8		MCS4	206.5	195	175.5		MCS4	432.4	408.3	367.5
	MCS5	137.6	130	117		MCS5	275.3	260	234		MCS5	576.5	544.4	490
	MCS6	154.9	146.3	131.6		MCS6	309.7	292.5	263.3		MCS6	648.5	612.5	551.3
	MCS7	172.1	162.5	146.3		MCS7	344.1	325	292.5		MCS7	720.6	680.6	612.5
	MCS8	206.5	195	175.5		MCS8	412.`9	390	351		MCS8	864.7	816.7	735
	MCS9	229.4	216.7	195		MCS9	458.8	433.3	390		MCS9	960.8	907.4	816.7
	MCS10	258.1	243.8	219.4		MCS10	516.2	487.5	438.8		MCS10	1080.9	1020.8	918.8
	MCS11	286.8	270.8	243.8		MCS11	573.5	541.7	487.5		MCS11	1201	1134.3	1020.8

Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)		
		SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)
11ax 20MHz NSS=3	MCS0	25.8	24.4	21.9	11ax 40MHz NSS=3	MCS0	51.6	48.8	43.9	11ax 80MHz NSS=3	MCS0	108.1	102.1	91.9
	MCS1	51.6	48.8	43.9		MCS1	103.2	97.5	87.8		MCS1	216.2	204.2	183.8
	MCS2	77.4	73.1	65.8		MCS2	154.9	146.3	131.6		MCS2	324.3	306.3	275.6
	MCS3	103.2	97.5	87.8		MCS3	206.5	195	175.5		MCS3	432.4	408.3	367.5
	MCS4	154.9	146.3	131.6		MCS4	309.7	292.5	263.3		MCS4	648.5	612.5	551.3
	MCS5	206.5	195	175.5		MCS5	412.9	390	351		MCS5	864.7	816.7	735
	MCS6	232.3	219.4	197.4		MCS6	464.6	438.8	394.9		MCS6	972.8	918.8	826.9
	MCS7	258.1	243.8	219.4		MCS7	516.2	487.5	438.8		MCS7	1080.9	1020.8	918.8
	MCS8	309.7	292.5	263.3		MCS8	619.4	585	526.5		MCS8	1297.1	1225	1102.5
	MCS9	344.1	325	292.5		MCS9	688.2	650	585		MCS9	1441.2	1361.1	1225
	MCS10	387.1	365.6	329.1		MCS10	774.3	731.3	658.1		MCS10	1621.3	1531.3	1378.1
	MCS11	430.1	406.3	365.6		MCS11	860.3	812.5	731.3		MCS11	1801.5	1701.4	1531.3

Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)		
		SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)
11ax 20MHz NSS=4	MCS0	34.4	32.5	29.3	11ax 40MHz NSS=4	MCS0	68.8	65	58.5	11ax 80MHz NSS=4	MCS0	144.1	136.1	122.5
	MCS1	68.8	65	58.5		MCS1	137.6	130	117		MCS1	288.2	272.2	245
	MCS2	103.2	97.5	87.8		MCS2	206.5	195	175.5		MCS2	432.4	408.3	367.5
	MCS3	137.6	130	117		MCS3	275.3	260	234		MCS3	576.5	544.4	490
	MCS4	206.5	195	175.5		MCS4	412.9	390	351		MCS4	864.7	816.7	735
	MCS5	275.3	260	234		MCS5	550.6	520	468		MCS5	1152.9	1088.9	980
	MCS6	309.7	292.5	263.3		MCS6	619.4	585	526.5		MCS6	1297.1	1225	1102.5
	MCS7	344.1	325	292.5		MCS7	688.2	650	585		MCS7	1441.2	1361.1	1225
	MCS8	412.9	390	351		MCS8	825.9	780	702		MCS8	1729.4	1633.3	1470
	MCS9	458.8	433.3	390		MCS9	917.6	866.7	780		MCS9	1921.6	1814.8	1633.3
	MCS10	516.2	487.5	438.8		MCS10	1032.4	975	877.5		MCS10	2161.8	2041.7	1837.5
	MCS11	573.5	541.7	487.5		MCS11	1147.1	1083.3	975		MCS11	2401.9	2268.5	2041.7

Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)		
		SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)
11ax 160MHz NSS = 1	MCS0	72.1	68.1	61.3	11ax 160MHz NSS = 2	MCS0	144.1	136.1	122.5
	MCS1	144.1	136.1	122.5		MCS1	288.2	272.2	245
	MCS2	216.2	204.2	183.8		MCS2	432.4	408.3	367.5
	MCS3	288.2	272.2	245		MCS3	576.5	544.4	490
	MCS4	432.4	408.3	367.5		MCS4	864.7	816.7	735
	MCS5	576.5	544.4	490		MCS5	1152.9	1088.9	980
	MCS6	648.5	612.5	551.3		MCS6	1297.1	1225	1102.5
	MCS7	720.6	680.6	612.5		MCS7	1441.2	1361.1	1225
	MCS8	864.7	816.7	735		MCS8	1729.4	1633.3	1470
	MCS9	960.8	907.4	816.7		MCS9	1921.6	1814.8	1633.3
	MCS10	1080.9	1020.8	918.8		MCS10	2161.8	2041.7	1837.5
	MCS11	1201	1134.3	1020.8		MCS11	2402	2268.5	2041.7
Standard	Index	Data Rate (Mbps)			Standard	Index	Data Rate (Mbps)		
		SGI (0.8us)	MGI (1.6us)	LGI (3.2us)			SGI (0.8us)	MGI (1.6us)	LGI (3.2us)
11ax 160MHz NSS = 3	MCS0	216.2	204.2	183.8	11ax 160MHz NSS = 4	MCS0	288.2	272.2	245
	MCS1	432.4	408.3	367.5		MCS1	576.5	544.4	490
	MCS2	648.5	612.5	551.3		MCS2	864.7	816.7	735
	MCS3	864.7	816.7	735		MCS3	1152.9	1088.9	980
	MCS4	1297.1	1225	1102.5		MCS4	1729.4	1633.3	1470
	MCS5	1729.4	1633.3	1470		MCS5	2305.9	2177.8	1960
	MCS6	1945.6	1837.5	1653.8		MCS6	2594.1	2450	2205
	MCS7	2161.8	2041.7	1837.5		MCS7	2882.4	2722.2	2450
	MCS8	2594.1	2450	2205		MCS8	3458.8	3266.7	2940
	MCS9	2882.4	2722.2	2450		MCS9	3843.1	3629.6	3266.7
	MCS10	3242.6	3062.5	2756.3		MCS10	4323.5	4083.3	3675
	MCS11	3602.9	3402.8	3062.5		MCS11	4803.9	4537	4083.3

3.2 Accessories

Power supply:

Brand	HONOR
Model	ADS-36FKJ-12 12036EPCU
P/N	6274615A
ID	03
Input Power	100-240Vac, 50/60Hz, Max.1.0A
Output Power	12Vdc, 3.0A
Power Line	1.8m power cable without core attached on adapter

3.3 Feature of Equipment Under Test

Please refer to user manual.

3.4 Information Provided by the Manufacturer

Interface Availability:

Interface / Model	DC Power	Ethernet LAN 10Gbps	Ethernet LAN 1000Mbps	Ethernet WAN 1000Mbps	SFP 10Gbps	USB 3. 0	FXS	WLAN IEEE 802.11ax (2.4G+ 5GHz)4X4
FGA5330	12Vdc 3A	●(1 port)	●(3 port)	●(1 port)	●(1 port)	●(1 port)	●(1 port)	●

●: Equipped

○: Not Equipped

3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (Section 15.407)
KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02, 04/08/2016

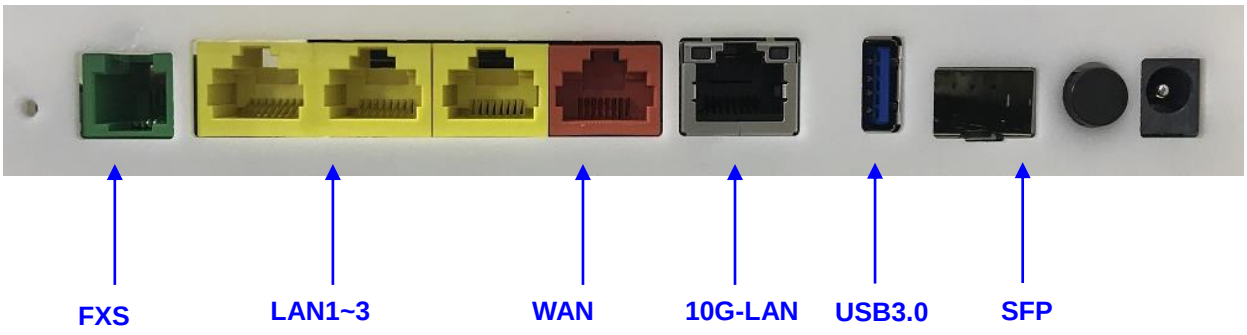
All test items have been performed and recorded as per the above standards.

3.6 Cabling Attached to the Equipment

Cable and Interconnection

Interface	Cable type	Cable length delivered with the modem	"Real life" Cable length that can be attached to this type of interface	Cable length to be used for testing	Internal/ external connection
LAN1, WAN	UTP Cat 5	2 meter	> 10 meter	Two 10 meter cables;	Internal
10G-LAN	UTP Cat 6	2 meter	> 10 meter	10 meter cables;	Internal
SFP	Optical	2 meter	> 10 meter	10 meter cables;	External
FXS	UTP Cat 3	2 meter	> 10 meter	1 meter flat cable	Internal
USB	STP	NA	NA	NA	Internal
AC power	UTP	1.8 meter	>10 meter	1.8 meter	External

3.7 Panel Drawing



3.8 Transmit Operating Mode

For 5250~5350MHz & 5470~5725MHz

Transmit Operating Mode						Transmit Muitiple Antennas					
■	Operating mode 1 (single antenna)					■	1TX				
■	Operating mode 2 (muitiple antenna, no beam forming)					■	2TX	■	3TX	■	4TX
■	Operating mode 3 (muitiple antenna, with beam forming)					■	2TX	■	3TX	■	4TX
■	802.11a	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11n (20MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11n (40MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ac (20MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ac (40MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ac (80MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ac (160MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ax (20MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ax (40MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ax (80MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		
■	802.11ax (160MHz)	Operating mode	■	1TX	■ 2TX	■	3TX	■	4TX		

For IEEE802.11a, 6Mbps~54Mbps: 1 Stream 4TX
For IEEE802.11n,
MCS0~MCS7: 1 Stream 1TX, 1 Stream 2TX, 1 Stream 3TX, 1 Stream 4TX
MCS8~MCS15: 2 Stream 2TX; 2 Stream 3TX; 2 Stream 4TX
MCS16~MCS23: 3 Stream 3TX; 3 Stream 4TX
MCS24~MCS31: 4 Stream 4TX;
For IEEE802.11ac 20MHz
Nss1MCS0~Nss1MCS8: 1 Stream 1TX, 1 Stream 2TX, 1 Stream 3TX, 1 Stream 4TX
Nss2MCS0~Nss2MCS9: 2 Stream 2TX; 2 Stream 3TX; 2 Stream 4TX
Nss3MCS0~Nss3MCS9: 3 Stream 3TX; 3 Stream 4TX
Nss4MCS0~Nss4MCS8: 4 Stream 4TX
For IEEE802.11ac 40/80MHz/160MHz
Nss1MCS0~Nss1MCS9: 1 Stream 1TX, 1 Stream 2TX, 1 Stream 3TX, 1 Stream 4TX
Nss2MCS0~Nss2MCS9: 2 Stream 2TX; 2 Stream 3TX; 2 Stream 4TX
Nss3MCS0~Nss3MCS9: 3 Stream 3TX; 3 Stream 4TX
Nss4MCS0~Nss4MCS9: 4 Stream 4TX
For IEEE802.11ax 20/40/80/160MHz
Nss1MCS0~Nss1MCS11: 1 Stream 1TX, 1 Stream 2TX, 1 Stream 4TX, 1 Stream 4TX
Nss2MCS0~Nss2MCS11: 2 Stream 2TX; 2 Stream 3TX; 2 Stream 4TX
Nss3MCS0~Nss3MCS11: 3 Stream 3TX; 3 Stream 4TX
Nss4MCS0~Nss4MCS11: 4 Stream 4TX

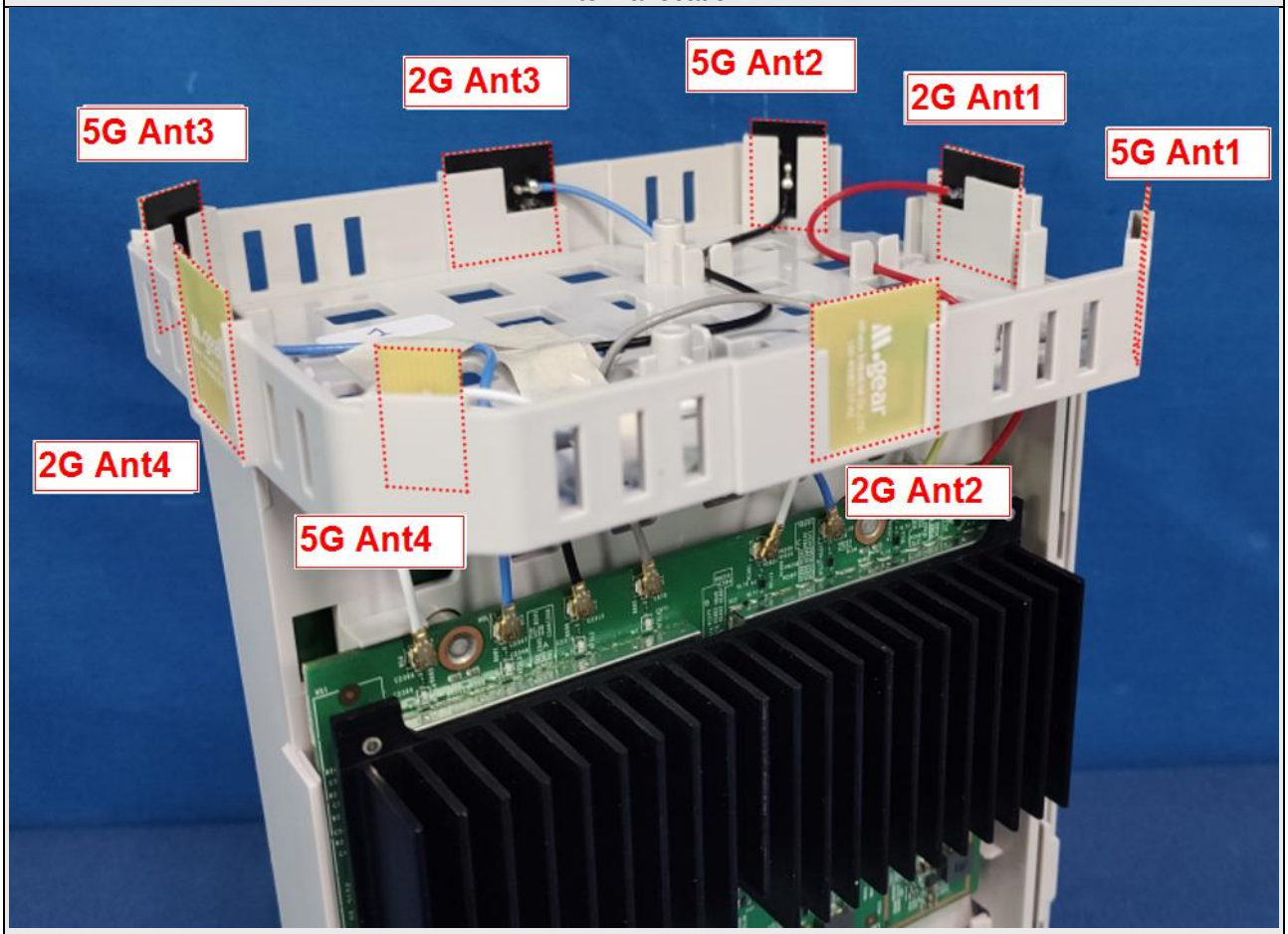
3.9 Antenna Requirements

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

3.10 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
2G-1	WHA YU	C107-511586-A	PCB PIFA	I-pex
2G-2	WHA YU	C107-511589-A	PCB PIFA	I-pex
2G-3	WHA YU	C107-511587-A	PCB PIFA	I-pex
2G-4	WHA YU	C107-511588-A	PCB PIFA	I-pex
5G-1	WHA YU	C107-511590-A	PCB Loop	I-pex
5G-2	WHA YU	C107-511591-A	PCB Dipole	I-pex
5G-3	WHA YU	C107-511592-A	PCB Dipole	I-pex
5G-4	WHA YU	C107-511593-A	PCB Dipole	I-pex

Antenna location



Antenna & Bandwidth

Antenna	1st (TX)				2nd (TX)			
Bandwidth / Mode	20 MHz	40 MHz	80 MHz	160 MHz	20 MHz	40 MHz	80 MHz	160 MHz
802.11a	V	X	X	X	V	X	X	X
802.11n	V	V	X	X	V	V	X	X
802.11ac	V	V	V	V	V	V	V	V
802.11ax	V	V	V	V	V	V	V	V

Antenna	3rd (TX)				4th (TX)			
Bandwidth / Mode	20 MHz	40 MHz	80 MHz	160 MHz	20 MHz	40 MHz	80 MHz	160 MHz
802.11a	V	X	X	X	V	X	X	X
802.11n	V	V	X	X	V	V	X	X
802.11ac	V	V	V	V	V	V	V	V
802.11ax	V	V	V	V	V	V	V	V

3.11 Table for Carrier Frequency

16 channels are provided for Bandwidth 20MHz:

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5250~5350 MHz U-NII-2A	52	5260 MHz	60	5300 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz U-NII-2C	100	5500 MHz	124	5620 MHz
	104	5520 MHz	128	5640 MHz
	108	5540 MHz	132	5660 MHz
	112	5560 MHz	136	5680 MHz
	116	5580 MHz	140	5700 MHz
	120	5600 MHz	144	5720 MHz

8 channels are provided for Bandwidth 40MHz:

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5250~5350 MHz U-NII-2A	54	5270 MHz	62	5310 MHz
5470~5725 MHz U-NII-2C	102	5510 MHz	126	5630 MHz
	110	5550 MHz	134	5670 MHz
	118	5590 MHz	142	5710 MHz

4 channels are provided for Bandwidth 80MHz:

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5250~5350 MHz U-NII-2A	58	5290 MHz	-	-
5470~5725 MHz U-NII-2C	106	5530 MHz	138	5690 MHz
	122	5610 MHz		

2 channels are provided for Bandwidth 160MHz:

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5350 MHz U-NII-2A	50	5250 MHz	-	-
5470~5725 MHz U-NII-2C	114	5570 MHz	-	-

3.12 Table for Master Test Modes

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Note	Channel	Data Rate	Antenna
UNII Detection Bandwidth Measurement and Statistical Performance Check (Radiated)	11ax(20MHz)	U-NII-2C /BPSK	100	Nss1MCS0	1+2+3+4
	11ax(40MHz)		102	Nss1MCS0	1+2+3+4
	11ax(80MHz)		106	Nss1MCS0	1+2+3+4
	11ax(160MHz)		50	Nss1MCS0	1+2+3+4
Channel Availability Check Time (Radiated)	11ax(20MHz)	U-NII-2C /BPSK	100	Nss1MCS0	1+2+3+4
	11ax(40MHz)		102	Nss1MCS0	1+2+3+4
	11ax(80MHz)		106	Nss1MCS0	1+2+3+4
	11ax(160MHz)		50	Nss1MCS0	1+2+3+4
Channel Move Time and Channel Closing Transmission Time (Radiated)	11ax(20MHz)	U-NII-2C /BPSK	100	Nss1MCS0	1+2+3+4
	11ax(40MHz)		102	Nss1MCS0	1+2+3+4
	11ax(80MHz)		106	Nss1MCS0	1+2+3+4
	11ax(160MHz)		50	Nss1MCS0	1+2+3+4
Non-Occupancy Period (Radiated)	11ax(160MHz)	U-NII-2C /BPSK	114	Nss1MCS0	1+2+3+4

Note:
1. Test mode refer to “KDB905462 D02 UNII DFS Compliance Procedures New Rules v02”, Table 2 04/08/2016

3.13 List of measurements for Master mode

Nominal Channel Bandwidth 802.11ax 20MHz/ch100

Temperature	25℃	**Humidity**	60%
Test Engineer	Chilin Lee	**Configurations**	**802.11ax 20MHz/ch100**

■	**EIRP ≥ 200mW, DFS Detection Threshold =-64dBm**
□	**EIRP < 200mW and PSD < 10 dBm/MHz, DFS Detection Threshold =-62dBm**
□	**EIRP < 200mW, that do not meet the PSD requirement, DFS Detection Threshold =-64dBm**

Parameter	**Test Value**	**Test Result**
U-NII Detection Bandwidth (Minimum 100% of the U-NII 99% transmission power bandwidth)	Type 0 Radar Detection >90%	Compiles
Statistical Performance Check (In-Service Monitoring)	30 time Type1~4 & 5 Radar Detection >80% Type 6 Radar Detection >70%	Compiles
Security features	country code, frequency range, modulation type, maximum output power can not be changed by unauthorized parties	

***Nomina*l Channel Bandwidth 802.11ax 40MHz/ch102**

Temperature	25℃	**Humidity**	55%
Test Engineer	Chilin Lee	**Configurations**	**802.11ax 40MHz/ch102**

■	**EIRP ≥ 200mW, DFS Detection Threshold =-64dBm**
□	**EIRP < 200mW and PSD < 10 dBm/MHz, DFS Detection Threshold =-62dBm**
□	**EIRP < 200mW, that do not meet the PSD requirement, DFS Detection Threshold =-64dBm**

Parameter	**Test Value**	**Test Result**
U-NII Detection Bandwidth (Minimum 100% of the U-NII 99% transmission power bandwidth)	Type 0 Radar Detection >90%	Compiles
Statistical Performance Check (In-Service Monitoring)	30 time Type1~4 & 5 Radar Detection >80% Type 6 Radar Detection >70%	Compiles
Security features	country code, frequency range, modulation type, maximum output power can not be changed by unauthorized parties	

Nominal Channel Bandwidth 802.11ax 80MHz/ch106

Temperature	25℃	**Humidity**	55%
Test Engineer	Chilin Lee	**Configurations**	**802.11ax 80MHz/ch106**

■	**EIRP ≥ 200mW, DFS Detection Threshold =-64dBm**
□	**EIRP < 200mW and PSD < 10 dBm/MHz, DFS Detection Threshold =-62dBm**
□	**EIRP < 200mW, that do not meet the PSD requirement, DFS Detection Threshold =-64dBm**

Parameter	Test Value	Test Result
U-NII Detection Bandwidth (Minimum 100% of the U-NII 99% transmission power bandwidth)	Type 0 Radar Detection >90%	Compiles
Statistical Performance Check (In-Service Monitoring)	30 time Type1+4 & 5 Radar Detection >80% Type 6 Radar Detection >70%	Compiles
Security features	country code, frequency range, modulation type, maximum output power can not be changed by unauthorized parties	

Nominal Channel Bandwidth 802.11ax160MHz/ch114

Temperature	*25℃*	***Humidity***	*55%*
Test Engineer	*Chilin Lee*	***Configurations***	**802.11ax 160MHz/ch114**

■	**EIRP ≥ 200mW, DFS Detection Threshold =-64dBm**
□	**EIRP < 200mW and PSD < 10 dBm/MHz, DFS Detection Threshold =-62dBm**
□	**EIRP < 200mW, that do not meet the PSD requirement, DFS Detection Threshold =-64dBm**

Parameter	Test Value	Test Result
U-NII Detection Bandwidth (Minimum 100% of the U-NII 99% transmission power bandwidth)	Type 0 Radar Detection >90%	Compiles
Statistical Performance Check (In-Service Monitoring)	30 time Type1+4 & 5 Radar Detection >80% Type 6 Radar Detection >70%	Compiles
Channel Move Time	Type 0 < 10s	Compiles
Channel Closing Transmission Time	Type 0 < 200ms	Compiles
Non-Occupancy Period	Type 0 ≧ 30 min	Compiles
Security features	country code, frequency range, modulation type, maximum output power can not be changed by unauthorized parties	

4 EUT Information

4.1 Operating Frequency Bands and Mode of EUT

Table 1: Operating Frequency Bands and Mode of EUT

Operational Mode	Operating Frequency Range	
	5250~5350MHz	5470~5725MHz
Master	✓	✓

4.2 EUT Software and Firmware Version

Table 2: The EUT Software/Firmware Version

No.	Product	Model No.	Software/Firmware Version
1	Gateway	FGA5330	19.4.0290-5249001-20200511135940

4.3 Description of Available Antennas to the EUT

Table 3: Antenna List

Frequency	Maximum Gain (dBi) for CDD mode							
	CDD mode (1 Stream 4 TX) for Power Gain				CDD mode (1 Stream 4 TX) for PSD Gain			
	20 MHz	40 MHz	80 MHz	160 MHz	20 MHz	40 MHz	80 MHz	160 MHz
5250MHz	-	-	-	3.04	-	-	-	6.16
5260MHz	3.04	-	-	-	5.87	-	-	-
5270MHz	-	2.60	-	-	-	6.33	-	-
5290MHz	-	-	2.81	-	-	-	5.98	-
5300MHz	2.69	-	-	-	6.18	-	-	-
5310MHz	-	2.30	-	-	-	6.01	-	-
5320MHz	2.56	-	-	-	5.75	-	-	-
5500MHz	2.38	-	-	-	6.08	-	-	-
5510MHz	-	2.78	-	-	-	6.32	-	-
5530MHz	-	-	2.97	-	-	-	6.59	-
5550MHz	-	2.75	-	-	-	6.00	-	-
5570MHz	-	-	-	3.45	-	-	-	5.70
5580MHz	3.13	-	-	-	6.58	-	-	-
5610MHz	-	-	2.92	-	-	-	5.47	-
5670MHz	-	3.09	-	-	-	5.67	-	-
5690MHz	-	-	3.72	-	-	-	6.63	-
5700MHz	3.17	-	-	-	5.86	-	-	-
5710MHz	-	3.23	-	-	-	5.96	-	-
5720MHz	3.18	-	-	-	5.85	-	-	-

Note:

1. Antenna Gain refer to “FGA5330_Antenna Test Report V1.18.pdf” files
2. Maximum Correlated Directional Gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi
3. Maximum Uncorrelated Directional Gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \ldots + 10^{GN/10}) / N_{ANT}]$ dBi

Frequency	Maximum Gain (dBi) for TxBF mode			
	TxBF mode (1 Stream 4 TX) for Power Gain & PSD Gain			
	20 MHz	40 MHz	80 MHz	160 MHz
5250MHz	-	-	-	6.16
5260MHz	5.87	-	-	-
5270MHz	-	6.33	-	-
5290MHz	-	-	5.98	-
5300MHz	6.18	-	-	-
5310MHz	-	6.01	-	-
5320MHz	5.75	-	-	-
5500MHz	6.08	-	-	-
5510MHz	-	6.32	-	-
5530MHz	-	-	6.59	-
5550MHz	-	6.00	-	-
5570MHz	-	-	-	5.70
5580MHz	6.58	-	-	-
5610MHz	-	-	5.47	-
5670MHz	-	5.67	-	-
5690MHz	-	-	6.63	-
5700MHz	5.86	-	-	-
5710MHz	-	5.96	-	-
5720MHz	5.85	-	-	-

