

Frequency Range: 1 to 18GHz

Polarization: Horizontal

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ULR-TC56882030000050F

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Modulation: 802.11n-20MHz

Data rate: MCS4

Frequency Band	Channel No. or Frequency (MHz)	Polarization	Frequency (MHz)	Emission level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5150-5250 (UNII-1)	36(5180)	Vertical	5150(PK)	61.25	74.00*	-12.75
			5150(Av)	48.15	54.00*	-5.85
			5180(PK)	105.93	-	-
			5180(Av)	93.86	-	-
			10360(Pk)	53.12	68.20	-15.08
			10360(Av)	40.93	54.00	-13.07
		Horizontal	5150(PK)	58.10	74.00*	-15.90
			5150(Av)	43.40	54.00*	-10.60
			5180(PK)	102.74	-	-
			5180(Av)	89.38	-	-
	48(5240)	Vertical	10360(Pk)	53.14	68.20	-15.06
			10360(Av)	40.89	54.00	-27.31
			5240(PK)	107.64	-	-
			5240(Av)	94.26	-	-
			5350(PK)	51.59	74.00*	-22.41
			5350(Av)	38.99	54.00*	-15.01
		Horizontal	10480(Pk)	53.84	68.20	-14.36
			10480(Av)	41.78	54.00	-13.11
			5240(PK)	102.17	-	-
			5240(Av)	89.41	-	-
5725-5825 (UNII-3)	149(5745)	Vertical	5350(PK)	46.99	74.00*	-27.01
			5350(Av)	34.71	54.00*	-19.29
			10480(Pk)	53.58	68.20	-14.62
			10480(Av)	41.79	54.00	-12.21
			5715(Pk)	52.10	78.2	-26.10
			5725(Pk)	64.04	78.2	-14.16
	Horizontal	5745(PK)	100.83	-	-	
		5745(Av)	88.75	-	-	
		11490(Pk)	55.95	74.00*	-18.05	
		11490(Av)	43.44	54.00*	-10.56	
		5715(Pk)	49.18	78.2	-29.02	
		5725(Pk)	60.66	78.2	-17.54	
Horizontal	5745(PK)	97.43	-	-		
	5745(Av)	84.57	-	-		
	11490(Pk)	55.13	74.00*	-18.87		
	11490(Av)	43.35	54.00*	-10.65		

Note:

* :- Indicate restricted band frequency in 15.205

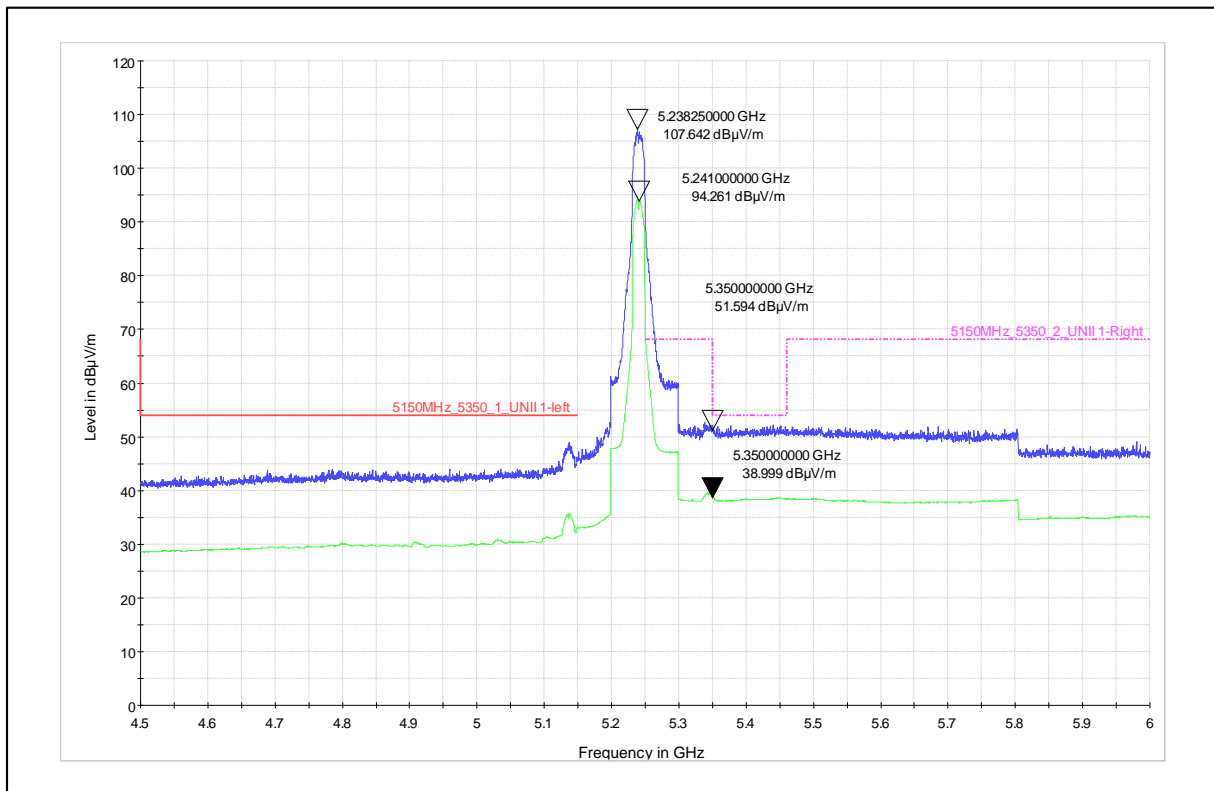
Pk: Peak Detector; Av: Average Detector

157(5825)	Vertical	5825(PK)	102.35	-	-
		5825(Av)	90.54	-	-
		5850(Pk)	60.88	78.2	-17.32
		5860(Pk)	53.49	78.2	-24.71
		11650(Pk)	57.24	74.00*	-16.76
		11650(Av)	44.34	54.00*	-9.66
	Horizontal	5825(PK)	98.82	-	-
		5825(Av)	85.73	-	-
		5850(Pk)	57.59	78.2	-20.61
		5860(Pk)	50.69	78.2	-27.51
		11650(Pk)	55.23	74.00*	-18.77
		11650(Av)	43.39	54.00*	-10.61

Note:

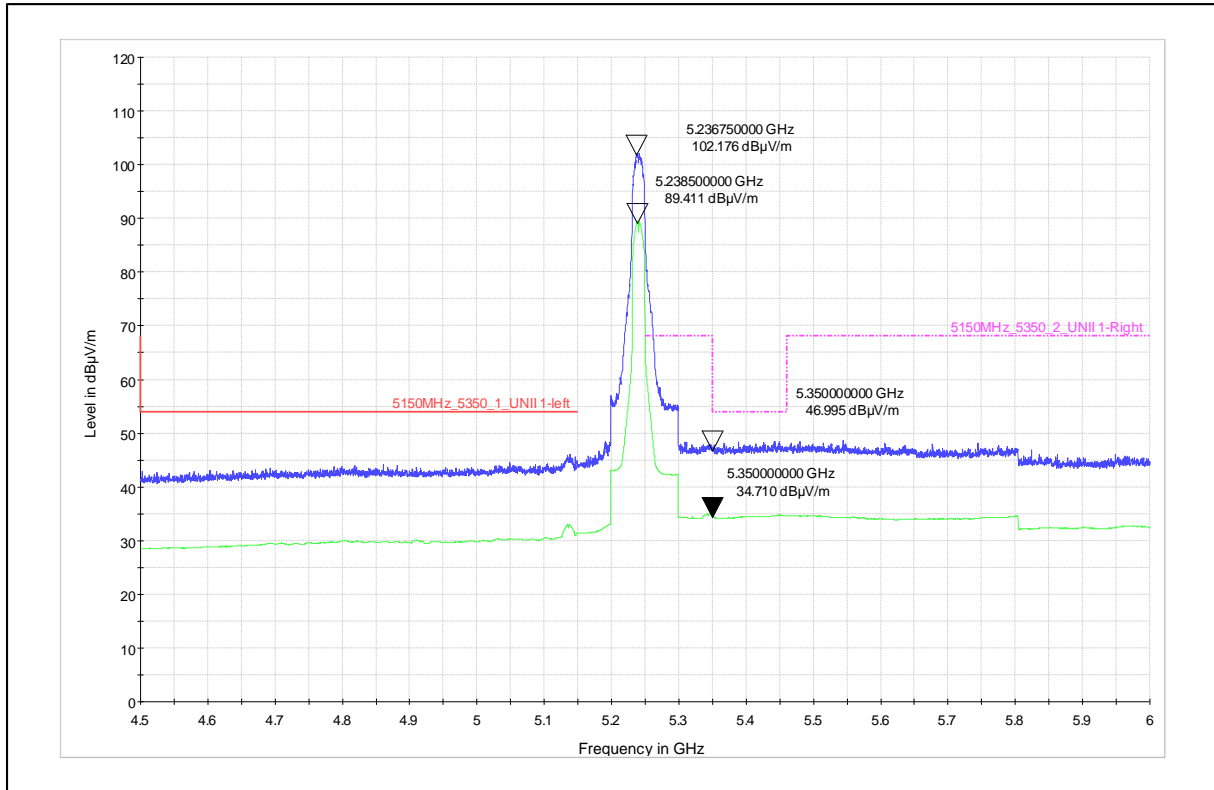
* :- Indicate restricted band frequency in 15.205
Pk: Peak Detector; Av: Average Detector

