



Appendix D: Frequency Stability

Test Result

Frequency Error vs. Voltage									
802.11a:5200MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
T _N	V _L	5200.04089	7.86	5200.03931	7.56	5200.04165	8.01	5200.04239	8.15
T _N	V _N	5200.02677	5.15	5200.02935	5.64	5200.03122	6.00	5200.03266	6.28
T _N	V _H	5200.03731	7.17	5200.04213	8.10	5200.04127	7.94	5200.04217	8.11

Frequency Error vs. Temperature									
802.11a: 5200 MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
40	V _N	5200.04112	7.91	5200.04345	8.36	5200.04764	9.16	5200.04959	9.54
30	V _N	5200.03792	7.29	5200.04244	8.16	5200.04671	8.98	5200.04871	9.37
20	V _N	5200.03698	7.11	5200.03977	7.65	5200.04235	8.14	5200.04354	8.37
10	V _N	5200.03122	6.00	5200.03348	6.44	5200.03877	7.46	5200.03922	7.54
0	V _N	5200.02953	5.68	5200.03033	5.83	5200.03466	6.67	5200.03764	7.24

Frequency Error vs. Voltage									
802.11a: 5825 MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
T _N	V _L	5825.04231	7.26	5825.03687	6.33	5825.03861	6.63	5825.04134	7.10
T _N	V _N	5825.02689	4.62	5825.02711	4.65	5825.02988	5.13	5825.03312	5.69
T _N	V _H	5825.03578	6.14	5825.03646	6.26	5825.04022	6.90	5825.04312	7.40

Frequency Error vs. Temperature									
802.11a:5825MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
40	V _N	5825.04312	7.40	5825.04873	8.37	5825.04964	8.52	5825.05235	8.99
30	V _N	5825.03971	6.82	5825.045466	7.81	5825.04833	8.30	5825.04944	8.49
20	V _N	5825.03477	5.97	5825.04087	7.02	5825.04789	8.22	5825.04476	7.68
10	V _N	5825.03255	5.59	5825.03577	6.14	5825.04211	7.23	5825.03997	6.86
0	V _N	5825.02911	5.00	5825.03412	5.86	5825.03579	6.14	5825.03744	6.43

Note: All the modes have been tested, only the worst data was recorded in the report.



Appendix E: Dynamic Frequency Selection

Test Result

DFS In-Service Monitoring (5250 MHz; 22.000 dBm; 160 MHz)

Test according to FCC title 47 part 15 §15.407(h), KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02

Measurement Summary

DUT Frequency (MHz)	Radar Type No.	Type of Measurement value	Overall Result
5250.000000	0	First of all Transmit Test	---
5250.000000	0	Channel Move Time	PASS
5250.000000	0	Channel Closing Transmission Time	PASS
5250.000000	0	Non-occupancy period	PASS

(continuation of the "Measurement Summary" table from column 4 ...)

DUT Frequency (MHz)	Overall Comment
5250.000000	not performed / not finished
5250.000000	
5250.000000	
5250.000000	

Channel Move Time Detailed Results

DUT Frequency (MHz)	Radar Type No.	CMT Tx Time (s)	CMT Limit (s)	CMT Result
5250.000000	0	0.433	10.000	PASS

(continuation of the "Channel Move Time Detailed Results" table from column 5 ...)

DUT Frequency (MHz)	CMT Comment
5250.000000	Tx Time value is last trailing edge found within sweep. See Note 1.

Channel Closing Transmission Time Detailed Results

DUT Frequency (MHz)	Radar Type No.	CCTT Type of Value	CCTT No. of Pulses found	CCTT Tx Time (ms)
5250.000000	0	first 200 ms	2	0.832
5250.000000	0	remaining 10.0 second(s) period	3	1.248

(continuation of the "Channel Closing Transmission Time Detailed Results" table from column 5 ...)

DUT Frequency (MHz)	CCTT Tx Time Limit (ms)	CCTT Result	CCTT Comment
5250.000000	200.000	PASS	See Note 1.
5250.000000	60.000	PASS	See Note 1.

Non-occupancy period Detailed Results

DUT Frequency (MHz)	Radar Type No.	NOP No. of Pulses found	NOP No. of Pulses Limit	NOP Tx Time (s)	NOP Tx Time Limit (s)
5250.000000	0	0	0	0.000	0.000

(continuation of the "Non-occupancy period Detailed Results" table from column 6 ...)

DUT Frequency (MHz)	NOP Result
5250.000000	PASS

Transmitting Test Detailed Results

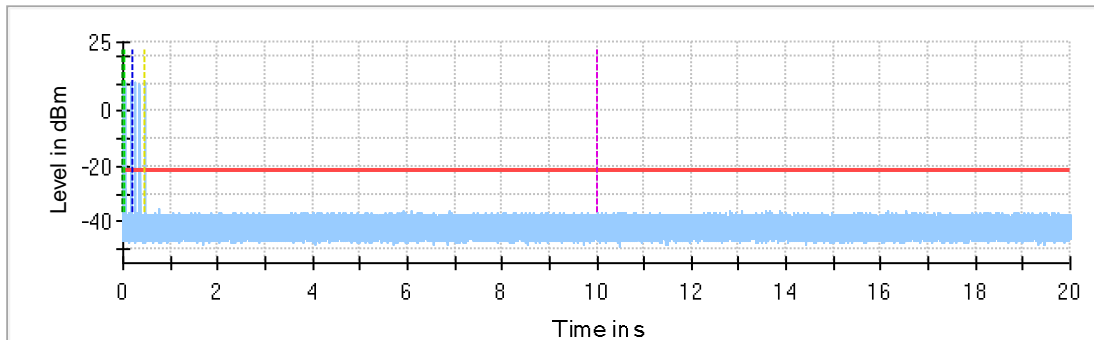
DUT Frequency (MHz)	Tx-Test Result	Tx-Test Comment
5250.000000	---	not performed / not finished