Note:

1. Antenna Gain refer to “FGA5330_Antenna Test Report V1.18.pdf” files
2. Maximum Correlated Directional Gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi
3. Maximum Uncorrelated Directional Gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \ldots + 10^{GN/10}) / N_{ANT}]$ dBi

Frequency	Maximum Gain (dBi) for TXBF mode			
	TXBF mode (2 Stream 4 TX) Power Gain & PSD Gain			
	20 MHz	40 MHz	80 MHz	160 MHz
5250MHz	-	-	-	4.64
5260MHz	4.47	-	-	-
5270MHz	-	4.86	-	-
5290MHz	-	-	4.55	-
5300MHz	4.61	-	-	-
5310MHz	-	4.48	-	-
5320MHz	4.25	-	-	-
5500MHz	4.28	-	-	-
5510MHz	-	4.56	-	-
5530MHz	-	-	4.87	-
5550MHz	-	4.58	-	-
5570MHz	-	-	-	4.27
5580MHz	4.66	-	-	-
5610MHz	-	-	3.87	-
5670MHz	-	4.16	-	-
5690MHz	-	-	5.02	-
5700MHz	4.43	-	-	-
5710MHz	-	4.20	-	-
5720MHz	4.32	-	-	-

Note:

1. Antenna Gain refer to “FGA5330_Antenna Test Report V1.18.pdf” files
2. Maximum Correlated Directional Gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi
3. Maximum Uncorrelated Directional Gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \ldots + 10^{GN/10}) / N_{ANT}]$ dBi

Frequency	Maximum Gain (dBi) for TXBF mode			
	TXBF mode (3 Stream 4 TX) Power Gain & PSD Gain			
	20 MHz	40 MHz	80 MHz	160 MHz
5250MHz	-	-	-	2.40
5260MHz	2.25	-	-	-
5270MHz	-	2.66	-	-
5290MHz	-	-	2.32	-
5300MHz	2.31	-	-	-
5310MHz	-	2.17	-	-
5320MHz	1.94	-	-	-
5500MHz	2.19	-	-	-
5510MHz	-	2.58	-	-
5530MHz	-	-	2.88	-
5550MHz	-	2.56	-	-
5570MHz	-	-	-	2.25
5580MHz	2.46	-	-	-
5610MHz	-	-	1.99	-
5670MHz	-	2.26	-	-
5690MHz	-	-	3.05	-
5700MHz	2.57	-	-	-
5710MHz	-	2.31	-	-
5720MHz	2.48	-	-	-

Note:

1. Antenna Gain refer to “FGA5330_Antenna Test Report V1.18.pdf” files
2. Maximum Correlated Directional Gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi
3. Maximum Uncorrelated Directional Gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \ldots + 10^{GN/10}) / N_{ANT}]$ dBi

4.4 EUT Maximum and Minimum Conducted Power

Table 4: The Measured Conducted Output Power

CDD Mode

Frequency Band (MHz)	MAX. Power		MIN. Power	
	Output Power (mW)	Output Power (dBm)	Output Power (mW)	Output Power (dBm)
5250~5350	247.8	23.94	62.23	17.94
5470~5725	247.149	23.93	62.087	17.93

Beamforming Mode

Frequency Band (MHz)	MAX. Power		MIN. Power	
	Output Power (mW)	Output Power (dBm)	Output Power (mW)	Output Power (dBm)
5250~5350	246.473	23.92	61.944	17.92
5470~5725	241.599	23.83	60.674	17.83

4.5 EUT Maximum and Minimum EIRP Power

Table 5: The EIRP Output Power List

CDD Mode

Frequency Band (MHz)	MAX. EIRP Power		MIN. EIRP Power	
	Output Power (mW)	Output Power (dBm)	Output Power (mW)	Output Power (dBm)
5250~5350	493.170	26.93	123.88	20.93
5470~5725	533.335	27.27	133.968	21.27

Beamforming Mode

Frequency Band (MHz)	MAX. EIRP Power		MIN. EIRP Power	
	Output Power (mW)	Output Power (dBm)	Output Power (mW)	Output Power (dBm)
5250~5350	979.490	29.91	246.037	23.91
5470~5725	979.490	29.91	246.037	23.91

4.6 Transmit Power Control (TPC)

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

Applicable	EIRP	FCC 15.407 (h)(1)
√	>500mW	The TPC mechanism is required for system with an EIRP of above 500mW
	<500mW	The TPC mechanism is not required for system with an EIRP of less 500mW

The UUT can adjust a transmitter's output power based on the signal level present at the receiver.TPC is auto controlled by software.

4.7 Statement of Manufacturer

Manufacturer statement confirming that information regarding the parameters of the detected Radar Waveforms is not available to the end user.

5 U-NII DFS Rule Requirements

5.1 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 6 and 7 for the applicability of DFS requirements for each of the operational modes.

Table 6: Applicability of DFS Requirements Prior to Use a Channel

Requirement	Operational Mode		
	Master	Client without radar detection	Client with radar detection
Non-Occupancy Period	✓	✓ note	✓
DFS Detection Threshold	✓	Not required	✓
Channel Availability Check Time	✓	Not required	Not required
U-NII Detection Bandwidth	✓	Not required	✓
Note: Per KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02 section (b)(5/6), If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear. An analyzer plot that contains a single 30-minute sweep on the original channel.			

Table 7: Applicability of DFS Requirements during Normal Operation

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

Additional requirements for devices with multiple bandwidth modes	Master or Client with radar detection	Client without radar detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other 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 20 MHz channels and the channel center frequency.		

5.2 Test Limits and Radar Signal Parameters

Detection Threshold Values

Table 8: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
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: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 9: 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 U-NII 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 10: 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 15 unique PRI values randomly selected within the range of 518~3066 μ sec with a minimum of 1 μ sec,excluding PRI values selected in Test A	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu sec}}\right)\right\}$	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

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

Table 11: 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

Three subsets of trials will be performed with a minimum of ten trials per subset. The subset of trials differ in where the Long Pulse Type 5 Signal is tuned in frequency.

a) the Channel center frequency
b) tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the low edge of the UUT Occupied Bandwidth
c) tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the high edge of the UUT Occupied Bandwidth

It include 10 trails for every subset, the formula as below,

For subset case 1: the center frequency of the signal generator will remain fixed at the center of the UUT Channel.

For subset case 2: to retain 90% frequency overlap between the radar signal and the UUT Occupied Bandwidth, the center frequency of the signal generator will vary for each of the ten trials in subset case 2. The center frequency of the signal generator for each trial is calculated by:

$FL+(0.4*Chirp\ Width\ [in\ MHz])$

For subset case 3: to retain 90% frequency overlap between the radar signal and the UUT Occupied Bandwidth, the center frequency of the signal generator will vary for each of the ten trials in subset case 3. The center frequency of the signal generator for each trial is calculated by:

$FH-(0.4*Chirp\ Width\ [in\ MHz])$

Table 12: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

6 Test & Support Equipment List

6.1 Test Instruments

Table 13: Test Instruments List

DESCRIPTION & MANUFAXTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	ESR	102026	Apr. 22, 2020	Apr. 21, 2021
Vector Signal Generator Agilent	N5182B	MY53052700	Jul. 17, 2019	Jul. 16, 2020
Horn_Antenna FT-RF	HA-07M18G-NF	0000220091110	Nov. 24, 2019	Nov. 23, 2020
DFS Control Box	BV-DFS-CB	002	Dec. 02, 2019	Dec. 01, 2020

6.2 Description of Support Units

Table 14: Support Unit Information

No.	Product	Brand	Model No.	FCC ID	Spec
1	Wireless-AX6000 Dual Band Gigabit Router	ASUS	RT-AX88U	MSQ-RTAXHP00	

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

Table 15: Software/Firmware Information

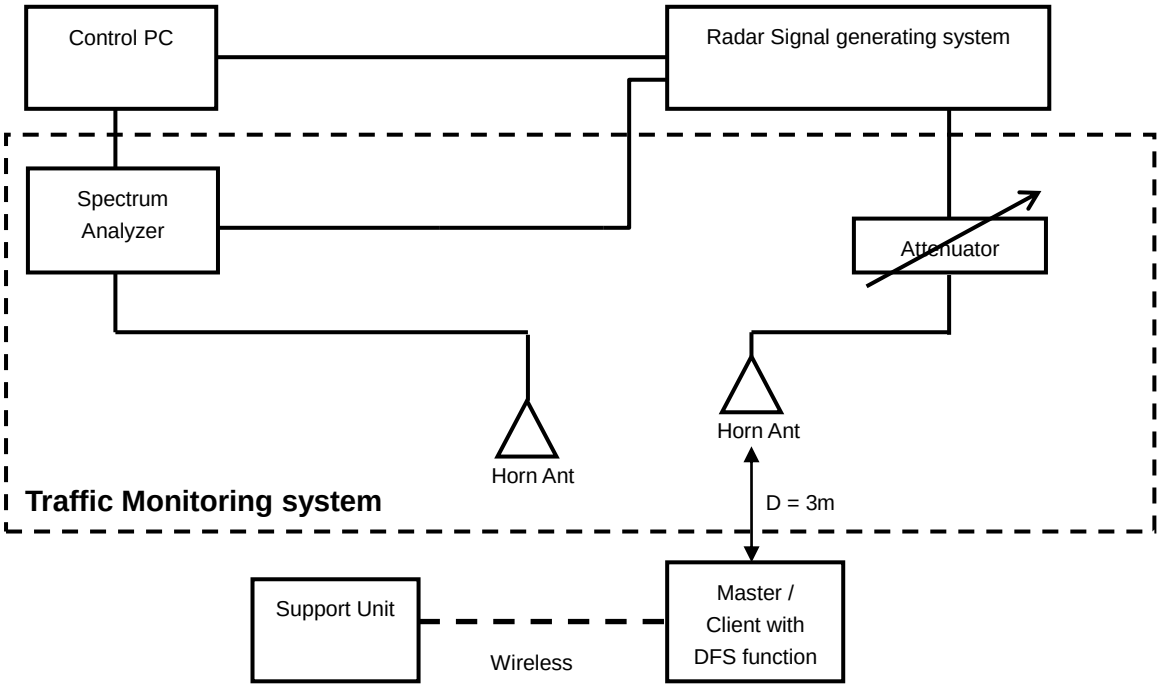
No.	Product	Model No.	Software/Firmware Version
1	Wireless-AX6000 Dual Band Gigabit Router	RT-AX88U	3.0.0.4.384

7 Test Procedure

7.1 DFS Measurement System

A complete DFS Measurement System consists of two subsystems: (1) the Radar Signal Generating system and (2) the Traffic Monitoring system. The control PC is necessary for generating the Radar waveforms in Table 10, 11 and 12. The traffic monitoring subsystem is specified to the type of unit under test (UUT).

Radiated Setup Configuration of DFS Measurement System



Channel Loading

System testing will be performed with channel-loading using means appropriate to the data types that are used by the unlicensed device. The following requirements apply:

a)	The data file must be of a type that is typical for the device (i.e., MPEG-2, MPEG-4, WAV, MP3, MP4, AVI, etc.) and must generally be transmitting in a streaming mode.	
b)	Software to ping the client is permitted to simulate data transfer but must have random ping intervals.	
c)	Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater.	✓
d)	Unicast or Multicast protocols are preferable but other protocols may be used. The appropriate protocol used must be described in the test procedures.	

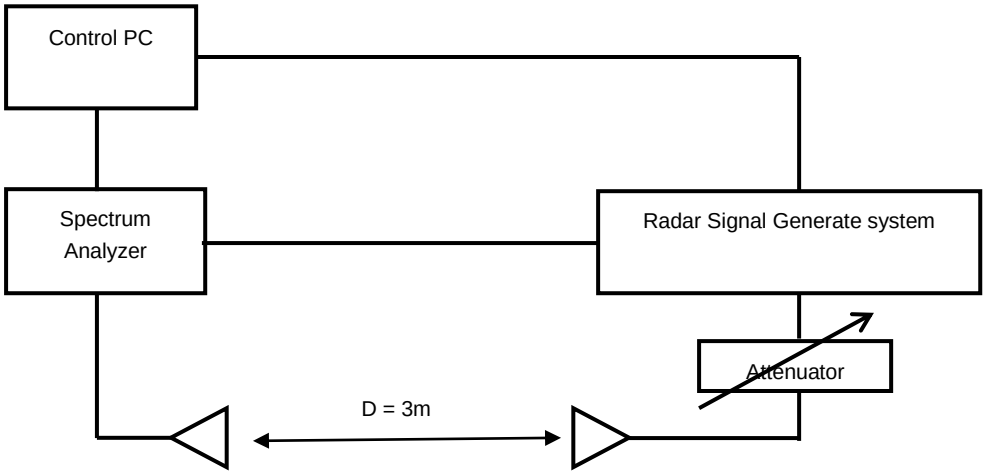
7.2 Calibration of DFS Detection Threshold Level

The measured channel is chosen from the operating channels of the UUT within the 5250-5350MHz or 5470-5725MHz and using the all bandwidth mode available for the link. The radar signal was the same as transmitted channels, and injected into the antenna of AP (master) or Client Device with Radar Detection, measured the channel closing transmission time and channel move time.

Radiated setup configuration of Calibration of DFS Detection Threshold Level

The radar signal generate system is gererating waveform pattern of radar types. The amplitude of the radar signal generator system is adjusted to yield a level of–64 dBm as measured on the spectrum analyzer.

The interference detection threshold level is lower than – 64dBm hence it provides margin to the limit.



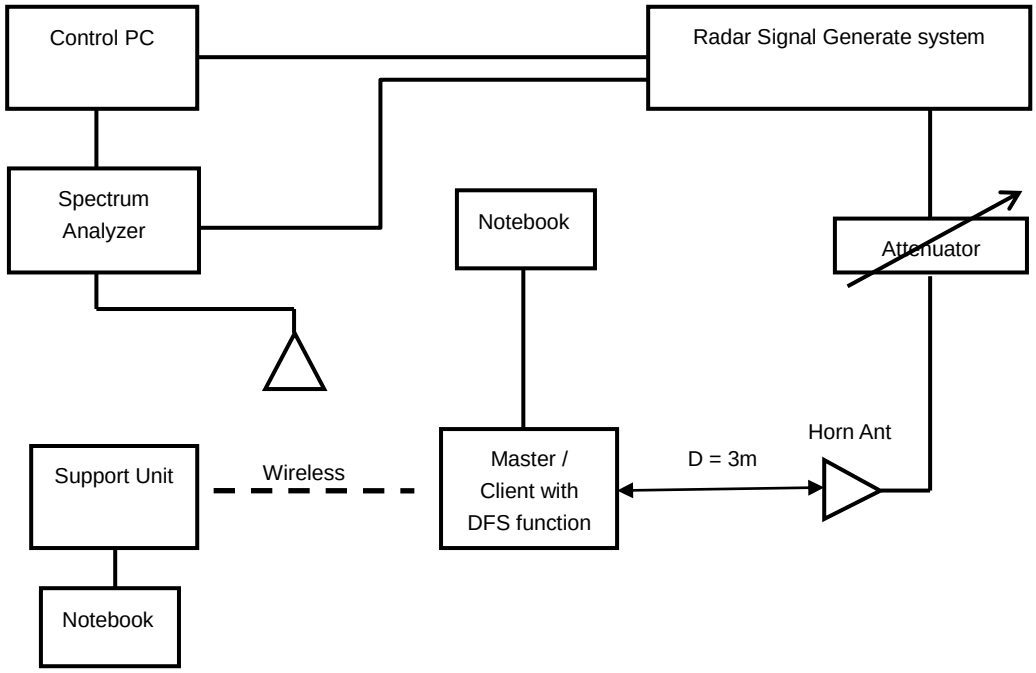
7.3 Deviation from Test Standard

No deviation.

7.4 Radiated Test Setup Configuration

Master mode

The EUT is a U-NII Device operating in Master mode. The radar test signals are injected into the Master Device.

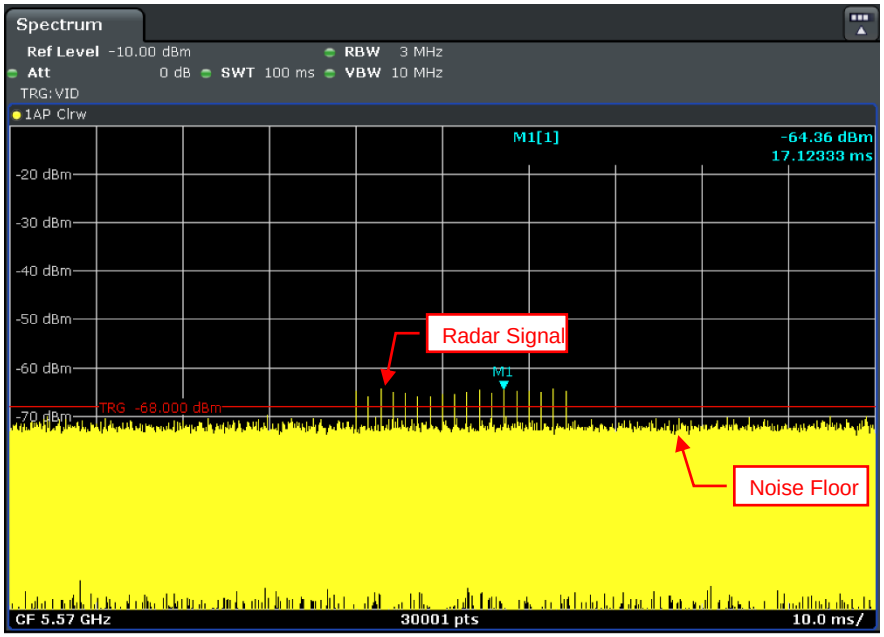


Note: The UUT main beam of the antenna is directly toward the radar emitter during testing.

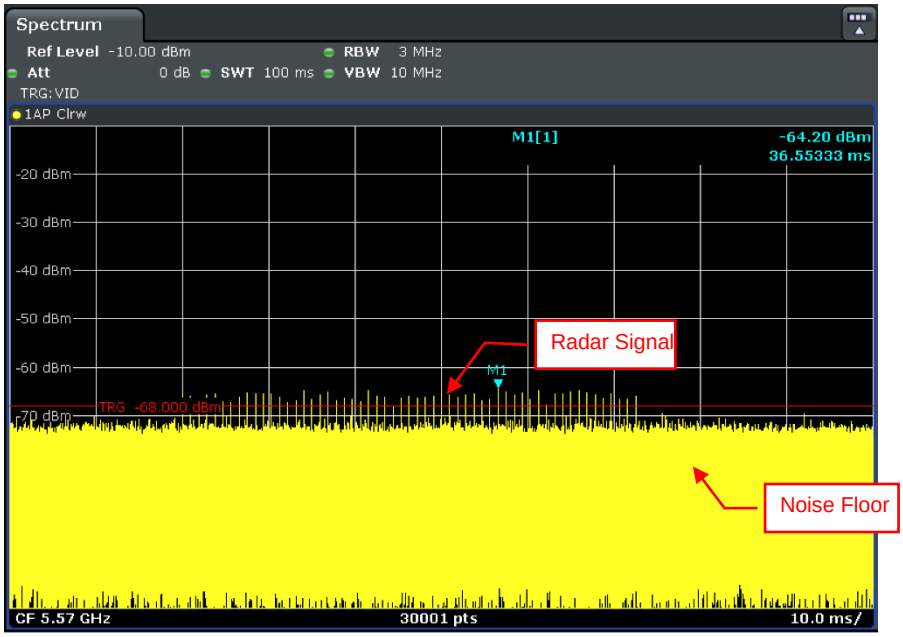
7.5 DFS Detection Threshold

The radar test waveforms are injected into the Master.
This test was investigated for different bandwidth (20MHz、40MHz、80MHz、160MHz).
The following plots was done on 160MHz as a representative

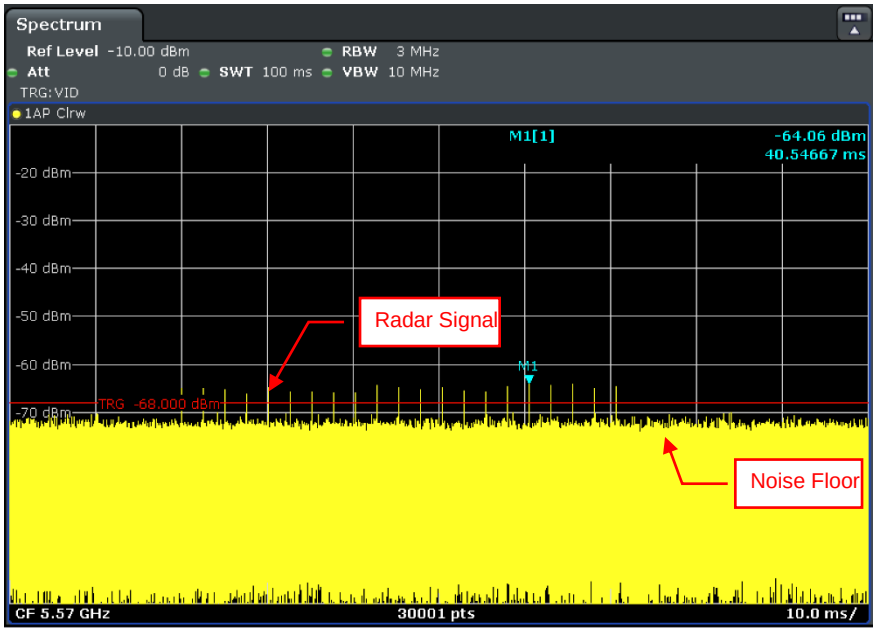
For detection threshold level of -64dBm, the tested level is lower than required level for 1dB, hence it provides margin to the limit.



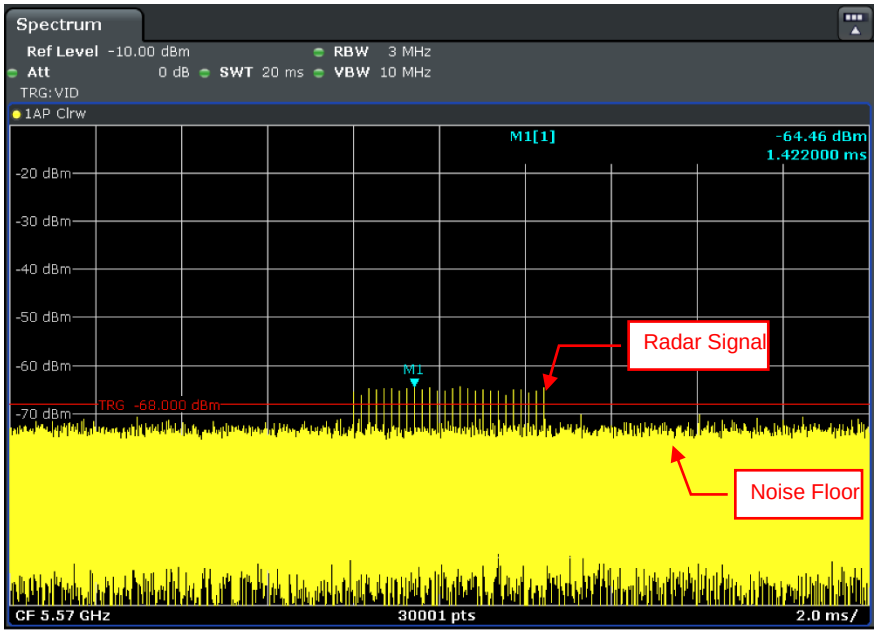
Radar Signal 0



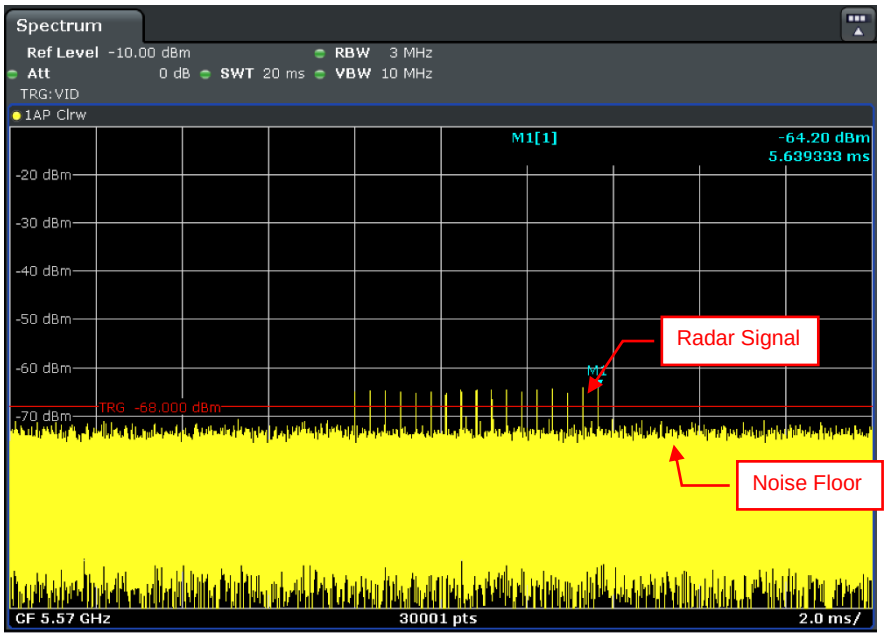
Radar Signal 1 (Test A)



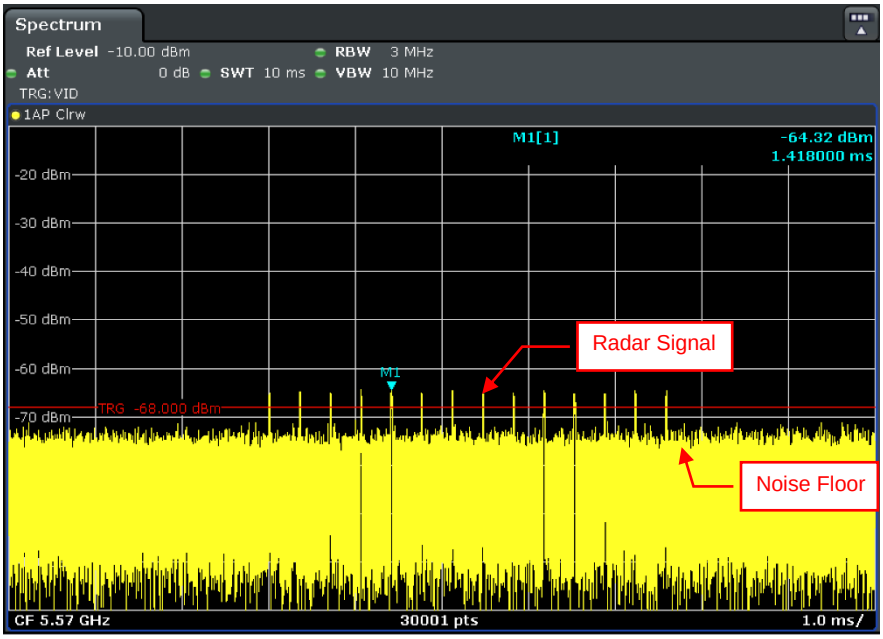
Radar Signal 1 (Test B)