Worst case emissions for restricted band of operation



Channel Frequency: 5240MHz

Polarization: Vertical



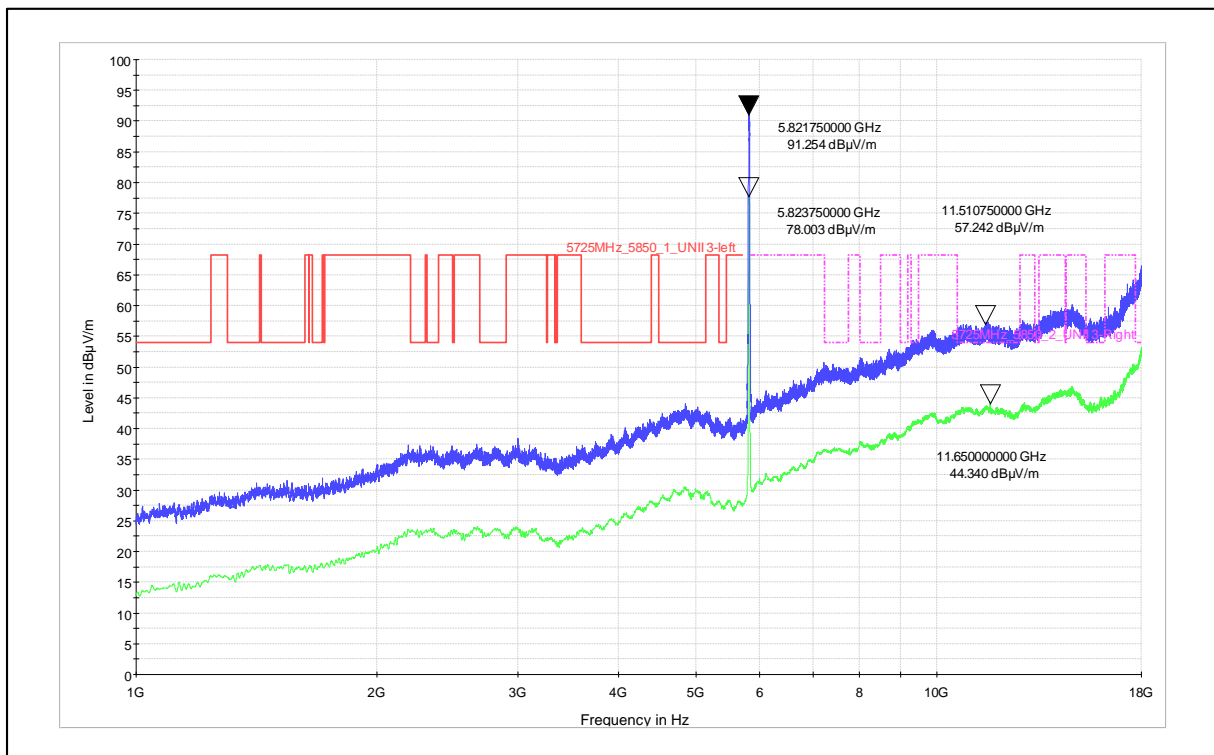
Channel Frequency: 5240MHz

Polarization: Horizontal

Worst case emissions for Spurious radiated emissions above 1GHz

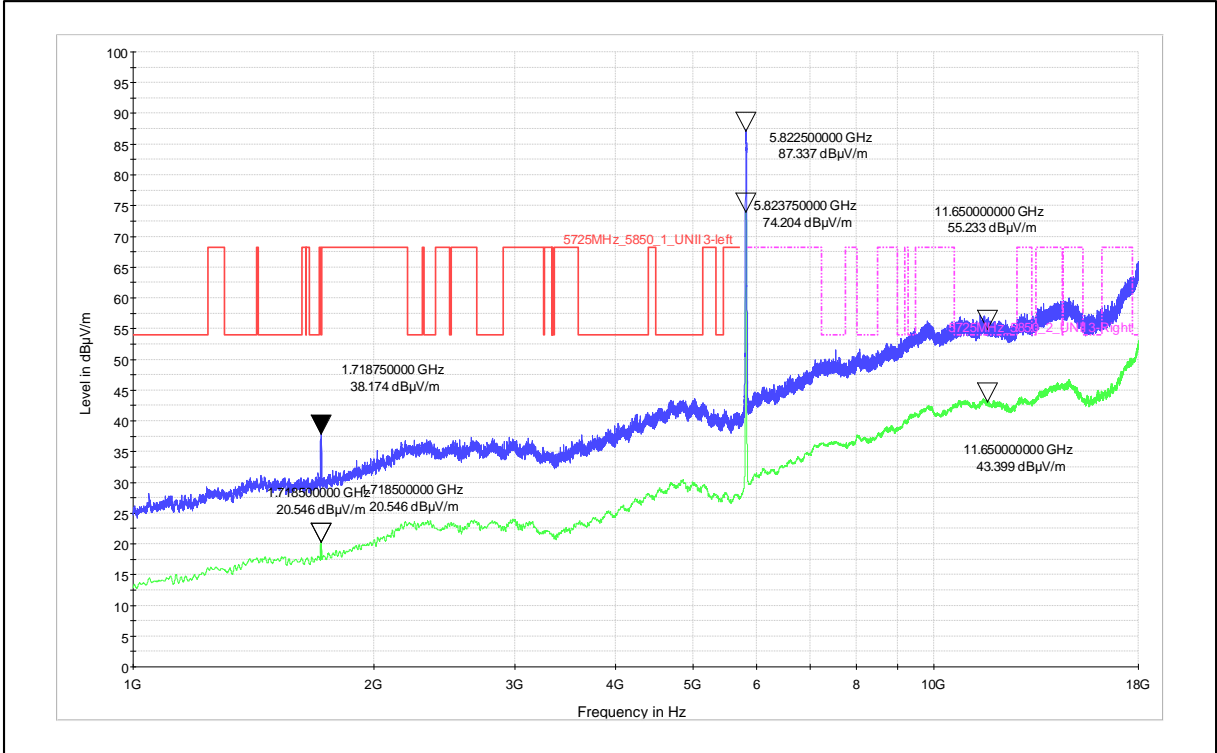
Modulation: 802.11n-20MHz

Channel Frequency: 5825 MHz



Frequency Range: 1 to 18GHz

Polarization: Vertical



Frequency Range: 1 to 18GHz

Polarization: Horizontal

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Test Report No.:

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Modulation: 802.11n-20MHz
Data rate: MCS7

Frequency Band	Channel No. or Frequency (MHz)	Polarization	Frequency (MHz)	Emission level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5150-5250 (UNII-1)	36(5180)	Vertical	5150(PK)	62.07	74.00*	-11.93
			5150(Av)	47.93	54.00*	-6.07
			5180(PK)	104.47	-	-
			5180(Av)	90.11	-	-
			10360(Pk)	53.34	68.20	-14.86
			10360(Av)	40.94	54.00	-13.06
		Horizontal	5150(PK)	55.90	74.00*	-18.10
			5150(Av)	43.07	54.00*	-10.93
			5180(PK)	99.25	-	-
			5180(Av)	85.05	-	-
	48(5240)	Vertical	5240(PK)	100.31	-	-
			5240(Av)	85.93	-	-
			5350(PK)	46.72	74.00*	-27.28
			5350(Av)	34.49	54.00*	-19.51
			10480(Pk)	53.25	68.20	-14.95
			10480(Av)	41.77	54.00	-12.23
		Horizontal	5240(PK)	104.81	-	-
			5240(Av)	90.47	-	-
			5350(PK)	51.21	74.00*	-22.79
			5350(Av)	38.71	54.00*	-15.29
5725-5825 (UNII-3)	149(5745)	Vertical	5715(Pk)	54.60	78.2	-23.60
			5725(Pk)	66.76	78.2	-11.44
			5745(PK)	101.64	-	-
			5745(Av)	88.08	-	-
		Horizontal	11490(Pk)	55.28	74.00*	-18.72
			11490(Av)	43.44	54.00*	-10.56
			5715(Pk)	62.18	78.2	-16.02
			5725(Pk)	52.82	78.2	-25.38
	149(5745)	Horizontal	5745(PK)	98.12	-	-
			5745(Av)	83.87	-	-
			11490(Pk)	55.93	74.00*	-18.07
			11490(Av)	43.27	54.00*	-10.73

Note:

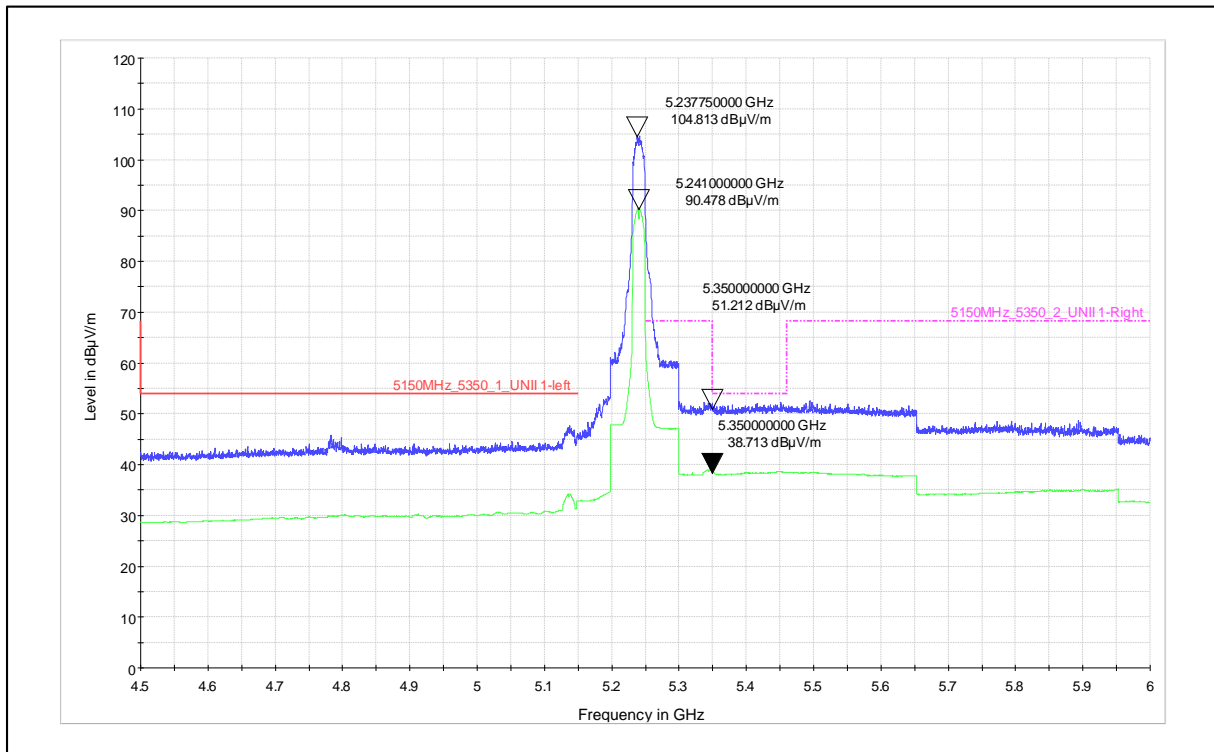
* :- Indicate restricted band frequency in 15.205
Pk: Peak Detector; Av: Average Detector

5725-5825 (UNII-3)	157(5825)	Vertical	5825(PK)	103.24	-	-
			5825(Av)	89.25	-	-
			5850(Pk)	63.58	78.2	-14.62
			5860(Pk)	56.83	78.2	-21.37
			11650(Pk)	56.09	74.00*	-17.91
			11650(Av)	44.08	54.00*	-9.92
	Horizontal	5825(PK)	98.79	-	-	
		5825(Av)	84.60	-	-	
		5850(Pk)	58.01	78.2	-20.19	
		5860(Pk)	51.27	78.2	-26.93	
		11650(Pk)	54.90	74.00*	-19.1	
		11650(Av)	43.27	54.00*	-10.73	

Note:

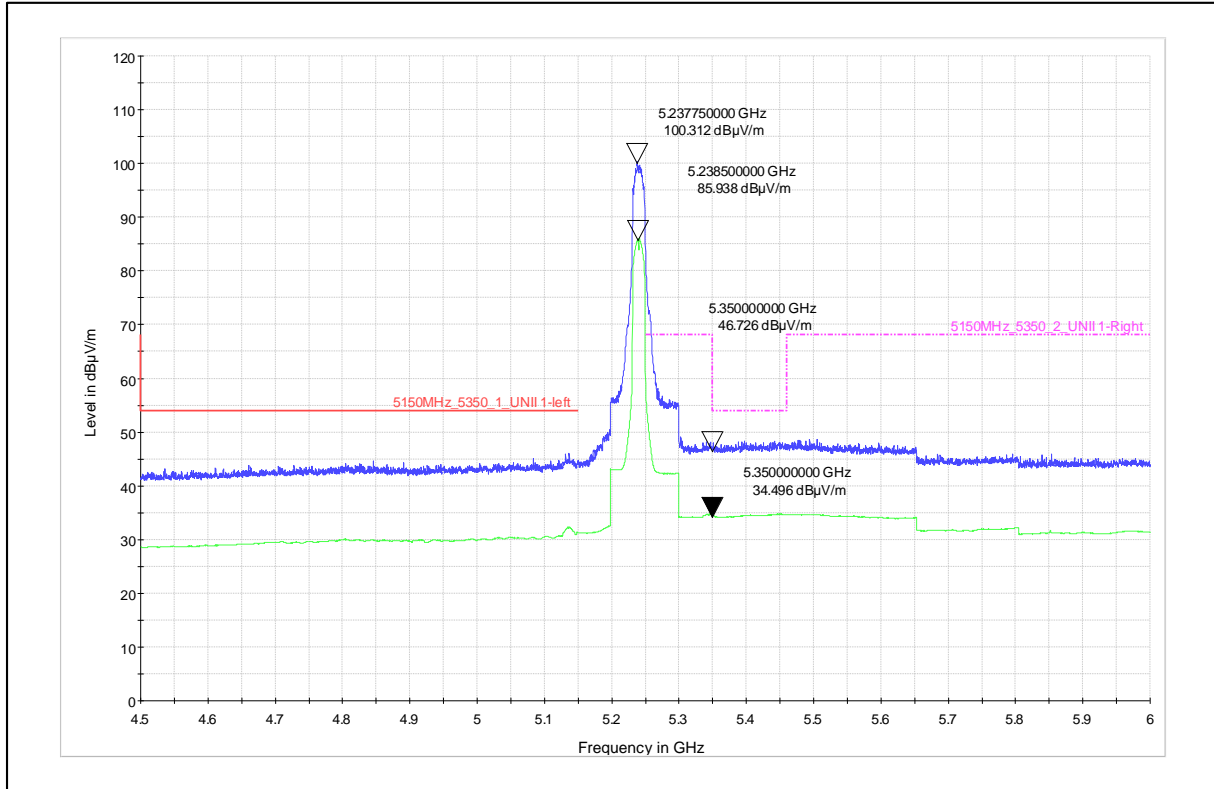
* :- Indicate restricted band frequency in 15.205
Pk: Peak Detector; Av : Average Detector

