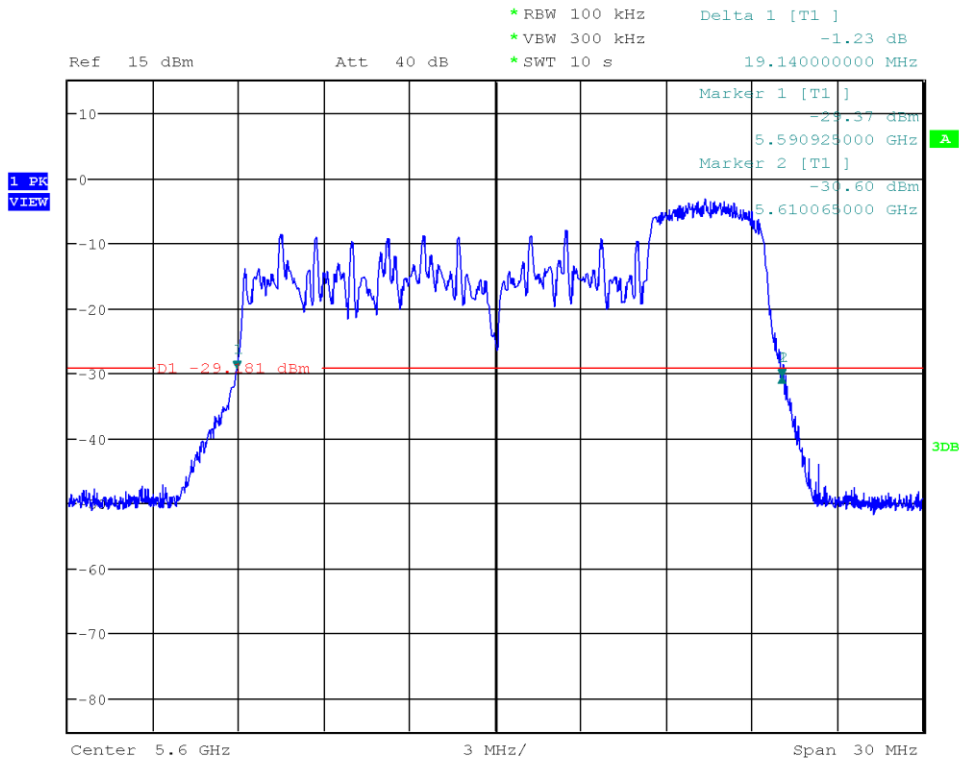


26 dB Bandwidth

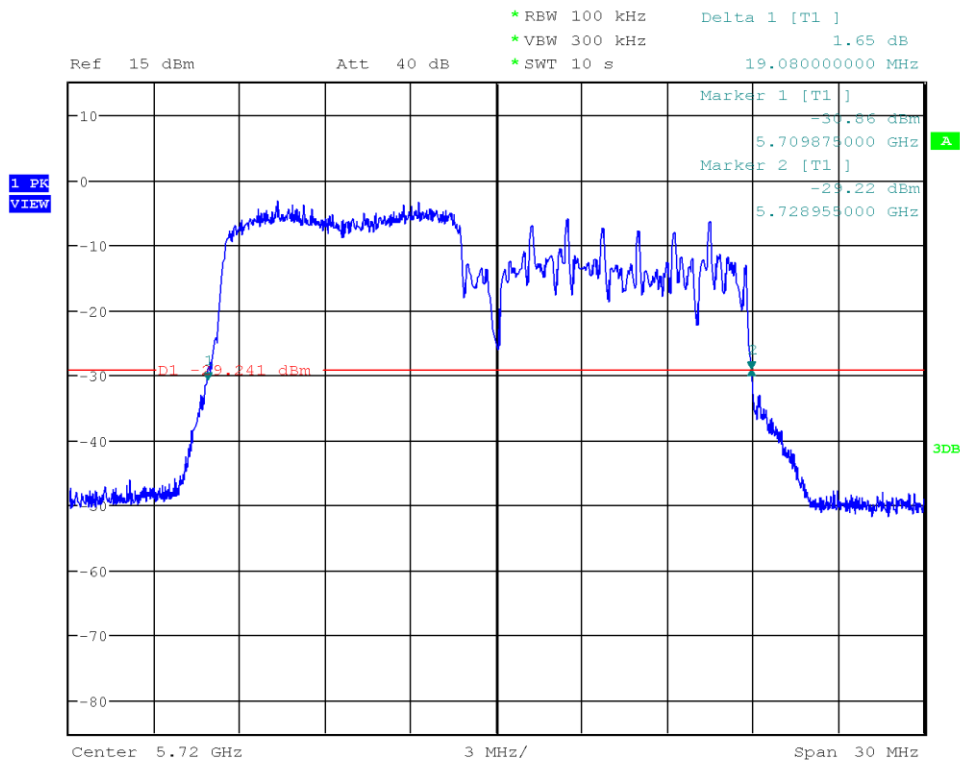
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 120, 5600 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 52 tones
 Lower Frequency [MHz]: 5590.925
 Upper Frequency [MHz]: 5610.065
 26 dB Bandwidth [MHz]: 19.140



Date: 27.FEB.2024 14:06:48

26 dB Bandwidth

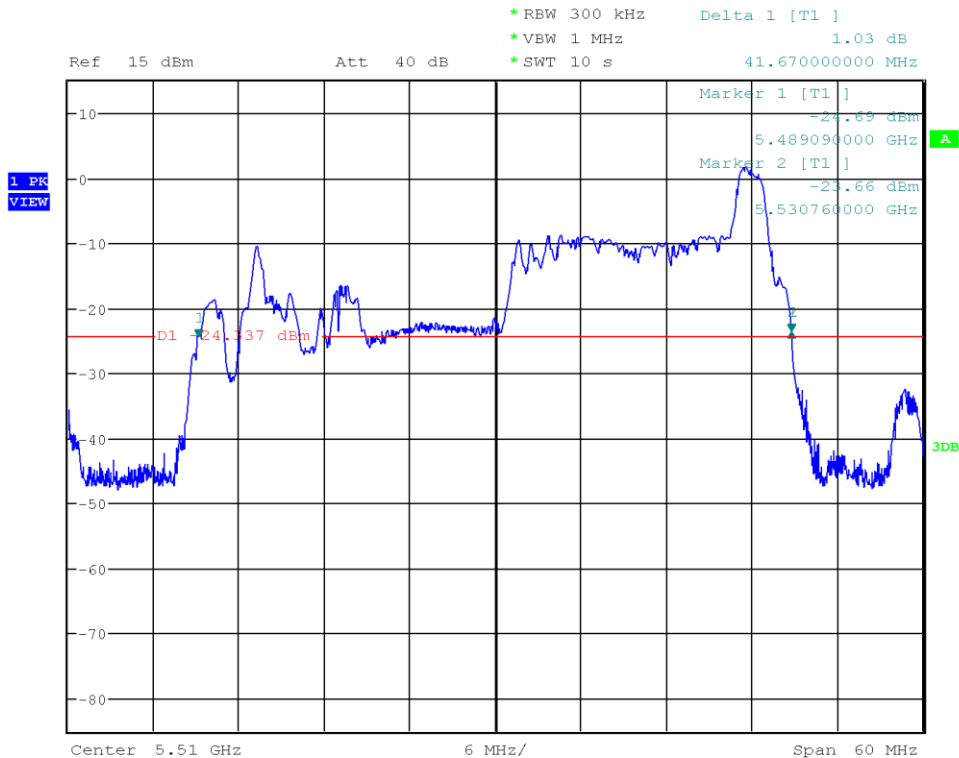
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 144, 5720 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5709.875
 Upper Frequency [MHz]: 5728.955
 26 dB Bandwidth [MHz]: 19.080



Date: 27.FEB.2024 14:08:00

26 dB Bandwidth

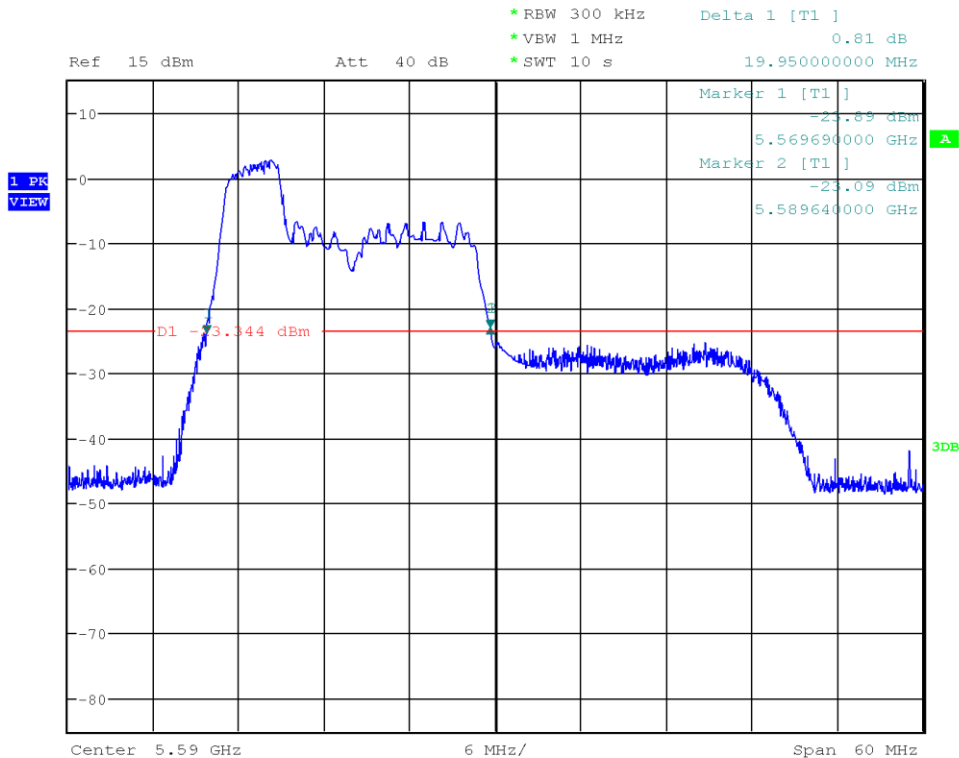
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 102, 5510 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 26 tones
 Lower Frequency [MHz]: 5489.090
 Upper Frequency [MHz]: 5530.760
 26 dB Bandwidth [MHz]: 41.670



Date: 27.FEB.2024 14:09:50

26 dB Bandwidth

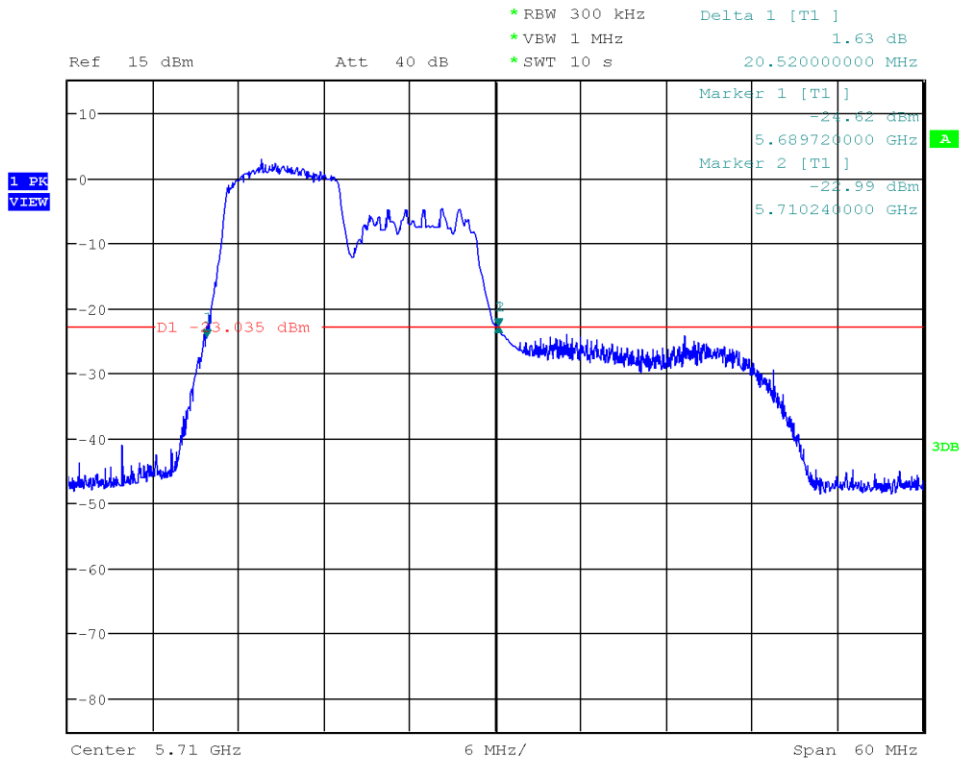
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 118, 5590 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 52 tones
 Lower Frequency [MHz]: 5569.690
 Upper Frequency [MHz]: 5589.640
 26 dB Bandwidth [MHz]: 19.950



Date: 27.FEB.2024 14:10:52

26 dB Bandwidth

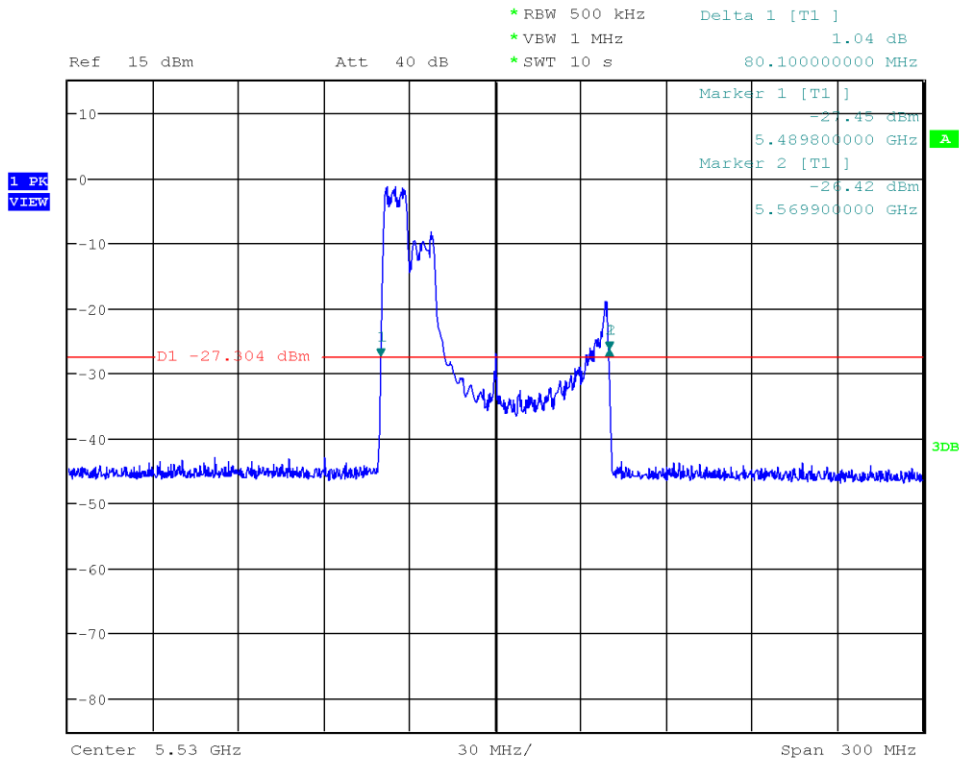
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 142, 5710 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5689.720
 Upper Frequency [MHz]: 5710.240
 26 dB Bandwidth [MHz]: 20.520