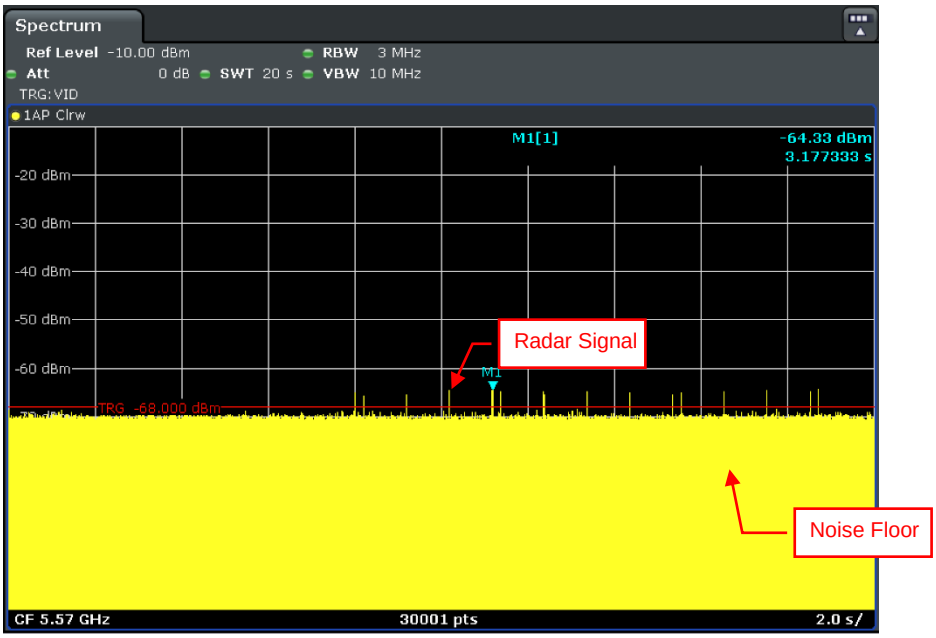
Radar Signal 2



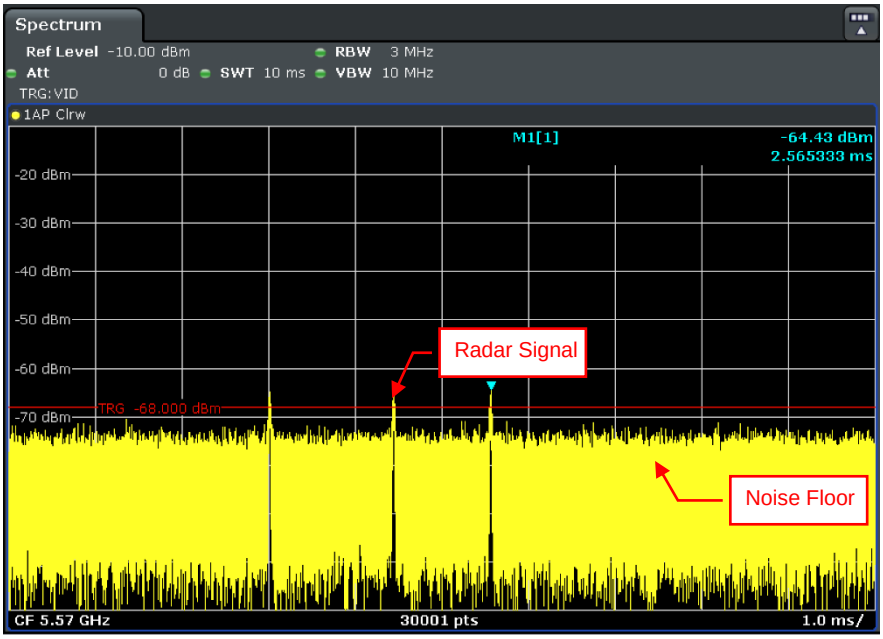
Radar Signal 3



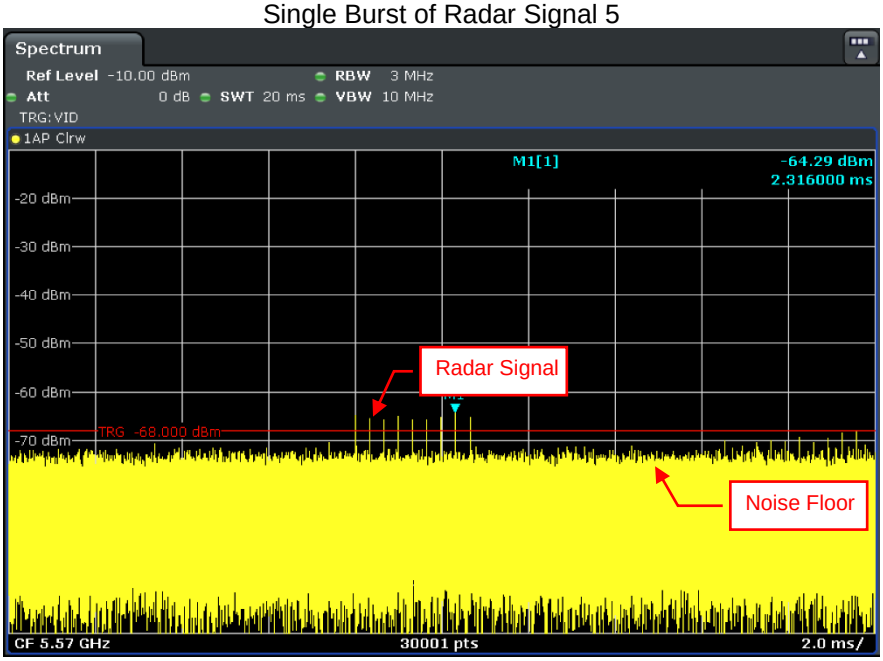
Single Burst of Radar Signal 4



Radar Signal 5



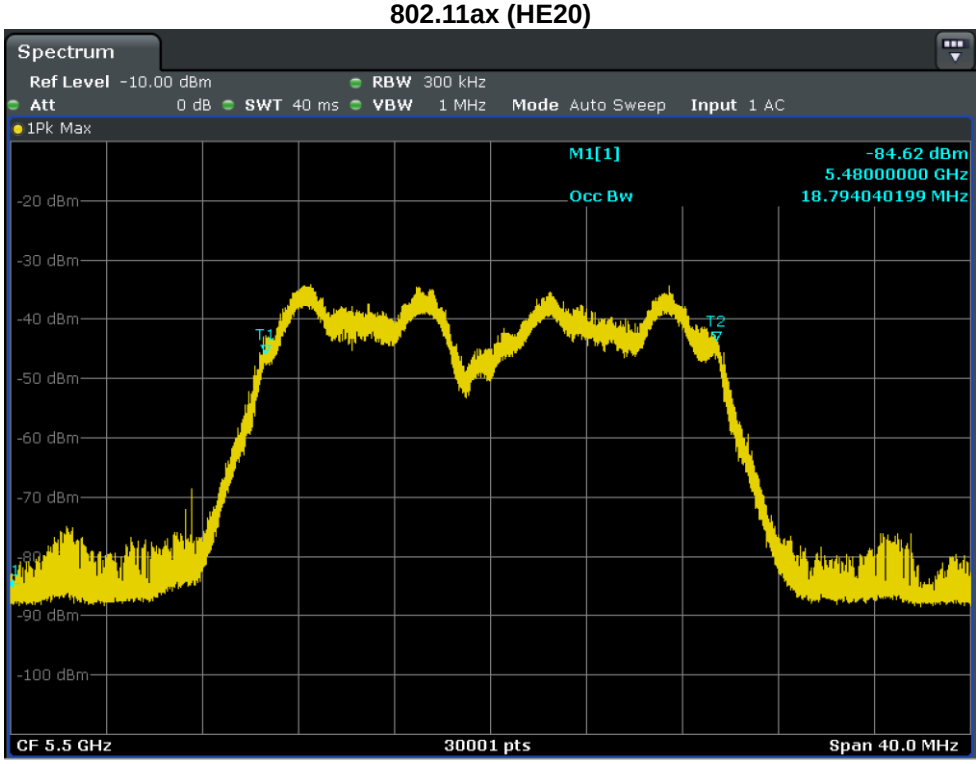
Single Burst of Radar Signal 5



Radar Signal 6

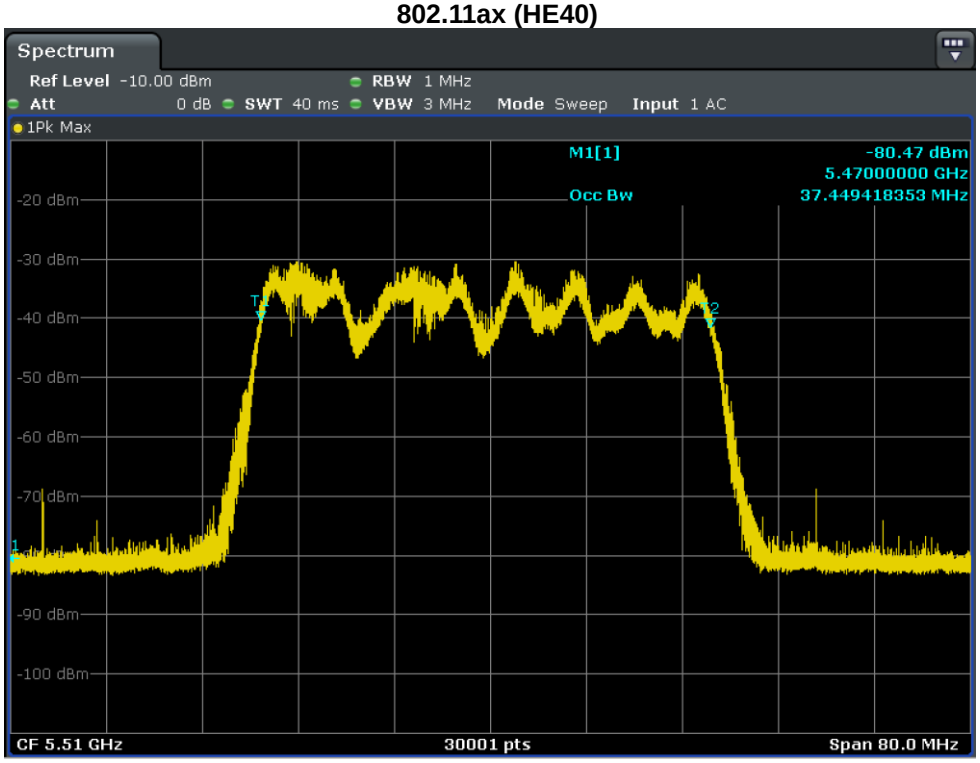
7.6 **UNII Detection Bandwidth Measurement**

802.11ax (HE20)



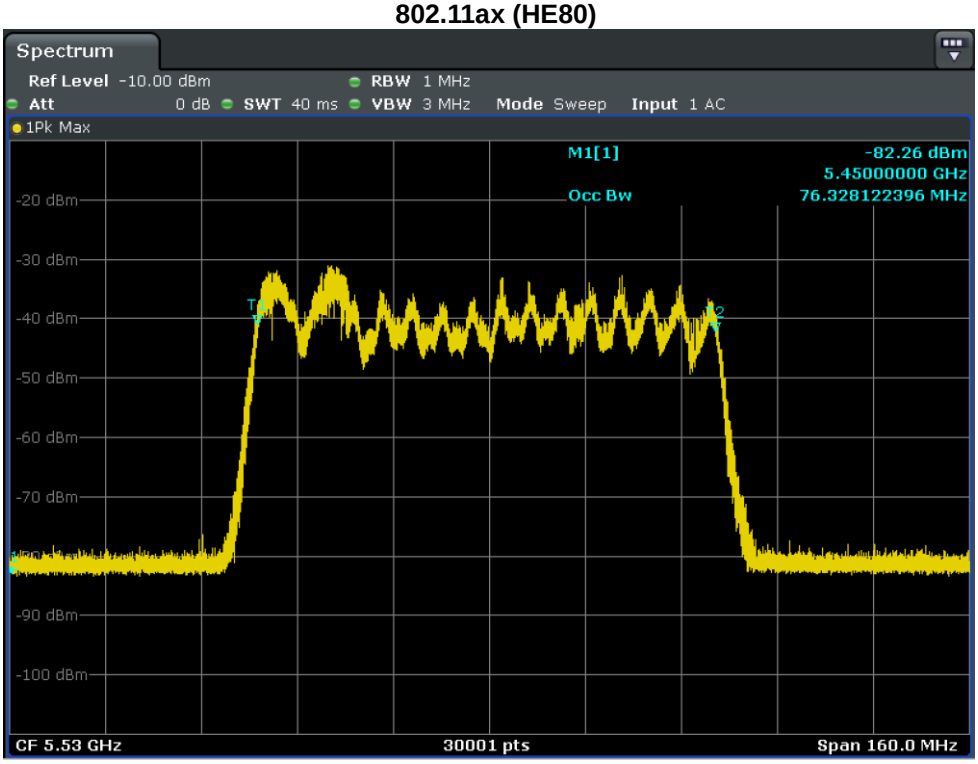
U-NII 99% Channel bandwidth

802.11ax (HE40)



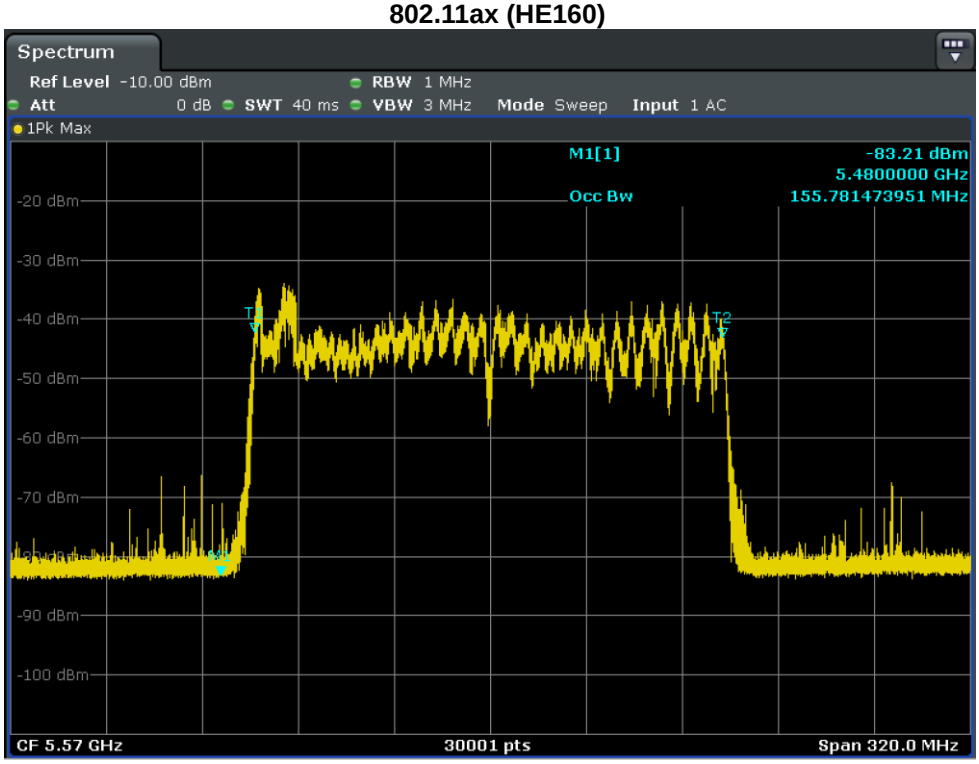
U-NII 99% Channel bandwidth

802.11ax (HE80)



U-NII 99% Channel bandwidth

802.11ax (HE160)



7.6.1 Limit

Minimum 100% of the UNII 99% transmission power bandwidth. During the *U-NII Detection Bandwidth* detection test, radar type 0 is used and for each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

7.6.2 Test Procedures

1. Adjust the equipment to produce a single Burst of the Short Pulse Radar Type 0 at the center frequency of the UUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Radiated Test Setup above section 7.4.
3. The UUT is set up as a stand-alone device (no associated Client and no traffic). Frame based systems will be set to a talk/listen ratio of 0%/100% during this test.
4. Generate single radar Burst, and note the response of the UUT. Repeat for a minimum of 10 trials. The UUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the UUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = FH – FL
8. The U-NII Detection Bandwidth must be at least 100% of the UUT transmitter 99% power, otherwise, the UUT does not comply with DFS requirements.

7.6.3 Test Deviation

There is no deviation with the original standard.

7.6.4 Test Result for UNII Detection Bandwidth

U-NII 99% Channel bandwidth

Detection Bandwidth Test - **802.11ax (HE20)**

Radar Type 0
EUT Frequency: 5500MHz
EUT 99% Power bandwidth: 18.794MHz
Detection bandwidth limit (100% of EUT 99% Power bandwidth): 18.794MHz
Detection bandwidth (5509.5(FH) – 5490.5(FL)) : 19MHz
Test Result : PASS

Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490.5(FL)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5491	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5492	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5493	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5494	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5496	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90
5497	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5498	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5499	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5501	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5502	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5503	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5504	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5506	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5507	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5508	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5509	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5509.5(FH)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

Detection Bandwidth Test - **802.11ax (HE40)**

Radar Type 0
EUT Frequency: 5510MHz
EUT 99% Power bandwidth: 37.449MHz
Detection bandwidth limit (100% of EUT 99% Power bandwidth): 37.449MHz
Detection bandwidth (5529(FH) – 5491(FL)) : 38MHz
Test Result : PASS

Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5491(FL)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5492	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5493	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5494	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5496	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5497	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5498	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5499	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5501	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5502	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90
5503	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5504	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5506	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5507	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5508	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5509	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5511	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5512	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5513	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5514	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5515	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5516	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5517	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5518	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5519	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5521	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5522	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5523	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5524	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5525	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5526	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5527	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5528	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5529(FH)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90

Detection Bandwidth Test - **802.11ax (HE80)**

Radar Type 0
EUT Frequency: 5530MHz
EUT 99% Power bandwidth: 76.328MHz
Detection bandwidth limit (100% of EUT 99% Power bandwidth): 76.328MHz
Detection bandwidth (5569(FH) – 5491(FL)) : 78MHz
Test Result : PASS

Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5491(FL)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5492	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5493	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5494	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5496	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5497	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5498	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5499	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5501	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5502	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5503	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5504	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5506	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5507	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5508	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5509	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5511	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5512	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5513	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5514	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5515	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5516	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5517	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5518	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5519	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5521	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5522	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5523	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5524	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5525	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5526	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5527	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5528	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5529	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5530	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5531	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5532	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5533	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5534	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5535	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

5536	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5537	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5538	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5539	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5540	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5541	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5542	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5543	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5544	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5545	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5546	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5547	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5548	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5549	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5550	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5551	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5552	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5553	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5554	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5555	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5556	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5557	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5558	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5559	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5560	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5561	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5562	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5563	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5564	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5565	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5566	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5567	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5568	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5569(FH)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

Detection Bandwidth Test - **802.11ax (HE160)**

Radar Type 0
EUT Frequency: 5570MHz
EUT 99% Power bandwidth: 155.781MHz
Detection bandwidth limit (100% of EUT 99% Power bandwidth): 155.781MHz
Detection bandwidth (5648(FH) – 5492(FL)) : 156MHz
Test Result : PASS

Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5492(FL)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5493	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5494	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5496	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5497	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5498	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5499	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5501	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5502	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5503	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5504	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5506	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5507	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5508	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5509	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5511	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5512	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90
5513	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5514	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5515	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5516	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5517	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5518	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5519	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5521	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5522	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5523	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5524	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5525	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5526	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5527	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5528	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5529	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5530	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5531	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5532	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5533	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5534	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5535	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5536	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

5537	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5538	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5539	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5540	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5541	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5542	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5543	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5544	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5545	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5546	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5547	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5548	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5549	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5550	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5551	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5552	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5553	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5554	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5555	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5556	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5557	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5558	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5559	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5560	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5561	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5562	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5563	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5564	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5565	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5566	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5567	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5568	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5569	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	90
5570	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5571	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5572	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5573	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5574	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5575	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5576	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90
5577	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5578	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5579	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5580	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5581	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5582	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5583	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5584	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5585	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5586	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5587	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5588	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5589	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5590	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5591	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

5592	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5593	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5594	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5595	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5596	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5597	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5598	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5599	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5600	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5601	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5602	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5603	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5604	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5605	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5606	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5607	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5608	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5609	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5610	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5611	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5612	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5613	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5614	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5615	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5616	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5617	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5618	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5619	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5620	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5621	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5622	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5623	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5624	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5625	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5626	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5627	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5628	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5629	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5630	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5631	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5632	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5633	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5634	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5635	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5636	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5637	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5638	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5639	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	90
5640	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5641	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5642	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5643	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5644	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5645	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5646	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

5647	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5648(FH)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

7.7 Initial Channel Availability Check Time Measurement

7.7.1 Channel Availability Check Limit

The UUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

7.7.2 Initial Channel Availability Check Time

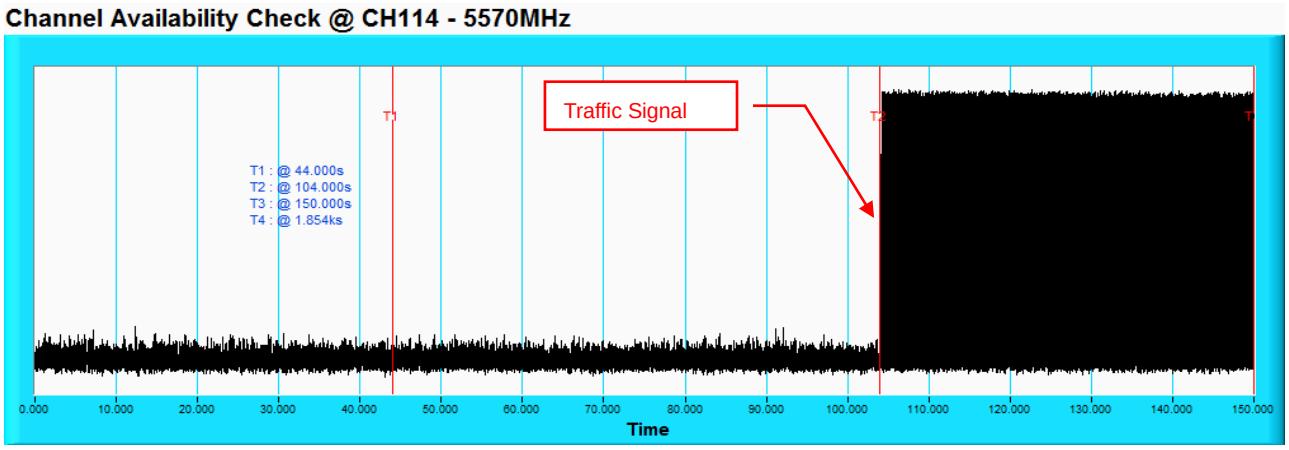
7.7.3 Test Procedures

1. Set configuration as section 7.4.
2. Power on the UUT and measure T2 from spectrum. T2 is end CAC timing and start to link on DFS channel. Use spectrum analyzer to monitor T1 & T2
3. We inject radar at (T2-T1) sec to insure that CAC time is not less than 60 sec.
4. We inject radar at (T2-T1) sec to insure that CAC time is less than 61 sec.

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

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

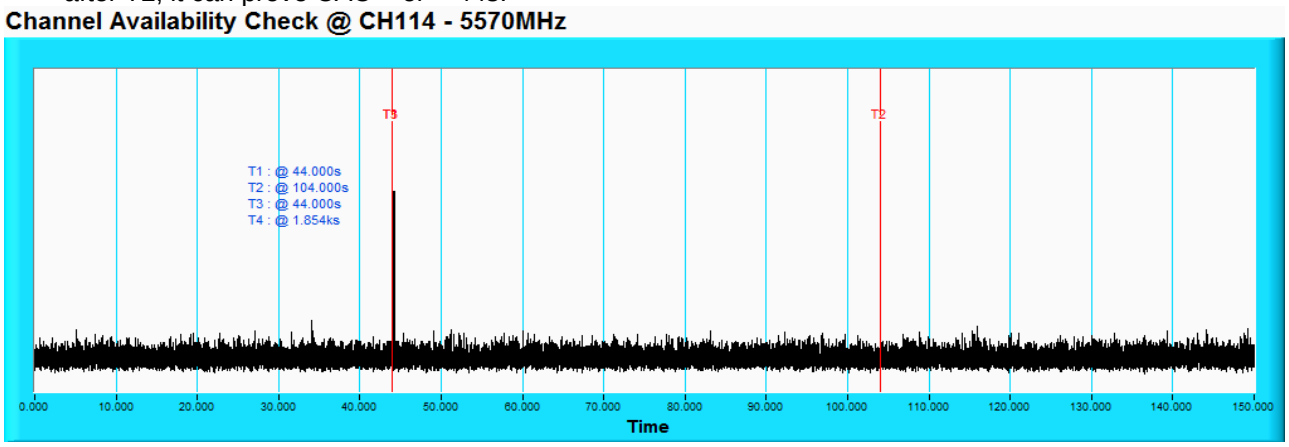
Initial Channel Availability Check Time



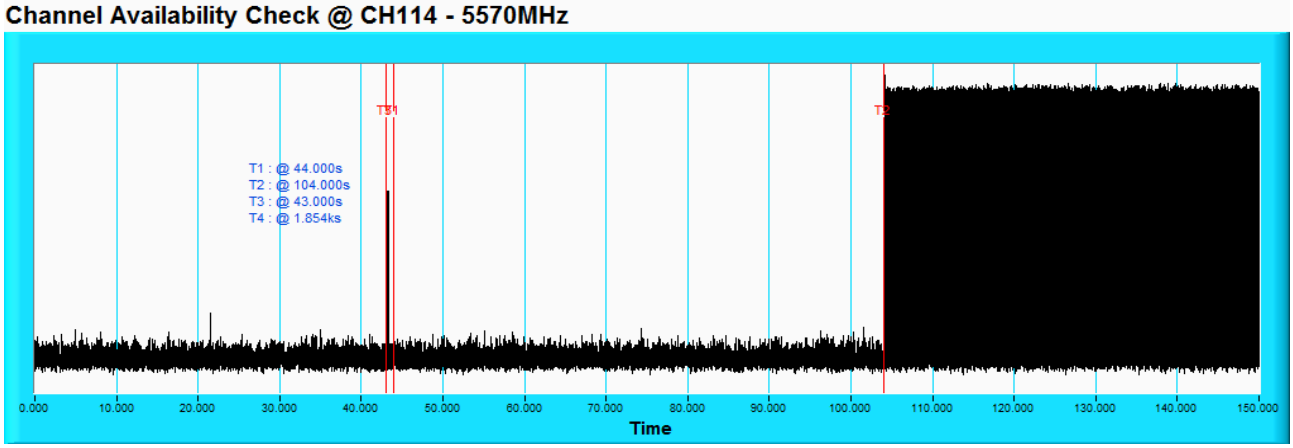
NOTE: T1 denotes the end of power-up time period is 44th second. T2 denotes the end of Channel Availability Check time is 104th second. Channel Availability Check time is equal to (T2 – T1) 60 seconds.

Illustration for confirming CAC duration:
802.11ax 160MHz 5570MHz

Step 1: We will inject radar at T2-60s to see if there is any transmission after T2, if it will stop transmission after T2, it can prove CAC = or > 44s.



Step 2: We will inject radar at T2-61s to see if there is any transmission after T2, if it will resume transmission after T2, it can prove CAC < 43s.