Additional Information

Note	Description
Note 1:	Because of the radar pulse event at the beginning, the investigation of the trace begins with an offset of 28.7 ms conforming to the end of the Radar burst.
Note 2:	Channel move time (CMT) / channel closing transmission time (CCTT) measurement was made with hi resolution video sweep using OSP DAQ channel
Note 3:	Because of the substantially higher sampling rate of the video signal the results for CCTT and CMT are more accurate than in the graphics visible. Reached timing accuracy of the video trace: approx 4 μs
Note 4:	The Non-Occupancy Period trace starts at the end of the Channel move time trace (20.000 secs.) Labeling of the x-axis (time) is relative to its beginning (0 secs.)

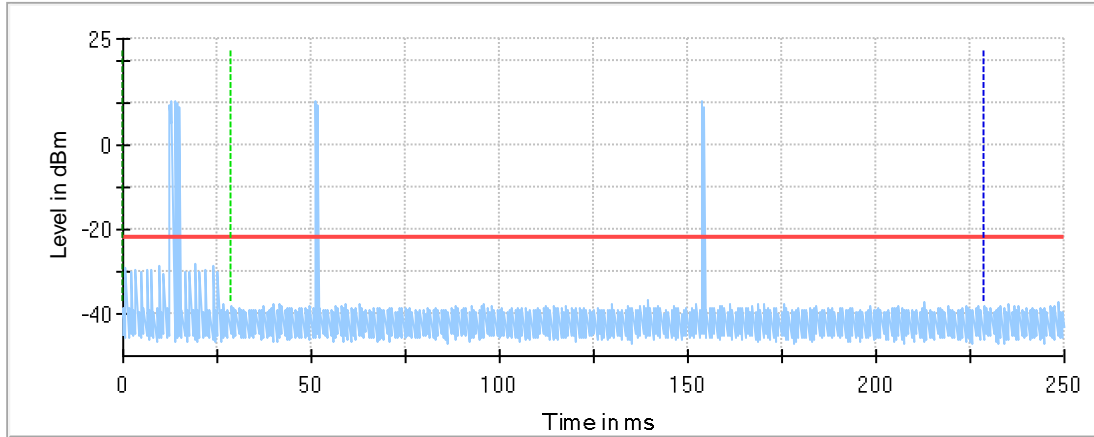
Test Graphs

Channel Move Time



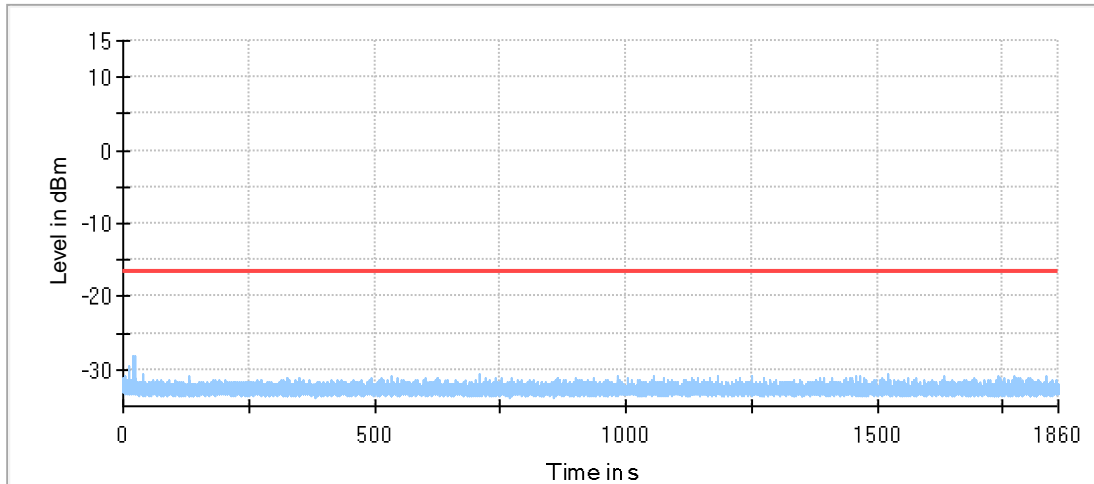
- Channel Move Time
- Threshold
- - - Start of Radar
- - - Trigger at end of Radar
- - - First 200ms of Channel Closing Tx Time
- - - 10sec Channel Move Time Limit
- - - Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms



- Channel Move Time first 200ms
- Start of Radar
- First 200ms of Channel Closing Tx Time
- Threshold
- Triqger at end of Radar

Non-occupancy period



- Non-occupancy period
- Threshold

Note: All the modes have been tested, only the worst data was recorded in the report.

END OF REPORT