Date: 27.FEB.2024 14:12:13

26 dB Bandwidth

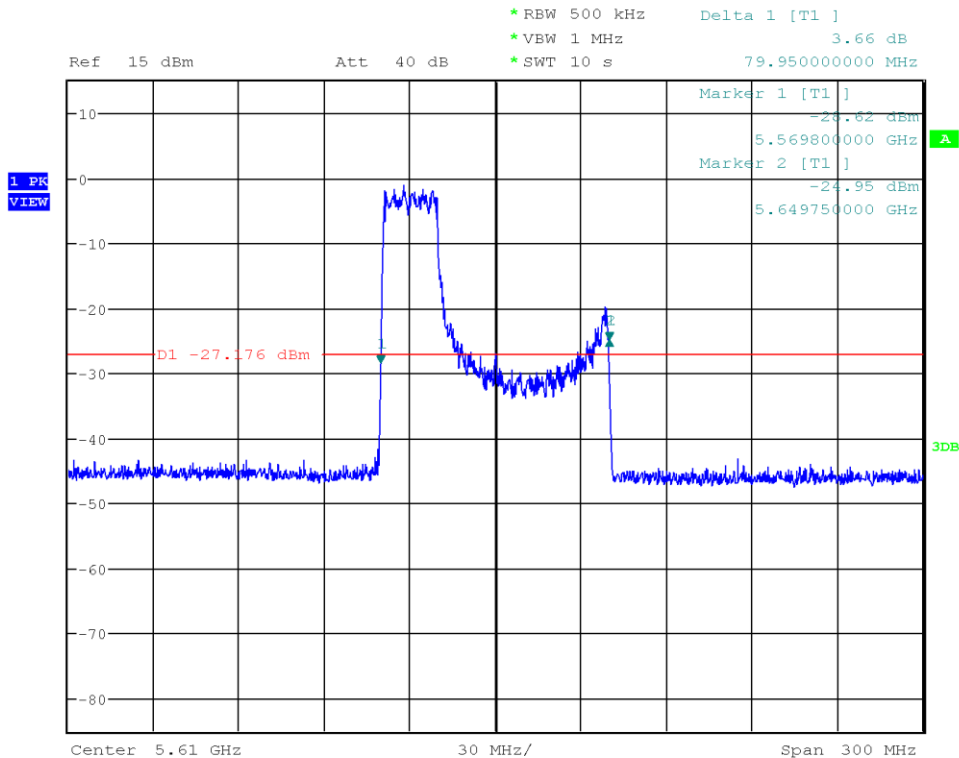
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE80-TB), Channel: 106, 5530 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5489.800
 Upper Frequency [MHz]: 5569.900
 26 dB Bandwidth [MHz]: 80.100



Date: 27.FEB.2024 14:13:40

26 dB Bandwidth

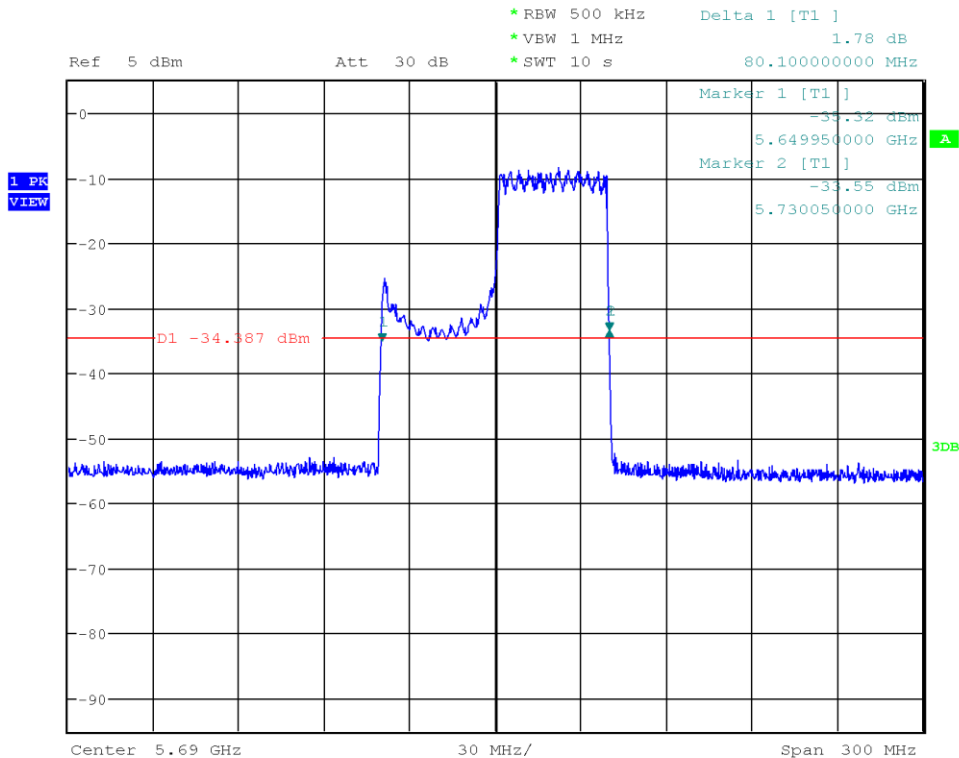
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE80-TB), Channel: 122, 5610 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 224 tones
 Lower Frequency [MHz]: 5569.800
 Upper Frequency [MHz]: 5649.750
 26 dB Bandwidth [MHz]: 79.950



Date: 27.FEB.2024 14:15:18

26 dB Bandwidth

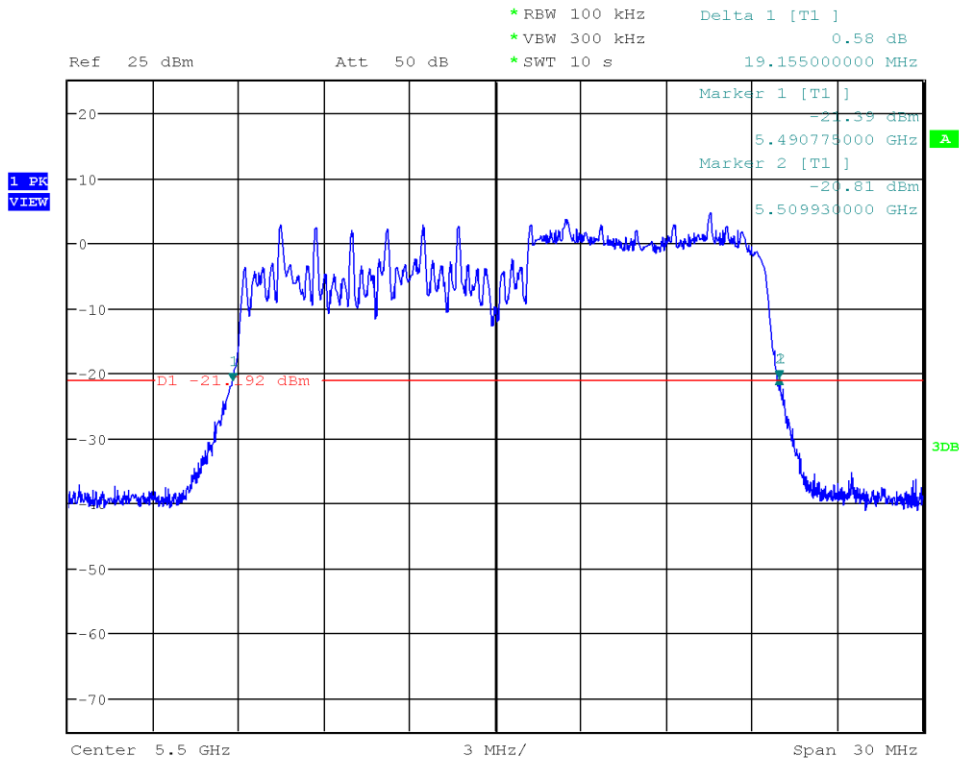
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE80-TB), Channel: 138, 5690 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 481 tones
 Lower Frequency [MHz]: 5649.950
 Upper Frequency [MHz]: 5730.050
 26 dB Bandwidth [MHz]: 80.100



Date: 27.FEB.2024 14:17:35

26 dB Bandwidth

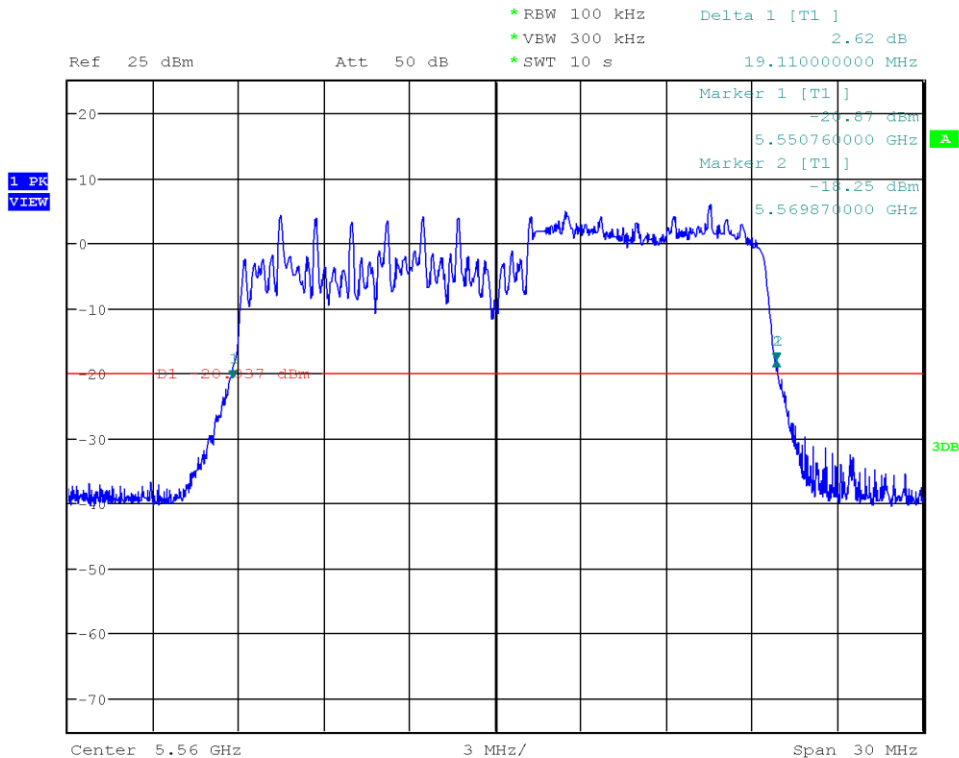
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 100, 5500 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5490.775
 Upper Frequency [MHz]: 5509.930
 26 dB Bandwidth [MHz]: 19.155



Date: 27.FEB.2024 14:19:01

26 dB Bandwidth

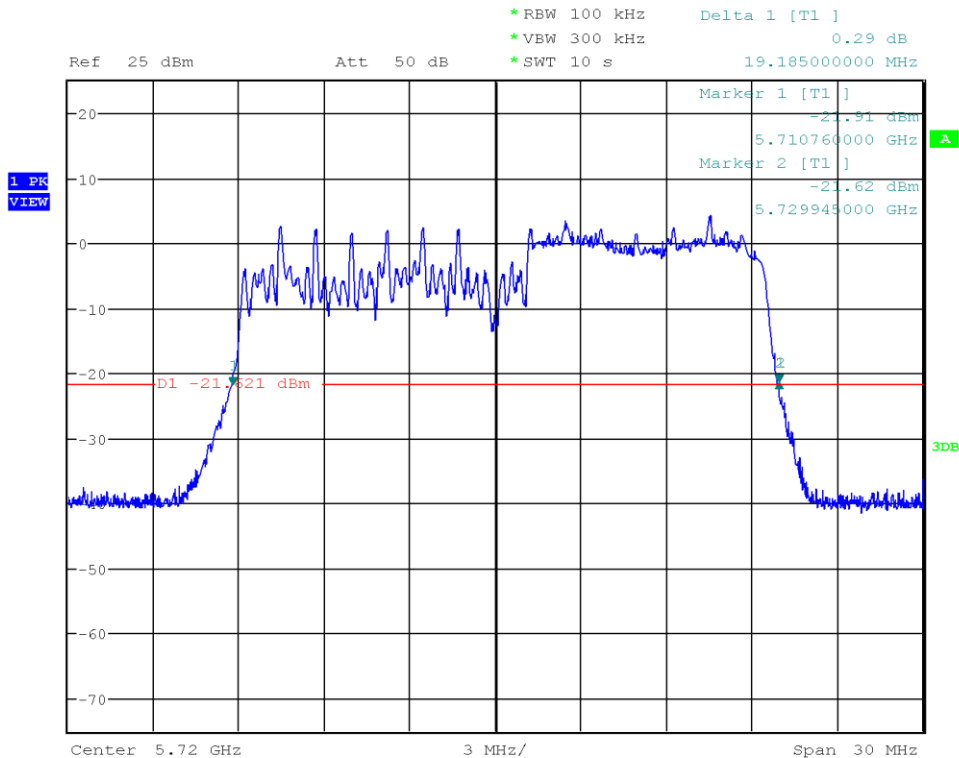
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 112, 5560 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5550.760
 Upper Frequency [MHz]: 5569.870
 26 dB Bandwidth [MHz]: 19.110



Date: 27.FEB.2024 14:19:49

26 dB Bandwidth

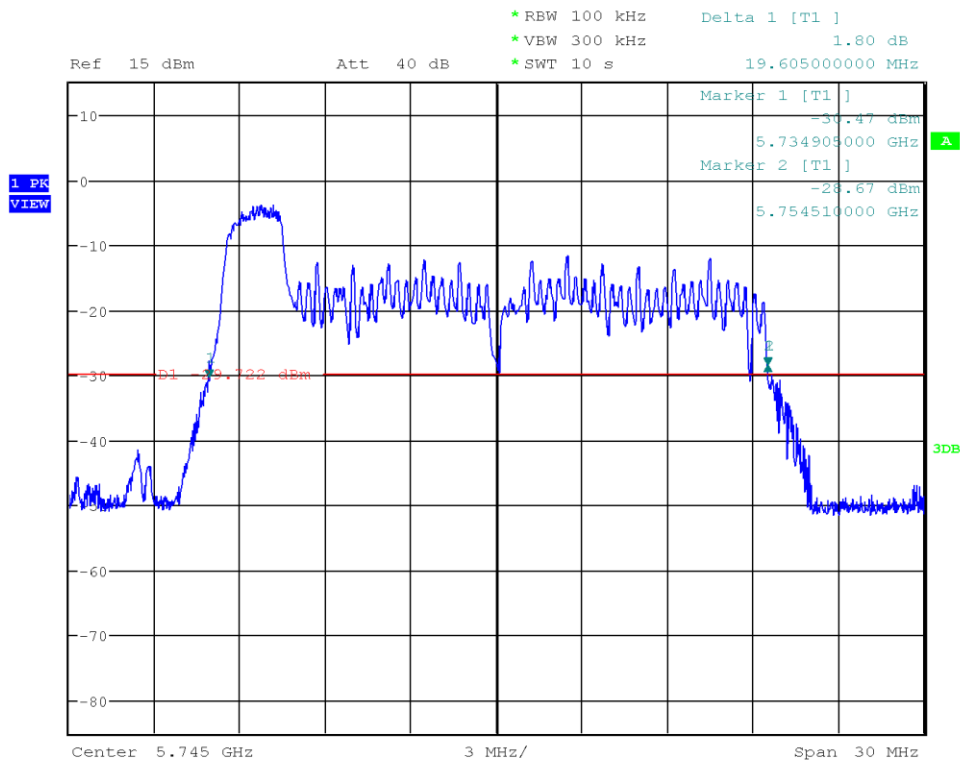
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 144, 5720 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5710.760
 Upper Frequency [MHz]: 5729.945
 26 dB Bandwidth [MHz]: 19.185