Worst case emissions for restricted band of operation



Channel Frequency: 5240MHz

Polarization: Vertical



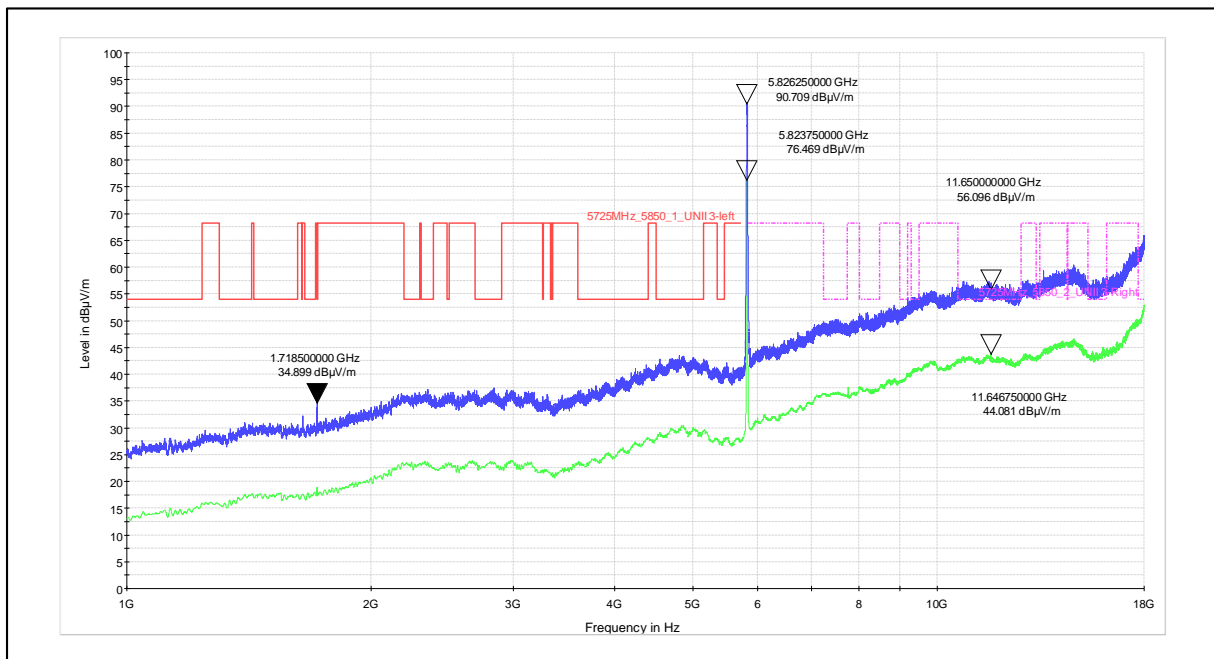
Channel Frequency: 5240MHz

Polarization: Horizontal

Worst case emissions for Spurious radiated emissions above 1GHz

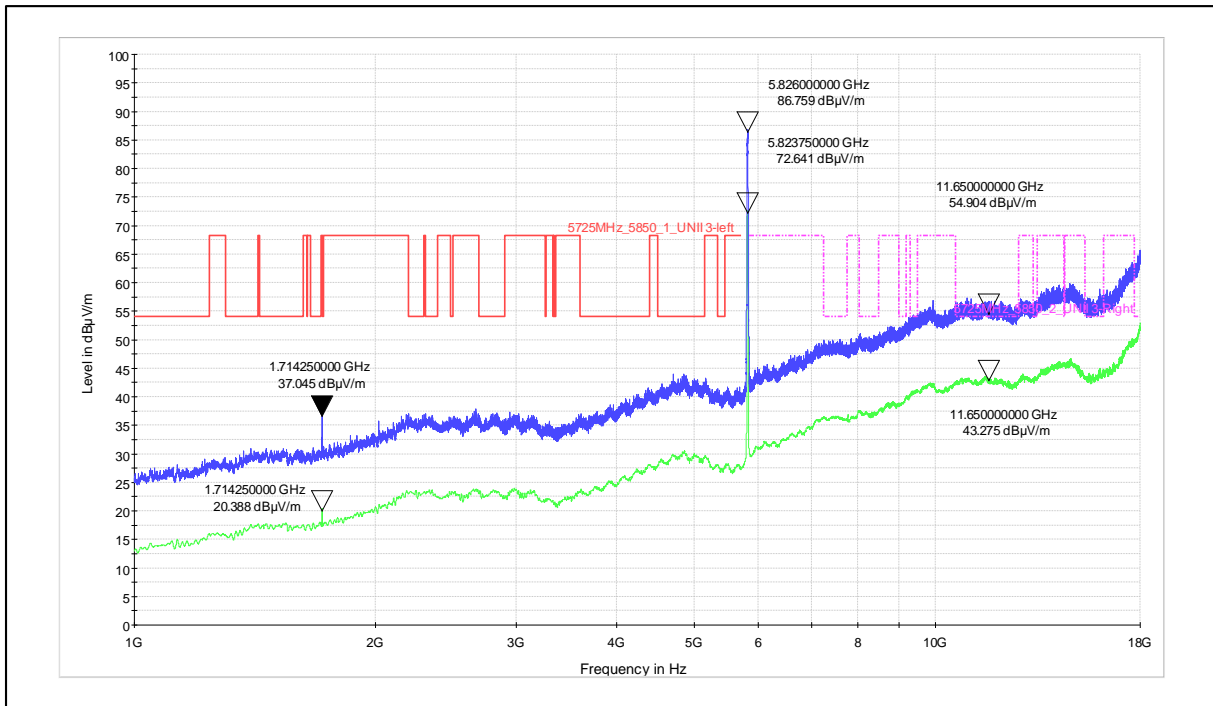
Modulation: 802.11n-20MHz

Channel Frequency: 5825 MHz



Frequency Range: 1 to 18GHz

Polarization: Vertical



Frequency Range: 1 to 18GHz

Polarization: Horizontal

Modulation: 802.11n-40MHz

Data rate: MCS0

Frequency Band	Channel No. or Frequency	Polarization	Frequency (MHz)	Emission level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5150-5250 (UNII-1)	36(5190)	Vertical	5150(PK)	65.77	74.00*	-8.23
			5150(Av)	49.93	54.00*	-4.07
			5190(PK)	100.05	-	-
			5190(Av)	88.22	-	-
			10380(Pk)	53.22	68.20	-14.98
			10380(Av)	41.26	54.00	-12.74
	36(5190)	Horizontal	5150(PK)	62.78	74.00*	-11.22
			5150(Av)	45.38	54.00*	-8.62
			5190(PK)	96.61	-	-
			5190(Av)	84.69	-	-
			10380(Pk)	53.22	68.20	-14.98
			10380(Av)	41.29	54.00	-12.71
	48(5230)	Vertical	5230(PK)	103.21	-	-
			5230(Av)	91.50	-	-
			5350(PK)	51.08	74.00*	-22.92
			5350(Av)	38.47	54.00*	-15.53
			10460(Pk)	53.80	68.20	-14.40
		Horizontal	10460(Av)	41.87	54.00	-12.13
			5230(PK)	99.67	-	-
			5230(Av)	89.00	-	-
5350(PK)			46.74	74.00*	-27.26	
5350(Av)			34.50	54.00*	-19.50	
5725-5825 (UNII-3)	Vertical	10460(Pk)	53.93	68.20	-14.27	
		10460(Av)	41.85	54.00	-12.15	
		5610(Pk)	30.60	78.2	-47.60	
		5725(Pk)	72.27	78.2	-5.93	
		5755(PK)	99.68	-	-	
	Horizontal	5755(Av)	88.62	-	-	
		11510(Pk)	57.58	74.00*	-16.42	
		11510(Av)	43.78	54.00*	-10.22	
		5610(Pk)	30.09	78.2	-48.11	
		5725(Pk)	69.33	78.2	-8.87	
Horizontal	5755(PK)	96.67	-	-		
	5755(Av)	84.65	-	-		
	11510(Pk)	55.53	74.00*	-18.47		
	11510(Av)	43.58	54.00*	-10.42		

Note:

* :- Indicate restricted band frequency in 15.205

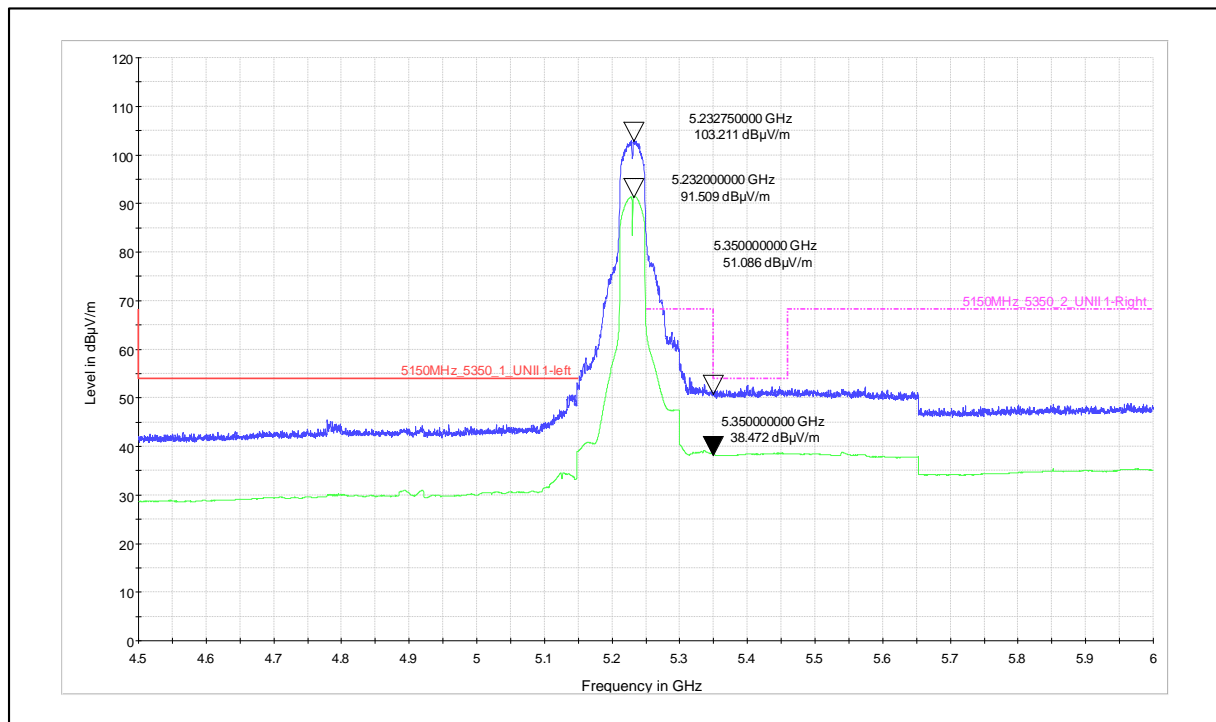
Pk: Peak Detector; Av: Average Detector

5725-5825 (UNII-3)	157(5795)	Vertical	5795(PK)	100.26	-	-
			5795(Av)	89.29	-	-
			5850(Pk)	56.14	78.2	-22.06
			5981(PK)	45.37	78.2	-32.83
			11590(Pk)	56.07	74.00*	-17.93
			11590(Av)	43.66	54.00*	-10.34
	Horizontal	5795(PK)	96.63	-	-	
		5795(Av)	84.63	-	-	
		5850(Pk)	52.68	78.2	-25.52	
		5981(Pk)	43.93	78.2	-34.27	
		11590(Pk)	55.80	74.00*	-18.20	
		11590(Av)	43.28	54.00*	-10.72	

Note:

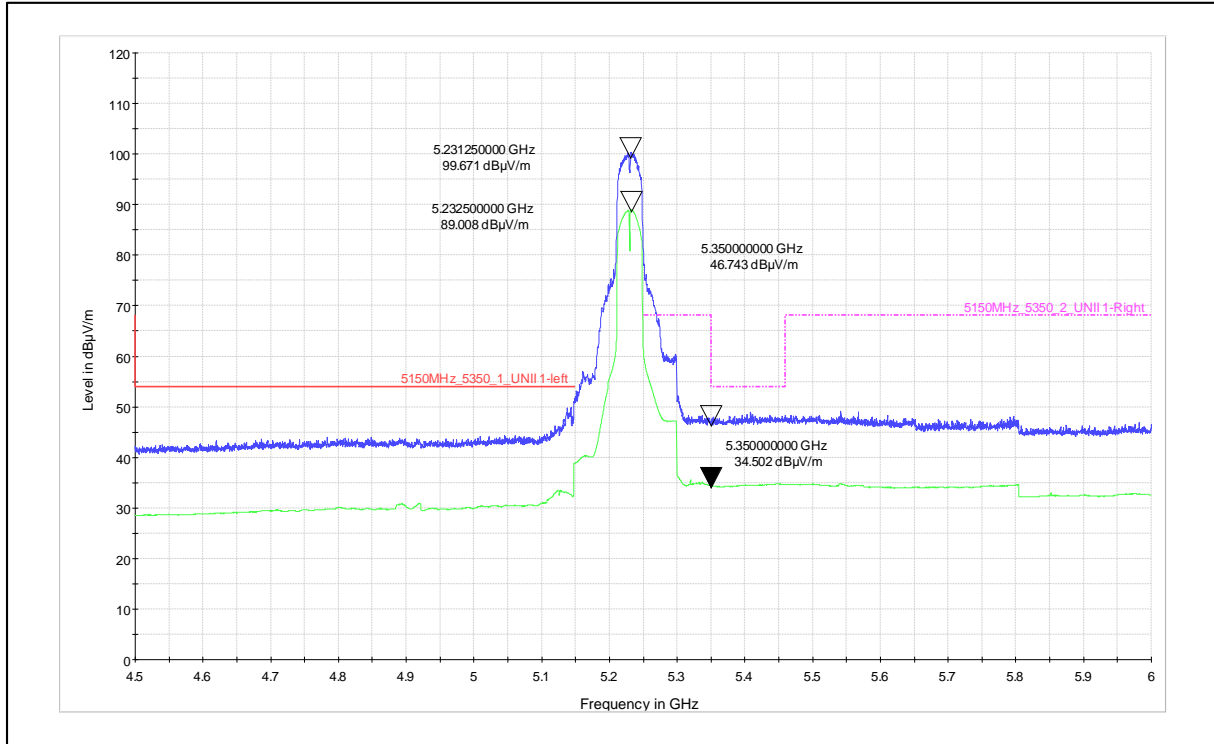
* :- Indicate restricted band frequency in 15.205
Pk: Peak Detector; Av: Average Detector

Worst case emissions for restricted band of operation



Channel Frequency: 5230MHz

Polarization: Vertical

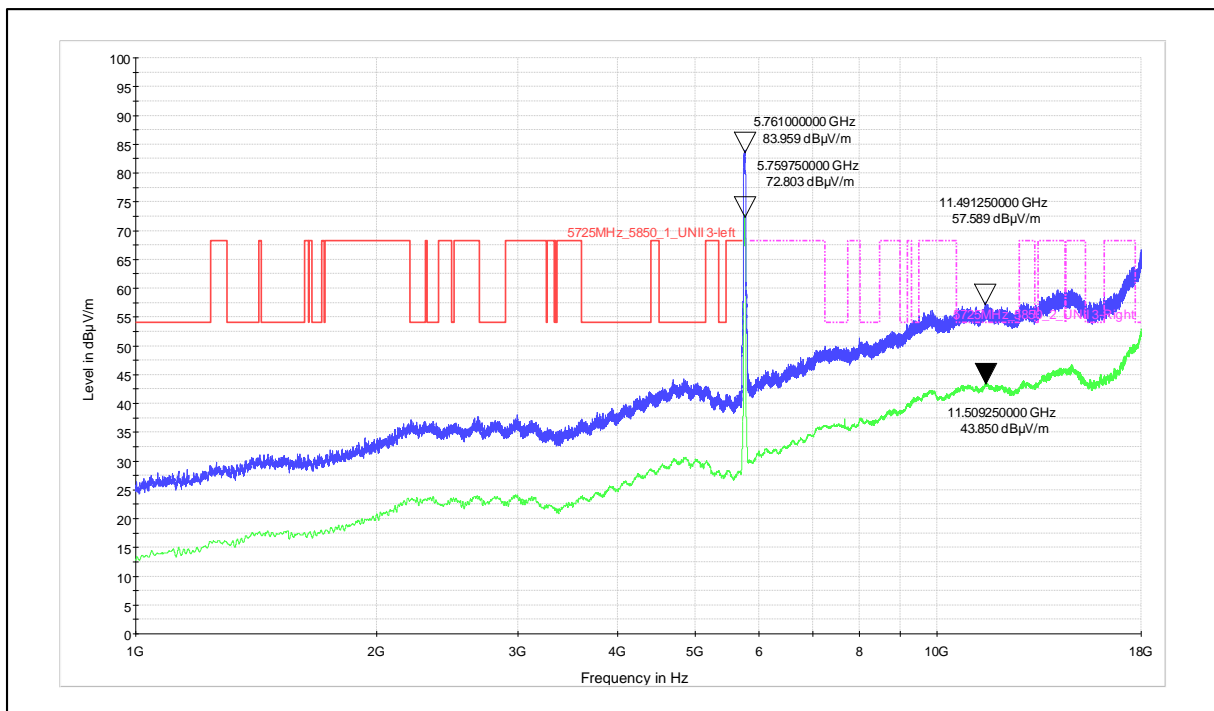


Channel Frequency: 5230MHz

Polarization: Horizontal

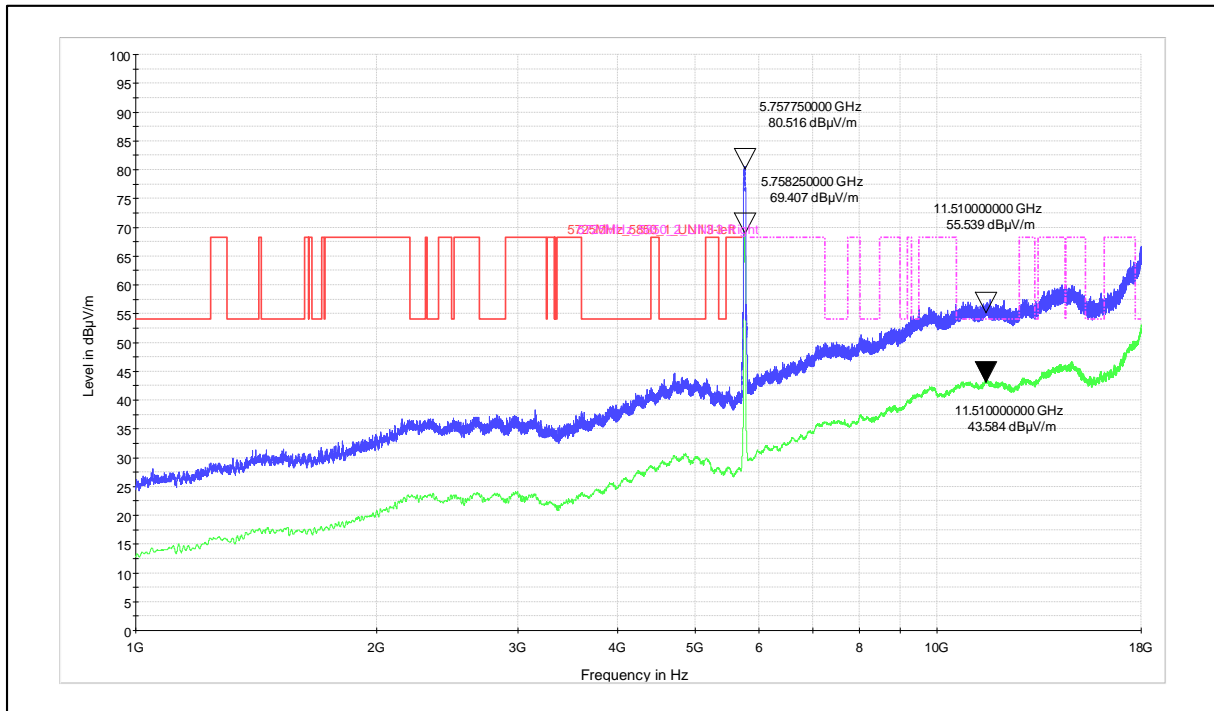
Worst case emissions for Spurious radiated emissions above 1GHz

Modulation: 802.11n-40MHz
Channel Frequency: 5755 MHz



Frequency Range: 1-18GHz

Polarization: Vertical



Frequency Range: 1 to 18GHz

Polarization: Horizontal

Modulation: 802.11n-40MHz
Data rate: MCS4

Frequency Band	Channel No. or Frequency	Polarization	Frequency (MHz)	Emission level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	
5150-5250 (UNII-1)	36(5190)	Vertical	5150(PK)	69.98	74.00*	-4.02	
			5150(Av)	52.08	54.00*	-1.92	
			5190(PK)	103.75	-	-	
			5190(Av)	88.57	-	-	
			10380(Pk)	53.80	68.20	-14.40	
			10380(Av)	41.89	54.00	-12.11	
		Horizontal	5150(PK)	65.67	74.00*	-8.33	
			5150(Av)	50.00	54.00*	-4.00	
			5190(PK)	98.92	-	-	
			5190(Av)	84.57	-	-	
	48(5230)	Vertical	10380(Pk)	53.65	68.20	-14.55	
			10380(Av)	41.20	54.00	-12.80	
			5230(PK)	103.69	-	-	
			5230(Av)	88.71	-	-	
			5350(PK)	50.28	74.00*	-23.72	
			5350(Av)	38.34	54.00*	-15.66	
		Horizontal	10460(Pk)	53.96	68.20	-14.24	
			10460(Av)	41.95	54.00	-12.05	
			5230(PK)	98.57	-	-	
			5230(Av)	83.80	-	-	
5725-5825 (UNII-3)	149(5745)	Vertical	5350(PK)	46.79	74.00*	-27.21	
			5350(Av)	34.31	54.00*	-19.69	
			10460(Pk)	53.66	68.20	-14.54	
			10460(Av)	41.91	54.00	-12.09	
			5610(Pk)	43.14	78.2	-35.06	
			5725(Pk)	73.52	78.2	-4.68	
		Horizontal	5755(PK)	100.36	-	-	
			5755(Av)	86.49	-	-	
			11510(Pk)	55.94	74.00*	-18.06	
			11510(Av)	43.57	54.00*	-10.43	
			Horizontal	5610(Pk)	42.14	78.2	-36.06
				5725(Pk)	69.61	78.2	-8.59
				5755(PK)	97.61	-	-
				5755(Av)	82.47	-	-
			11510(Pk)	56.56	74.00*	-17.44	
			11510(Av)	43.55	54.00*	-10.45	