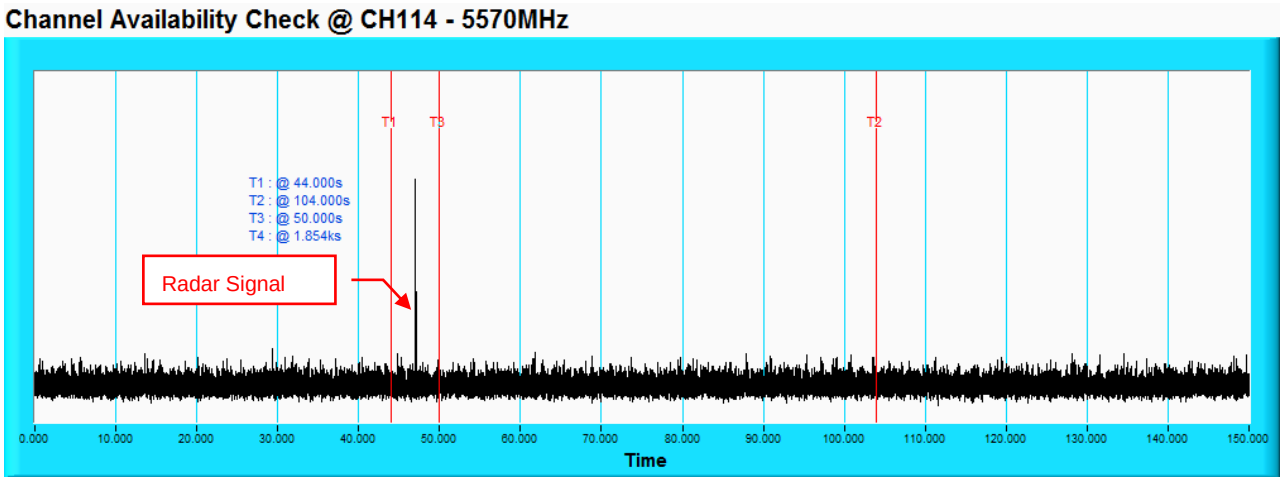


7.7.4 Beginning and End of the Channel Availability Check Time

7.7.5 Test Procedures

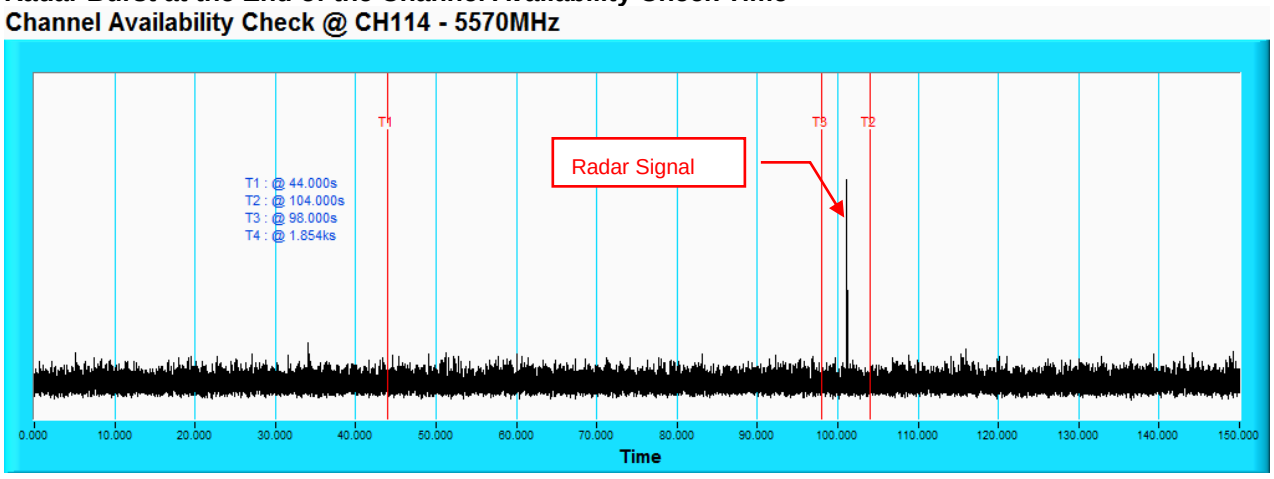
1. Set configuration as section 7.2 and do DFS calibration, and then adjust attenuator to make sure that the threshold value of the reference test signal defined in Table 8 is (-64dBm) at the UUT's antenna port.
2. Set configuration as section 7.4.
3. A single Burst of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at T1(for beginning).
4. A single Burst of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at T1 + 54 seconds. (for end).
5. Verify that during the 200 second measurement window no UUT transmissions occurred on Chr. The Channel Availability Check results will be recorded.

Radar Burst at the Beginning of the Channel Availability Check Time



NOTE: T1 denotes the end of power up time period is 44th second. T3 denotes 48.3th second and the radar burst was commenced within a 6 second window starting from the end of power-up sequence. T2 denotes the 104th second.

Radar Burst at the End of the Channel Availability Check Time



NOTE: T1 denotes the end of power up time period is 44th second.T3 denotes 96.3th second and the radar burst was commenced within 54th second to 60th second window starting from the end of power-up sequence. T2 denotes the 104th second.

7.8 Channel Closing Transmission and Channel Move Time

The UUT has In-Service Monitoring function to continuously monitor the radar signals, If radar is detected, must leave the channel.

7.8.1 Closing Transmission and Channel Move Time Limit

1. The Channel Move Time to cease all transmissions on the current Channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec.
2. The total duration of Channel Closing Transmission Time is 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period consisting of data signals and the aggregate of control signals, by a U-NII device during the Channel Move Time.

7.8.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

7.8.3 Test Setup

Refer a clause 7.4 in this test report.

7.8.4 Test Procedures

1. Set configuration as section 7.2 and do DFS calibration, and then adjust attenuator to make sure that the threshold value of the reference test signal is -64dBm at the UUT's antenna port and traffic signal is lower than radar burst signal.
2. Set configuration as section 7.4.
3. Use Lan Test software to reach duty cycle 17 % traffic from Slave to UUT
4. The frequency of a radar is as same as transmiting frequency of UUT.
5. The Channel Closing Transmission Time and the Channel Move Time are illustrated in figure 17. T1 denotes the end of the radar burst
6. The transmissions of the UUT following instant T1 shall be observed for a period greater than 10 s. The aggregate duration (*Channel Closing Transmission Time)* of all transmissions from the UUT on Chr during the *Channel Move Time* shall be compared to the limit (200ms).
   NOTE: The aggregate duration of all transmissions of the UUT does not include quiet periods in between transmissions of the UUT.
7. T2 denotes the instant when the UUT has ceased all transmissions on the channel Chr. The time difference between T1 and T2 shall be measured. This value *(Channel Move Time*) shall be noted and compared with the limit (10 s).
8. A timing trace or description of the observed timing and behaviour of the UUT shall be recorded in the report

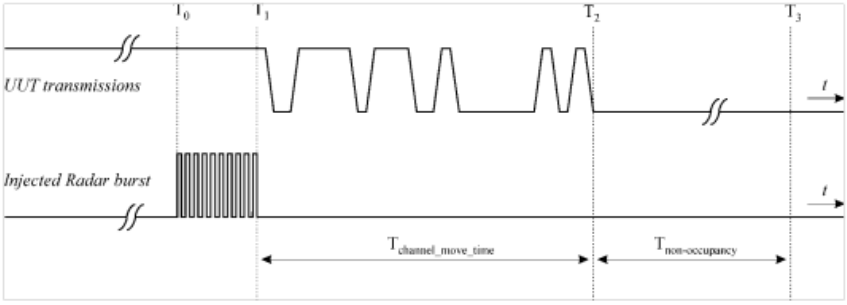
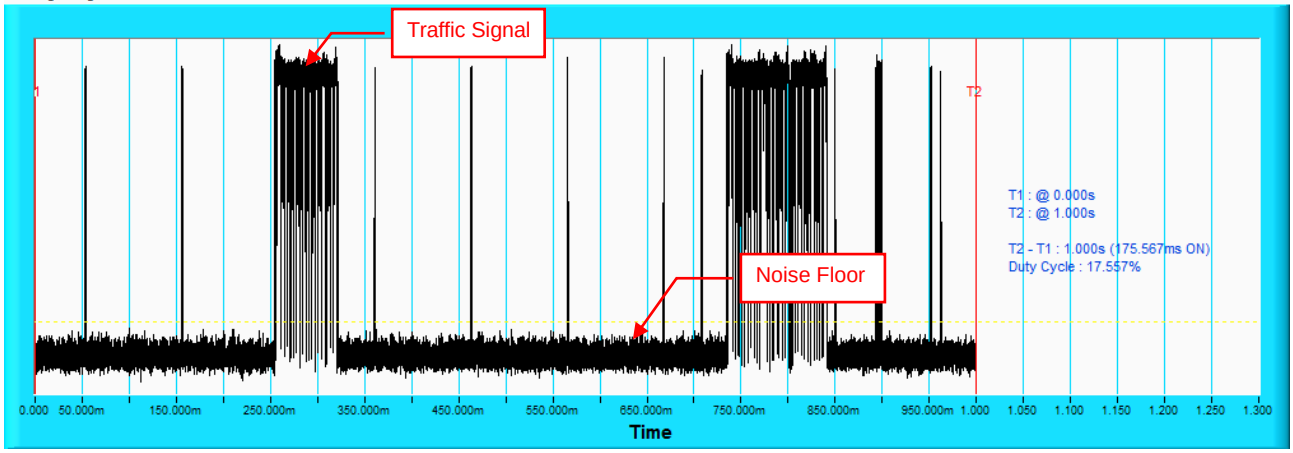


Figure 17: Example of Channel Closing Transmission Time & Channel Closing Time

Wireless Traffic Loading

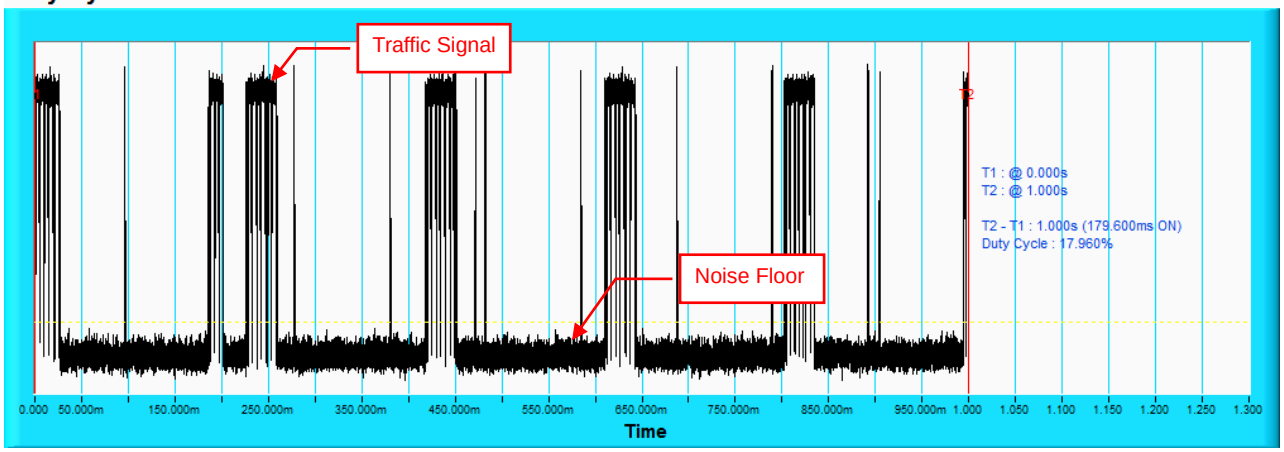
802.11ax (HE20)

Duty Cycle



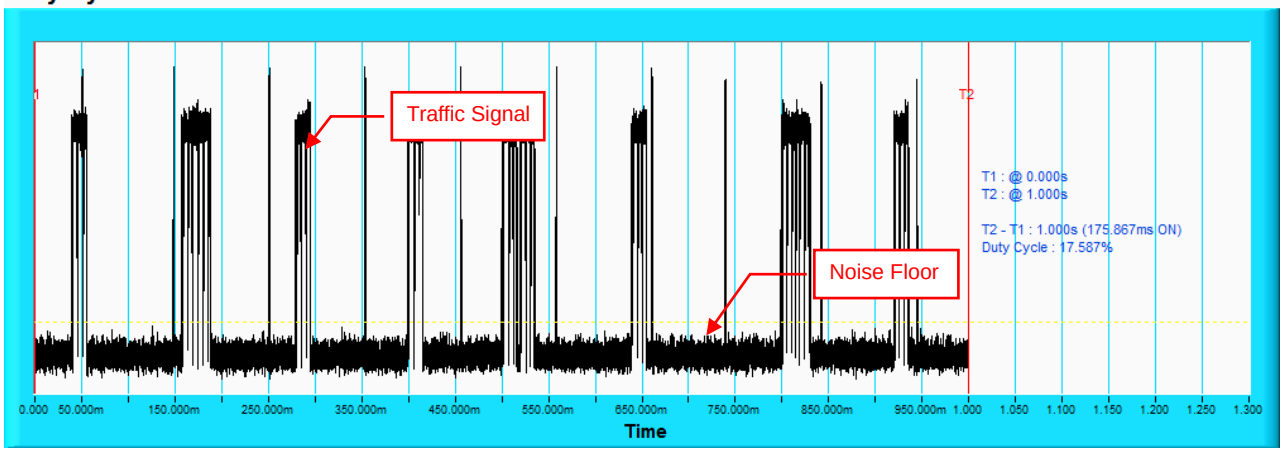
802.11ax (HE40)

Duty Cycle



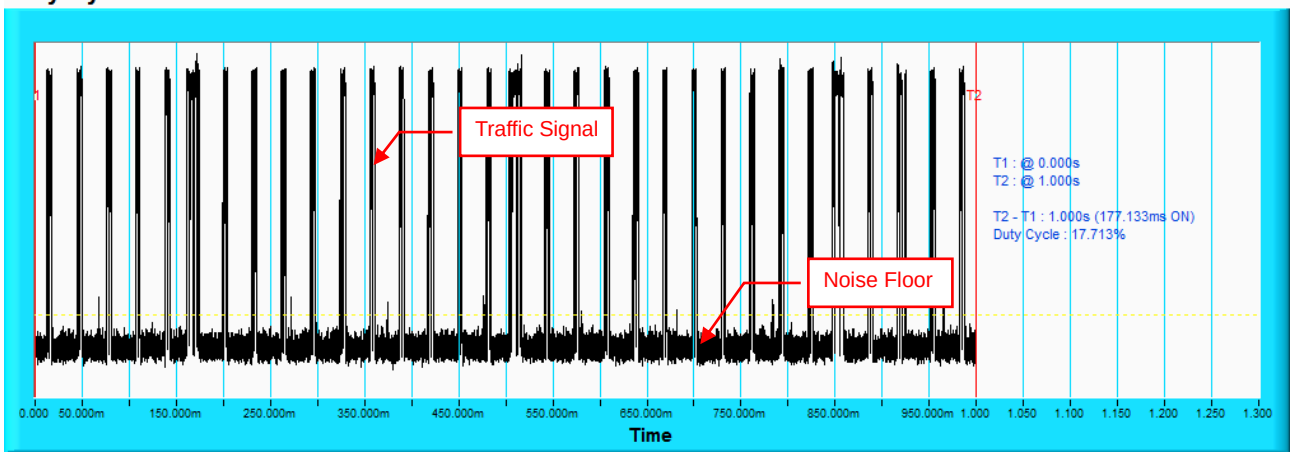
802.11ax (HE80)

Duty Cycle



802.11ax (HE160)

Duty Cycle



Radar test waveform

Table 1: Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Number of Trials(Times)	Percentage of Successful Detection (%)
1	Test A 15 unique PRI values randomly selected from the list of 23 PRI values 15 unique PRI values randomly selected within the range of 518~3066 μ sec with a minimum of 1 μ sec,excluding PRI values selected in Test A	Roundup $\left\{\left(\frac{1}{360}\right) \cdot \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	18	30	90
2	1-5	150-230	23-29	30	76.7
3	6-10	200-500	16-18	30	83.3
4	11-20	200-500	12-16	30	86.7
Aggregate (Radar Types 1-4)				120	84.2

Table 2: Long Pulse Radar Test Waveform

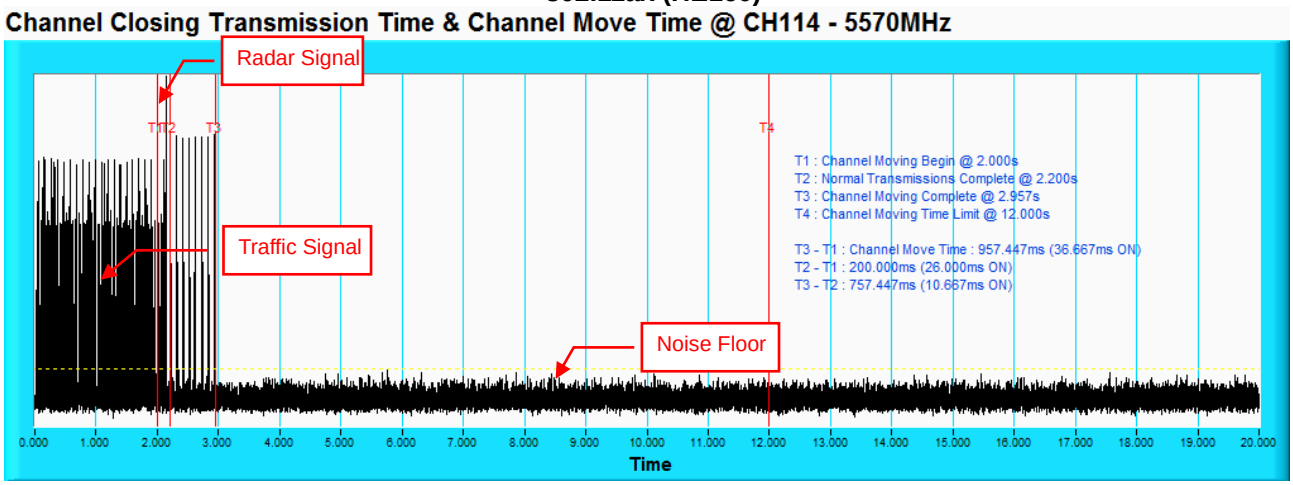
Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Burst	Number of Bursts	Number of Trials(Times)	Percentage of Successful Detection (%)
5	50-100	5-20	1000-2000	1-3	8-20	30	90

Table 3: Frequency Hopping Radar Test Waveform

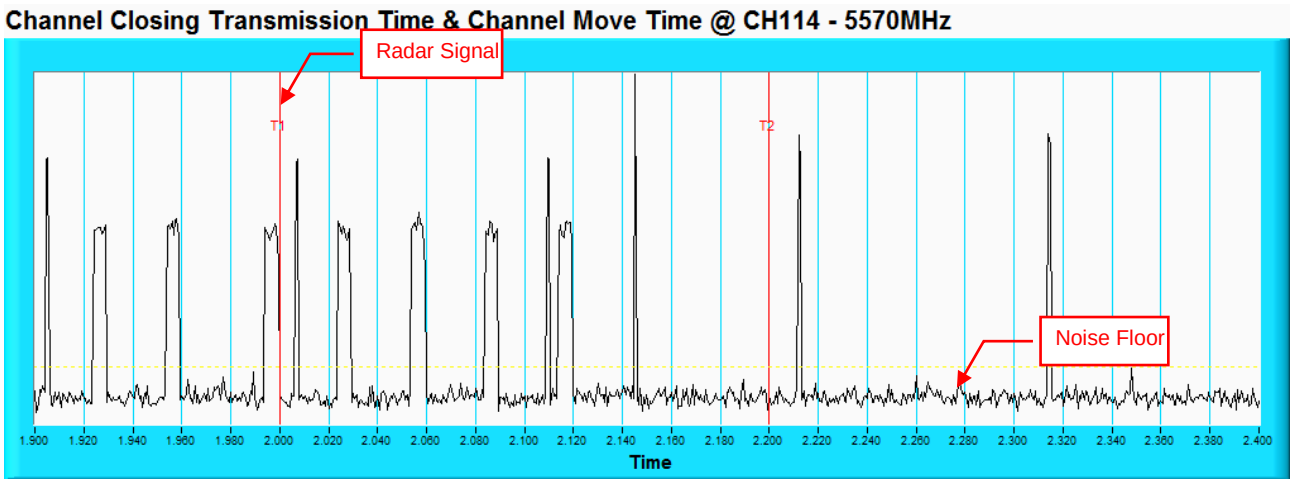
Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Number of Trials(Times)	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	30	93.3

Radar signal 0

802.11ax (HE160)



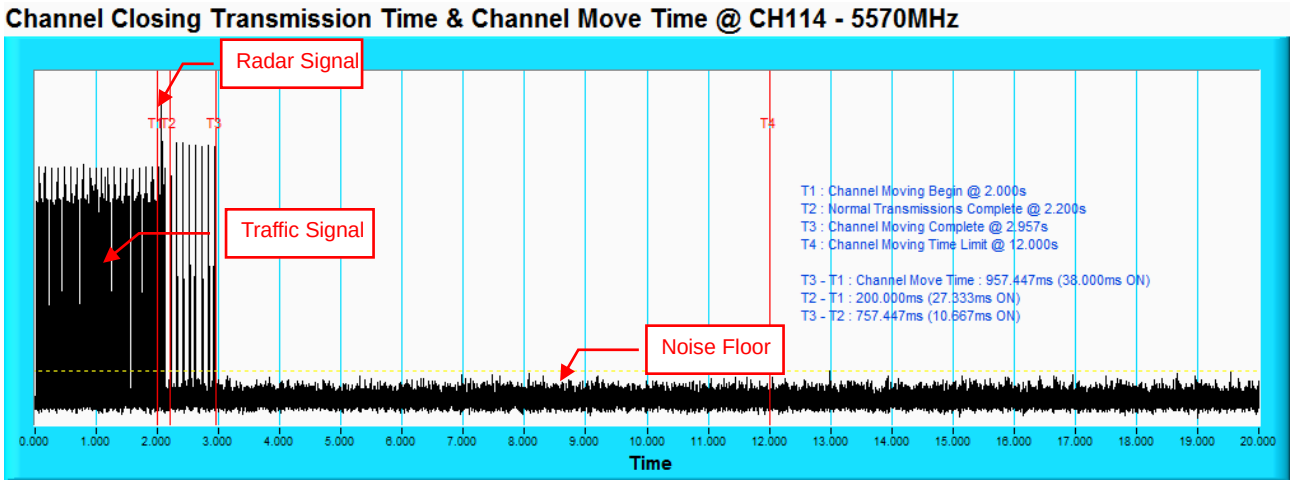
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



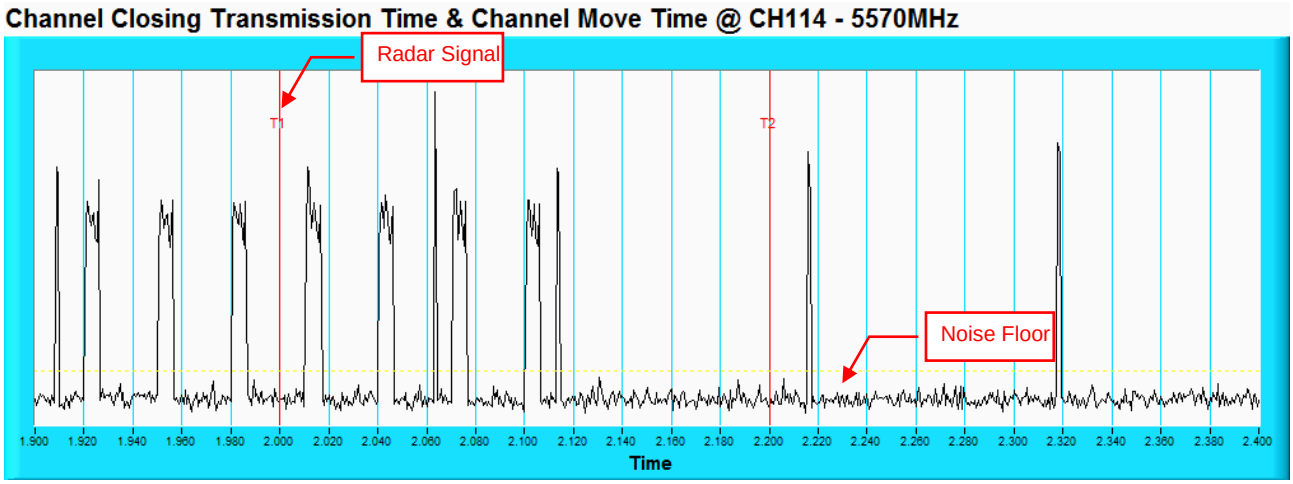
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 1

802.11ax (HE160)



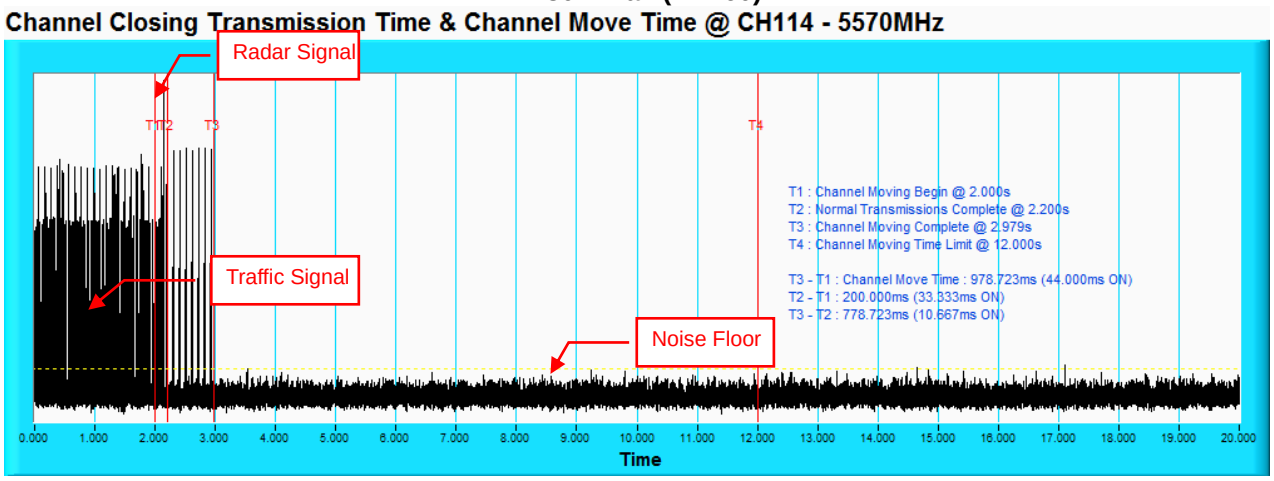
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