Date: 27.FEB.2024 14:20:32

26 dB Bandwidth

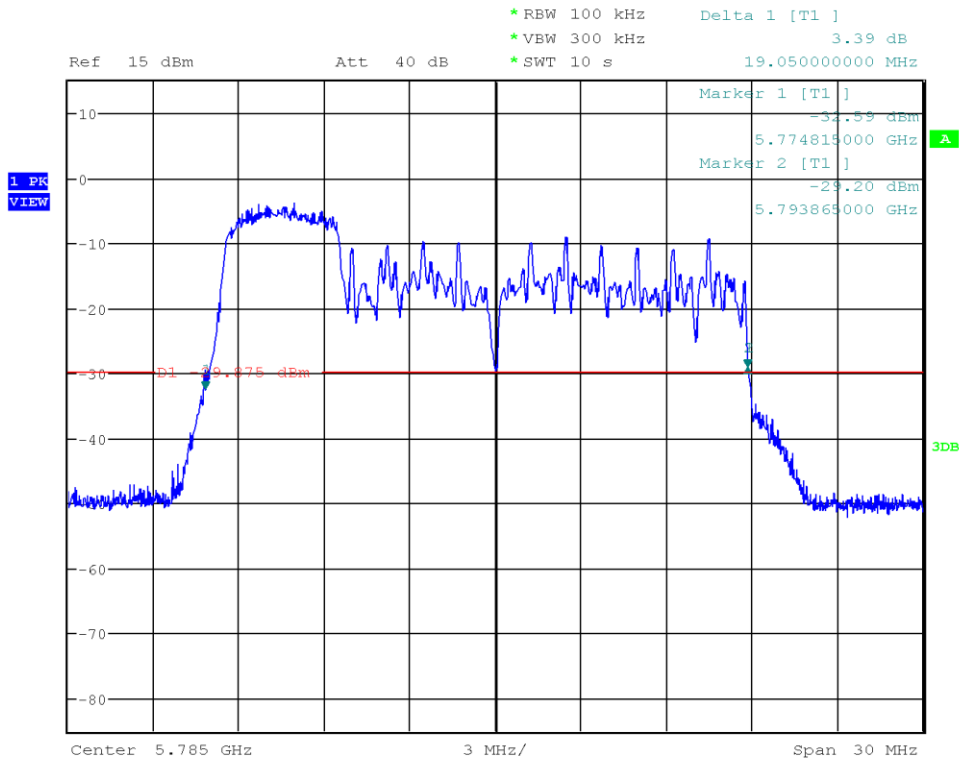
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 149, 5745 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 26 tones
 Lower Frequency [MHz]: 5734.905
 Upper Frequency [MHz]: 5754.510
 26 dB Bandwidth [MHz]: 19.605



Date: 27.FEB.2024 14:24:58

26 dB Bandwidth

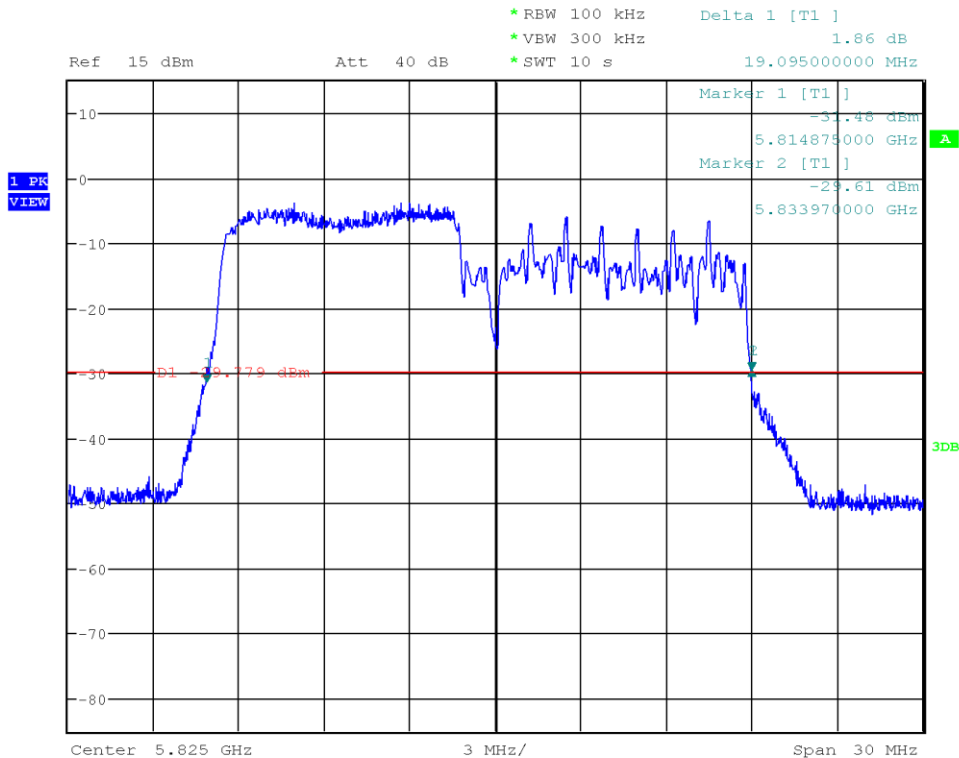
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 157, 5785 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 52 tones
 Lower Frequency [MHz]: 5774.815
 Upper Frequency [MHz]: 5793.865
 26 dB Bandwidth [MHz]: 19.050



Date: 27.FEB.2024 14:26:12

26 dB Bandwidth

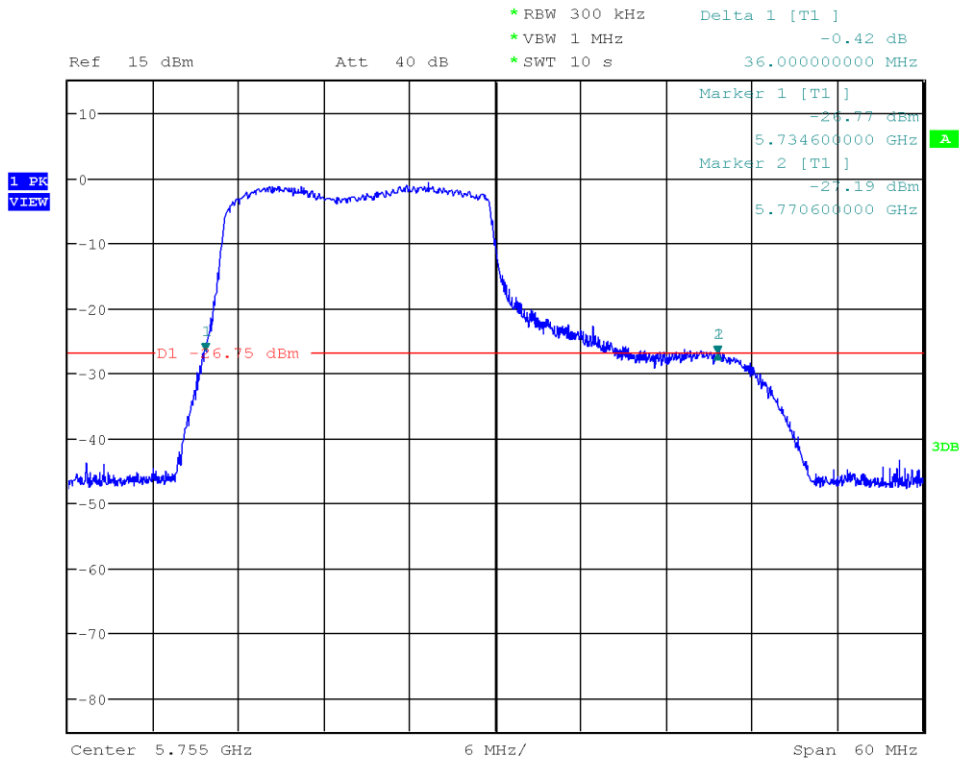
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 165, 5825 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5814.875
 Upper Frequency [MHz]: 5833.970
 26 dB Bandwidth [MHz]: 19.095



Date: 27.FEB.2024 14:27:25

26 dB Bandwidth

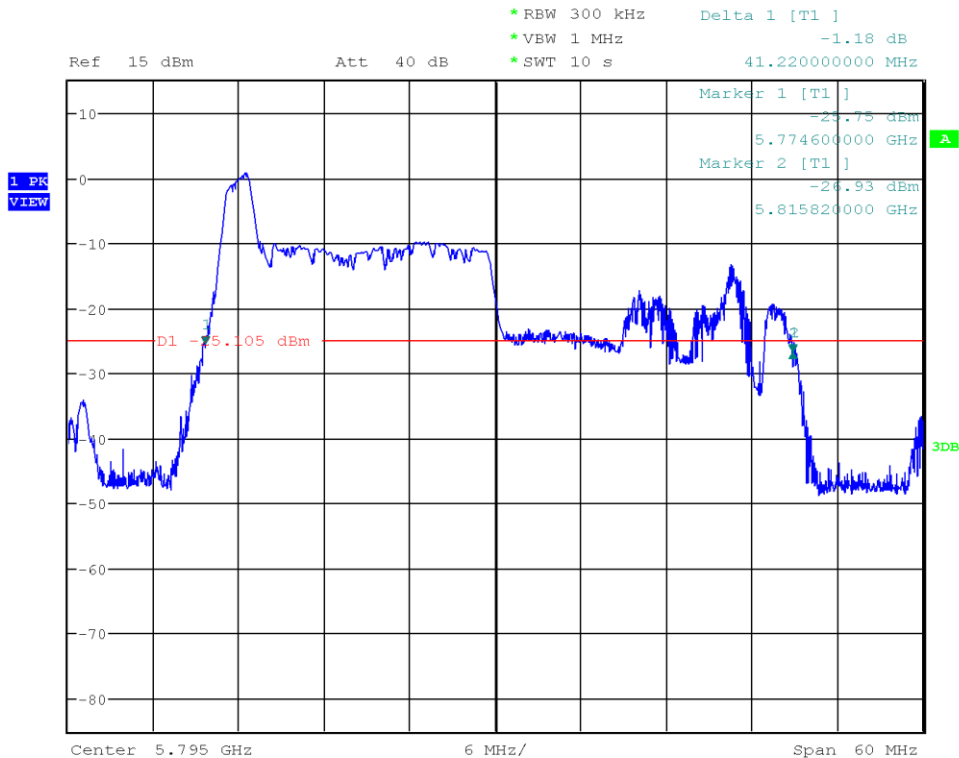
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 151, 5755 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 224 tones
 Lower Frequency [MHz]: 5734.600
 Upper Frequency [MHz]: 5770.600
 26 dB Bandwidth [MHz]: 36.000



Date: 27.FEB.2024 14:29:21

26 dB Bandwidth

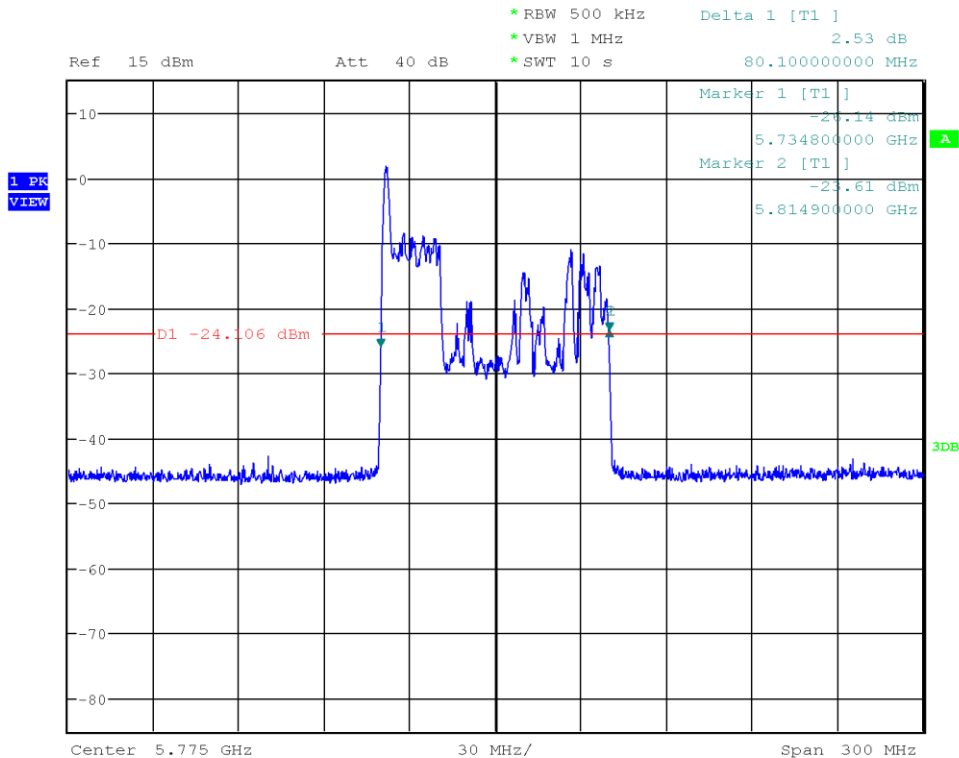
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 159, 5795 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 26 tones
 Lower Frequency [MHz]: 5774.600
 Upper Frequency [MHz]: 5815.820
 26 dB Bandwidth [MHz]: 41.220



Date: 27.FEB.2024 14:31:14

26 dB Bandwidth

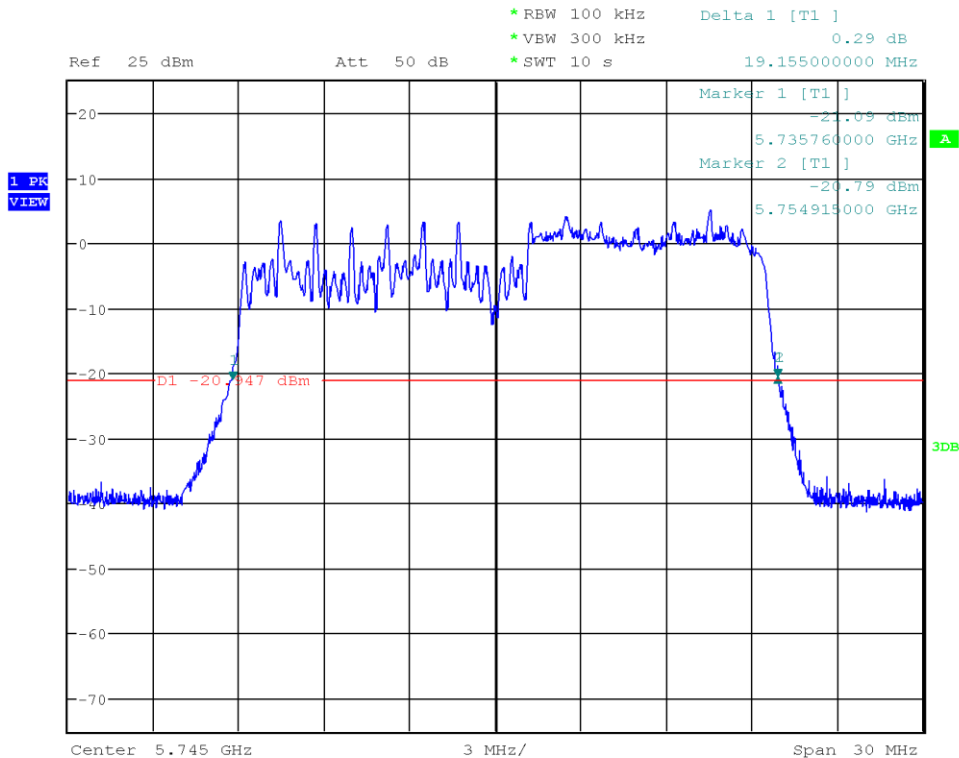
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE80-TB), Channel: 155, 5775 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 26 tones
 Lower Frequency [MHz]: 5734.800
 Upper Frequency [MHz]: 5814.900
 26 dB Bandwidth [MHz]: 80.100



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26 dB Bandwidth

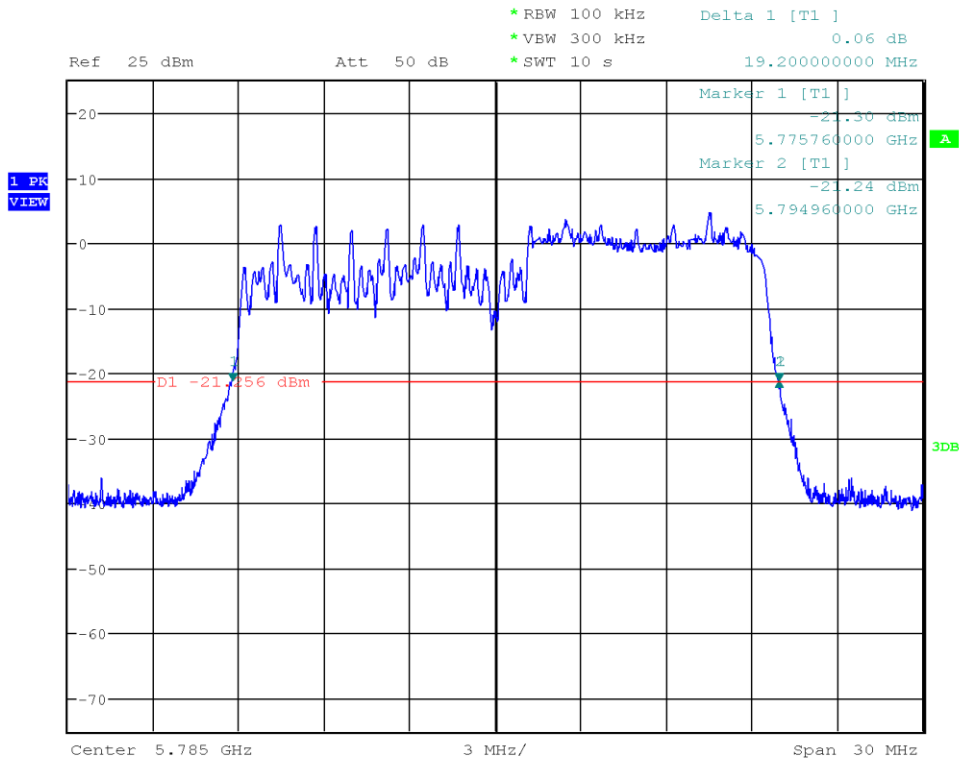
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 149, 5745 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5735.760
 Upper Frequency [MHz]: 5754.915
 26 dB Bandwidth [MHz]: 19.155