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

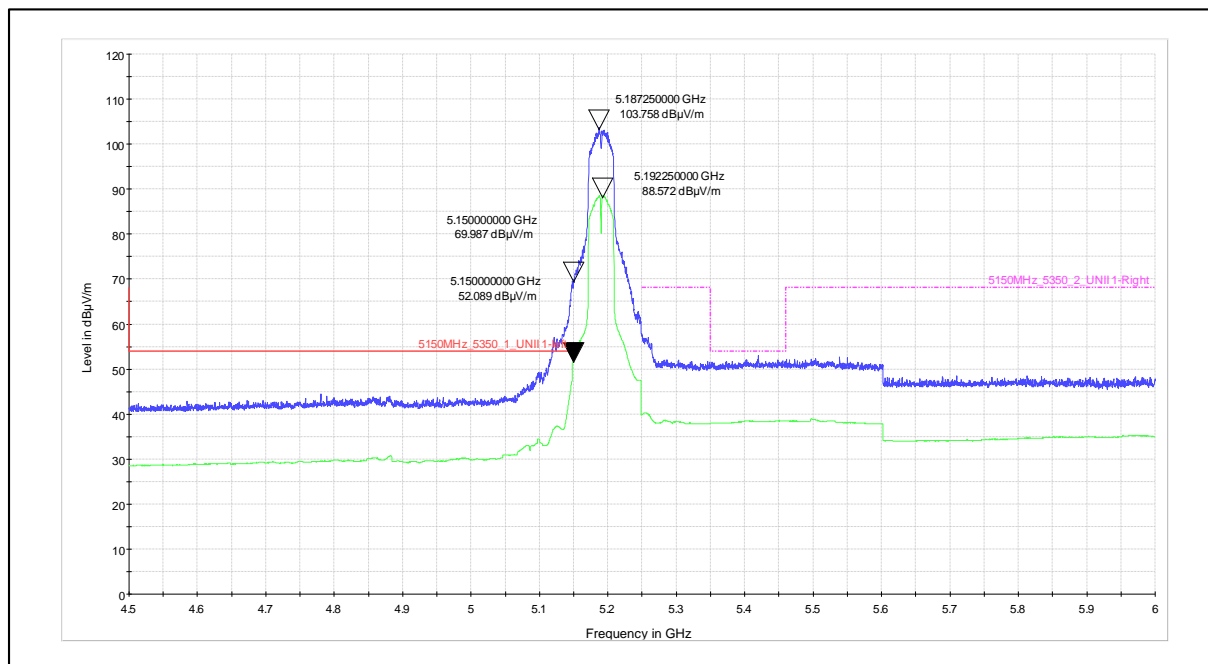
5725-5825 (UNII-3)	157(5785)	Vertical	5795(PK)	100.05	-	-
			5795(Av)	85.54	-	-
			5850(Pk)	53.77	78.2	-24.43
			5981(Pk)	46.07	78.2	-32.13
			11590(Pk)	56.18	74.00*	-17.82
			11590(Av)	43.52	54.00*	-10.48
	Horizontal	5795(PK)	96.63	-	-	
		5795(Av)	81.40	-	-	
		5850(Pk)	50.23	78.2	-27.97	
		5981(Pk)	43.78	78.2	-34.42	
		11590(Pk)	55.59	74.00*	-18.41	
		11590(Av)	43.22	54.00*	-10.78	

Note:

* - Indicate restricted band frequency in 15.205

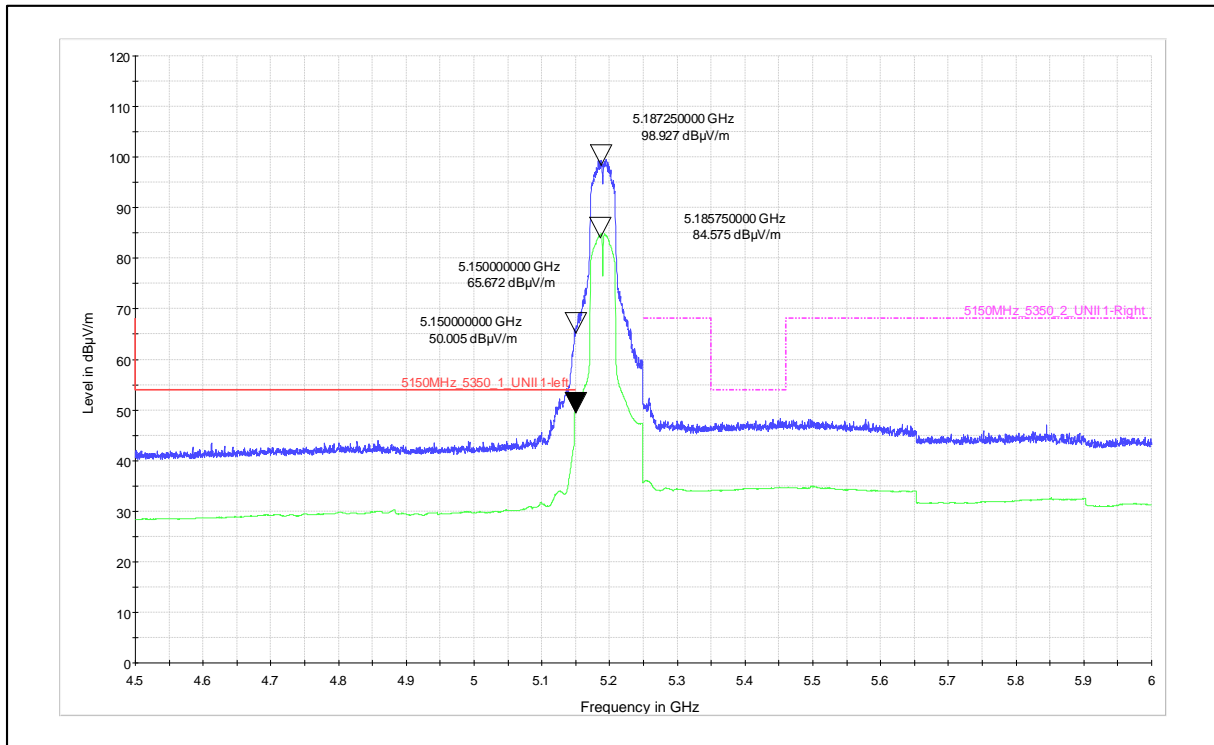
Pk: Peak Detector; Av: Average Detector

Worst case emissions for restricted band of operation



Channel Frequency: 5190MHz

Polarization: Vertical

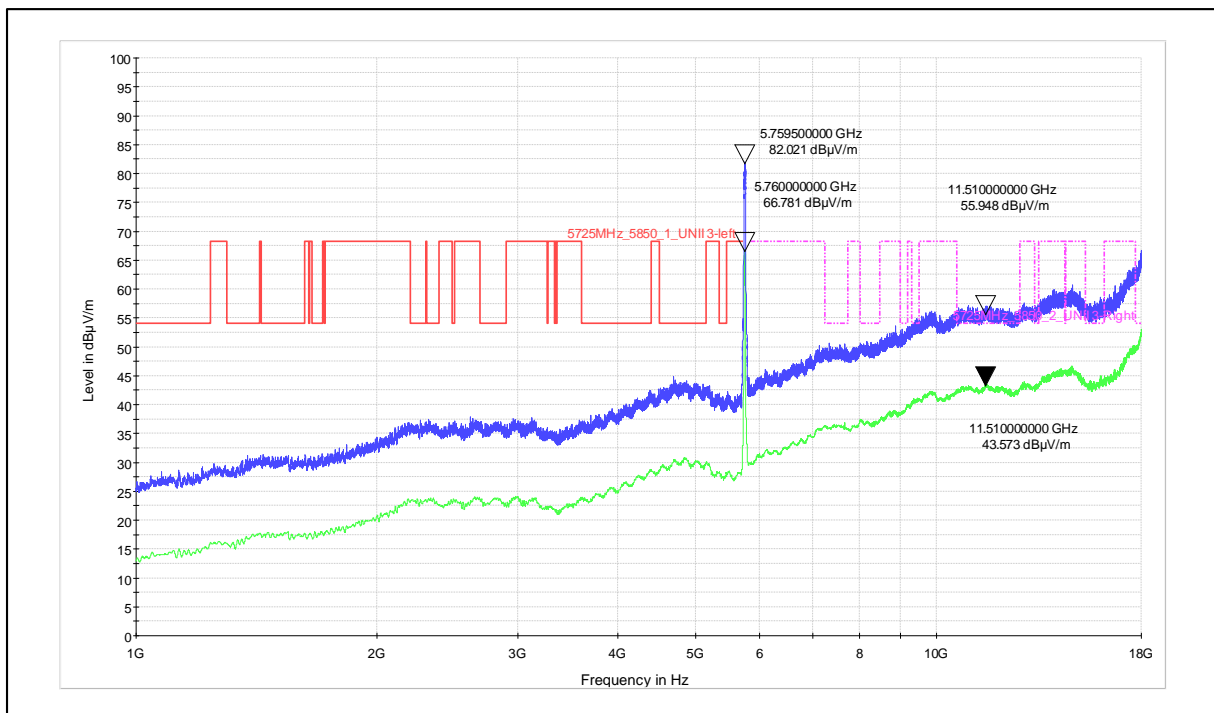


Channel Frequency: 5190MHz

Polarization: Horizontal

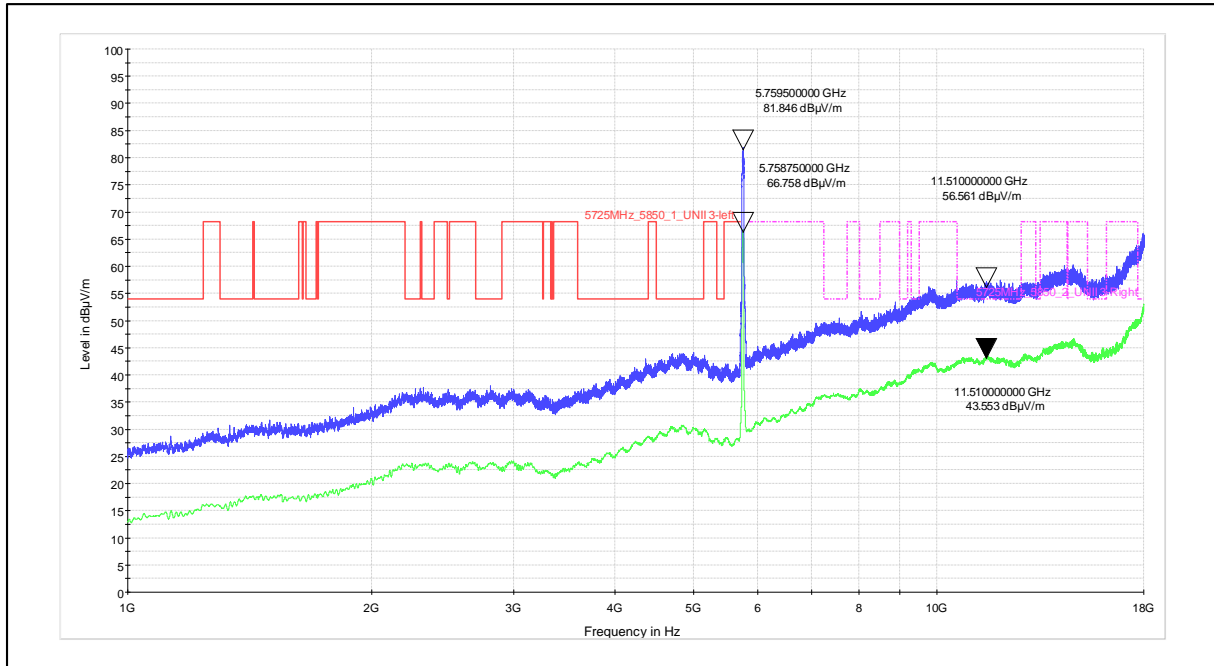
Worst case emissions for Spurious radiated emissions above 1GHz

Modulation: 802.11n-40MHz
Channel Frequency: 5755 MHz



Frequency Range: 1 to 18GHz

Polarization: Vertical



Frequency Range: 1 to 18GHz

Polarization: Horizontal

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Modulation: 802.11n-40MHz

Data rate: MCS7

Frequency Band	Channel No. or Frequency	Polarization	Frequency (MHz)	Emission level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	
5150-5250 (UNII-1)	36(5190)	Vertical	5150(PK)	63.32	74.00*	-10.68	
			5150(Av)	49.23	54.00*	-4.77	
			5190(PK)	100.97	-	-	
			5190(Av)	84.79	-	-	
			10380(Pk)	53.21	68.20	-14.99	
			10380(Av)	41.17	54.00	-12.83	
		Horizontal	5150(PK)	62.97	74.00*	-11.03	
			5150(Av)	44.40	54.00*	-9.60	
			5190(PK)	97.82	-	-	
			5190(Av)	81.91	-	-	
	48(5230)	Vertical	10380(Pk)	53.90	68.20	-14.30	
			10380(Av)	41.17	54.00	-12.83	
			5230(PK)	100.09	-	-	
			5230(Av)	84.00	-	-	
			5350(PK)	47.87	74.00*	-26.13	
			5350(Av)	35.02	54.00*	-18.98	
		Horizontal	10460(Pk)	55.44	68.20	-12.76	
			10460(Av)	42.30	54.00	-12.70	
			5230(PK)	94.94	-	-	
			5230(Av)	78.79	-	-	
5725-5825 (UNII-3)	149(5745)	Vertical	5350(PK)	45.54	74.00*	-28.46	
			5350(Av)	31.94	54.00*	-22.06	
			10460(Pk)	54.34	68.20	-13.86	
			10460(Av)	42.23	54.00	-11.77	
		Horizontal	5610(pk)	41.80	78.2	-36.40	
			5725(Pk)	64.46	78.2	-13.74	
			5755(PK)	95.15	-	-	
			5755(Av)	79.71	-	-	
	11510(Pk)		56.43	74.00*	-17.57		
	11510(Av)		43.50	54.00*	-10.50		
			Vertical	5610(pk)	41.88	78.2	-36.32
				5725(Pk)	59.77	78.2	-18.43
			Horizontal	5755(PK)	92.32	-	-
				5755(Av)	75.94	-	-
11510(Pk)				55.91	74.00*	-18.09	
11510(Av)				43.47	54.00*	-10.53	

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

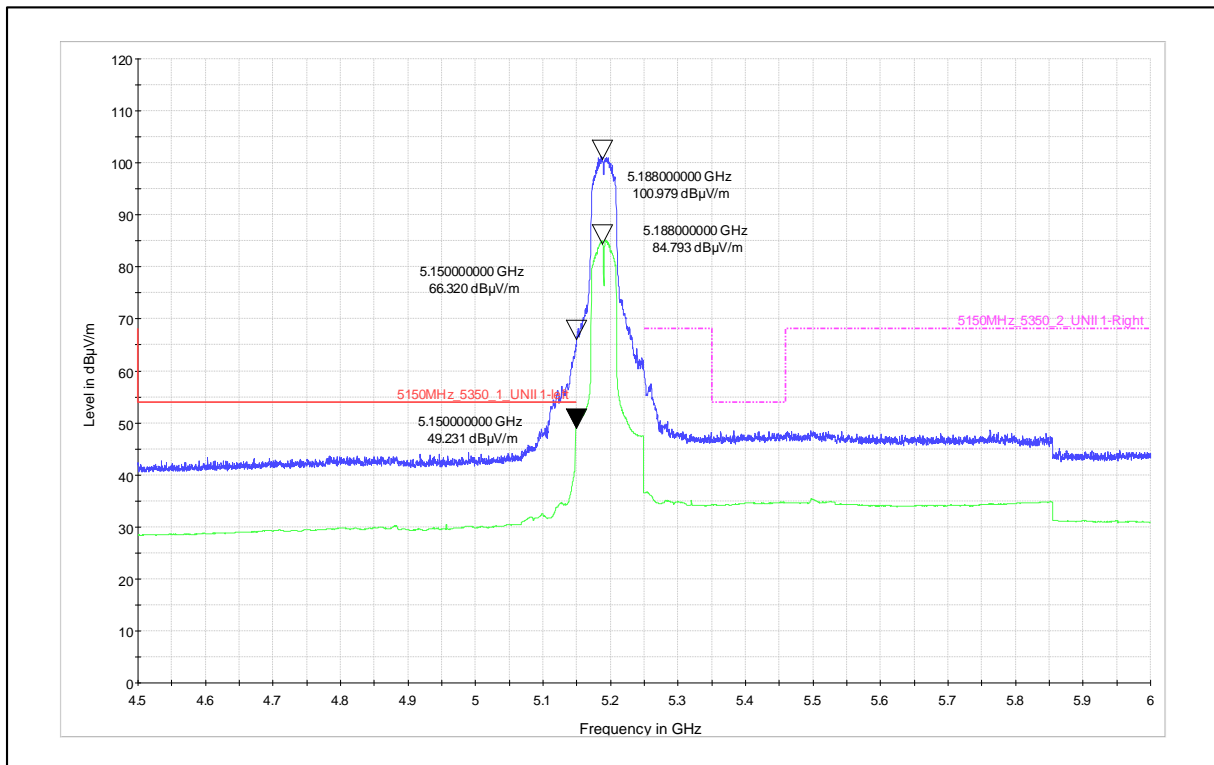
5725-5825 (UNII-3)	157(5785)	Vertical	5795(Pk)	98.19	-	-
			5795(Av)	82.19	-	-
			5850(Pk)	54.52	78.2	-23.68
			5981(Pk)	45.22	78.2	-32.98
			11590(Pk)	55.66	74.00*	-18.34
			11590(Av)	43.25	54.00*	-10.75
	Horizontal	5795(Pk)	94.42	-	-	
		5795(Av)	77.82	-	-	
		5850(Pk)	49.36	78.2	-28.84	
		5981(Pk)	43.00	78.2	-35.20	
		11590(Pk)	55.82	74.00*	-18.18	
		11590(Av)	43.16	54.00*	-10.84	