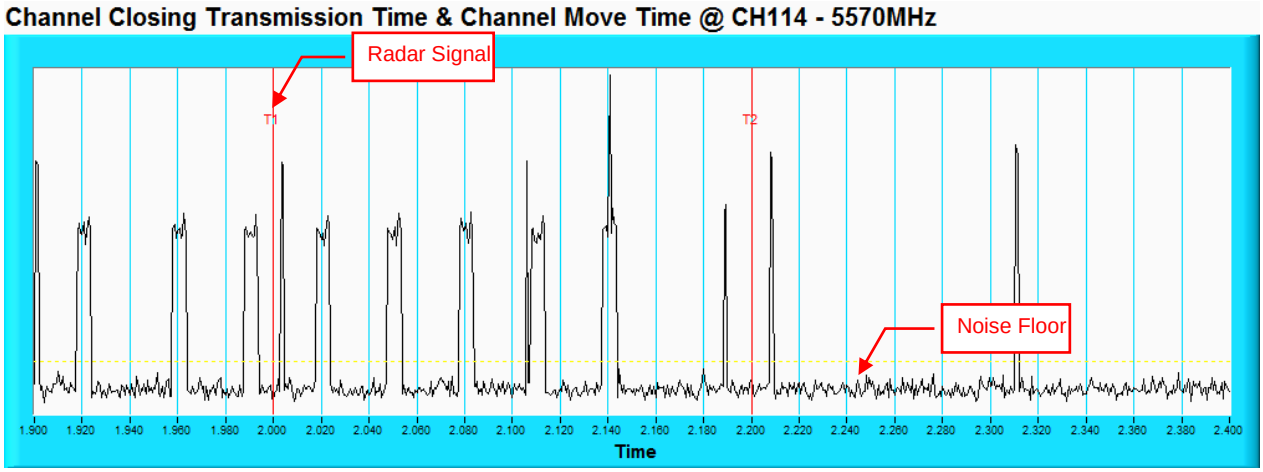
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 2

802.11ax (HE160)



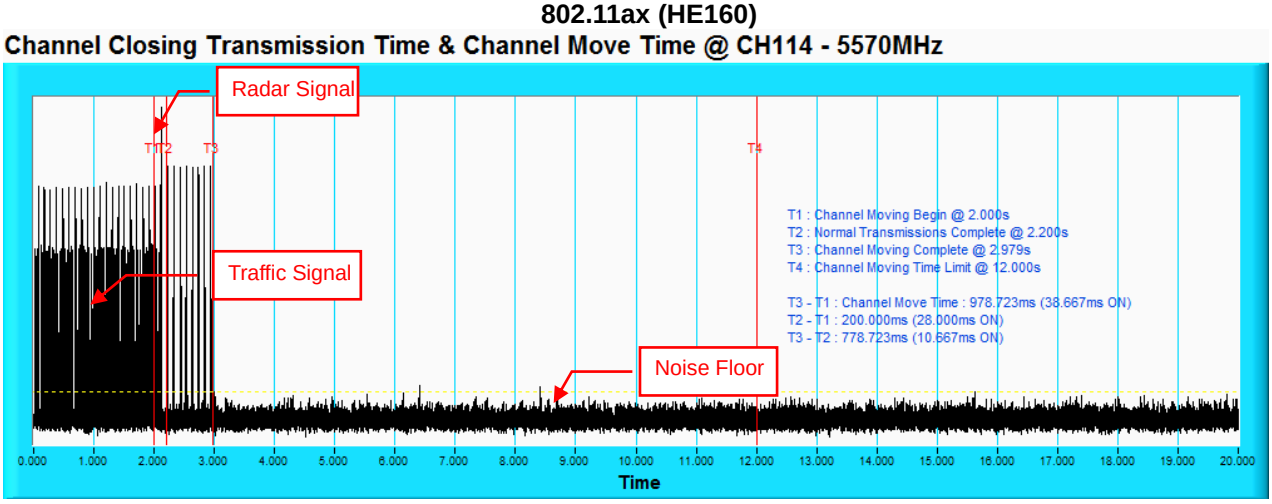
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



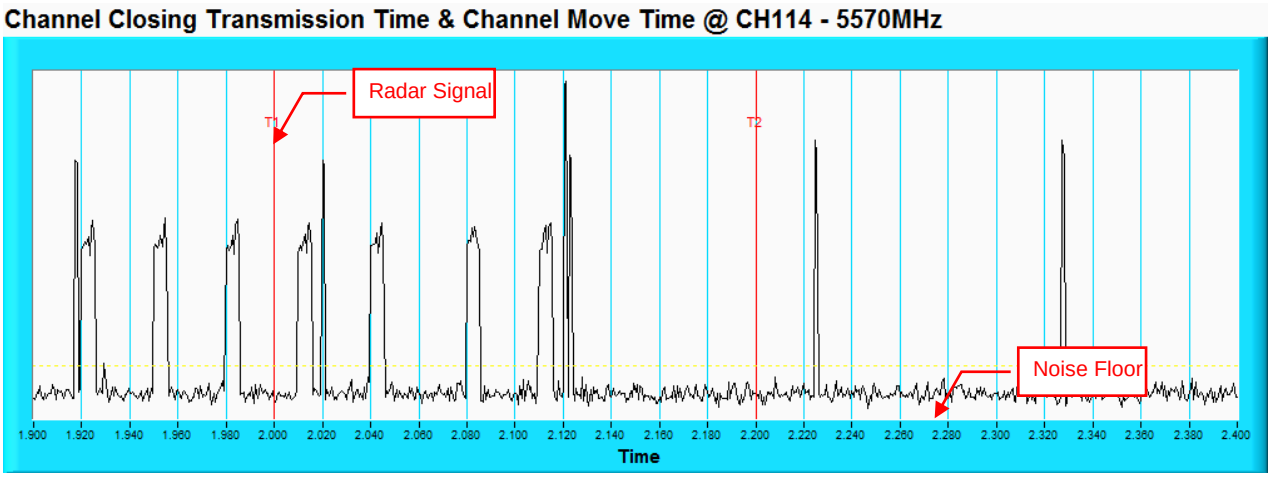
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 3

802.11ax (HE160)



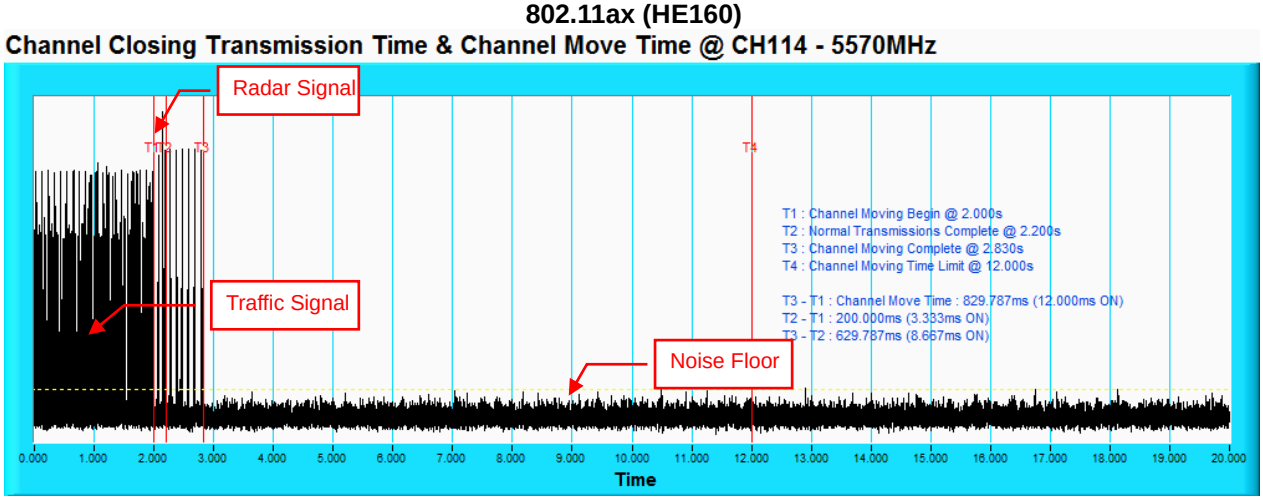
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



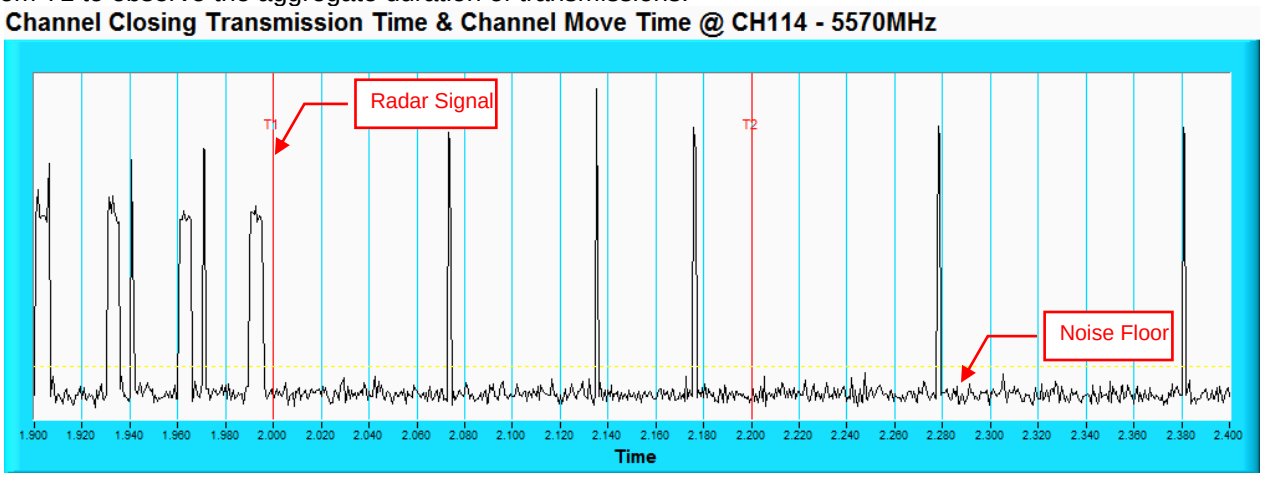
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 4

802.11ax (HE160)



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



NOTE: Zoom in of the first 500ms after radar signal applied.

7.9 Non- Occupancy Period

The Non-Occupancy Period time is 30 minute during which a Channel will not be utilized after a Radar Waveform is detected on that Channel.

7.9.1 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

7.9.2 Test Setup

Refer a clause 7.4 in this test report.

7.9.3 Test Procedures

Non-Occupancy Period

1. Following instant T2 of channel shutdown, the selected channel Chr shall be observed for a period equal to the Non-Occupancy Period (T3-T2) to verify that the UUT does not resume any transmissions on this channel.
2. A timing trace or description of the observed timing and behaviour of the UUT shall be recorded in the report.

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.

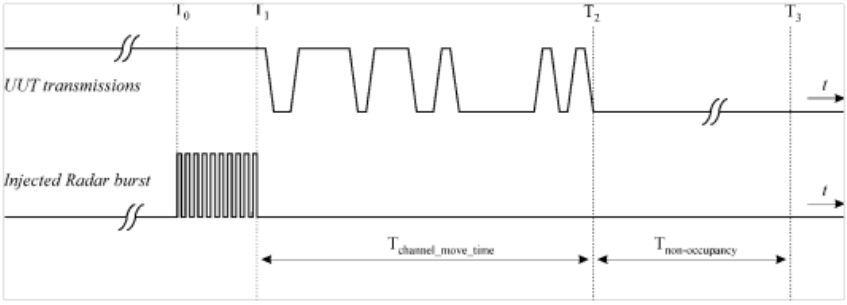
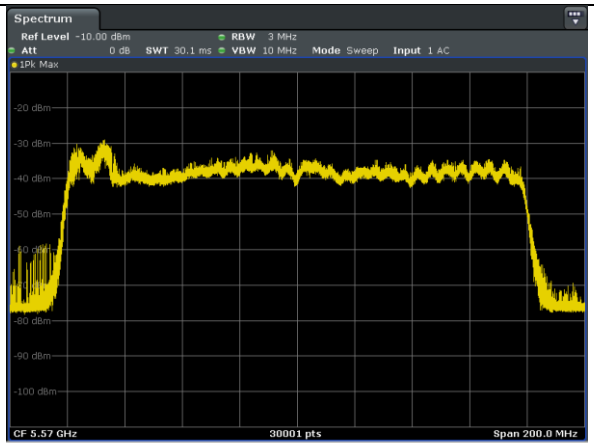
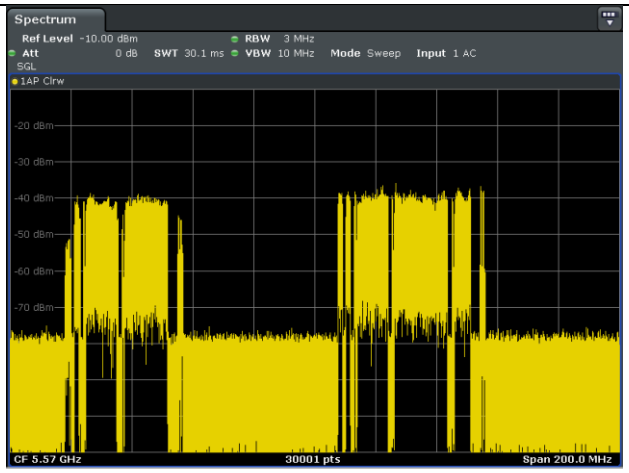
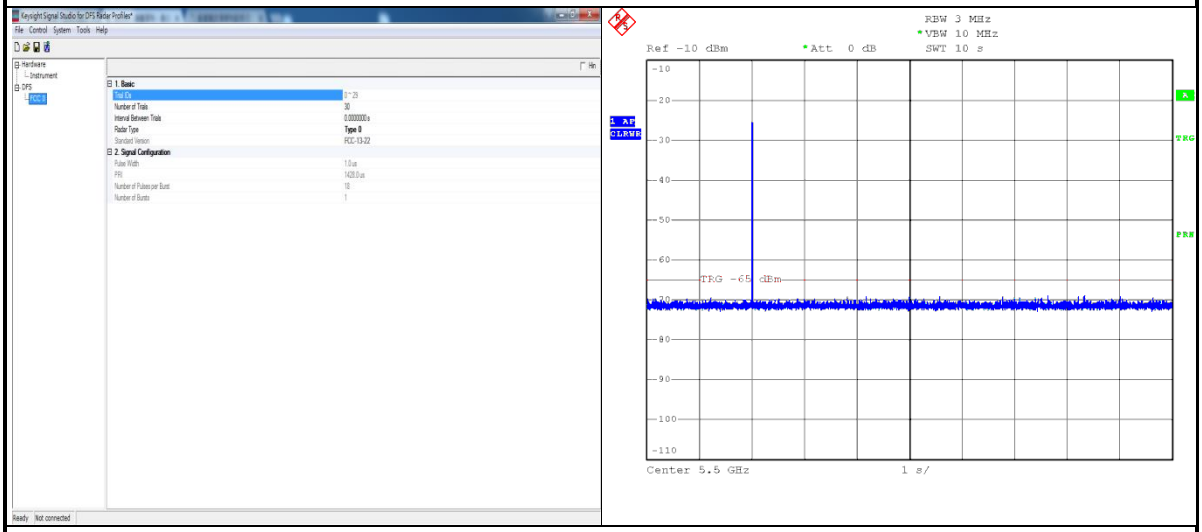


Figure 17: Example of Channel Closing Transmission Time & Channel Closing Time

1) Test results demonstrating an associated client link is established with the master on a test frequency.

EUT (master) links with Client on 5570MHz

2) The master and DFS-certified client device are associated, and system testing will be performed with channel-loading for a non-occupancy period test.

Client performed with channel-loading via master.

3). The device transmits one type of radar as specified in the DFS Order.

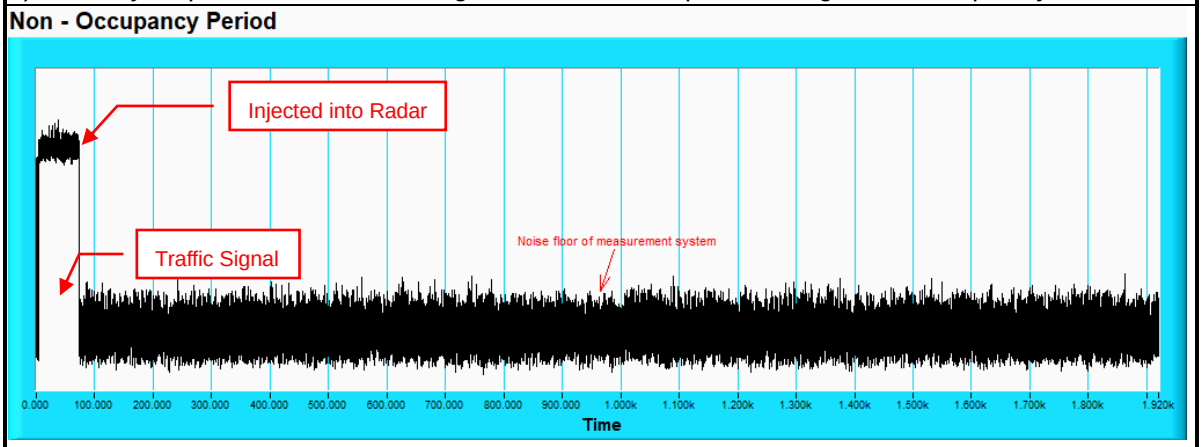


Radar 0 is used to test during DFS testing.

4) The test frequency has been monitored to ensure no transmission of any type has occurred for 30 minutes;

Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear;

5) An analyzer plot that contains a single 30-minute sweep on the original test frequency.



7.10 Statistical Performance Check Measurement

7.10.1 Limit

The minimum percentage of successful detection requirements found in below table when a radar burst with a level equal to the DFS Detection Threshold is generated on the Operating Channel of the U-NII device (In-Service Monitoring).

Radar Type	Minimum Number of Trails	DETECTION PROBABILITY
1	30	Pd > 60%
2	30	Pd > 60%
3	30	Pd > 60%
4	30	Pd > 60%
Aggregate (Radar Types 1-4)	120	Pd > 80%
5	30	Pd > 80%
6	30	Pd > 70%

- **Short Pulse Radar Test**

The percentage of successful detection is calculated by:

$$\frac{TotalWaveformDetections}{TotalWaveformTrails} \times 100 = \text{Probability of Detection Radar Waveform}$$

In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows: $\frac{Pd1 + Pd2 + Pd3 + Pd4}{4}$

- **Long Pulse Radar Test**

Three subsets of trials will be performed with a minimum of ten trials per subset. The subset of trials differ in where the Long Pulse Type 5 Signal is tuned in frequency:

a) the Channel center frequency (Figure 18);

b) tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the low edge of the UUT Occupied Bandwidth (Figure 19); and

c) tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the high edge of the UUT Occupied Bandwidth (Figure 20).

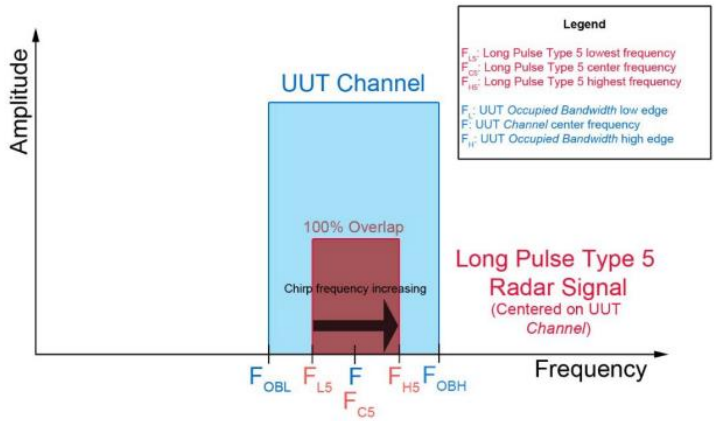


Figure 18: Example of the Relationship Between Long Pulse Type 5 Signal and the U-NII channel when the Signal is Tuned to the UUT Channel Center Frequency

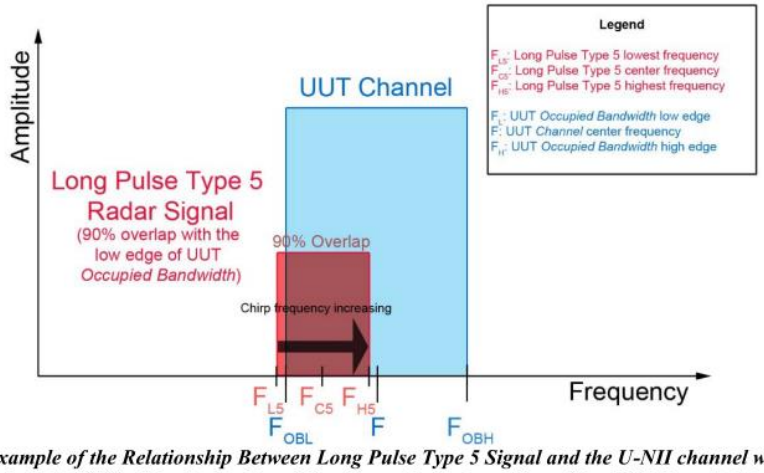


Figure 19: Example of the Relationship Between Long Pulse Type 5 Signal and the U-NII channel when the Signal is Tuned so that 90% of the Radar Signal Overlaps with the Low Edge of the UUT Occupied Bandwidth

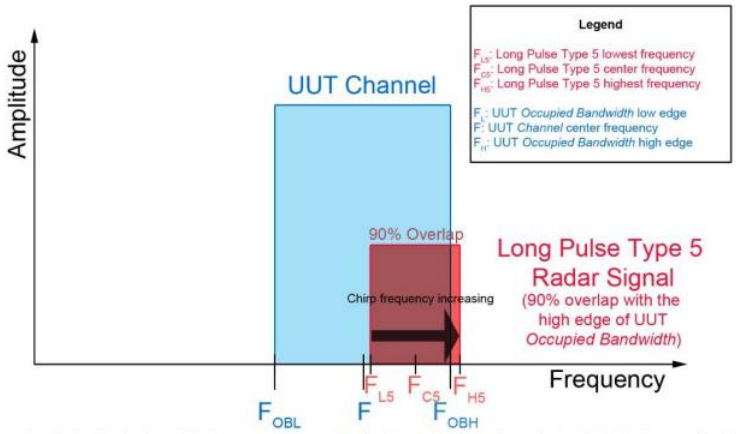


Figure 20: Example of the Relationship Between Long Pulse Type 5 Signal and the U-NII channel when the Signal is Tuned so that 90% of the Radar Signal Overlaps with the High Edge of the UUT Occupied Bandwidth

For subset case 1: the center frequency of the signal generator will remain fixed at the center of the UUT Channel.

For subset case 2: to retain 90% frequency overlap between the radar signal and the UUT Occupied Bandwidth, the center frequency of the signal generator will vary for each of the ten trials in subset case 2. The center frequency of the signal generator for each trial is calculated by:

$$F_L + (0.4 * Chirp\ Width\ [in\ MHz\ ])$$

For subset case 3: to retain 90% frequency overlap between the radar signal and the UUT Occupied Bandwidth, the center frequency of the signal generator will vary for each of the ten trials in subset case 3. The center frequency of the signal generator for each trial is calculated by:

$$F_H - (0.4 * Chirp\ Width\ [in\ MHz\ ])$$

The percentage of successful detection is calculated by dividing the sum of the detections for the three subsets by the sum of trials for the three subsets:

$$\frac{TotalWavef\ ormDetecti\ ons}{TotalWavef\ ormTrails} \times 100$$

- **Frequency Hopping Radar Test**

The percentage of successful detection is calculated by:

$$\frac{TotalWavef\ ormDetecti\ ons}{TotalWavef\ ormTrails} \times 100$$

7.10.2 Test Procedures

1. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
2. Set configuration as section 7.2 and do DFS calibration, and then adjust attenuator to make sure that the threshold value of the radar test signals defined in table 10-12 (Type1~6) is -64dBm at the UUT's antenna port and traffic signal is higher than radar burst signal.
3. Set configuration as section 7.4.
4. Use Lan test software to reach duty cycle 17 % traffic from Slave to UUT
5. Enter "debug command" from console.
6. The frequency of a radar is as same as transmiting frequency of UUT. If the UUT successfully detects the radar burst, it will appear "detected DFS message" from console.
7. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 1-4 and 6 to ensure detection occurs.
8. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs.
9. The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in below table.

7.10.3 Test Deviation

There is no deviation with the original standard.