Date: 27.FEB.2024 14:38:19

26 dB Bandwidth

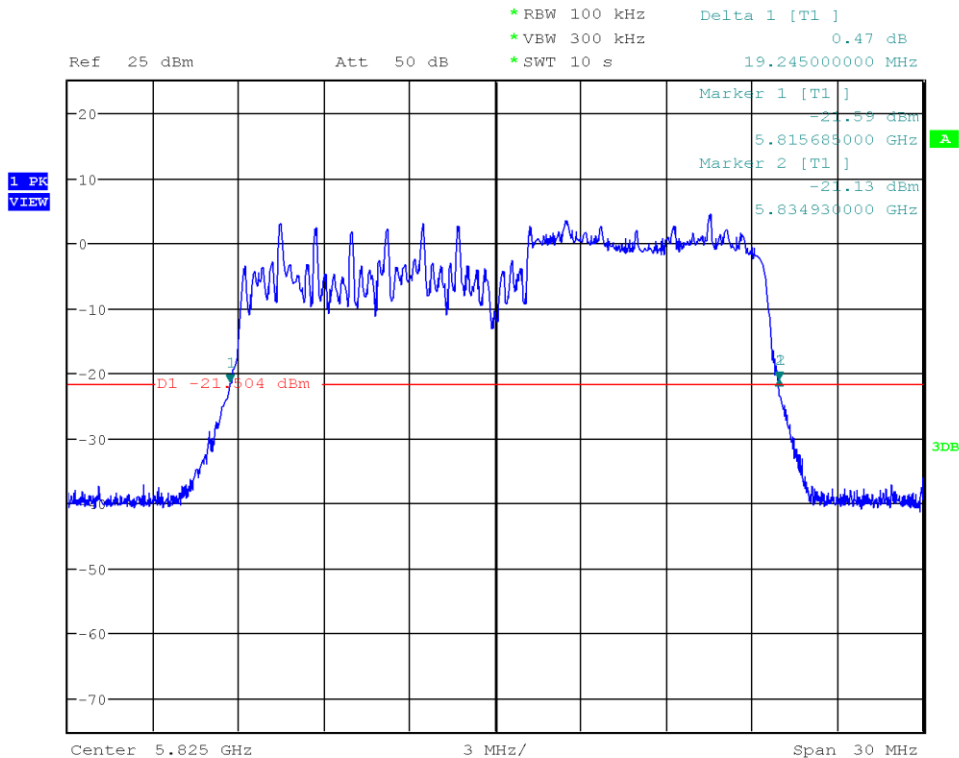
Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 157, 5785 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5775.760
 Upper Frequency [MHz]: 5794.960
 26 dB Bandwidth [MHz]: 19.200



Date: 27.FEB.2024 14:39:31

26 dB Bandwidth

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 165, 5825 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-27
 Note: 106 tones
 Lower Frequency [MHz]: 5815.685
 Upper Frequency [MHz]: 5834.930
 26 dB Bandwidth [MHz]: 19.245



Date: 27.FEB.2024 14:40:09

3.4 Test Conditions and Results - Maximum output power

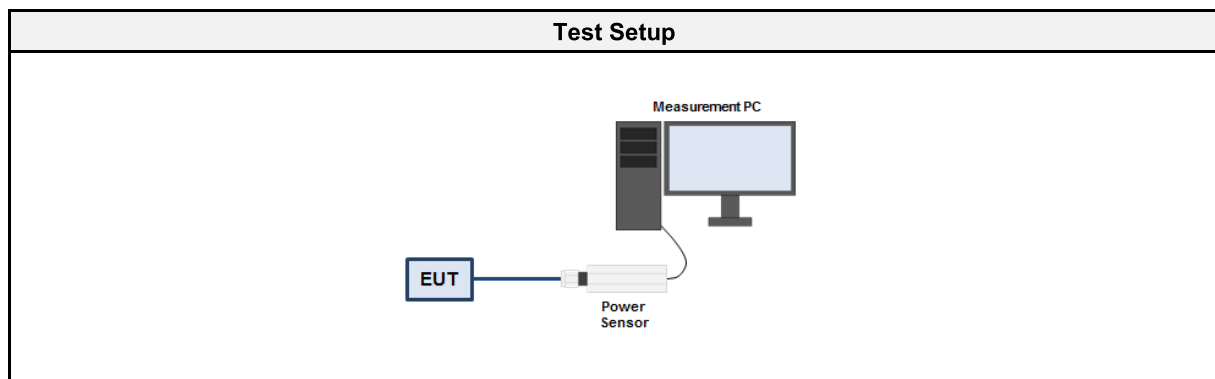
3.4.1 Information

Test Information	
Reference	FCC 15.407(a) ISED RSS-247 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.2
Measurement Method	KDB 789033 E ANSI C63.10 12.3
Operator	Azamat Ibraimov
Date	2024-02-23
Measurement uncertainty	±1.59 %

3.4.2 Limits

Limits			
Frequency band	Condition	Power limit	Maximum antenna gain ¹
5150 - 5250 MHz	Access point, indoor	1 W/30 dBm	6 dBi
5150 - 5250 MHz	Access point, outdoor	1 W/30 dBm Antenna pattern requirements may apply if EIRP > 200 mW / 23 dBm	6 dBi
5150 - 5250 MHz	Access point, fixed point to point	1 W/30 dBm	23 dBi
5150 - 5250 MHz	Client	250 mW/24 dBm	6 dBi
5250 - 5350 MHz	-	Minimum of 250 mW/24 dBm or 11 dBm + 10*Log ₁₀ (BW ³)	6 dBi
5470 - 5725 MHz	-	Minimum of 250 mW/24 dBm or 11 dBm + 10*Log ₁₀ (BW ³)	6 dBi
5725 - 5850 MHz	-	1 W/30 dBm ²	6 dBi
Note 1: The maximum output power must be reduced by the amount in dB that the gain exceeds the maximum allowed gain Note 2: Fixed point to point applications are excluded from power reduction according to Note 1 Note 3: BW is the 26 dB bandwidth in MHz			

3.4.3 Setup



3.4.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Power sensor	ETS-Lindgren	7002-006	EF00934	2023-08	2024-08

3.4.5 Procedure

Test Procedure
<ol style="list-style-type: none"> 1. One wide band power sensor is connected to each antenna port of the EUT 1. EUT transmitter is activated in test mode under normal conditions 2. The output power is measured simultaneously at all antenna ports 3. The maximum power level is determined

3.4.6 Results

Test Results - 5150 - 5250 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	Power [dBm]	Limit [dBm]	Verdict
HE20-TB 106T	36	5180	20	6.6	23.4	PASS
HE20-TB 106T	40	5200	20	6.8	23.4	PASS
HE20-TB 106T	48	5240	20	6.9	23.4	PASS
HE40-TB 106T	36+40	5190	40	7.1	23.4	PASS
HE40-TB 106T	44+48	5230	40	7.3	23.4	PASS
HE80-TB 52T	36+40+44+48	5210	80	-0.2	23.4	PASS
HE20-SU ER	36	5180	20	12.3	23.4	PASS
HE20-SU ER	40	5200	20	13.5	23.4	PASS
HE20-SU ER	48	5240	20	13.5	23.4	PASS

Note: The limit is for client devices and reduced by the gain exceeding the maximum allowed gain.

Test Results - 5250 - 5350 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	Power [dBm]	Limit [dBm]	Verdict
HE20-TB 106T	52	5260	20	7.0	22.7	PASS
HE20-TB 106T	56	5280	20	7.2	22.7	PASS
HE20-TB 106T	64	5320	20	7.2	22.7	PASS
HE40-TB 106T	52+56	5270	40	7.4	22.7	PASS
HE40-TB 106T	60+64	5310	40	7.6	22.7	PASS
HE80-TB 52T	52+56+60+64	5290	80	0.3	22.7	PASS
HE20-SU ER	52	5260	20	13.5	22.7	PASS
HE20-SU ER	56	5280	20	13.7	22.7	PASS
HE20-SU ER	64	5320	20	12.6	22.7	PASS

Test Results - 5470 - 5725 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	Power [dBm]	Limit [dBm]	Verdict
HE20-TB 106T	100	5500	20	5.6	22	PASS
HE20-TB 106T	120	5600	20	7.6	22	PASS
HE20-TB 106T	144	5720	20	6.3	22	PASS
HE40-TB 106T	100+104	5510	40	5.9	22	PASS
HE40-TB 106T	116+120	5590	40	8.1	22	PASS
HE40-TB 106T	140+144	5710	40	6.9	22	PASS
HE80-TB 52T	100+104+108+112	5530	80	0.9	22	PASS
HE80-TB 52T	116+120+124+128	5610	80	3.9	22	PASS
HE80-TB 52T	132+136+140+144	5690	80	-0.3	22	PASS
HE20-SU ER	100	5500	20	12.3	22	PASS
HE20-SU ER	112	5560	20	14.3	22	PASS
HE20-SU ER	144	5720	20	12.7	22	PASS

Test Results - 5725 - 5850 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	Power [dBm]	Limit [dBm]	Verdict
HE20-TB 106T	149	5745	20	7.1	29.4	PASS
HE20-TB 106T	157	5785	20	6.4	29.4	PASS
HE20-TB 106T	165	5825	20	6.6	29.4	PASS
HE40-TB 106T	149+153	5755	40	7.2	29.4	PASS
HE40-TB 106T	157+161	5795	40	6.8	29.4	PASS
HE80-TB 52T	149+153+157+161	5775	80	-0.5	29.4	PASS
HE20-SU ER	149	5745	20	13.7	29.4	PASS
HE20-SU ER	157	5785	20	13	29.4	PASS
HE20-SU ER	165	5825	20	13	29.4	PASS

3.5 Test Conditions and Results - Power spectral density

3.5.1 Information

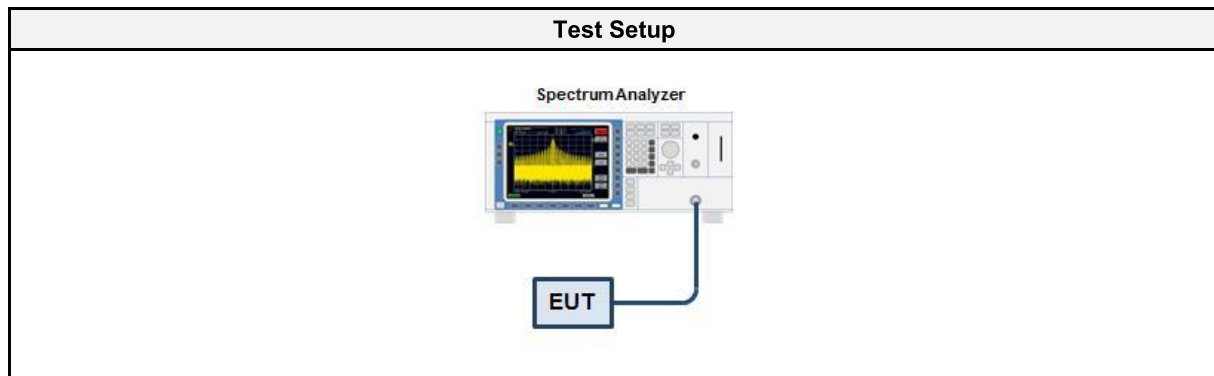
Test Information	
Reference	FCC 15.407(a) ISED RSS-247 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.2
Measurement Method	KDB 789033 F ANSI C63.10 12.5
Operator	Azamat Ibraimov
Date	2024-02-28
Measurement uncertainty	±2.86 %

3.5.2 Limits

Limits			
Frequency band	Condition	PSD limit	Maximum antenna gain ¹
5150 - 5250 MHz	Access point, indoor	17 dBm/MHz	6 dBi
5150 - 5250 MHz	Access point, outdoor	17 dBm/MHz	6 dBi
5150 - 5250 MHz	Access point, fixed point to point	17 dBm/MHz	23 dBi
5150 - 5250 MHz	Client	11 dBm/MHz	6 dBi
5250 - 5350 MHz	All devices	11 dBm/MHz	6 dBi
5470 - 5725 MHz	All devices	11 dBm/MHz	6 dBi
5725 - 5850 MHz	All devices	30 dBm/500 kHz	6 dBi

Note 1: The power density limit must be reduced by the amount in dB that the gain exceeds the maximum allowed gain

3.5.3 Setup



3.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyzer	R&S	FSU43	EF01631	2023-08	2024-08
Cable(CAABC)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.5.5 Procedure

Test Procedure	
1.	EUT transmitter is activated in test mode under normal conditions
2.	The spectrum analyzer is set to rms detection with a span over the emission bandwidth
3.	The resolution bandwidth is set to 1 MHz / 500 kHz and video bandwidth to ≥ 3 MHz
4.	The number of sweep points is set $\geq 2 \times \text{span} / \text{RBW}$ and the sweep time is set to auto
5.	Trace averaging is set to 100
6.	The maximum of the emission envelope is determined
7.	The duty cycle ($10 \times \text{Log}_{10}(1/\text{duty cycle})$) correction is added to the measurement result

3.5.6 Results

Test Results - 5150 - 5250 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	PSD [dBm/MHz]	Limit [dBm/MHz]	Verdict
HE20-TB 106T	36	5180	20	-1.724	10.4	PASS
HE20-TB 106T	40	5200	20	-1.449	10.4	PASS
HE20-TB 106T	48	5240	20	-1.845	10.4	PASS
HE40-TB 106T	36+40	5190	40	-1.440	10.4	PASS
HE40-TB 106T	44+48	5230	40	-1.480	10.4	PASS
HE80-TB 26T	36+40+44+48	5210	80	-5.150	10.4	PASS
HE20-SU ER	36	5180	20	4.127	10.4	PASS
HE20-SU ER	40	5200	20	5.333	10.4	PASS
HE20-SU ER	48	5240	20	5.111	10.4	PASS

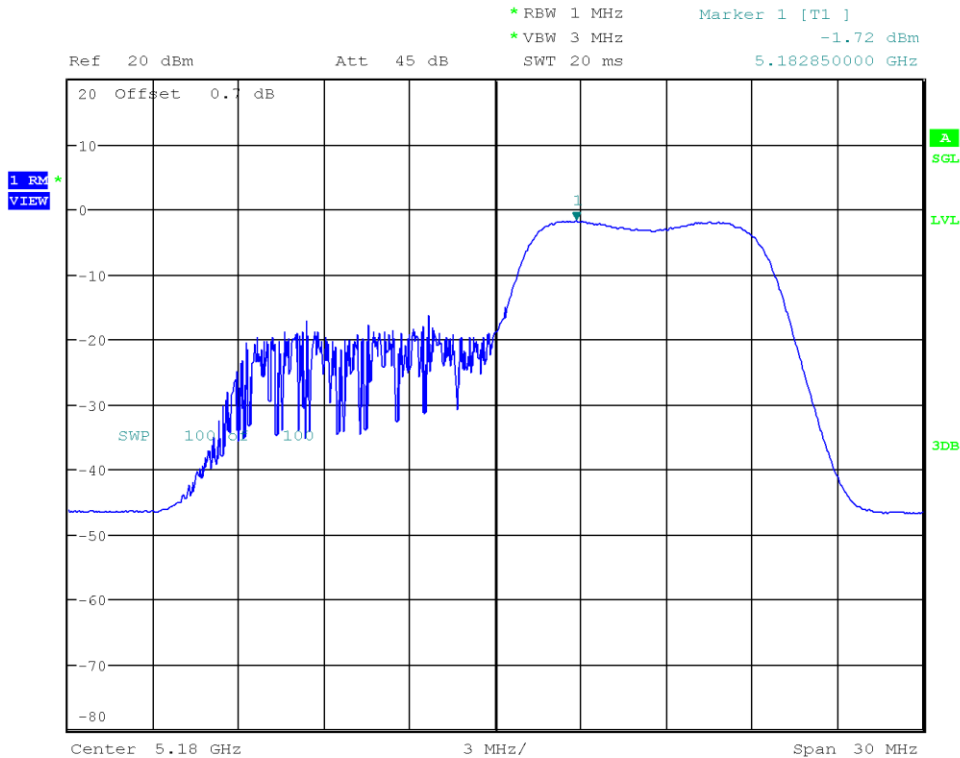
Test Results - 5250 - 5350 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	PSD [dBm/MHz]	Limit [dBm/MHz]	Verdict
HE20-TB 106T	52	5260	20	-1.564	9.7	PASS
HE20-TB 106T	56	5280	20	-1.320	9.7	PASS
HE20-TB 106T	64	5320	20	-1.240	9.7	PASS
HE40-TB 106T	52+56	5270	40	-1.354	9.7	PASS
HE40-TB 106T	60+64	5310	40	-0.935	9.7	PASS
HE80-TB 52T	52+56+60+64	5290	80	-4.614	9.7	PASS
HE20-SU ER	52	5260	20	4.993	9.7	PASS
HE20-SU ER	56	5280	20	5.267	9.7	PASS
HE20-SU ER	64	5320	20	4.228	9.7	PASS

Test Results - 5470 - 5725 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	PSD [dBm/MHz]	Limit [dBm/MHz]	Verdict
HE20-TB 106T	100	5500	20	-2.911	9	PASS
HE20-TB 106T	120	5600	20	-0.579	9	PASS
HE20-TB 106T	144	5720	20	-1.969	9	PASS
HE40-TB 106T	100+104	5510	40	-2.758	9	PASS
HE40-TB 106T	116+120	5590	40	-0.511	9	PASS
HE40-TB 106T	140+144	5710	40	-1.767	9	PASS
HE80-TB 52T	100+104+108+112	5530	80	-4.240	9	PASS
HE80-TB 52T	116+120+124+128	5610	80	-0.940	9	PASS
HE80-TB 52T	132+136+140+144	5690	80	-5.312	9	PASS
HE20-SU ER	100	5500	20	4.542	9	PASS
HE20-SU ER	112	5560	20	5.776	9	PASS
HE20-SU ER	144	5720	20	4.117	9	PASS

Test Results - 5725 - 5850 MHz						
Mode	Channel	Frequency [MHz]	Nominal BW [MHz]	PSD [dBm/MHz]	Limit [dBm/MHz]	Verdict
HE20-TB 106T	149	5745	20	-4.398	29.4	PASS
HE20-TB 106T	157	5785	20	-4.772	29.4	PASS
HE20-TB 106T	165	5825	20	-4.881	29.4	PASS
HE40-TB 106T	149+153	5755	40	-4.592	29.4	PASS
HE40-TB 106T	157+161	5795	40	-4.563	29.4	PASS
HE80-TB 52T	149+153+157+161	5775	80	-7.731	29.4	PASS
HE20-SU ER	149	5745	20	2.192	29.4	PASS
HE20-SU ER	157	5785	20	1.742	29.4	PASS
HE20-SU ER	165	5825	20	1.537	29.4	PASS

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax HE20-TB, Channel: 36, 5180 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5182.850
 Spectral Density [dBm/RBW]: -1.724
 Resolution Bandwidth [MHz]: 1



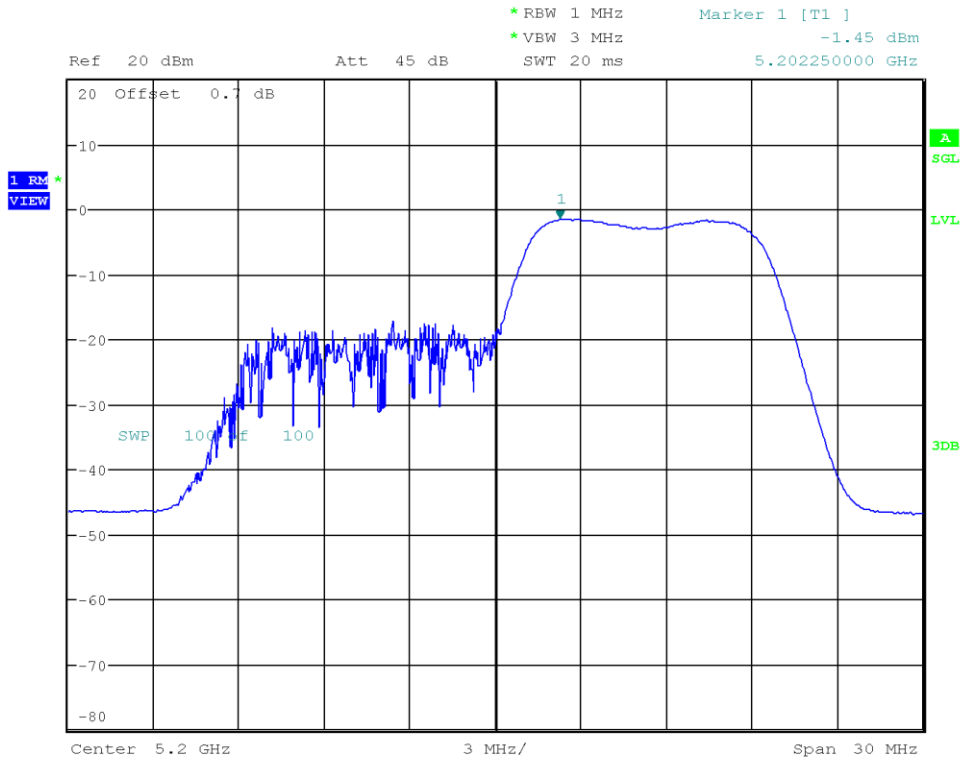
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax HE20-TB, Channel: 40, 5200 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5202.250
 Spectral Density [dBm/RBW]: -1.449
 Resolution Bandwidth [MHz]: 1



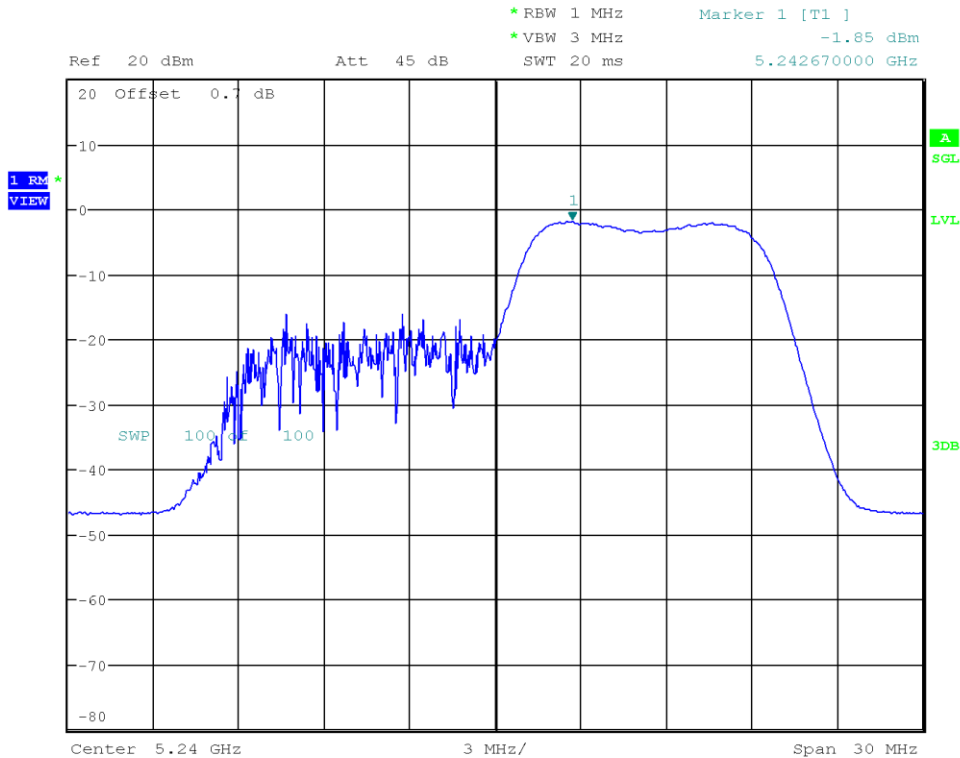
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax HE20-TB, Channel: 48, 5240 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5242.670
 Spectral Density [dBm/RBW]: -1.845
 Resolution Bandwidth [MHz]: 1



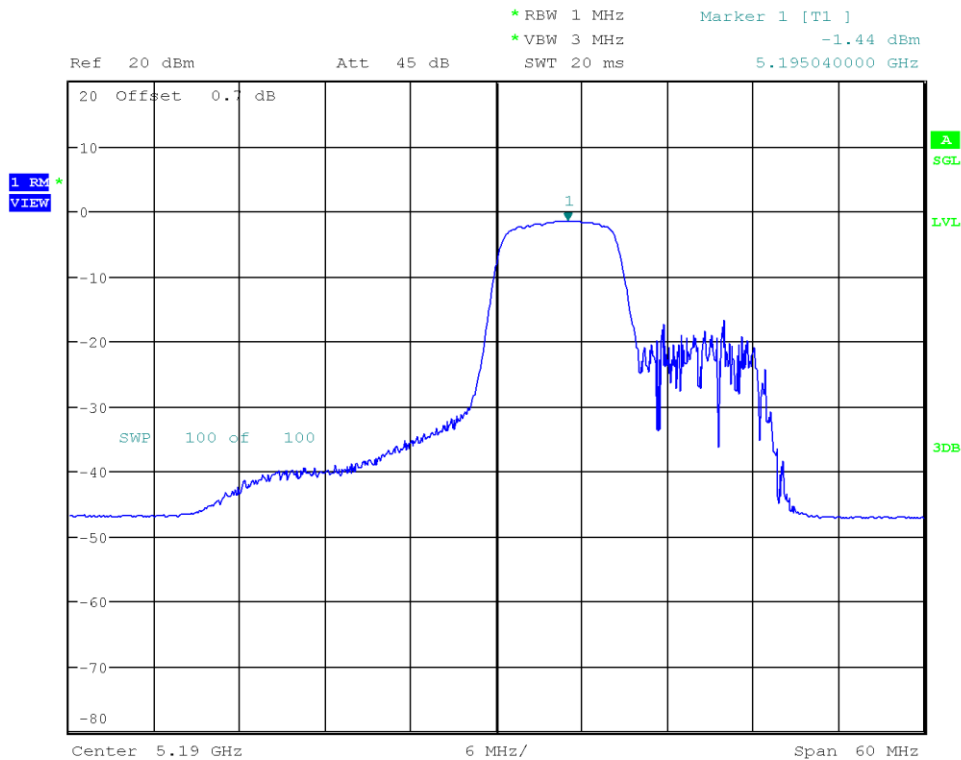
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 38, 5190 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5195.040
 Spectral Density [dBm/RBW]: -1.440
 Resolution Bandwidth [MHz]: 1



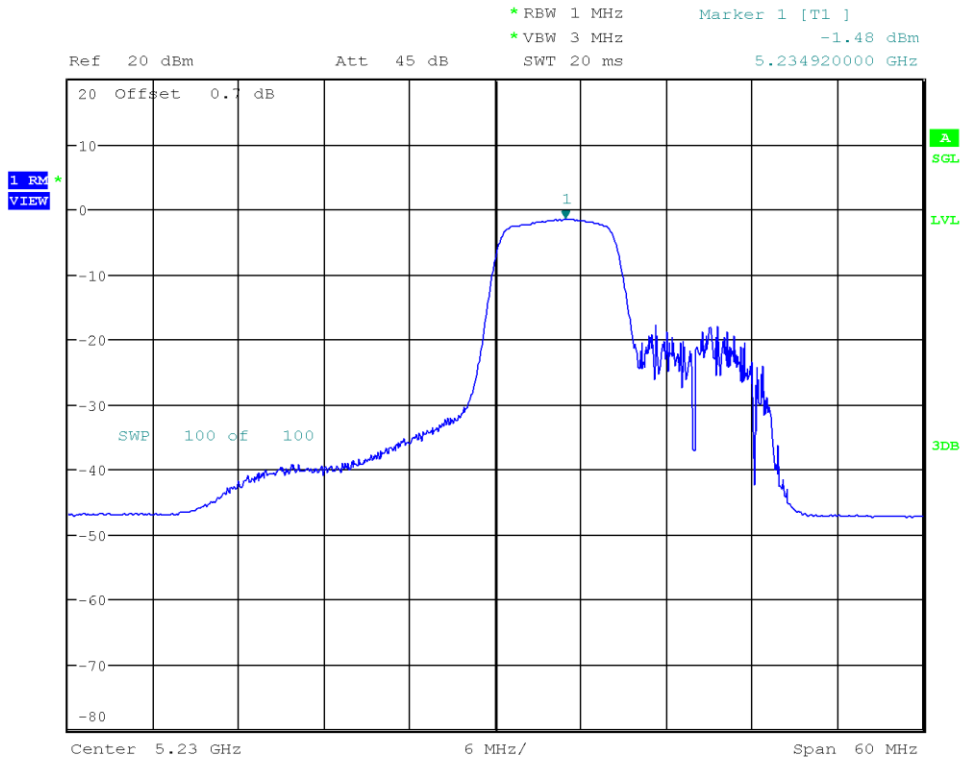
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 46, 5230 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5234.920
 Spectral Density [dBm/RBW]: -1.480
 Resolution Bandwidth [MHz]: 1



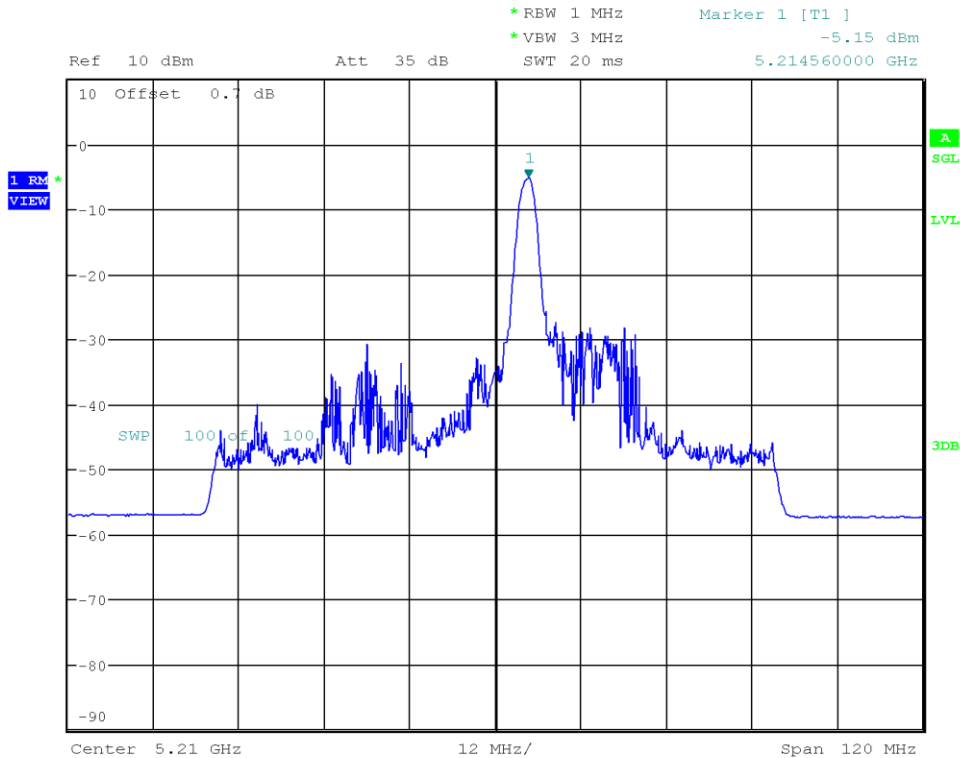
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE80-TB), Channel: 42, 5210 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 26 tones
 Maximum Frequency [MHz]: 5214.560
 Spectral Density [dBm/RBW]: -5.150
 Resolution Bandwidth [MHz]: 1