7.10.4 Test Result of Statistical Performance Check

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Type 1 Radar Statistical Performances						
Trial #	Test Frequency (MHz)	Pulse Repetition Frequency Number (1 to 23)	Pulse Repetition Frequency (pps)	Pulses per Burst	Pulse Repetition Interval (μsec)	Detection
1	5500	22	1066	57	938	Yes
2	5494	10	1433	76	698	Yes
3	5495	6	1618	86	618	Yes
4	5505	2	1859	99	538	Yes
5	5500	19	1139	61	878	Yes
6	5498	23	326.2	18	3066	**No**
7	5494	7	1567	83	638	Yes
8	5505	21	1089	58	918	Yes
9	5497	17	1193	63	838	**No**
10	5493	18	1166	62	858	Yes
11	5495	15	1253	67	798	Yes
12	5502	11	1393	74	718	Yes
13	5498	4	1730	92	578	Yes
14	5507	5	1672	89	598	Yes
15	5506	3	1792	95	558	Yes
16	5497	-	394.3	21	2536	Yes
17	5504	-	1035	55	966	Yes
18	5508	-	1209	64	827	Yes
19	5500	-	399.8	22	2501	Yes
20	5503	-	385.4	21	2595	Yes
21	5504	-	897.7	48	1114	Yes
22	5494	-	768	41	1302	Yes
23	5495	-	328.4	18	3045	Yes
24	5503	-	615.8	33	1624	Yes
25	5495	-	347.5	19	2878	Yes
26	5499	-	973.7	52	1027	Yes
27	5494	-	402.4	22	2485	Yes
28	5506	-	625	33	1600	Yes
29	5507	-	853.2	46	1172	**No**
30	5496	-	849.6	45	1177	Yes
						Detection Rate : 90%

Note. “ - “ : 15 unique PRI values randomly selected within the range of 518-3066 μsec,with a minimum increment of 1μsec, excluding PRI values selected in Test A

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Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5500	26	3.2	179	Yes
2	5495	23	1.1	207	**No**
3	5500	24	2.1	230	Yes
4	5504	29	4.8	200	Yes
5	5503	28	3.9	214	Yes
6	5493	26	2.9	222	Yes
7	5506	26	3.2	204	Yes
8	5503	25	2.5	192	Yes
9	5508	26	3.1	164	**No**
10	5502	23	1.2	156	Yes
11	5497	27	3.9	210	Yes
12	5502	29	4.6	201	Yes
13	5498	26	3.2	162	Yes
14	5493	25	2.2	197	Yes
15	5506	29	4.5	163	Yes
16	5492	26	3	203	Yes
17	5505	29	5	168	**No**
18	5506	25	2.4	217	**No**
19	5507	26	2.9	191	Yes
20	5491	25	2.3	166	Yes
21	5492	27	3.7	150	Yes
22	5495	25	2.2	176	Yes
23	5492	29	4.9	195	Yes
24	5504	26	2.9	202	**No**
25	5496	25	2.5	178	Yes
26	5494	23	1.1	206	Yes
27	5507	27	3.8	155	Yes
28	5502	29	4.7	157	**No**
29	5503	25	2.4	224	**No**
30	5508	28	4.2	159	Yes
Detection Rate : 76.7%					

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Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5500	17	8.2	355	Yes
2	5507	16	6.1	487	Yes
3	5499	16	7.1	344	**No**
4	5503	18	9.8	288	Yes
5	5509	18	8.9	230	Yes
6	5497	17	7.9	432	Yes
7	5497	17	8.2	207	Yes
8	5500	17	7.5	443	Yes
9	5494	17	8.1	439	Yes
10	5501	16	6.2	223	Yes
11	5497	18	8.9	208	**No**
12	5491	18	9.6	463	Yes
13	5499	17	8.2	441	**No**
14	5498	16	7.2	323	Yes
15	5506	18	9.5	297	Yes
16	5501	17	8	412	Yes
17	5506	18	10	324	**No**
18	5491	17	7.4	271	Yes
19	5493	17	7.9	349	Yes
20	5501	16	7.3	409	Yes
21	5495	18	8.7	373	Yes
22	5507	16	7.2	254	**No**
23	5500	18	9.9	274	Yes
24	5498	17	7.9	278	Yes
25	5502	17	7.5	317	Yes
26	5500	16	6.1	260	Yes
27	5509	18	8.8	211	Yes
28	5502	18	9.7	272	Yes
29	5506	17	7.4	264	Yes
30	5493	18	9.2	284	**No**
					Detection Rate : 80%

802.11ax (HE20)

Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5500	14	16	355	Yes
2	5502	12	11.3	487	Yes
3	5497	13	13.5	344	Yes
4	5499	16	19.4	288	Yes
5	5493	15	17.5	230	Yes
6	5507	14	15.3	432	Yes
7	5496	14	15.9	207	Yes
8	5506	13	14.3	443	Yes
9	5508	14	15.8	439	Yes
10	5499	12	11.5	223	Yes
11	5491	15	17.4	208	Yes
12	5498	16	19	463	Yes
13	5504	14	16	441	Yes
14	5495	13	13.8	323	Yes
15	5502	16	18.9	297	Yes
16	5499	14	15.5	412	Yes
17	5495	16	19.9	324	Yes
18	5492	13	14.1	271	Yes
19	5502	14	15.2	349	**No**
20	5502	13	13.8	409	**No**
21	5505	15	17.1	373	Yes
22	5507	13	13.8	254	**No**
23	5506	16	19.8	274	Yes
24	5506	14	15.3	278	Yes
25	5501	13	14.5	317	Yes
26	5509	12	11.3	260	Yes
27	5505	15	17.3	211	Yes
28	5507	16	19.2	272	Yes
29	5507	13	14.2	264	**No**
30	5494	15	18.2	284	Yes
					Detection Rate : 86.7%

802.11ax (HE20)

Type 5 Radar Statistical Performances				
Trial #	Minimum Chirp Width(MHz)	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	13	5500	LP_Signal_01	Yes
2	5	5500	LP_Signal_02	Yes
3	9	5500	LP_Signal_03	Yes
4	19	5500	LP_Signal_04	**No**
5	16	5500	LP_Signal_05	Yes
6	12	5500	LP_Signal_06	Yes
7	13	5500	LP_Signal_07	**No**
8	10	5500	LP_Signal_08	Yes
9	13	5500	LP_Signal_09	Yes
10	6	5500	LP_Signal_10	Yes
11	16	5497	LP_Signal_11	Yes
12	19	5499	LP_Signal_12	Yes
13	13	5496	LP_Signal_13	Yes
14	10	5495	LP_Signal_14	Yes
15	18	5498	LP_Signal_15	Yes
16	12	5496	LP_Signal_16	Yes
17	20	5499	LP_Signal_17	Yes
18	10	5495	LP_Signal_18	Yes
19	12	5496	LP_Signal_19	Yes
20	10	5495	LP_Signal_20	Yes
21	15	5503	LP_Signal_21	Yes
22	9	5505	LP_Signal_22	Yes
23	20	5501	LP_Signal_23	Yes
24	12	5504	LP_Signal_24	**No**
25	11	5505	LP_Signal_25	Yes
26	5	5507	LP_Signal_26	**No**
27	16	5503	LP_Signal_27	Yes
28	19	5501	LP_Signal_28	Yes
29	10	5505	LP_Signal_29	**No**
30	17	5502	LP_Signal_30	Yes
				Detection Rate : 83.3%

Note: The Long Pulse Radar pattern shown in Appendix A.1

802.11ax (HE20)

Type 6 Radar Statistical Performances					
Trial #	Pulses per Burst	Pulse Width(us)	PRI(us)	Hopping Frequency Sequence Name	Detection
1	9	1	333.3	HOP_FREQ_SEQ_01	Yes
2	9	1	333.3	HOP_FREQ_SEQ_02	Yes
3	9	1	333.3	HOP_FREQ_SEQ_03	Yes
4	9	1	333.3	HOP_FREQ_SEQ_04	Yes
5	9	1	333.3	HOP_FREQ_SEQ_05	Yes
6	9	1	333.3	HOP_FREQ_SEQ_06	Yes
7	9	1	333.3	HOP_FREQ_SEQ_07	Yes
8	9	1	333.3	HOP_FREQ_SEQ_08	Yes
9	9	1	333.3	HOP_FREQ_SEQ_09	**No**
10	9	1	333.3	HOP_FREQ_SEQ_10	Yes
11	9	1	333.3	HOP_FREQ_SEQ_11	Yes
12	9	1	333.3	HOP_FREQ_SEQ_12	Yes
13	9	1	333.3	HOP_FREQ_SEQ_13	Yes
14	9	1	333.3	HOP_FREQ_SEQ_14	Yes
15	9	1	333.3	HOP_FREQ_SEQ_15	Yes
16	9	1	333.3	HOP_FREQ_SEQ_16	Yes
17	9	1	333.3	HOP_FREQ_SEQ_17	Yes
18	9	1	333.3	HOP_FREQ_SEQ_18	Yes
19	9	1	333.3	HOP_FREQ_SEQ_19	Yes
20	9	1	333.3	HOP_FREQ_SEQ_20	Yes
21	9	1	333.3	HOP_FREQ_SEQ_21	Yes
22	9	1	333.3	HOP_FREQ_SEQ_22	Yes
23	9	1	333.3	HOP_FREQ_SEQ_23	Yes
24	9	1	333.3	HOP_FREQ_SEQ_24	Yes
25	9	1	333.3	HOP_FREQ_SEQ_25	Yes
26	9	1	333.3	HOP_FREQ_SEQ_26	Yes
27	9	1	333.3	HOP_FREQ_SEQ_27	Yes
28	9	1	333.3	HOP_FREQ_SEQ_28	**No**
29	9	1	333.3	HOP_FREQ_SEQ_29	Yes
30	9	1	333.3	HOP_FREQ_SEQ_30	Yes
					Detection Rate : 93.3%

Note: The Frequency Hopping Radar pattern shown in Appendix A.2

802.11ax (HE40)

Type 1 Radar Statistical Performances						
Trial #	Test Frequency (MHz)	Pulse Repetition Frequency Number (1 to 23)	Pulse Repetition Frequency (pps)	Pulses per Burst	Pulse Repetition Interval (μsec)	Detection
1	5510	22	1066	57	938	Yes
2	5520	10	1433	76	698	Yes
3	5500	6	1618	86	618	Yes
4	5492	2	1859	99	538	Yes
5	5492	19	1139	61	878	Yes
6	5516	23	326.2	18	3066	Yes
7	5528	7	1567	83	638	Yes
8	5508	21	1089	58	918	**No**
9	5528	17	1193	63	838	Yes
10	5508	18	1166	62	858	Yes
11	5515	15	1253	67	798	Yes
12	5528	11	1393	74	718	Yes
13	5492	4	1730	92	578	Yes
14	5496	5	1672	89	598	Yes
15	5500	3	1792	95	558	**No**
16	5505	-	394.3	21	2536	Yes
17	5516	-	1035	55	966	Yes
18	5520	-	1209	64	827	Yes
19	5506	-	399.8	22	2501	Yes
20	5494	-	385.4	21	2595	Yes
21	5513	-	897.7	48	1114	Yes
22	5503	-	768	41	1302	Yes
23	5500	-	328.4	18	3045	Yes
24	5507	-	615.8	33	1624	Yes
25	5524	-	347.5	19	2878	Yes
26	5522	-	973.7	52	1027	Yes
27	5520	-	402.4	22	2485	Yes
28	5525	-	625	33	1600	Yes
29	5518	-	853.2	46	1172	Yes
30	5496	-	849.6	45	1177	Yes
						Detection Rate : 93.3%

Note. “ - “ : 15 unique PRI values randomly selected within the range of 518-3066 μsec,with a minimum increment of 1μsec, excluding PRI values selected in Test A

802.11ax (HE40)

Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	26	3.2	179	Yes
2	5520	23	1.1	207	Yes
3	5500	24	2.1	230	Yes
4	5520	29	4.8	200	Yes
5	5514	28	3.9	214	Yes
6	5494	26	2.9	222	**No**
7	5504	26	3.2	204	Yes
8	5518	25	2.5	192	Yes
9	5505	26	3.1	164	Yes
10	5505	23	1.2	156	Yes
11	5516	27	3.9	210	Yes
12	5525	29	4.6	201	Yes
13	5523	26	3.2	162	Yes
14	5514	25	2.2	197	Yes
15	5521	29	4.5	163	Yes
16	5521	26	3	203	Yes
17	5503	29	5	168	Yes
18	5506	25	2.4	217	Yes
19	5502	26	2.9	191	Yes
20	5498	25	2.3	166	Yes
21	5524	27	3.7	150	Yes
22	5507	25	2.2	176	Yes
23	5516	29	4.9	195	Yes
24	5510	26	2.9	202	Yes
25	5511	25	2.5	178	Yes
26	5495	23	1.1	206	Yes
27	5521	27	3.8	155	**No**
28	5507	29	4.7	157	**No**
29	5492	25	2.4	224	Yes
30	5497	28	4.2	159	Yes
					Detection Rate : 90%

802.11ax (HE40)

Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	17	8.2	355	Yes
2	5520	16	6.1	487	Yes
3	5500	16	7.1	344	**No**
4	5516	18	9.8	288	Yes
5	5504	18	8.9	230	Yes
6	5523	17	7.9	432	Yes
7	5494	17	8.2	207	**No**
8	5525	17	7.5	443	**No**
9	5520	17	8.1	439	Yes
10	5523	16	6.2	223	Yes
11	5498	18	8.9	208	Yes
12	5519	18	9.6	463	Yes
13	5492	17	8.2	441	Yes
14	5526	16	7.2	323	Yes
15	5515	18	9.5	297	Yes
16	5514	17	8	412	Yes
17	5524	18	10	324	**No**
18	5498	17	7.4	271	Yes
19	5524	17	7.9	349	Yes
20	5521	16	7.3	409	Yes
21	5512	18	8.7	373	Yes
22	5498	16	7.2	254	Yes
23	5496	18	9.9	274	Yes
24	5524	17	7.9	278	**No**
25	5514	17	7.5	317	Yes
26	5492	16	6.1	260	Yes
27	5501	18	8.8	211	Yes
28	5519	18	9.7	272	Yes
29	5527	17	7.4	264	Yes
30	5526	18	9.2	284	Yes
					Detection Rate : 83.3%

802.11ax (HE40)

Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	14	16	355	**No**
2	5520	12	11.3	487	**No**
3	5500	13	13.5	344	Yes
4	5516	16	19.4	288	**No**
5	5503	15	17.5	230	**No**
6	5527	14	15.3	432	Yes
7	5496	14	15.9	207	Yes
8	5500	13	14.3	443	Yes
9	5496	14	15.8	439	Yes
10	5499	12	11.5	223	Yes
11	5499	15	17.4	208	Yes
12	5517	16	19	463	Yes
13	5500	14	16	441	Yes
14	5502	13	13.8	323	Yes
15	5516	16	18.9	297	**No**
16	5517	14	15.5	412	Yes
17	5497	16	19.9	324	Yes
18	5496	13	14.1	271	**No**
19	5505	14	15.2	349	Yes
20	5525	13	13.8	409	Yes
21	5508	15	17.1	373	Yes
22	5492	13	13.8	254	Yes
23	5519	16	19.8	274	Yes
24	5525	14	15.3	278	Yes
25	5500	13	14.5	317	**No**
26	5510	12	11.3	260	Yes
27	5494	15	17.3	211	Yes
28	5498	16	19.2	272	**No**
29	5515	13	14.2	264	Yes
30	5496	15	18.2	284	**No**
					Detection Rate : 70%

802.11ax (HE40)

Type 5 Radar Statistical Performances				
Trial #	Minimum Chirp Width(MHz)	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	13	5510	LP_Signal_01	Yes
2	5	5510	LP_Signal_02	Yes
3	9	5510	LP_Signal_03	Yes
4	19	5510	LP_Signal_04	Yes
5	16	5510	LP_Signal_05	Yes
6	12	5510	LP_Signal_06	Yes
7	13	5510	LP_Signal_07	Yes
8	10	5510	LP_Signal_08	Yes
9	13	5510	LP_Signal_09	Yes
10	6	5510	LP_Signal_10	Yes
11	16	5497	LP_Signal_11	Yes
12	19	5499	LP_Signal_12	Yes
13	13	5496	LP_Signal_13	Yes
14	10	5495	LP_Signal_14	Yes
15	18	5498	LP_Signal_15	Yes
16	12	5496	LP_Signal_16	Yes
17	20	5499	LP_Signal_17	Yes
18	10	5495	LP_Signal_18	Yes
19	12	5496	LP_Signal_19	Yes
20	10	5495	LP_Signal_20	Yes
21	15	5523	LP_Signal_21	**No**
22	9	5525	LP_Signal_22	Yes
23	20	5521	LP_Signal_23	**No**
24	12	5524	LP_Signal_24	Yes
25	11	5525	LP_Signal_25	Yes
26	5	5527	LP_Signal_26	Yes
27	16	5523	LP_Signal_27	Yes
28	19	5521	LP_Signal_28	**No**
29	10	5525	LP_Signal_29	Yes
30	17	5522	LP_Signal_30	Yes
				Detection Rate : 90%

Note: The Long Pulse Radar pattern shown in Appendix A.1

802.11ax (HE40)

Type 6 Radar Statistical Performances					
Trial #	Pulses per Burst	Pulse Width(us)	PRI(us)	Hopping Frequency Sequence Name	Detection
1	9	1	333.3	HOP_FREQ_SEQ_01	Yes
2	9	1	333.3	HOP_FREQ_SEQ_02	Yes
3	9	1	333.3	HOP_FREQ_SEQ_03	Yes
4	9	1	333.3	HOP_FREQ_SEQ_04	Yes
5	9	1	333.3	HOP_FREQ_SEQ_05	Yes
6	9	1	333.3	HOP_FREQ_SEQ_06	Yes
7	9	1	333.3	HOP_FREQ_SEQ_07	**No**
8	9	1	333.3	HOP_FREQ_SEQ_08	Yes
9	9	1	333.3	HOP_FREQ_SEQ_09	Yes
10	9	1	333.3	HOP_FREQ_SEQ_10	Yes
11	9	1	333.3	HOP_FREQ_SEQ_11	Yes
12	9	1	333.3	HOP_FREQ_SEQ_12	Yes
13	9	1	333.3	HOP_FREQ_SEQ_13	Yes
14	9	1	333.3	HOP_FREQ_SEQ_14	Yes
15	9	1	333.3	HOP_FREQ_SEQ_15	**No**
16	9	1	333.3	HOP_FREQ_SEQ_16	Yes
17	9	1	333.3	HOP_FREQ_SEQ_17	Yes
18	9	1	333.3	HOP_FREQ_SEQ_18	Yes
19	9	1	333.3	HOP_FREQ_SEQ_19	Yes
20	9	1	333.3	HOP_FREQ_SEQ_20	**No**
21	9	1	333.3	HOP_FREQ_SEQ_21	Yes
22	9	1	333.3	HOP_FREQ_SEQ_22	Yes
23	9	1	333.3	HOP_FREQ_SEQ_23	Yes
24	9	1	333.3	HOP_FREQ_SEQ_24	Yes
25	9	1	333.3	HOP_FREQ_SEQ_25	Yes
26	9	1	333.3	HOP_FREQ_SEQ_26	Yes
27	9	1	333.3	HOP_FREQ_SEQ_27	Yes
28	9	1	333.3	HOP_FREQ_SEQ_28	Yes
29	9	1	333.3	HOP_FREQ_SEQ_29	Yes
30	9	1	333.3	HOP_FREQ_SEQ_30	Yes
					Detection Rate : 90%

Note: The Frequency Hopping Radar pattern shown in Appendix A.2

802.11ax (HE80)

Type 1 Radar Statistical Performances						
Trial #	Test Frequency (MHz)	Pulse Repetition Frequency Number (1 to 23)	Pulse Repetition Frequency (pps)	Pulses per Burst	Pulse Repetition Interval (μsec)	Detection
1	5530	22	1066	57	798	Yes
2	5540	10	1433	76	818	Yes
3	5560	6	1618	86	578	Yes
4	5520	2	1859	99	718	Yes
5	5500	19	1139	61	938	Yes
6	5528	23	326.2	18	638	Yes
7	5549	7	1567	83	538	Yes
8	5510	21	1089	58	658	Yes
9	5512	17	1193	63	518	Yes
10	5516	18	1166	62	878	Yes
11	5515	15	1253	67	918	Yes
12	5495	11	1393	74	3066	Yes
13	5559	4	1730	92	678	Yes
14	5525	5	1672	89	598	Yes
15	5542	3	1792	95	618	**No**
16	5542	-	394.3	21	900	**No**
17	5493	-	1035	55	977	Yes
18	5500	-	1209	64	1598	Yes
19	5558	-	399.8	22	1369	Yes
20	5539	-	385.4	21	847	Yes
21	5529	-	897.7	48	2496	Yes
22	5552	-	768	41	1889	Yes
23	5495	-	328.4	18	2877	Yes
24	5510	-	615.8	33	1559	Yes
25	5545	-	347.5	19	1965	Yes
26	5505	-	973.7	52	2895	Yes
27	5547	-	402.4	22	1722	Yes
28	5504	-	625	33	1271	Yes
29	5541	-	853.2	46	1237	Yes
30	5558	-	849.6	45	1934	Yes
						Detection Rate : 93.3%

Note. “ - “ : 15 unique PRI values randomly selected within the range of 518-3066 μsec,with a minimum increment of 1μsec, excluding PRI values selected in Test A

802.11ax (HE80)

Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5530	26	3.2	179	Yes
2	5540	23	1.1	207	Yes
3	5560	24	2.1	230	Yes
4	5520	29	4.8	200	Yes
5	5500	28	3.9	214	**No**
6	5513	26	2.9	222	Yes
7	5527	26	3.2	204	Yes
8	5550	25	2.5	192	Yes
9	5502	26	3.1	164	Yes
10	5545	23	1.2	156	Yes
11	5494	27	3.9	210	**No**
12	5534	29	4.6	201	Yes
13	5525	26	3.2	162	Yes
14	5532	25	2.2	197	Yes
15	5554	29	4.5	163	Yes
16	5560	26	3	203	Yes
17	5525	29	5	168	Yes
18	5542	25	2.4	217	**No**
19	5524	26	2.9	191	Yes
20	5497	25	2.3	166	Yes
21	5554	27	3.7	150	Yes
22	5556	25	2.2	176	Yes
23	5497	29	4.9	195	Yes
24	5561	26	2.9	202	Yes
25	5552	25	2.5	178	Yes
26	5526	23	1.1	206	Yes
27	5526	27	3.8	155	Yes
28	5493	29	4.7	157	Yes
29	5494	25	2.4	224	Yes
30	5502	28	4.2	159	**No**
					Detection Rate : 86.7%

802.11ax (HE80)

Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5530	17	8.2	355	Yes
2	5540	16	6.1	487	Yes
3	5560	16	7.1	344	Yes
4	5520	18	9.8	288	Yes
5	5500	18	8.9	230	Yes
6	5556	17	7.9	432	Yes
7	5541	17	8.2	207	Yes
8	5534	17	7.5	443	Yes
9	5562	17	8.1	439	Yes
10	5517	16	6.2	223	Yes
11	5553	18	8.9	208	Yes
12	5514	18	9.6	463	Yes
13	5545	17	8.2	441	**No**
14	5557	16	7.2	323	Yes
15	5497	18	9.5	297	Yes
16	5565	17	8	412	**No**
17	5548	18	10	324	Yes
18	5540	17	7.4	271	Yes
19	5556	17	7.9	349	**No**
20	5509	16	7.3	409	Yes
21	5542	18	8.7	373	Yes
22	5506	16	7.2	254	Yes
23	5531	18	9.9	274	**No**
24	5493	17	7.9	278	**No**
25	5522	17	7.5	317	**No**
26	5536	16	6.1	260	Yes
27	5505	18	8.8	211	Yes
28	5547	18	9.7	272	Yes
29	5539	17	7.4	264	Yes
30	5496	18	9.2	284	Yes
					Detection Rate : 80%

802.11ax (HE80)

Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5530	14	16	355	Yes
2	5540	12	11.3	487	**No**
3	5560	13	13.5	344	Yes
4	5520	16	19.4	288	**No**
5	5500	15	17.5	230	Yes
6	5545	14	15.3	432	Yes
7	5546	14	15.9	207	**No**
8	5554	13	14.3	443	**No**
9	5505	14	15.8	439	Yes
10	5530	12	11.5	223	**No**
11	5531	15	17.4	208	Yes
12	5565	16	19	463	Yes
13	5515	14	16	441	Yes
14	5523	13	13.8	323	Yes
15	5537	16	18.9	297	Yes
16	5557	14	15.5	412	**No**
17	5518	16	19.9	324	Yes
18	5556	13	14.1	271	Yes
19	5552	14	15.2	349	Yes
20	5499	13	13.8	409	Yes
21	5556	15	17.1	373	Yes
22	5546	13	13.8	254	Yes
23	5532	16	19.8	274	Yes
24	5563	14	15.3	278	Yes
25	5549	13	14.5	317	**No**
26	5534	12	11.3	260	**No**
27	5508	15	17.3	211	**No**
28	5521	16	19.2	272	Yes
29	5508	13	14.2	264	Yes
30	5502	15	18.2	284	Yes
					Detection Rate : 70%

802.11ax (HE80)

Type 5 Radar Statistical Performances				
Trial #	Minimum Chirp Width(MHz)	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	13	5530	LP_Signal_01	Yes
2	5	5530	LP_Signal_02	Yes
3	9	5530	LP_Signal_03	**No**
4	19	5530	LP_Signal_04	Yes
5	16	5530	LP_Signal_05	Yes
6	12	5530	LP_Signal_06	Yes
7	13	5530	LP_Signal_07	Yes
8	10	5530	LP_Signal_08	Yes
9	13	5530	LP_Signal_09	Yes
10	6	5530	LP_Signal_10	Yes
11	16	5497	LP_Signal_11	**No**
12	19	5499	LP_Signal_12	Yes
13	13	5496	LP_Signal_13	Yes
14	10	5495	LP_Signal_14	Yes
15	18	5498	LP_Signal_15	Yes
16	12	5496	LP_Signal_16	**No**
17	20	5499	LP_Signal_17	Yes
18	10	5495	LP_Signal_18	Yes
19	12	5496	LP_Signal_19	Yes
20	10	5495	LP_Signal_20	Yes
21	15	5563	LP_Signal_21	Yes
22	9	5565	LP_Signal_22	Yes
23	20	5561	LP_Signal_23	**No**
24	12	5564	LP_Signal_24	Yes
25	11	5565	LP_Signal_25	Yes
26	5	5567	LP_Signal_26	**No**
27	16	5563	LP_Signal_27	Yes
28	19	5561	LP_Signal_28	Yes
29	10	5565	LP_Signal_29	Yes
30	17	5562	LP_Signal_30	Yes
				Detection Rate : 83.3%

Note: The Long Pulse Radar pattern shown in Appendix A.1

802.11ax (HE80)

Type 6 Radar Statistical Performances					
Trial #	Pulses per Burst	Pulse Width(us)	PRI(us)	Hopping Frequency Sequence Name	Detection
1	9	1	333.3	HOP_FREQ_SEQ_01	Yes
2	9	1	333.3	HOP_FREQ_SEQ_02	Yes
3	9	1	333.3	HOP_FREQ_SEQ_03	**No**
4	9	1	333.3	HOP_FREQ_SEQ_04	Yes
5	9	1	333.3	HOP_FREQ_SEQ_05	Yes
6	9	1	333.3	HOP_FREQ_SEQ_06	Yes
7	9	1	333.3	HOP_FREQ_SEQ_07	Yes
8	9	1	333.3	HOP_FREQ_SEQ_08	Yes
9	9	1	333.3	HOP_FREQ_SEQ_09	Yes
10	9	1	333.3	HOP_FREQ_SEQ_10	Yes
11	9	1	333.3	HOP_FREQ_SEQ_11	Yes
12	9	1	333.3	HOP_FREQ_SEQ_12	Yes
13	9	1	333.3	HOP_FREQ_SEQ_13	Yes
14	9	1	333.3	HOP_FREQ_SEQ_14	Yes
15	9	1	333.3	HOP_FREQ_SEQ_15	Yes
16	9	1	333.3	HOP_FREQ_SEQ_16	Yes
17	9	1	333.3	HOP_FREQ_SEQ_17	Yes
18	9	1	333.3	HOP_FREQ_SEQ_18	Yes
19	9	1	333.3	HOP_FREQ_SEQ_19	Yes
20	9	1	333.3	HOP_FREQ_SEQ_20	Yes
21	9	1	333.3	HOP_FREQ_SEQ_21	**No**
22	9	1	333.3	HOP_FREQ_SEQ_22	Yes
23	9	1	333.3	HOP_FREQ_SEQ_23	Yes
24	9	1	333.3	HOP_FREQ_SEQ_24	Yes
25	9	1	333.3	HOP_FREQ_SEQ_25	Yes
26	9	1	333.3	HOP_FREQ_SEQ_26	Yes
27	9	1	333.3	HOP_FREQ_SEQ_27	Yes
28	9	1	333.3	HOP_FREQ_SEQ_28	Yes
29	9	1	333.3	HOP_FREQ_SEQ_29	Yes
30	9	1	333.3	HOP_FREQ_SEQ_30	Yes
					Detection Rate : 93.3%

Note:The Frequency Hopping Radar pattern shown in Appendix A.2

802.11ax (HE160)

Type 1 Radar Statistical Performances						
Trial #	Test Frequency (MHz)	Pulse Repetition Frequency Number (1 to 23)	Pulse Repetition Frequency (pps)	Pulses per Burst	Pulse Repetition Interval (μsec)	Detection
1	5570	22	1066	57	798	Yes
2	5580	10	1433	76	818	Yes
3	5600	6	1618	86	578	Yes
4	5560	2	1859	99	718	Yes
5	5540	19	1139	61	938	Yes
6	5597	23	326.2	18	638	Yes
7	5614	7	1567	83	538	Yes
8	5589	21	1089	58	658	Yes
9	5583	17	1193	63	518	Yes
10	5546	18	1166	62	878	Yes
11	5511	15	1253	67	918	Yes
12	5515	11	1393	74	3066	Yes
13	5540	4	1730	92	678	Yes
14	5509	5	1672	89	598	Yes
15	5645	3	1792	95	618	Yes
16	5500	-	394.3	21	900	Yes
17	5631	-	1035	55	977	Yes
18	5528	-	1209	64	1598	Yes
19	5512	-	399.8	22	1369	Yes
20	5582	-	385.4	21	847	Yes
21	5603	-	897.7	48	2496	Yes
22	5544	-	768	41	1889	Yes
23	5546	-	328.4	18	2877	Yes
24	5493	-	615.8	33	1559	**No**
25	5520	-	347.5	19	1965	Yes
26	5642	-	973.7	52	2895	**No**
27	5610	-	402.4	22	1722	Yes
28	5598	-	625	33	1271	Yes
29	5584	-	853.2	46	1237	Yes
30	5589	-	849.6	45	1934	Yes
						Detection Rate : 93.3%