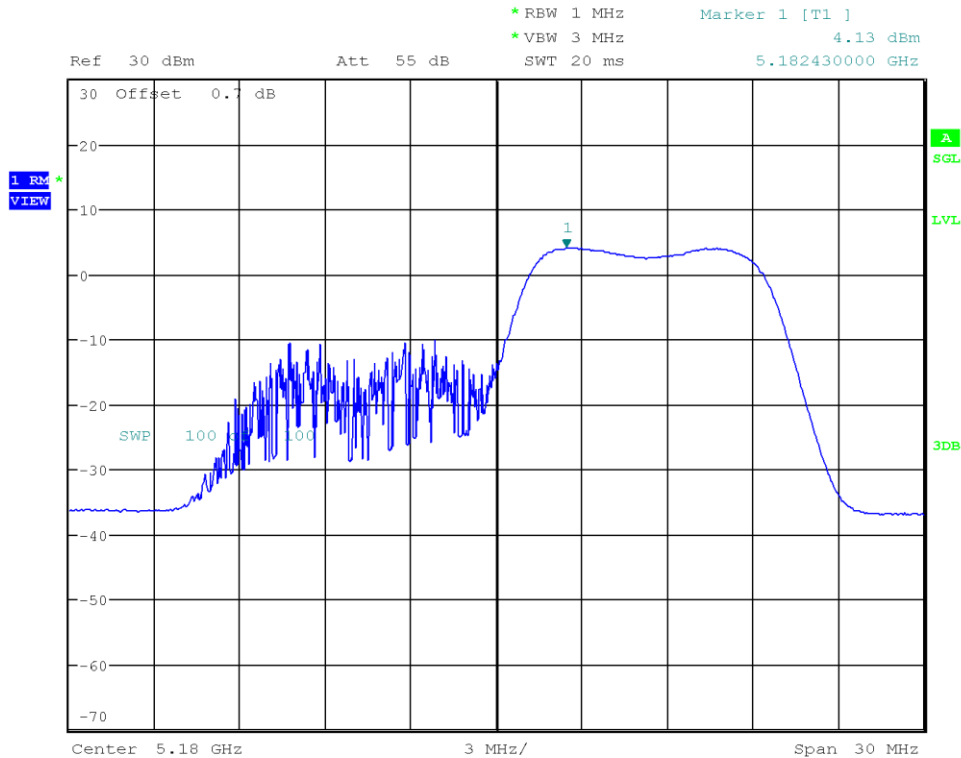
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 36, 5180 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5182.430
 Spectral Density [dBm/RBW]: 4.127
 Resolution Bandwidth [MHz]: 1



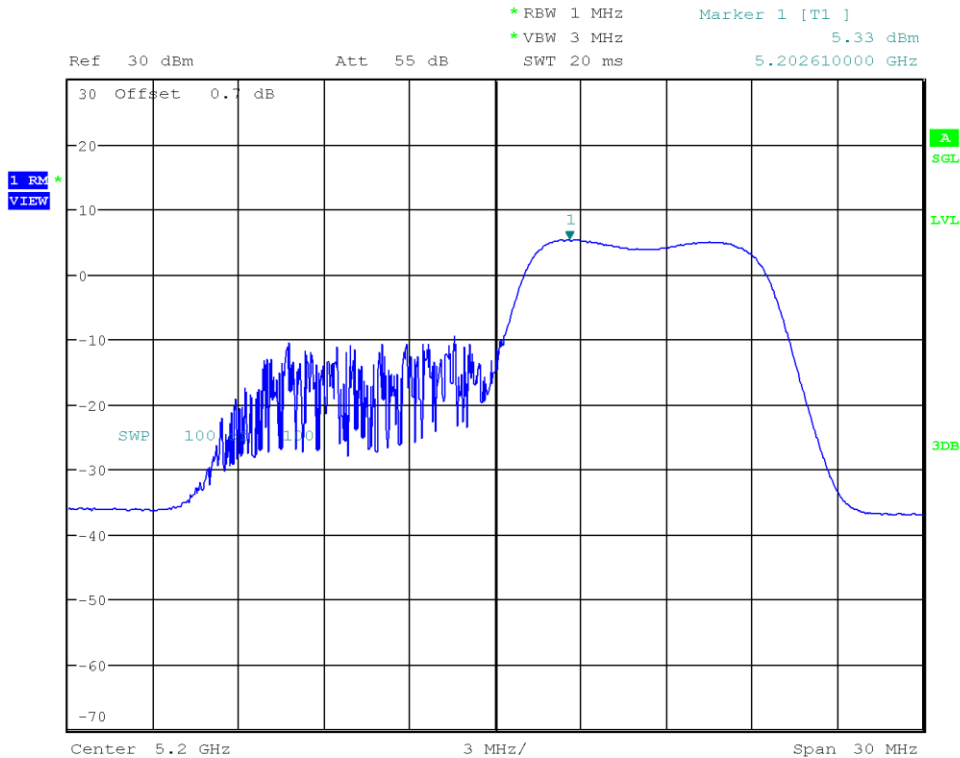
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 40, 5200 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5202.610
 Spectral Density [dBm/RBW]: 5.333
 Resolution Bandwidth [MHz]: 1



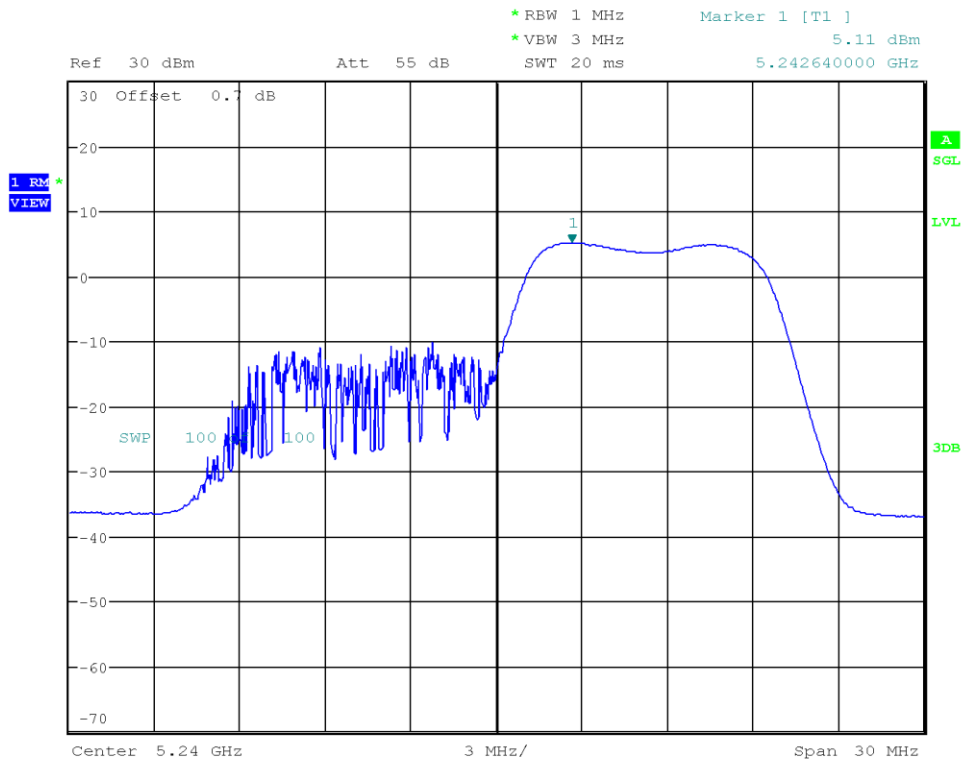
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Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 48, 5240 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5242.640
 Spectral Density [dBm/RBW]: 5.111
 Resolution Bandwidth [MHz]: 1



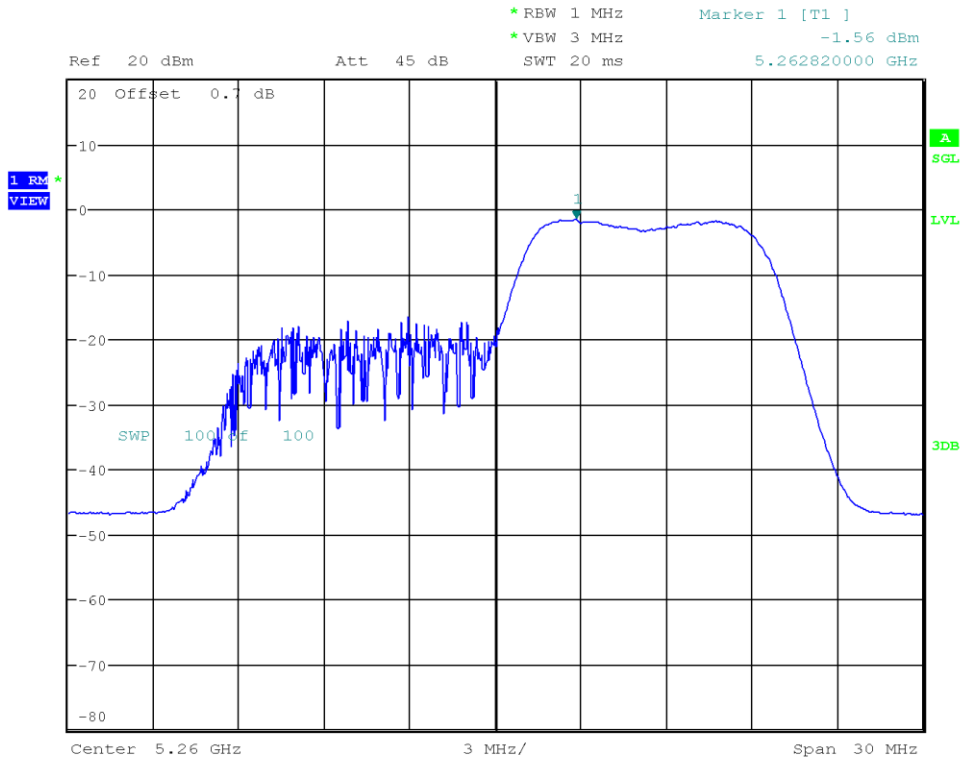
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 52, 5260 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5262.820
 Spectral Density [dBm/RBW]: -1.564
 Resolution Bandwidth [MHz]: 1



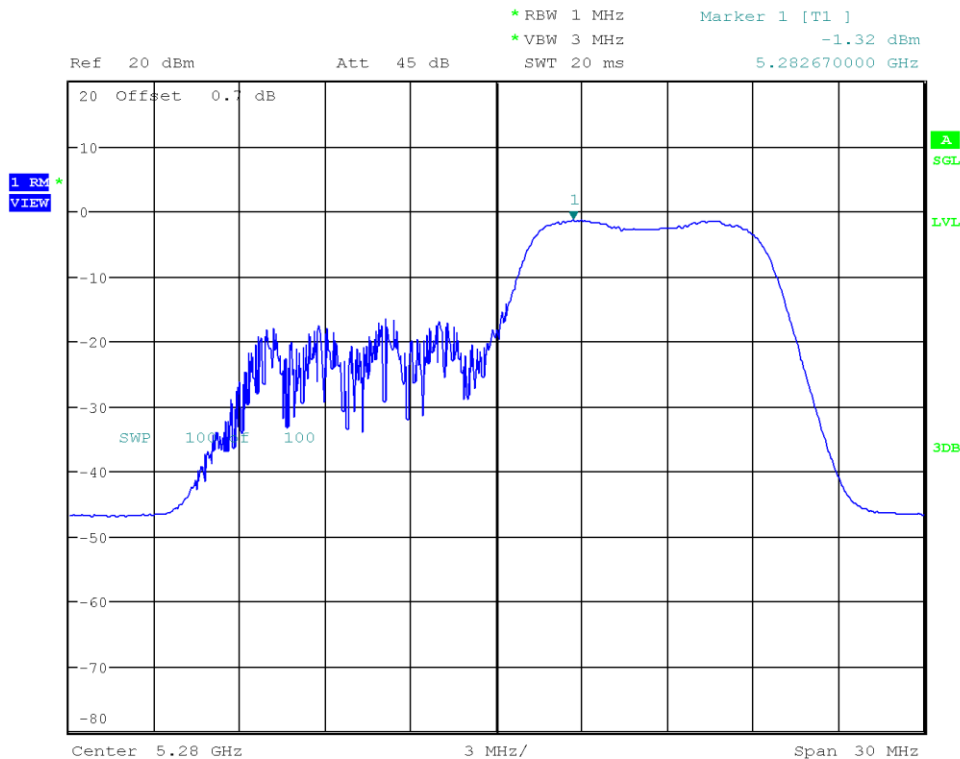
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 56, 5280 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5282.670
 Spectral Density [dBm/RBW]: -1.320
 Resolution Bandwidth [MHz]: 1



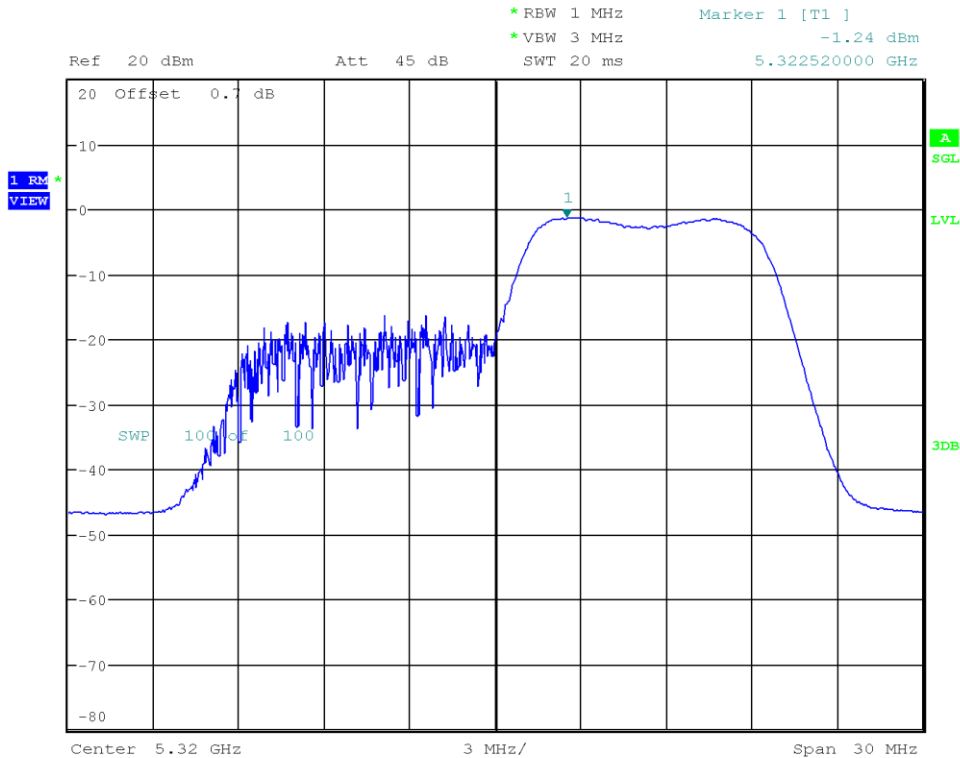
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 64, 5320 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5322.520
 Spectral Density [dBm/RBW]: -1.240
 Resolution Bandwidth [MHz]: 1