Note. “ - “ : 15 unique PRI values randomly selected within the range of 518-3066 μsec,with a minimum increment of 1μsec, excluding PRI values selected in Test A

802.11ax (HE160)

Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5570	26	3.2	179	Yes
2	5580	23	1.1	207	Yes
3	5600	24	2.1	230	Yes
4	5560	29	4.8	200	Yes
5	5540	28	3.9	214	Yes
6	5597	26	2.9	222	Yes
7	5614	26	3.2	204	Yes
8	5589	25	2.5	192	Yes
9	5583	26	3.1	164	Yes
10	5546	23	1.2	156	**No**
11	5511	27	3.9	210	Yes
12	5515	29	4.6	201	Yes
13	5540	26	3.2	162	**No**
14	5509	25	2.2	197	Yes
15	5645	29	4.5	163	**No**
16	5500	26	3	203	**No**
17	5631	29	5	168	Yes
18	5528	25	2.4	217	Yes
19	5512	26	2.9	191	**No**
20	5582	25	2.3	166	Yes
21	5603	27	3.7	150	Yes
22	5544	25	2.2	176	Yes
23	5546	29	4.9	195	Yes
24	5493	26	2.9	202	Yes
25	5520	25	2.5	178	Yes
26	5642	23	1.1	206	Yes
27	5610	27	3.8	155	**No**
28	5598	29	4.7	157	Yes
29	5584	25	2.4	224	Yes
30	5589	28	4.2	159	Yes
					Detection Rate : 80%

802.11ax (HE160)

Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5570	17	8.2	355	**No**
2	5580	16	6.1	487	Yes
3	5600	16	7.1	344	Yes
4	5560	18	9.8	288	Yes
5	5540	18	8.9	230	Yes
6	5597	17	7.9	432	Yes
7	5614	17	8.2	207	Yes
8	5589	17	7.5	443	Yes
9	5583	17	8.1	439	Yes
10	5546	16	6.2	223	Yes
11	5511	18	8.9	208	Yes
12	5515	18	9.6	463	Yes
13	5540	17	8.2	441	Yes
14	5509	16	7.2	323	**No**
15	5645	18	9.5	297	Yes
16	5500	17	8	412	Yes
17	5631	18	10	324	**No**
18	5528	17	7.4	271	Yes
19	5512	17	7.9	349	Yes
20	5582	16	7.3	409	Yes
21	5603	18	8.7	373	Yes
22	5544	16	7.2	254	Yes
23	5546	18	9.9	274	**No**
24	5493	17	7.9	278	Yes
25	5520	17	7.5	317	Yes
26	5642	16	6.1	260	Yes
27	5610	18	8.8	211	Yes
28	5598	18	9.7	272	Yes
29	5584	17	7.4	264	Yes
30	5589	18	9.2	284	Yes
					Detection Rate : 86.7%

802.11ax (HE160)

Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5570	14	16	355	Yes
2	5580	12	11.3	487	**No**
3	5600	13	13.5	344	Yes
4	5560	16	19.4	288	Yes
5	5540	15	17.5	230	Yes
6	5597	14	15.3	432	Yes
7	5614	14	15.9	207	Yes
8	5589	13	14.3	443	Yes
9	5583	14	15.8	439	Yes
10	5546	12	11.5	223	**No**
11	5511	15	17.4	208	Yes
12	5515	16	19	463	Yes
13	5540	14	16	441	Yes
14	5509	13	13.8	323	Yes
15	5645	16	18.9	297	**No**
16	5500	14	15.5	412	Yes
17	5631	16	19.9	324	Yes
18	5528	13	14.1	271	Yes
19	5512	14	15.2	349	**No**
20	5582	13	13.8	409	Yes
21	5603	15	17.1	373	Yes
22	5544	13	13.8	254	Yes
23	5546	16	19.8	274	**No**
24	5493	14	15.3	278	**No**
25	5520	13	14.5	317	Yes
26	5642	12	11.3	260	Yes
27	5610	15	17.3	211	Yes
28	5598	16	19.2	272	Yes
29	5584	13	14.2	264	Yes
30	5589	15	18.2	284	Yes
					Detection Rate : 80%

802.11ax (HE160)

Type 5 Radar Statistical Performances				
Trial #	Minimum Chirp Width(MHz)	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	9	5570	LP_Signal_01	**No**
2	18	5570	LP_Signal_02	Yes
3	13	5570	LP_Signal_03	Yes
4	15	5570	LP_Signal_04	Yes
5	5	5570	LP_Signal_05	Yes
6	13	5570	LP_Signal_06	Yes
7	15	5570	LP_Signal_07	Yes
8	12	5570	LP_Signal_08	**No**
9	20	5570	LP_Signal_09	Yes
10	6	5570	LP_Signal_10	Yes
11	20	5498	LP_Signal_11	Yes
12	8	5500	LP_Signal_12	Yes
13	7	5497	LP_Signal_13	Yes
14	20	5496	LP_Signal_14	Yes
15	17	5499	LP_Signal_15	Yes
16	5	5497	LP_Signal_16	Yes
17	20	5500	LP_Signal_17	Yes
18	19	5496	LP_Signal_18	Yes
19	10	5497	LP_Signal_19	Yes
20	14	5496	LP_Signal_20	Yes
21	5	5642	LP_Signal_21	Yes
22	16	5644	LP_Signal_22	Yes
23	5	5640	LP_Signal_23	Yes
24	11	5643	LP_Signal_24	Yes
25	5	5644	LP_Signal_25	Yes
26	20	5646	LP_Signal_26	Yes
27	14	5642	LP_Signal_27	Yes
28	13	5640	LP_Signal_28	Yes
29	7	5644	LP_Signal_29	Yes
30	11	5641	LP_Signal_30	**No**
				Detection Rate : 90%

Note: The Long Pulse Radar pattern shown in Appendix A.1

802.11ax (HE160)

Type 6 Radar Statistical Performances					
Trial #	Pulses per Burst	Pulse Width(us)	PRI(us)	Hopping Frequency Sequence Name	Detection
1	9	1	333.3	HOP_FREQ_SEQ_01	Yes
2	9	1	333.3	HOP_FREQ_SEQ_02	Yes
3	9	1	333.3	HOP_FREQ_SEQ_03	Yes
4	9	1	333.3	HOP_FREQ_SEQ_04	Yes
5	9	1	333.3	HOP_FREQ_SEQ_05	Yes
6	9	1	333.3	HOP_FREQ_SEQ_06	Yes
7	9	1	333.3	HOP_FREQ_SEQ_07	Yes
8	9	1	333.3	HOP_FREQ_SEQ_08	Yes
9	9	1	333.3	HOP_FREQ_SEQ_09	Yes
10	9	1	333.3	HOP_FREQ_SEQ_10	Yes
11	9	1	333.3	HOP_FREQ_SEQ_11	Yes
12	9	1	333.3	HOP_FREQ_SEQ_12	Yes
13	9	1	333.3	HOP_FREQ_SEQ_13	Yes
14	9	1	333.3	HOP_FREQ_SEQ_14	Yes
15	9	1	333.3	HOP_FREQ_SEQ_15	Yes
16	9	1	333.3	HOP_FREQ_SEQ_16	Yes
17	9	1	333.3	HOP_FREQ_SEQ_17	Yes
18	9	1	333.3	HOP_FREQ_SEQ_18	Yes
19	9	1	333.3	HOP_FREQ_SEQ_19	Yes
20	9	1	333.3	HOP_FREQ_SEQ_20	**No**
21	9	1	333.3	HOP_FREQ_SEQ_21	Yes
22	9	1	333.3	HOP_FREQ_SEQ_22	Yes
23	9	1	333.3	HOP_FREQ_SEQ_23	Yes
24	9	1	333.3	HOP_FREQ_SEQ_24	Yes
25	9	1	333.3	HOP_FREQ_SEQ_25	Yes
26	9	1	333.3	HOP_FREQ_SEQ_26	**No**
27	9	1	333.3	HOP_FREQ_SEQ_27	Yes
28	9	1	333.3	HOP_FREQ_SEQ_28	Yes
29	9	1	333.3	HOP_FREQ_SEQ_29	Yes
30	9	1	333.3	HOP_FREQ_SEQ_30	Yes
					Detection Rate : 93.3%

Note: The Frequency Hopping Radar pattern shown in Appendix A.2

RADAR TEST SIGNAL

A.1 The Long Pulse Radar Pattern

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_01

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	13	77.8	1665	1477	-
2	1	13	51.9	1074	-	-
3	1	13	63.8	1584	-	-
4	3	13	96.6	1682	1786	1843
5	3	13	85.9	1795	1215	1729
6	2	13	73.7	1198	1549	-
7	2	13	77.2	1837	1819	-
8	2	13	68.4	1587	1114	-
9	2	13	76.7	2000	1155	-
10	1	13	53.2	1147	-	-
11	3	13	85.7	1433	1695	1394
12	3	13	94.3	1670	1426	1935
13	2	13	77.6	1294	1671	-
14	1	13	65.7	1512	-	-
15	3	13	93.5	1444	1130	1468
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_02

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	5	75	1880	1527	-
2	3	5	99.4	1401	1262	1257
3	2	5	67.4	1531	1403	-
4	2	5	73.6	1449	1041	-
5	1	5	65.9	1432	-	-
6	3	5	83.8	1356	1292	1419
7	1	5	65.5	1543	-	-
8	3	5	98.6	1548	1796	1728
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_03

Number of Bursts in Trial: 11

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	9	73.8	1806	1538	-
2	2	9	69.5	1117	1649	-
3	1	9	51.9	1651	-	-
4	3	9	84.6	1976	1032	1271
5	3	9	95.4	1060	1903	1388
6	2	9	68	1368	1351	-
7	3	9	89.6	1338	1514	1573
8	2	9	81.9	1022	1689	-
9	3	9	88.3	1810	1330	1838
10	1	9	53.7	1597	-	-
11	3	9	91.3	1961	1106	1001
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_04

Number of Bursts in Trial: 20

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	19	68.1	1339	1355	-
2	1	19	58.7	1251	-	-
3	2	19	75.3	1136	1640	-
4	1	19	56.4	1753	-	-
5	3	19	99.7	1196	1708	1159
6	1	19	57.7	1013	-	-
7	1	19	59.5	1072	-	-
8	2	19	80	1482	1369	-
9	2	19	82	1993	1197	-
10	2	19	82.8	1883	1005	-
11	3	19	88	1061	1928	1101
12	3	19	93.2	1207	1907	1223
13	2	19	70.4	1526	1360	-
14	3	19	95.3	1171	1955	1775
15	2	19	81.9	1690	1545	-
16	3	19	98.5	1975	1169	1062
17	1	19	65	1767	-	-
18	3	19	85.4	1011	1637	1425
19	3	19	91.6	1878	1445	1325
20	2	19	67.3	1091	1218	-

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_05

Number of Bursts in Trial: 17

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	16	67.9	1320	1133	-
2	1	16	62.3	1957	-	-
3	1	16	53.3	1592	-	-
4	3	16	90	1900	1153	1346
5	2	16	77.1	1166	1646	-
6	3	16	83.9	1278	1232	1459
7	3	16	89.1	1240	1384	1939
8	2	16	81.8	1833	1676	-
9	1	16	50.3	1075	-	-
10	3	16	87.1	1116	1996	1756
11	2	16	71.3	1225	1815	-
12	3	16	97.5	1884	1465	1132
13	3	16	90.6	1561	1040	1354
14	3	16	86.3	1596	1183	1792
15	3	16	97.6	1365	1073	1361
16	3	16	84.7	1021	1718	1854
17	3	16	99.7	1150	1244	1988
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_06

Number of Bursts in Trial: 14

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	12	92.9	1085	1564	1407
2	2	12	67.7	1744	1747	-
3	1	12	65.8	1092	-	-
4	1	12	56.3	1851	-	-
5	1	12	53.7	1727	-	-
6	3	12	83.5	1679	1930	1025
7	1	12	65.8	1519	-	-
8	3	12	85.9	1134	1034	1808
9	2	12	76.3	1606	1926	-
10	2	12	81.5	1891	1714	-
11	3	12	89.4	1310	1594	1827
12	1	12	63.4	1568	-	-
13	2	12	69.6	1307	1925	-
14	2	12	74.5	1264	1846	-
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_07

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	13	96.6	1182	1609	1581
2	3	13	96.7	1829	1799	1154
3	3	13	86.5	1923	1396	1865
4	2	13	73.3	1908	1318	-
5	1	13	55.8	1688	-	-
6	1	13	55.4	1145	-	-
7	3	13	85.3	1336	1504	1820
8	2	13	79.4	1344	1893	-
9	1	13	65.7	1476	-	-
10	2	13	68.6	1008	1028	-
11	2	13	77.7	1972	1835	-
12	2	13	79.6	1882	1331	-
13	3	13	94.9	1830	1070	1349
14	1	13	61.4	1451	-	-
15	3	13	90.6	1233	1562	1887
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_08

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	10	52.6	1210	-	-
2	3	10	84.1	1314	1725	1529
3	3	10	97.7	1139	1868	1805
4	3	10	97.3	1341	1446	1755
5	3	10	98.8	1544	1386	1302
6	2	10	72.2	1771	1184	-
7	2	10	67.6	1175	1027	-
8	2	10	75.7	1026	1871	-
9	1	10	60.9	1798	-	-
10	1	10	64.2	1138	-	-
11	2	10	78.8	1784	1604	-
12	3	10	87.5	1511	1712	1683
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_09

Number of Bursts in Trial: 14

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	13	54.1	1415	-	-
2	1	13	50.7	1221	-	-
3	1	13	52.3	1974	-	-
4	3	13	99.8	1558	1696	1949
5	2	13	68.4	1014	1099	-
6	2	13	80.8	1736	1505	-
7	1	13	62.5	1778	-	-
8	2	13	74.8	1149	1204	-
9	1	13	50.8	1049	-	-
10	1	13	54	1417	-	-
11	1	13	63	1730	-	-
12	3	13	91.8	1143	1270	1347
13	2	13	79.3	1274	1992	-
14	1	13	64.3	1937	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_10

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	6	63.4	1043	-	-
2	1	6	52	1863	-	-
3	3	6	97.2	1973	1605	1583
4	2	6	78.7	1466	1743	-
5	2	6	74.2	1280	1219	-
6	3	6	88.7	1293	1934	1273
7	1	6	54.3	1991	-	-
8	3	6	95.4	1580	1555	1791
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_11

Number of Bursts in Trial: 17

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	16	73.7	1208	1497	-
2	3	16	97.4	1942	1754	1613
3	3	16	91.7	1999	1702	1462
4	1	16	66.2	1393	-	-
5	2	16	70.8	1968	1821	-
6	1	16	52.3	1740	-	-
7	2	16	78.9	1308	1984	-
8	2	16	70.9	1050	1358	-
9	2	16	75.6	1437	1430	-
10	1	16	59.1	1697	-	-
11	2	16	77	1397	1304	-
12	2	16	67.9	1803	1083	-
13	2	16	81.2	1720	1932	-
14	2	16	78.7	1247	1121	-
15	1	16	63.3	1634	-	-
16	2	16	68.9	1849	1423	-
17	1	16	59.3	1093	-	-
18	2	16	73.7	1208	1497	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_12

Number of Bursts in Trial: 19

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	19	98.9	1381	1680	1488
2	2	19	82.3	1716	1855	-
3	3	19	86.7	1211	1400	1919
4	3	19	89.7	1861	1068	1282
5	3	19	98.6	1507	1194	1461
6	2	19	71.1	1921	1789	-
7	1	19	55.9	1947	-	-
8	2	19	67.9	1350	1372	-
9	3	19	84.4	1203	1107	1443
10	1	19	58.8	1715	-	-
11	1	19	65.6	1017	-	-
12	2	19	78.5	1911	1704	-
13	2	19	82.3	1845	1686	-
14	3	19	90.1	1938	1071	1266
15	3	19	90.2	1989	1089	1950
16	2	19	83.1	1943	1406	-
17	1	19	58.8	1742	-	-
18	2	19	77	1187	1657	-
19	1	19	55	1012	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_13

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	13	58.1	1929	-	-
2	1	13	52.1	1910	-	-
3	1	13	59.9	1971	-	-
4	1	13	60.2	1812	-	-
5	3	13	95.9	1399	1906	1608
6	2	13	79.9	1626	1859	-
7	2	13	78.5	1238	1917	-
8	1	13	53.8	1763	-	-
9	1	13	64.7	1800	-	-
10	1	13	61.4	1390	-	-
11	2	13	83.2	1692	1858	-
12	3	13	84.7	1533	1677	1638
13	3	13	88.7	1703	1528	1058
14	2	13	78.3	1258	1951	-
15	2	13	69.3	1731	1717	-
16						
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_14

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	10	75.3	1994	1612	-
2	1	10	56.3	1456	-	-
3	2	10	67.7	1617	1185	-
4	1	10	55.6	1337	-	-
5	2	10	75.2	1421	1267	-
6	2	10	76.3	1359	1305	-
7	3	10	85.7	1547	1362	1924
8	3	10	98.4	1873	1550	1249
9	3	10	86.4	1779	1439	1046
10	3	10	93.6	1059	1031	1452
11	1	10	63.3	1328	-	-
12	3	10	92.4	1412	1673	1322
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_15

Number of Bursts in Trial: 19

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	18	93.3	1983	1912	1535
2	2	18	69.1	1102	1794	-
3	3	18	86.9	1044	1152	1148
4	3	18	84.9	1894	1948	1118
5	2	18	72.3	1094	1916	-
6	1	18	51.7	1447	-	-
7	1	18	58.3	1429	-	-
8	1	18	60.8	1979	-	-
9	1	18	57.1	1641	-	-
10	3	18	88.9	1886	1964	1489
11	2	18	72	1909	1297	-
12	3	18	90.9	1261	1566	1370
13	1	18	59.8	1552	-	-
14	2	18	70	1759	1291	-
15	2	18	67.2	1625	1881	-
16	3	18	91.2	1382	1832	1661
17	1	18	56.5	1483	-	-
18	1	18	51.2	1237	-	-
19	2	18	74.1	1471	1245	-
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_16

Number of Bursts in Trial: 14

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	12	76.9	1110	1140	-
2	1	12	50.2	1316	-	-
3	1	12	62.9	1520	-	-
4	1	12	64.7	1902	-	-
5	3	12	83.8	1410	1097	1621
6	1	12	65.4	1944	-	-
7	1	12	53.2	1024	-	-
8	1	12	51.7	1603	-	-
9	2	12	78.7	1804	1168	-
10	2	12	72.4	1030	1343	-
11	1	12	53.8	1327	-	-
12	2	12	73.6	1524	1553	-
13	2	12	66.7	1722	1122	-
14	2	12	82.5	1404	1019	-
15						
16						
17						
18						
19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_17

Number of Bursts in Trial: 20

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	20	87.6	1565	1055	1840
2	3	20	85.2	1735	1541	1408
3	3	20	84.8	1534	1889	1463
4	2	20	77.9	1749	1460	-
5	2	20	76.5	1518	1485	-
6	1	20	60.9	1540	-	-
7	2	20	83	1080	1010	-
8	2	20	80.4	1824	1752	-
9	2	20	67.5	1764	1181	-
10	1	20	62.1	1495	-	-
11	3	20	86.4	1773	1966	1263
12	3	20	84.3	1593	1188	1788
13	2	20	76.9	1226	1537	-
14	3	20	95.8	1192	1298	1844
15	1	20	55.2	1644	-	-
16	1	20	59	1402	-	-
17	3	20	94.5	1296	1700	1283
18	3	20	91.9	1970	1978	1165
19	3	20	85.2	1732	1551	1189
20	2	20	69.5	1038	1224	-

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_18

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	10	86.4	1259	1918	1455
2	3	10	92.2	1598	1719	1895
3	2	10	80.4	1816	1899	-
4	1	10	54.3	1335	-	-
5	1	10	53.1	1303	-	-
6	2	10	69.4	1503	1546	-
7	2	10	69.1	1279	1639	-
8	3	10	100	1375	1438	1595
9	2	10	79.6	1239	1705	-
10	3	10	88.4	1374	1579	1623
11	1	10	53.3	1016	-	-
12	1	10	65.3	1709	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_19

Number of Bursts in Trial: 14

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	12	55.3	1920	-	-
2	1	12	58.3	1797	-	-
3	2	12	72.3	1610	1039	-
4	3	12	84.8	1131	1761	1721
5	2	12	82.5	1875	1431	-
6	1	12	63.3	1095	-	-
7	2	12	80	1119	1913	-
8	3	12	90.3	1660	1853	1123
9	3	12	91.1	1539	1783	1172
10	3	12	96.6	1525	1036	1385
11	2	12	82.7	1710	1990	-
12	1	12	50.7	1234	-	-
13	2	12	78.4	1047	1109	-
14	3	12	99.5	1299	1965	1869
15						
16						
17						
18						
19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_20

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	10	88.6	1501	1067	1927
2	1	10	57.4	1723	-	-
3	3	10	96.6	1086	1658	1324
4	2	10	69.7	1751	1945	-
5	2	10	77.9	1642	1317	-
6	1	10	62	1866	-	-
7	3	10	88.4	1997	1077	1366
8	3	10	97.3	1790	1896	1367
9	3	10	96.2	1391	1787	1672
10	3	10	95.4	1020	1892	1414
11	1	10	54.8	1084	-	-
12	2	10	80.4	1850	1436	-
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_21

Number of Bursts in Trial: 16

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	15	74.7	1619	1611	-
2	1	15	57.1	1560	-	-
3	3	15	91.9	1392	1475	1276
4	2	15	83.1	1809	1772	-
5	1	15	50.7	1003	-	-
6	2	15	79.2	1574	1600	-
7	1	15	58.7	1186	-	-
8	2	15	71	1521	1567	-
9	2	15	79	1777	1960	-
10	2	15	68.5	1284	1428	-
11	2	15	73.5	1904	1352	-
12	2	15	70.5	1864	1115	-
13	2	15	76.6	1045	1300	-
14	2	15	81.2	1160	1675	-
15	1	15	61.8	1277	-	-
16	3	15	94.9	1450	1206	1860
17						
18						
19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_22

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	9	78.5	1653	1698	-
2	3	9	89.8	1174	1962	1167
3	1	9	59.4	1982	-	-
4	2	9	79.6	1633	1890	-
5	2	9	76	1112	1811	-
6	1	9	53.6	1144	-	-
7	2	9	80.9	1220	1053	-
8	1	9	61.6	1724	-	-
9	1	9	53.4	1901	-	-
10	1	9	59.9	1379	-	-
11	1	9	60.4	1453	-	-
12	3	9	91.4	1768	1726	1227
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_23

Number of Bursts in Trial: 20

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	20	77	1191	1363	-
2	1	20	58.1	1248	-	-
3	1	20	62.1	1836	-	-
4	2	20	76.9	1334	1236	-
5	2	20	80	1914	1852	-
6	1	20	52	1701	-	-
7	3	20	88.6	1693	1995	1905
8	2	20	72.9	1922	1387	-
9	3	20	98.5	1839	1746	1389
10	1	20	57.9	1193	-	-
11	3	20	95.9	1659	1870	1066
12	1	20	53.5	1162	-	-
13	3	20	92	1745	1654	1458
14	1	20	57.3	1834	-	-
15	2	20	70.5	1684	1586	-
16	2	20	70	1042	1664	-
17	3	20	84	1765	1630	1176
18	2	20	76.1	1557	1057	-
19	3	20	93.2	1985	1018	1340
20	3	20	96.8	1760	1614	1817

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_24

Number of Bursts in Trial: 14

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	12	50.1	1841	-	-
2	3	12	93.5	1590	1081	1413
3	2	12	68.8	1707	1577	-
4	1	12	56.3	1056	-	-
5	3	12	86	1953	1108	1987
6	2	12	75.2	1572	1536	-
7	1	12	54.4	1517	-	-
8	2	12	71.1	1329	1243	-
9	2	12	76.2	1940	1770	-
10	2	12	80.2	1098	1209	-
11	2	12	79.7	1588	1214	-
12	3	12	90.9	1615	1862	1601
13	2	12	68.7	1377	1441	-
14	2	12	67.4	1872	1313	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_25

Number of Bursts in Trial: 13

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	11	94	1643	1748	1941
2	2	11	70.8	1177	1201	-
3	1	11	56.3	1006	-	-
4	3	11	96.7	1230	1163	1332
5	3	11	90.6	1217	1582	1498
6	2	11	74.5	1569	1281	-
7	3	11	92.6	1065	1669	1222
8	3	11	89	1493	1135	1380
9	3	11	96.5	1607	1822	1602
10	2	11	70.5	1141	1178	-
11	3	11	94	1009	1629	1956
12	1	11	55.8	1290	-	-
13	3	11	87.7	1435	1963	1164
14						
15						
16						
17						
18						
19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_26

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	5	68.6	1306	1161	-
2	2	5	83.1	1420	1315	-
3	1	5	60.9	1687	-	-
4	2	5	77.7	1776	1158	-
5	2	5	77.4	1793	1510	-
6	2	5	66.8	1576	1323	-
7	1	5	63.7	1333	-	-
8	3	5	91.2	1409	1681	1275
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_27

Number of Bursts in Trial: 17

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	16	83.6	1632	1195	1000
2	3	16	89.4	1173	1627	1656
3	1	16	55.8	1532	-	-
4	3	16	90.9	1981	1554	1998
5	1	16	54.7	1825	-	-
6	3	16	97.7	1734	1202	1250
7	2	16	67.5	1571	1434	-
8	3	16	96.7	1589	1469	1268
9	2	16	68.3	1750	1954	-
10	2	16	78.3	1591	1082	-
11	1	16	55	1427	-	-
12	3	16	84.9	1129	1936	1199
13	2	16	74.6	1959	1856	-
14	1	16	63.3	1885	-	-
15	3	16	99.8	1035	1515	1120
16	1	16	63.6	1647	-	-
17	3	16	87.3	1931	1051	1831
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_28

Number of Bursts in Trial: 19

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	19	85.6	1946	1078	1015
2	2	19	68.6	1029	1780	-
3	1	19	54.2	1111	-	-
4	1	19	61.2	1104	-	-
5	3	19	97.1	1157	1969	1100
6	3	19	98.3	1142	1699	1622
7	1	19	62.4	1655	-	-
8	2	19	80.2	1126	1769	-
9	3	19	87.5	1216	1448	1179
10	3	19	85.8	1847	1348	1472
11	3	19	88.1	1023	1124	1631
12	1	19	65.3	1848	-	-
13	1	19	52.5	1470	-	-
14	1	19	52.3	1312	-	-
15	2	19	74.1	1915	1200	-
16	1	19	54.9	1479	-	-
17	2	19	76.2	1376	1502	-
18	1	19	60.4	1758	-	-
19	2	19	81.5	1491	1103	-
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_29

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	10	50.5	1857	-	-
2	1	10	55.7	1246	-	-
3	3	10	85.8	1774	1002	1967
4	2	10	76.9	1125	1474	-
5	2	10	75.1	1254	1052	-
6	3	10	92.3	1180	1486	1492
7	2	10	78.1	1301	1757	-
8	3	10	92.2	1898	1252	1713
9	3	10	89	1260	1706	1411
10	2	10	70.9	1578	1620	-
11	1	10	63.1	1782	-	-
12	1	10	55.3	1522	-	-
13						
14						
15						
16						
17						
18						
19						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_30