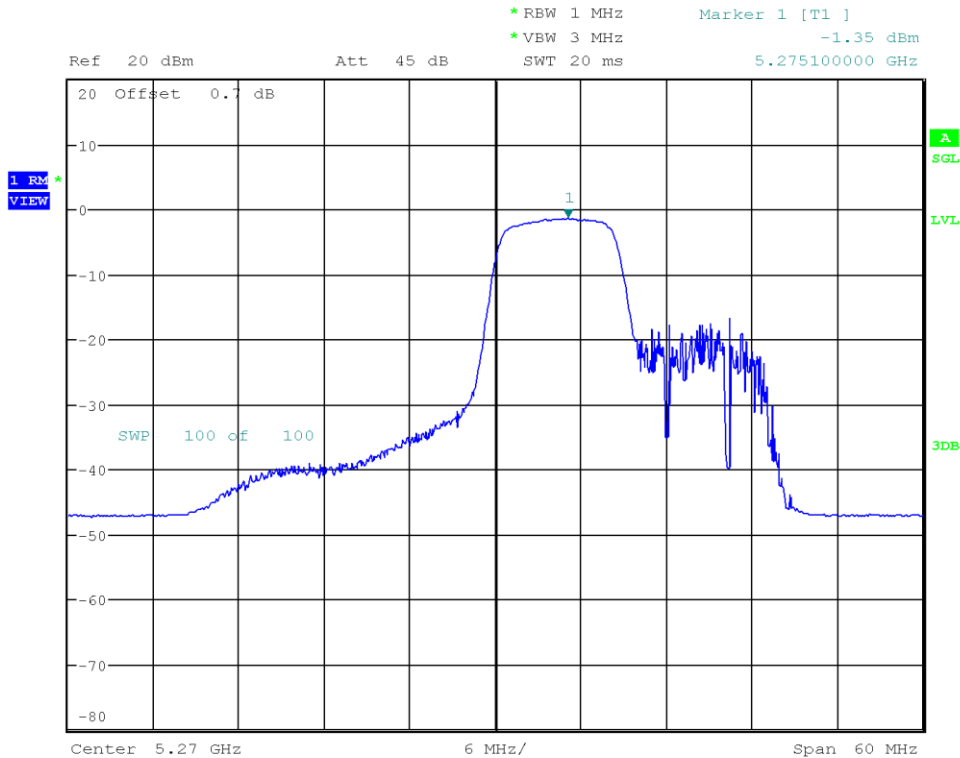
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 54, 5270 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5275.100
 Spectral Density [dBm/RBW]: -1.354
 Resolution Bandwidth [MHz]: 1



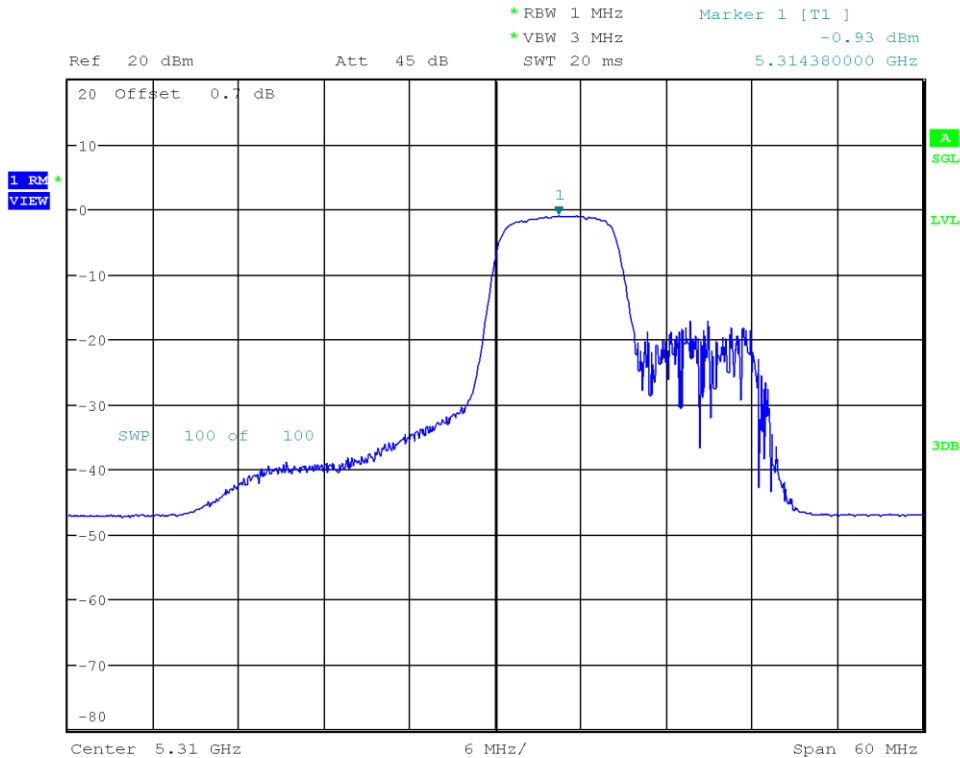
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 62, 5310 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5314.380
 Spectral Density [dBm/RBW]: -0.935
 Resolution Bandwidth [MHz]: 1



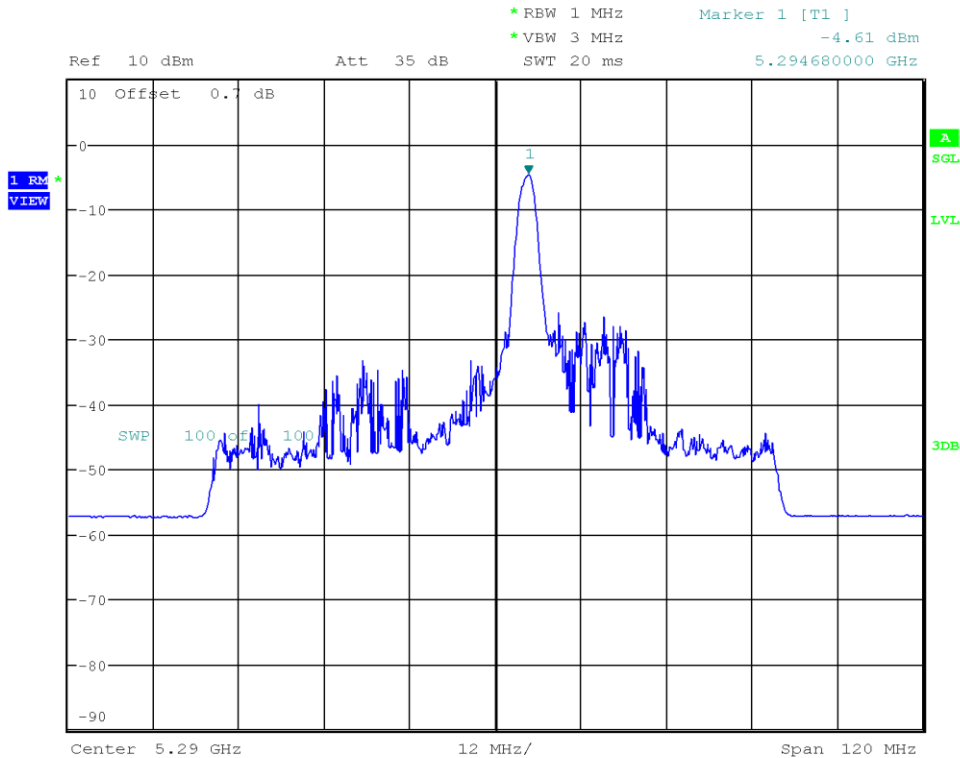
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE80-TB), Channel: 58, 5290 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 26 tones
 Maximum Frequency [MHz]: 5294.680
 Spectral Density [dBm/RBW]: -4.614
 Resolution Bandwidth [MHz]: 1



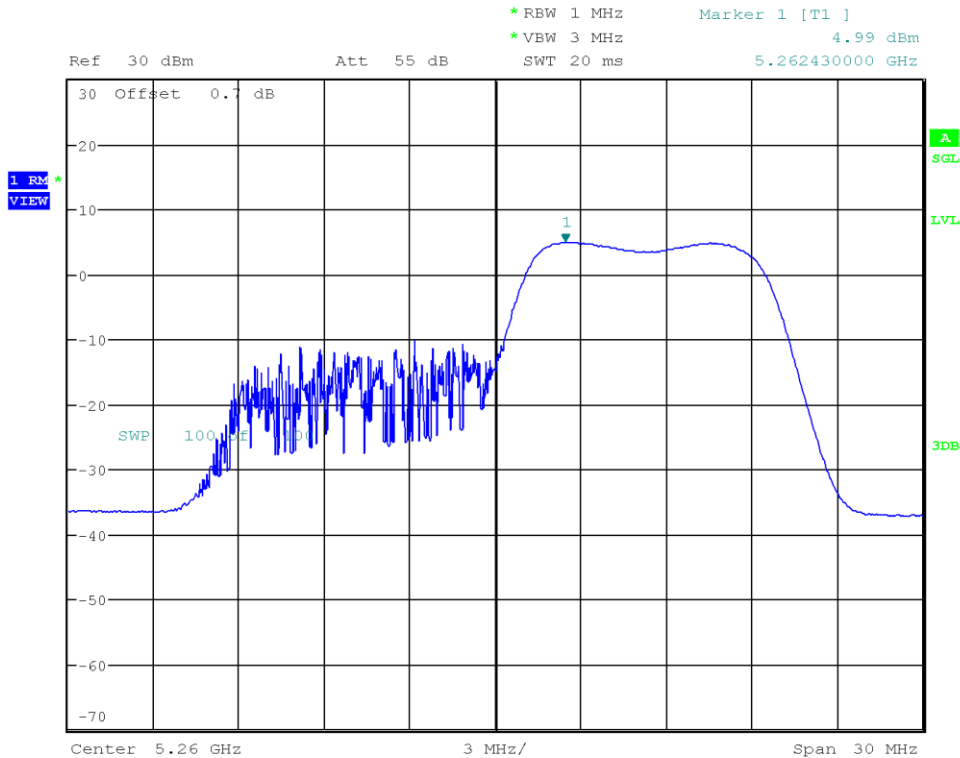
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 52, 5260 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5262.430
 Spectral Density [dBm/RBW]: 4.993
 Resolution Bandwidth [MHz]: 1



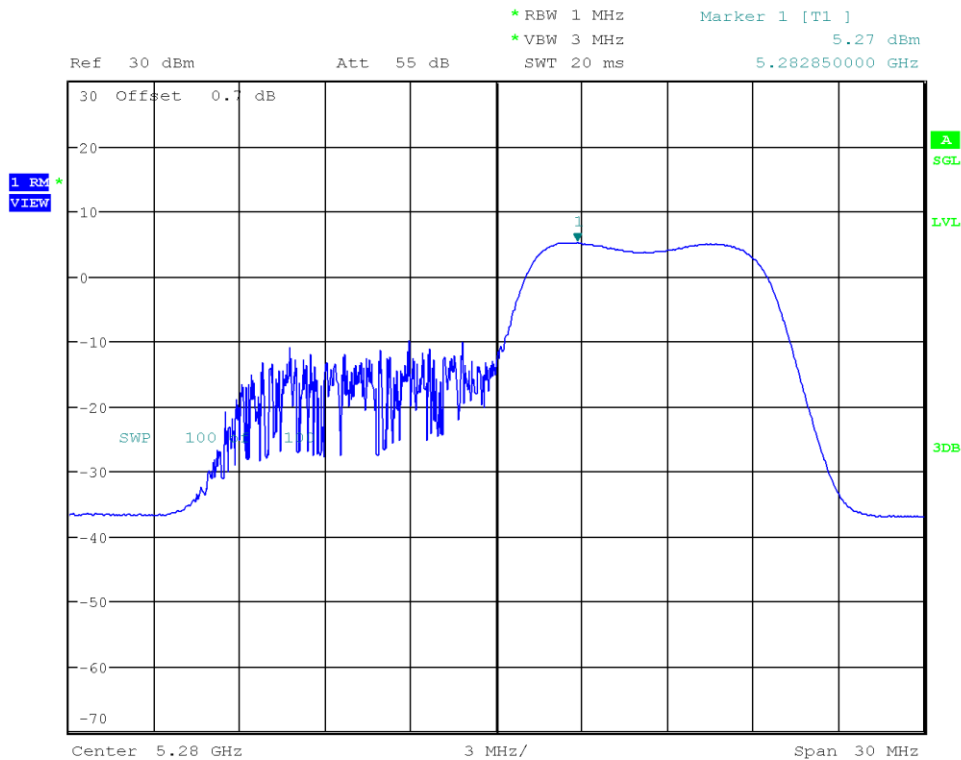
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 56, 5280 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5282.850
 Spectral Density [dBm/RBW]: 5.267
 Resolution Bandwidth [MHz]: 1



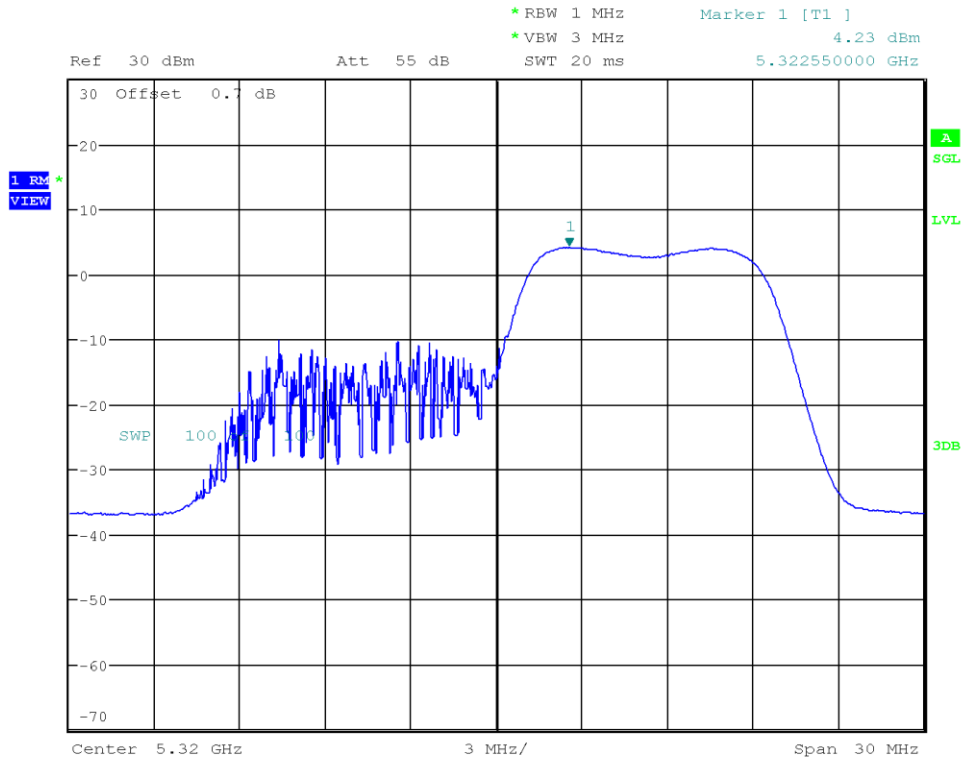
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-SU ER), Channel: 64, 5320 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5322.550
 Spectral Density [dBm/RBW]: 4.228
 Resolution Bandwidth [MHz]: 1



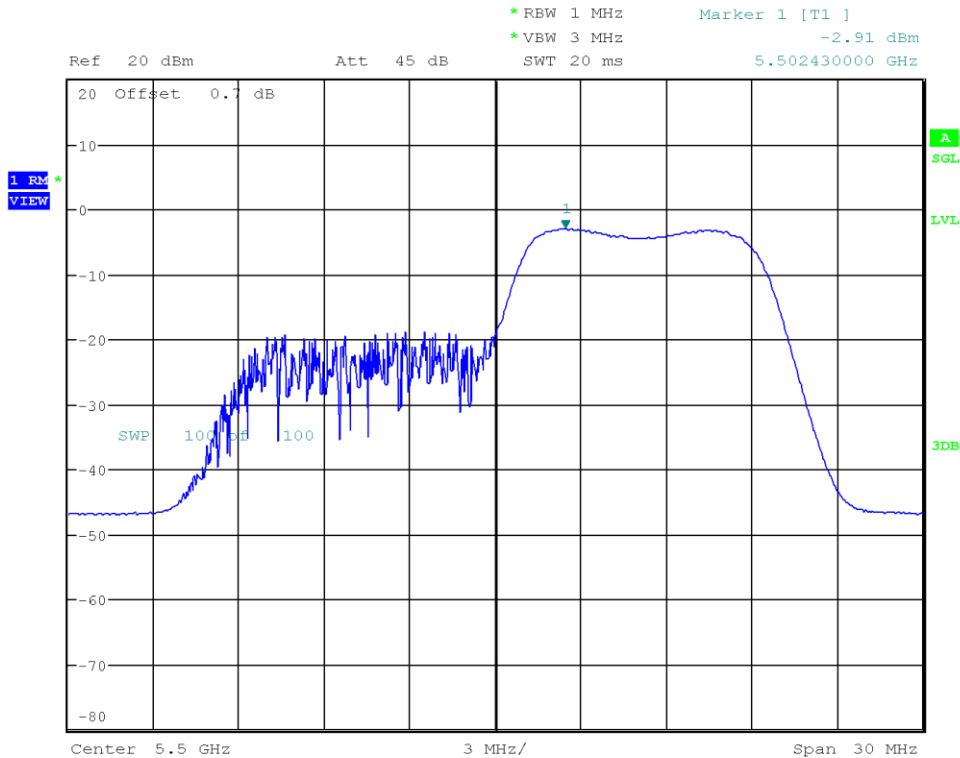
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

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Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 100, 5500 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5502.430
 Spectral Density [dBm/RBW]: -2.911
 Resolution Bandwidth [MHz]: 1



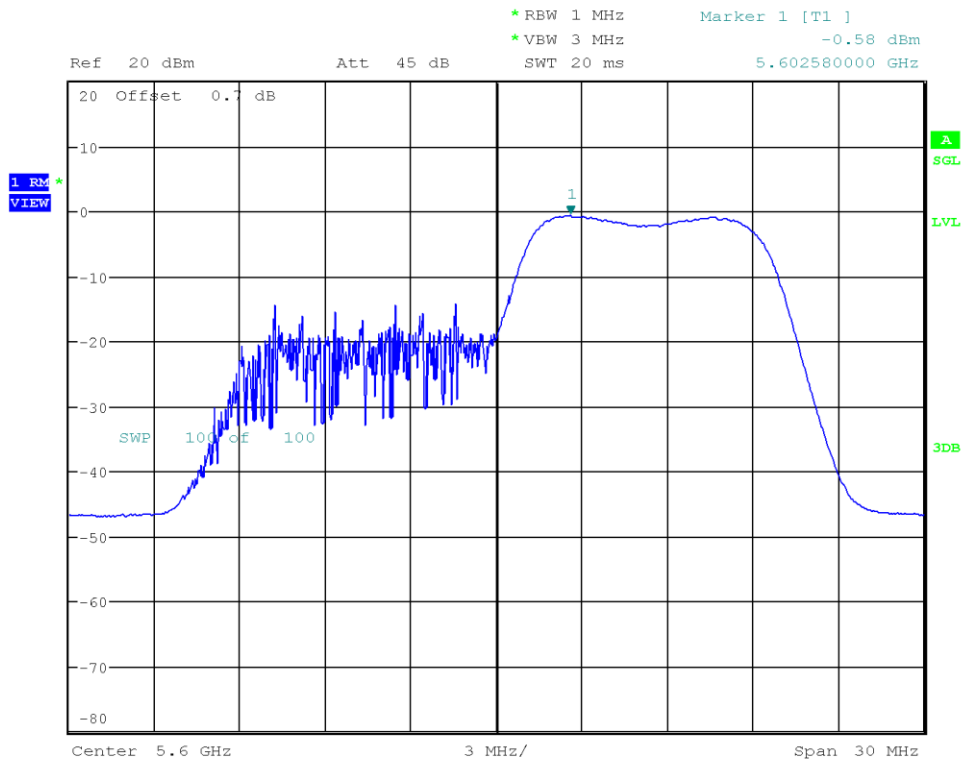
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
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 Applicant: Panasonic Industrial Devices Europe GmbH
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 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 120, 5600 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5602.580
 Spectral Density [dBm/RBW]: -0.579
 Resolution Bandwidth [MHz]: 1



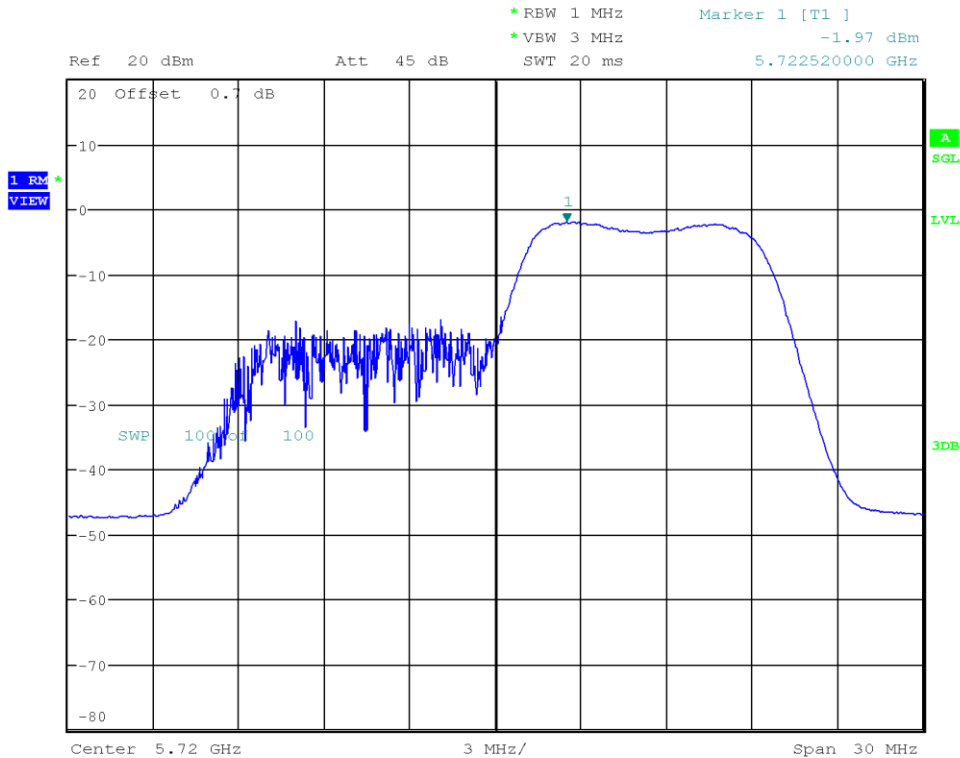
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE20-TB), Channel: 144, 5720 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5722.520
 Spectral Density [dBm/RBW]: -1.969
 Resolution Bandwidth [MHz]: 1



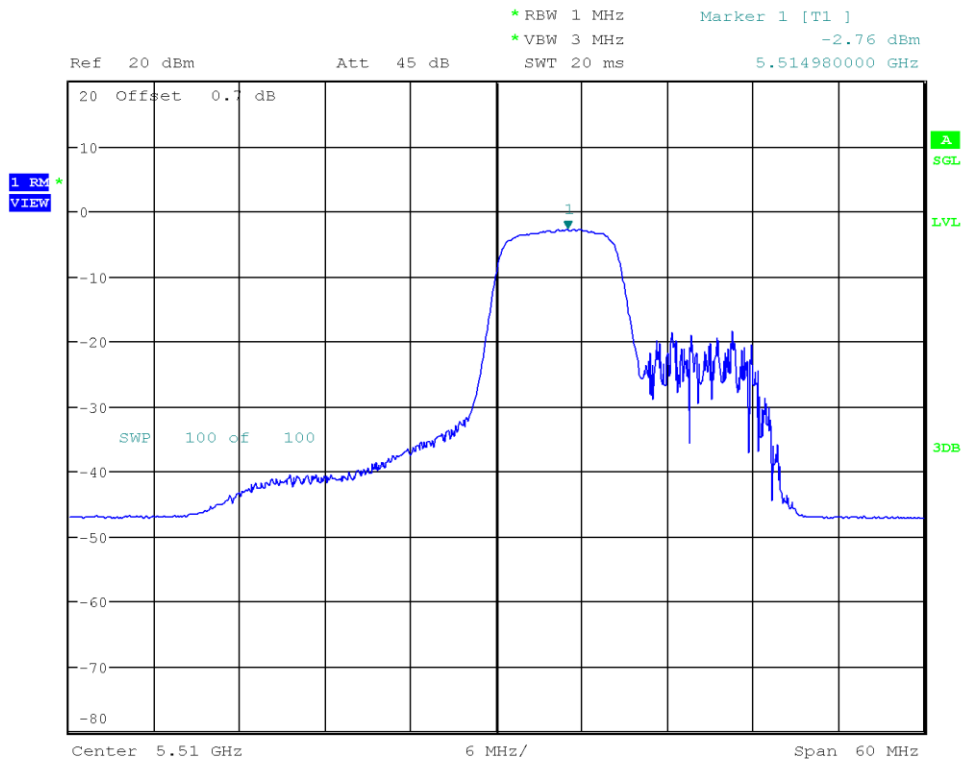
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 102, 5510 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5514.980
 Spectral Density [dBm/RBW]: -2.758
 Resolution Bandwidth [MHz]: 1



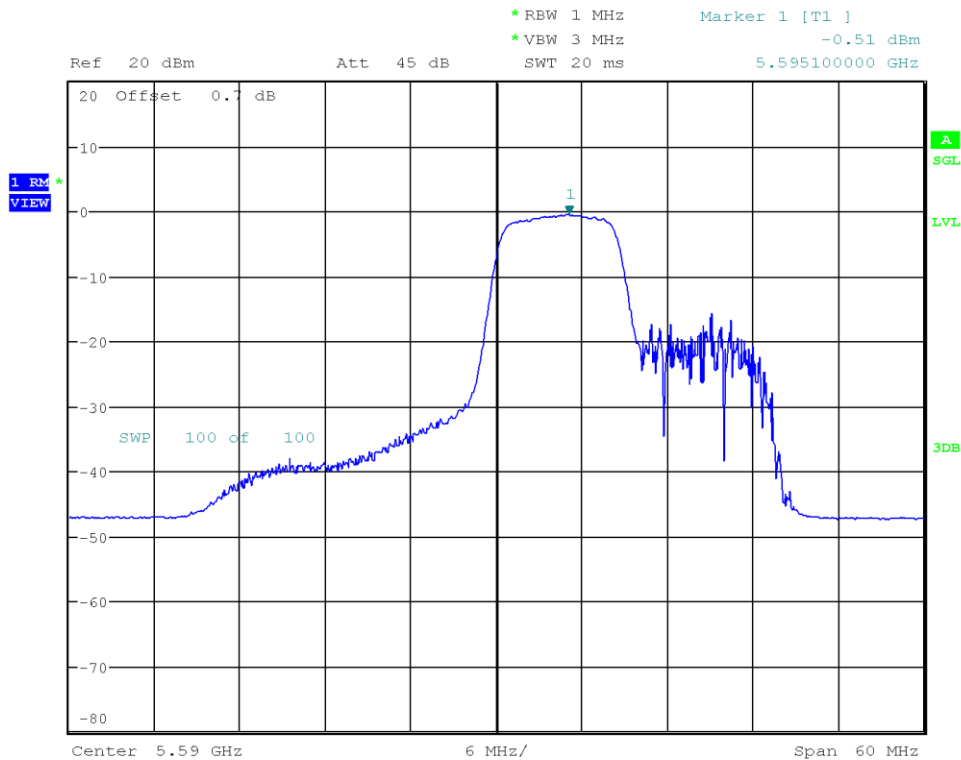
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Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Maximum Power Spectral Density

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 118, 5590 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5595.100
 Spectral Density [dBm/RBW]: -0.511
 Resolution Bandwidth [MHz]: 1



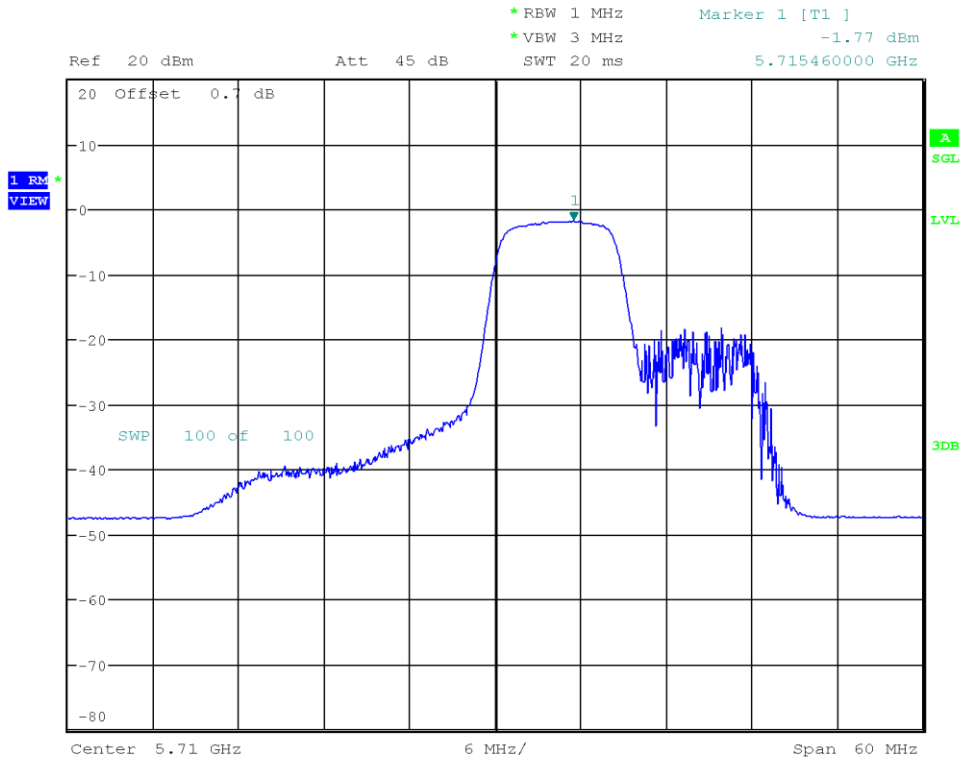
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Test Report No.: G0M-2309-2215-TFC407WF-V01

Eurofins Product Service GmbH
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 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE40-TB), Channel: 142, 5710 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 106 tones
 Maximum Frequency [MHz]: 5715.460
 Spectral Density [dBm/RBW]: -1.767
 Resolution Bandwidth [MHz]: 1



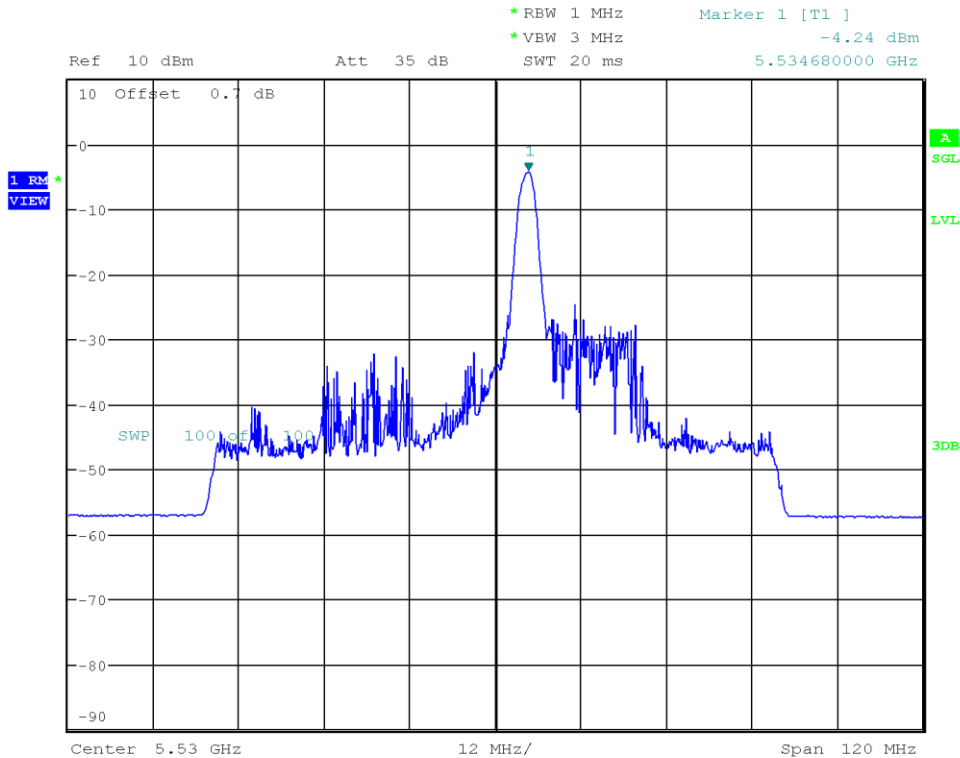
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 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 47713
 Reference Standards: FCC 15.407, RSS-247
 Reference Method: ANSI C63.10:2013, Section 12.5; KDB 789033 v02r02, Section F
 Operational Mode: IEEE 802.11ax (HE80-TB), Channel: 106, 5530 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Azamat Ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2024-02-28
 Number of Antenna Ports: 1
 Note: 26 tones
 Maximum Frequency [MHz]: 5534.680
 Spectral Density [dBm/RBW]: -4.240
 Resolution Bandwidth [MHz]: 1



Date: 28.FEB.2024 11:11:27

Test Report No.: G0M-2309-2215-TFC407WF-V01

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