Number of Bursts in Trial: 18

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	17	83.4	1454	1205	1801
2	3	17	97.3	1319	1826	1635
3	3	17	90.4	1079	1986	1674
4	3	17	91.8	1563	1151	1802
5	3	17	98.2	1876	1977	1766
6	1	17	59.5	1952	-	-
7	2	17	80	1253	1137	-
8	3	17	86.5	1054	1128	1828
9	3	17	91.1	1105	1599	1442
10	3	17	93.5	1867	1373	1087
11	1	17	60.7	1033	-	-
12	2	17	67.2	1288	1405	-
13	1	17	61.8	1585	-	-
14	2	17	79.4	1933	1667	-
15	2	17	81.4	1096	1464	-
16	1	17	65.7	1496	-	-
17	2	17	76	1733	1255	-
18	2	17	81	1326	1668	-
19						
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A.2 The Frequency Hopping Radar pattern

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_01					
Frequency (MHz)	0	1	2	3	4
0	5436	5618	5502	5507	5674
5	5429	5363	5362	5339	5615
10	5432	5291	5566	5689	5400
15	5658	5277	5656	5265	5588
20	5643	5342	5449	5558	5600
25	5557	5293	5478	5488	5560
30	5331	5350	5559	5604	5505
35	5251	5413	5292	5424	5703
40	5596	5433	5266	5273	5548
45	5437	5253	5447	5628	5286
50	5340	5690	5302	5441	5439
55	5421	5694	5417	5609	5576
60	5305	5351	5288	5354	5335
65	5620	5657	5686	5711	5663
70	5610	5297	5634	5510	5426
75	5357	5667	5370	5387	5281
80	5585	5524	5338	5385	5673
85	5464	5693	5455	5633	5712
90	5679	5269	5607	5651	5352
95	5358	5612	5289	5397	5402

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_02					
Frequency (MHz)	0	1	2	3	4
0	5691	5382	5438	5668	5419
5	5471	5385	5437	5502	5347
10	5363	5555	5607	5409	5421
15	5649	5404	5284	5310	5305
20	5554	5508	5370	5441	5531
25	5488	5496	5582	5522	5602
30	5317	5307	5299	5281	5325
35	5390	5504	5563	5577	5714
40	5435	5613	5679	5513	5642
45	5587	5417	5336	5505	5681
50	5648	5594	5391	5256	5530
55	5262	5722	5387	5278	5614
60	5580	5705	5470	5296	5595
65	5655	5378	5443	5606	5625
70	5446	5413	5466	5717	5275
75	5711	5626	5339	5410	5424
80	5566	5301	5448	5641	5293
85	5573	5393	5367	5535	5515
90	5350	5633	5459	5467	5297
95	5279	5386	5715	5624	5403

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_03					
Frequency (MHz)	0	1	2	3	4
0	5471	5621	5374	5354	5261
5	5513	5310	5512	5568	5651
10	5672	5344	5648	5507	5442
15	5262	5434	5290	5355	5497
20	5562	5577	5408	5530	5504
25	5279	5699	5308	5556	5266
30	5681	5264	5514	5523	5432
35	5595	5359	5255	5628	5274
40	5696	5520	5278	5639	5516
45	5397	5419	5563	5259	5438
50	5470	5567	5307	5619	5463
55	5666	5575	5707	5502	5433
60	5551	5635	5338	5427	5481
65	5324	5644	5555	5661	5350
70	5691	5538	5703	5613	5687
75	5585	5686	5547	5553	5461
80	5422	5457	5636	5588	5367
85	5377	5478	5445	5545	5684
90	5610	5287	5462	5285	5323
95	5597	5258	5420	5467	5698

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_04					
Frequency (MHz)	0	1	2	3	4
0	5251	5385	5310	5515	5481
5	5555	5332	5587	5256	5383
10	5603	5705	5311	5702	5463
15	5350	5561	5393	5400	5689
20	5570	5268	5349	5522	5477
25	5642	5685	5427	5412	5590
30	5308	5696	5632	5682	5343
35	5571	5686	5252	5505	5542
40	5304	5458	5421	5636	5348
45	5280	5502	5524	5312	5325
50	5346	5358	5708	5286	5513
55	5288	5661	5692	5488	5283
60	5356	5404	5270	5370	5504
65	5697	5717	5397	5707	5616
70	5351	5663	5544	5655	5650
75	5613	5625	5330	5678	5321
80	5307	5316	5538	5637	5413
85	5638	5485	5627	5291	5357
90	5382	5437	5562	5451	5596
95	5473	5366	5395	5509	5464

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_05					
Frequency (MHz)	0	1	2	3	4
0	5506	5624	5721	5579	5323
5	5694	5257	5662	5419	5590
10	5437	5494	5352	5422	5484
15	5438	5688	5496	5348	5406
20	5578	5337	5290	5611	5547
25	5433	5537	5533	5516	5350
30	5556	5372	5456	5541	5710
35	5302	5523	5658	5553	5524
40	5387	5396	5661	5633	5277
45	5260	5585	5582	5365	5697
50	5444	5409	5584	5457	5379
55	5615	5407	5546	5520	5490
60	5703	5663	5705	5691	5668
65	5550	5636	5320	5512	5675
70	5304	5716	5639	5503	5527
75	5295	5659	5606	5485	5681
80	5459	5384	5648	5501	5378
85	5689	5631	5305	5317	5297
90	5294	5264	5454	5617	5435
95	5452	5469	5690	5507	5562

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_06					
Frequency (MHz)	0	1	2	3	4
0	5664	5388	5657	5265	5543
5	5261	5279	5262	5582	5419
10	5368	5283	5393	5617	5505
15	5526	5340	5599	5598	5489
20	5503	5328	5603	5520	5321
25	5486	5620	5658	5445	5513
30	5587	5705	5361	5277	5490
35	5319	5336	5467	5363	5567
40	5334	5426	5630	5584	5715
45	5668	5640	5418	5477	5476
50	5460	5508	5407	5304	5569
55	5597	5268	5367	5649	5655
60	5648	5495	5531	5259	5394
65	5499	5672	5530	5307	5478
70	5473	5719	5524	5615	5462
75	5496	5415	5327	5694	5377
80	5447	5301	5320	5572	5561
85	5449	5721	5643	5404	5482
90	5303	5488	5471	5392	5413
95	5602	5299	5454	5351	5675

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_07					
Frequency (MHz)	0	1	2	3	4
0	5444	5627	5593	5426	5385
5	5303	5679	5337	5648	5626
10	5299	5547	5434	5526	5517
15	5467	5702	5438	5412	5497
20	5572	5269	5692	5493	5587
25	5338	5464	5346	5531	5431
30	5470	5327	5382	5656	5416
35	5581	5590	5586	5381	5677
40	5650	5272	5666	5724	5513
45	5695	5276	5601	5374	5267
50	5352	5321	5511	5597	5608
55	5723	5280	5523	5312	5562
60	5345	5690	5454	5680	5448
65	5611	5362	5674	5281	5545
70	5344	5373	5591	5421	5465
75	5568	5514	5329	5496	5541
80	5510	5298	5515	5551	5414
85	5524	5641	5686	5652	5701
90	5647	5406	5265	5500	5585
95	5252	5387	5313	5675	5697

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_08					
Frequency (MHz)	0	1	2	3	4
0	5699	5391	5529	5587	5605
5	5442	5701	5412	5336	5358
10	5608	5475	5435	5547	5497
15	5708	5483	5604	5505	5263
20	5685	5684	5466	5665	5667
25	5450	5251	5573	5320	5427
30	5445	5631	5379	5555	5672
35	5264	5392	5516	5258	5334
40	5721	5675	5359	5659	5629
45	5703	5562	5686	5431	5570
50	5468	5477	5502	5381	5309
55	5432	5510	5635	5256	5280
60	5626	5418	5397	5647	5572
65	5469	5559	5714	5255	5347
70	5600	5470	5380	5337	5558
75	5549	5291	5439	5277	5670
80	5673	5710	5454	5584	5261
85	5554	5648	5425	5521	5299
90	5288	5609	5602	5307	5484
95	5285	5303	5317	5723	5444

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_09					
Frequency (MHz)	0	1	2	3	4
0	5479	5630	5465	5273	5447
5	5484	5626	5487	5499	5662
10	5539	5697	5516	5568	5693
15	5624	5336	5431	5321	5416
20	5429	5723	5298	5439	5363
25	5614	5395	5554	5285	5712
30	5684	5384	5660	5308	5674
35	5694	5288	5279	5417	5306
40	5452	5438	5623	5574	5718
45	5274	5655	5442	5717	5480
50	5419	5579	5673	5613	5397
55	5254	5514	5656	5692	5578
60	5658	5561	5675	5580	5563
65	5678	5669	5716	5346	5683
70	5404	5361	5265	5311	5449
75	5446	5339	5659	5530	5543
80	5533	5297	5258	5670	5430
85	5454	5547	5453	5519	5602
90	5719	5502	5418	5711	5548
95	5619	5362	5468	5649	5406

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_10					
Frequency (MHz)	0	1	2	3	4
0	5637	5394	5401	5434	5667
5	5526	5648	5562	5662	5470
10	5486	5557	5350	5589	5306
15	5276	5439	5476	5513	5424
20	5498	5664	5290	5412	5629
25	5466	5501	5658	5319	5279
30	5670	5341	5400	5397	5261
35	5379	5550	5570	5695	5291
40	5521	5464	5339	5715	5678
45	5538	5525	5300	5533	5358
50	5374	5552	5361	5369	5385
55	5310	5593	5365	5395	5504
60	5615	5442	5295	5622	5614
65	5631	5543	5383	5324	5450
70	5298	5422	5653	5323	5705
75	5511	5320	5314	5461	5321
80	5625	5357	5512	5607	5645
85	5387	5349	5539	5270	5430
90	5255	5636	5417	5549	5556
95	5628	5509	5352	5410	5672

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_11					
Frequency (MHz)	0	1	2	3	4
0	5417	5633	5337	5595	5509
5	5568	5670	5637	5253	5601
10	5304	5275	5598	5545	5610
15	5297	5403	5542	5521	5705
20	5432	5664	5605	5379	5385
25	5517	5415	5704	5287	5353
30	5321	5559	5298	5615	5709
35	5692	5400	5470	5443	5345
40	5609	5604	5402	5482	5712
45	5510	5518	5608	5261	5586
50	5571	5550	5715	5575	5278
55	5305	5460	5339	5500	5691
60	5600	5722	5530	5567	5702
65	5330	5561	5643	5719	5658
70	5446	5426	5346	5552	5310
75	5453	5622	5398	5257	5373
80	5492	5475	5570	5625	5481
85	5442	5260	5354	5265	5352
90	5607	5597	5262	5357	5527
95	5690	5364	5472	5533	5454

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_12					
Frequency (MHz)	0	1	2	3	4
0	5672	5397	5273	5659	5254
5	5707	5595	5712	5416	5430
10	5710	5539	5261	5265	5631
15	5385	5530	5645	5469	5422
20	5343	5258	5643	5371	5358
25	5308	5267	5432	5488	5387
30	5460	5448	5255	5483	5415
35	5658	5714	5498	5620	5444
40	5687	5340	5722	5331	5439
45	5691	5319	5639	5458	5585
50	5251	5291	5664	5576	5627
55	5648	5293	5690	5510	5571
60	5376	5695	5512	5534	5253
65	5507	5466	5668	5597	5656
70	5318	5624	5296	5553	5374
75	5494	5419	5473	5252	5685
80	5351	5692	5544	5661	5637
85	5260	5630	5457	5370	5557
90	5522	5533	5716	5572	5292
95	5527	5517	5352	5489	5618

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_13					
Frequency (MHz)	0	1	2	3	4
0	5452	5636	5684	5345	5571
5	5274	5617	5312	5579	5637
10	5544	5328	5302	5363	5652
15	5473	5560	5651	5514	5614
20	5351	5424	5584	5460	5331
25	5671	5594	5635	5592	5421
30	5502	5434	5687	5710	5581
35	5510	5534	5380	5392	5278
40	5487	5368	5478	5299	5377
45	5692	5723	5364	5427	5342
50	5399	5361	5722	5405	5707
55	5445	5505	5385	5457	5463
60	5554	5550	5667	5633	5488
65	5588	5318	5379	5556	5698
70	5253	5650	5586	5562	5454
75	5504	5320	5607	5381	5561
80	5357	5638	5610	5593	5552
85	5660	5612	5618	5280	5539
90	5275	5485	5309	5582	5598
95	5347	5371	5721	5568	5358

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_14					
Frequency (MHz)	0	1	2	3	4
0	5707	5400	5620	5506	5316
5	5542	5387	5267	5369	5475
10	5689	5343	5558	5673	5561
15	5687	5279	5559	5331	5359
20	5493	5525	5452	5304	5462
25	5543	5363	5696	5358	5544
30	5323	5644	5688	5409	5433
35	5720	5365	5306	5426	5448
40	5694	5691	5252	5325	5675
45	5458	5382	5338	5648	5610
50	5715	5603	5393	5464	5697
55	5418	5549	5579	5595	5526
60	5416	5634	5550	5499	5295
65	5380	5496	5490	5566	5669
70	5698	5480	5608	5390	5656
75	5547	5704	5609	5335	5706
80	5532	5281	5333	5388	5545
85	5670	5552	5541	5556	5269
90	5528	5663	5391	5575	5377
95	5714	5594	5326	5637	5582

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_15					
Frequency (MHz)	0	1	2	3	4
0	5390	5639	5556	5667	5633
5	5358	5564	5462	5333	5576
10	5406	5478	5384	5278	5694
15	5552	5339	5382	5604	5620
20	5270	5659	5466	5541	5277
25	5350	5395	5469	5325	5392
30	5586	5687	5601	5428	5561
35	5253	5456	5674	5579	5459
40	5533	5558	5629	5322	5438
45	5465	5396	5701	5400	5591
50	5304	5444	5553	5520	5362
55	5262	5310	5345	5387	5288
60	5715	5602	5303	5442	5691
65	5515	5608	5530	5275	5411
70	5559	5351	5680	5568	5276
75	5513	5443	5644	5709	5355
80	5555	5272	5391	5616	5461
85	5493	5617	5298	5542	5551
90	5721	5596	5703	5343	5692
95	5566	5618	5707	5452	5313

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_16					
Frequency (MHz)	0	1	2	3	4
0	5645	5500	5492	5353	5378
5	5497	5489	5537	5496	5405
10	5715	5267	5425	5473	5640
15	5466	5485	5552	5337	5278
20	5253	5504	5533	5250	5616
25	5344	5672	5526	5426	5673
30	5558	5546	5335	5548	5523
35	5547	5470	5257	5373	5372
40	5263	5567	5635	5319	5436
45	5321	5454	5279	5287	5467
50	5480	5495	5642	5721	5684
55	5450	5487	5542	5358	5320
60	5389	5434	5604	5514	5464
65	5644	5265	5545	5689	5631
70	5284	5720	5656	5527	5273
75	5374	5419	5494	5688	5553
80	5301	5418	5564	5444	5708
85	5579	5556	5361	5668	5412
90	5593	5707	5654	5658	5381
95	5457	5272	5647	5516	5686

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_17					
Frequency (MHz)	0	1	2	3	4
0	5425	5264	5428	5514	5695
5	5539	5511	5612	5659	5646
10	5531	5466	5668	5261	5253
15	5496	5588	5597	5529	5286
20	5419	5445	5622	5698	5504
25	5671	5400	5630	5460	5292
30	5562	5515	5487	5271	5565
35	5260	5266	5507	5287	5686
40	5346	5505	5316	5365	5301
45	5631	5415	5332	5552	5721
50	5656	5546	5256	5544	5628
55	5638	5441	5593	5361	5707
60	5449	5570	5334	5527	5431
65	5715	5413	5583	5572	5437
70	5492	5325	5420	5472	5632
75	5486	5620	5494	5465	5475
80	5566	5681	5481	5549	5284
85	5347	5647	5639	5273	5326
90	5660	5397	5692	5263	5349
95	5474	5327	5414	5568	5658

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_18					
Frequency (MHz)	0	1	2	3	4
0	5680	5503	5364	5675	5440
5	5581	5436	5687	5347	5344
10	5577	5320	5507	5291	5282
15	5341	5623	5594	5642	5721
20	5672	5585	5386	5614	5671
25	5392	5523	5603	5259	5494
30	5334	5548	5472	5501	5261
35	5566	5704	5351	5634	5660
40	5298	5622	5429	5346	5640
45	5410	5294	5281	5714	5473
50	5385	5439	5597	5357	5442
55	5367	5475	5254	5395	5308
60	5655	5678	5578	5260	5376
65	5670	5353	5377	5441	5362
70	5619	5307	5707	5295	5397
75	5406	5387	5321	5608	5445
80	5589	5456	5717	5676	5462
85	5629	5544	5449	5479	5489
90	5602	5368	5669	5673	5336
95	5611	5465	5666	5361	5491

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_19					
Frequency (MHz)	0	1	2	3	4
0	5363	5267	5300	5361	5282
5	5623	5458	5287	5510	5648
10	5411	5681	5645	5486	5303
15	5332	5275	5697	5687	5438
20	5680	5654	5424	5703	5644
25	5658	5472	5331	5528	5473
30	5437	5429	5716	5413	5289
35	5368	5442	5430	5338	5461
40	5512	5284	5308	5407	5601
45	5261	5322	5531	5704	5436
50	5665	5419	5349	5498	5474
55	5649	5707	5425	5321	5502
60	5323	5264	5311	5655	5614
65	5599	5573	5566	5392	5390
70	5487	5404	5259	5494	5718
75	5318	5446	5674	5250	5662
80	5560	5634	5627	5584	5334
85	5630	5672	5663	5405	5470
90	5508	5696	5685	5389	5525
95	5596	5292	5465	5720	5520

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_20					
Frequency (MHz)	0	1	2	3	4
0	5618	5506	5711	5425	5502
5	5287	5383	5362	5576	5380
10	5342	5470	5686	5681	5324
15	5420	5402	5325	5635	5630
20	5688	5345	5365	5695	5617
25	5546	5437	5564	5562	5515
30	5326	5386	5359	5662	5584
35	5410	5533	5701	5588	5601
40	5300	5692	5697	5548	5404
45	5530	5716	5405	5492	5394
50	5591	5349	5612	5699	5620
55	5391	5266	5303	5671	5361
60	5687	5334	5577	5366	5465
65	5260	5594	5279	5638	5378
70	5393	5494	5463	5363	5430
75	5282	5322	5418	5271	5499
80	5385	5292	5443	5491	5250
85	5270	5625	5277	5678	5357
90	5532	5320	5579	5622	5680
95	5408	5723	5417	5605	5639

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_21					
Frequency (MHz)	0	1	2	3	4
0	5398	5270	5647	5586	5344
5	5329	5405	5437	5264	5587
10	5273	5259	5252	5401	5345
15	5508	5529	5428	5680	5347
20	5599	5414	5306	5309	5590
25	5337	5640	5668	5596	5557
30	5312	5343	5574	5339	5307
35	5549	5624	5594	5266	5612
40	5614	5300	5635	5313	5362
45	5696	5488	5550	5447	5381
50	5603	5275	5709	5689	5685
55	5257	5403	5490	5494	5393
60	5377	5686	5641	5288	5684
65	5630	5656	5664	5710	5461
70	5493	5721	5439	5700	5302
75	5402	5368	5399	5426	5434
80	5280	5355	5440	5628	5372
85	5370	5632	5605	5352	5485
90	5634	5547	5591	5639	5578
95	5387	5595	5543	5629	5282

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_22					
Frequency (MHz)	0	1	2	3	4
0	5653	5509	5583	5272	5564
5	5371	5330	5512	5427	5416
10	5582	5523	5293	5499	5366
15	5596	5559	5531	5250	5539
20	5607	5580	5344	5301	5563
25	5700	5600	5368	5297	5630
30	5696	5676	5300	5314	5588
35	5602	5688	5715	5390	5419
40	5526	5550	5383	5573	5456
45	5398	5291	5571	5608	5500
50	5268	5479	5489	5326	5420
55	5532	5686	5593	5309	5465
60	5522	5542	5253	5570	5704
65	5258	5633	5666	5391	5556
70	5360	5404	5447	5496	5415
75	5659	5271	5511	5380	5678
80	5536	5713	5515	5437	5406
85	5648	5335	5586	5378	5650
90	5312	5668	5429	5656	5270
95	5476	5269	5698	5266	5277

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_23					
Frequency (MHz)	0	1	2	3	4
0	5433	5273	5519	5406	5413
5	5352	5587	5590	5623	5513
10	5312	5334	5694	5387	5686
15	5537	5673	5353	5615	5649
20	5285	5390	5536	5491	5452
25	5571	5401	5664	5263	5565
30	5257	5529	5265	5422	5428
35	5661	5669	5440	5389	5466
40	5511	5696	5492	5695	5559
45	5654	5569	5553	5533	5355
50	5665	5377	5509	5335	5476
55	5719	5640	5308	5506	5436
60	5651	5707	5402	5627	5301
65	5582	5605	5698	5351	5638
70	5596	5419	5391	5618	5715
75	5642	5557	5458	5455	5317
80	5578	5434	5601	5531	5368
85	5708	5659	5678	5637	5626
90	5370	5340	5318	5689	5657
95	5254	5374	5723	5326	5464

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_24					
Frequency (MHz)	0	1	2	3	4
0	5591	5512	5455	5594	5626
5	5552	5277	5662	5656	5355
10	5347	5673	5375	5414	5408
15	5675	5338	5640	5718	5545
20	5526	5340	5701	5382	5509
25	5379	5401	5299	5602	5698
30	5305	5551	5689	5647	5514
35	5620	5394	5519	5457	5451
40	5703	5646	5449	5461	5489
45	5527	5539	5359	5627	5606
50	5420	5706	5366	5428	5598
55	5536	5323	5335	5325	5407
60	5397	5618	5709	5453	5722
65	5513	5531	5641	5433	5441
70	5645	5516	5599	5268	5367
75	5577	5587	5287	5700	5439
80	5707	5667	5573	5469	5334
85	5321	5434	5685	5671	5376
90	5643	5399	5568	5505	5324
95	5639	5571	5346	5312	5712

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_25					
Frequency (MHz)	0	1	2	3	4
0	5371	5276	5391	5280	5468
5	5594	5299	5262	5344	5659
10	5278	5462	5416	5609	5429
15	5288	5465	5268	5534	5409
20	5264	5471	5482	5267	5253
25	5405	5706	5257	5444	5440
30	5646	5387	5666	5533	5610
35	5350	5500	5365	5542	5254
40	5290	5701	5486	5456	5519
45	5442	5685	5485	5479	5687
50	5359	5523	5548	5591	5619
55	5281	5434	5562	5563	5541
60	5376	5668	5714	5480	5580
65	5265	5513	5622	5717	5502
70	5699	5592	5721	5536	5556
75	5310	5368	5420	5484	5680
80	5354	5633	5704	5331	5613
85	5337	5624	5256	5568	5511
90	5642	5550	5388	5670	5427
95	5576	5453	5455	5329	5292

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_26					
Frequency (MHz)	0	1	2	3	4
0	5626	5515	5327	5441	5688
5	5636	5699	5337	5507	5391
10	5684	5251	5457	5329	5450
15	5376	5592	5371	5333	5454
20	5542	5575	5680	5463	5455
25	5533	5677	5608	5335	5291
30	5486	5426	5603	5602	5440
35	5638	5672	5701	5621	5275
40	5279	5381	5703	5369	5483
45	5288	5499	5525	5646	5615
50	5572	5361	5718	5530	5301
55	5657	5589	5711	5405	5306
60	5438	5252	5563	5605	5373
65	5537	5429	5616	5475	5425
70	5411	5488	5702	5344	5697
75	5495	5428	5430	5414	5401
80	5261	5315	5610	5322	5389
85	5328	5466	5694	5663	5476
90	5596	5323	5586	5360	5433
95	5713	5564	5346	5347	5303

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_27					
Frequency (MHz)	0	1	2	3	4
0	5406	5279	5263	5505	5530
5	5678	5721	5412	5670	5598
10	5518	5515	5595	5427	5471
15	5367	5622	5474	5281	5646
20	5453	5644	5621	5552	5428
25	5421	5529	5336	5439	5325
30	5528	5315	5560	5342	5592
35	5458	5317	5417	5290	5517
40	5641	5609	5480	5692	5479
45	5608	5704	5668	5362	5712
50	5419	5581	5487	5533	5424
55	5359	5496	5635	5698	5550
60	5302	5503	5657	5378	5652
65	5307	5675	5703	5483	5705
70	5673	5454	5397	5557	5382
75	5416	5425	5391	5486	5452
80	5715	5308	5380	5344	5647
85	5571	5525	5547	5576	5363
90	5402	5287	5538	5445	5500
95	5590	5476	5252	5446	5432

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_28					
Frequency (MHz)	0	1	2	3	4
0	5564	5518	5674	5666	5275
5	5342	5646	5487	5261	5427
10	5449	5304	5636	5622	5492
15	5455	5274	5480	5326	5363
20	5461	5335	5659	5544	5401
25	5687	5381	5539	5640	5359
30	5570	5679	5517	5460	5366
35	5656	5378	5505	5310	5581
40	5631	5600	5579	5374	5574
45	5621	5459	5691	5287	5721
50	5724	5491	5595	5632	5576
55	5681	5380	5612	5313	5686
60	5454	5669	5582	5495	5609
65	5426	5603	5561	5327	5591
70	5470	5506	5652	5557	5330
75	5649	5413	5269	5670	5668
80	5438	5647	5553	5515	5322
85	5723	5618	5722	5717	5475
90	5309	5601	5344	5604	5690
95	5445	5685	5457	5368	5436

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_29					
Frequency (MHz)	0	1	2	3	4
0	5344	5282	5610	5352	5592
5	5384	5668	5562	5424	5634
10	5380	5665	5677	5342	5513
15	5543	5401	5583	5371	5555
20	5469	5501	5600	5633	5374
25	5575	5330	5267	5269	5393
30	5709	5474	5675	5518	5476
35	5517	5596	5581	5356	5593
40	5470	5683	5614	5571	5453
45	5299	5723	5514	5367	5296
50	5504	5324	5325	5273	5378
55	5272	5537	5441	5252	5549
60	5287	5276	5627	5349	5362
65	5309	5724	5333	5366	5625
70	5372	5713	5315	5271	5445
75	5548	5428	5717	5697	5443
80	5618	5564	5680	5667	5652
85	5615	5262	5494	5512	5334
90	5306	5421	5305	5522	5620
95	5413	5619	5284	5552	5714

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_30					
Frequency (MHz)	0	1	2	3	4
0	5599	5521	5546	5513	5337
5	5426	5593	5637	5587	5366
10	5689	5454	5718	5537	5534
15	5631	5528	5686	5416	5272
20	5380	5570	5541	5625	5347
25	5657	5373	5427	5276	5554
30	5431	5415	5292	5296	5656
35	5687	5377	5509	5604	5309
40	5291	5455	5282	5568	5382
45	5322	5306	5352	5401	5472
50	5259	5279	5327	5646	5696
55	5591	5470	5514	5507	5437
60	5482	5273	5553	5592	5585
65	5700	5566	5559	5632	5490
70	5321	5529	5433	5601	5331
75	5338	5317	5325	5697	5658
80	5684	5406	5263	5694	5260
85	5503	5265	5384	5617	5606
90	5365	5622	5545	5552	5522
95	5511	5567	5336	5707	5663

Appendix – Information of the Testing Laboratories

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

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

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