Note:

* :- Indicate restricted band frequency in 15.205

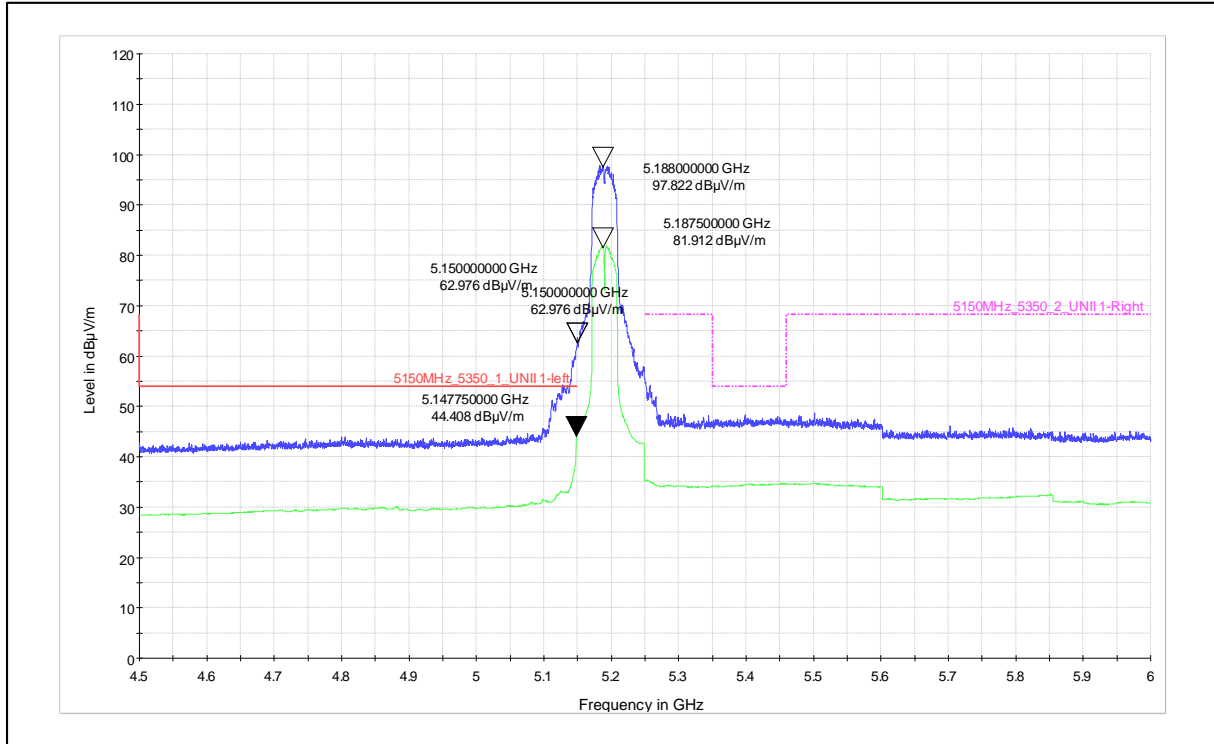
Pk: Peak Detector; Av: Average Detector

Worst case emissions for restricted band of operation



Channel Frequency: 5190MHz

Polarization: Vertical

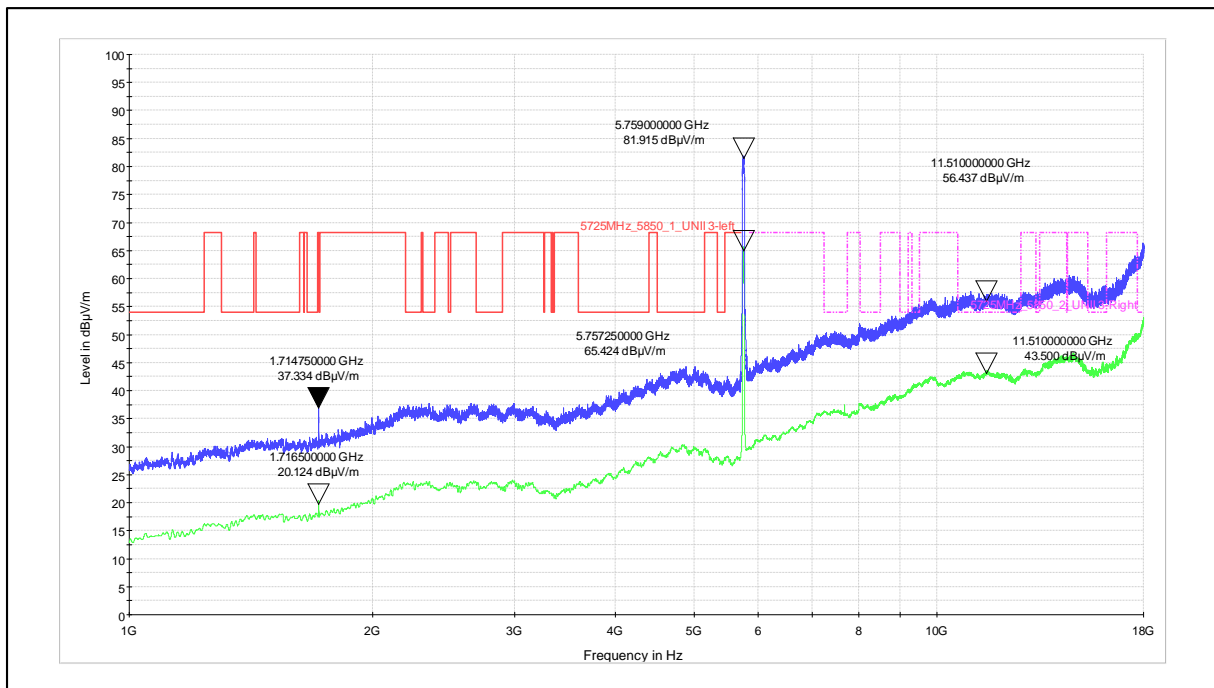


Channel Frequency: 5190MHz

Polarization: Horizontal

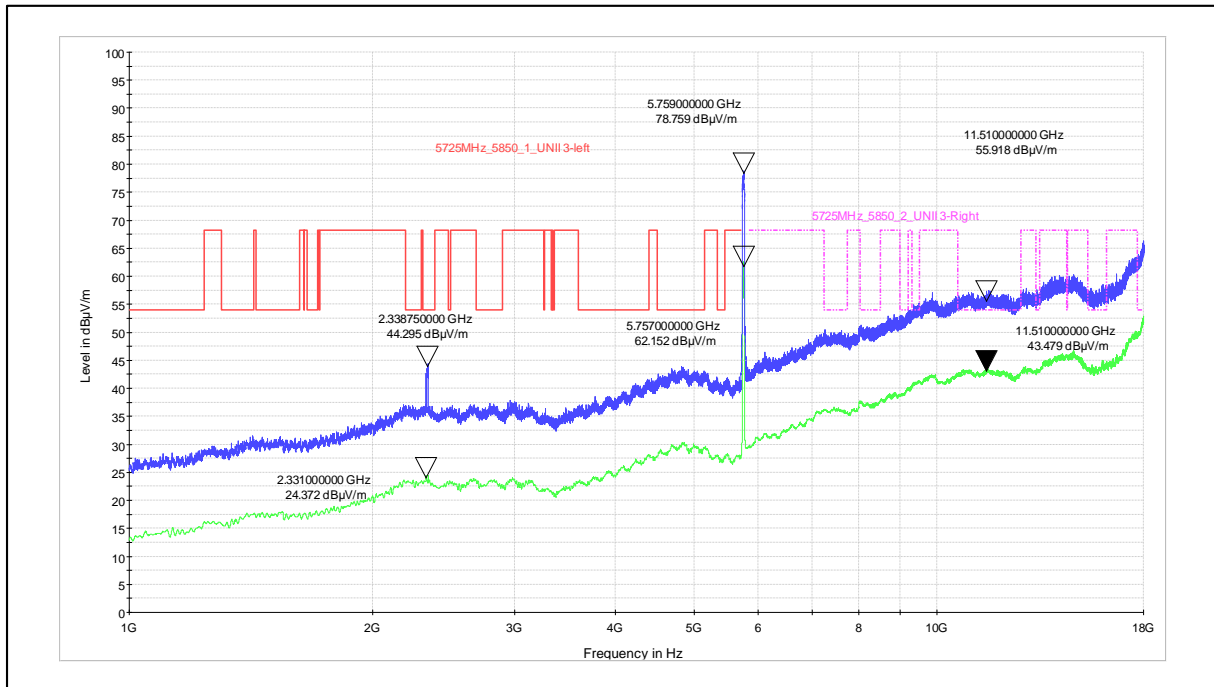
Worst case emissions for Spurious radiated emissions above 1GHz

Modulation: 802.11n-40MHz
Channel Frequency: 5755 MHz



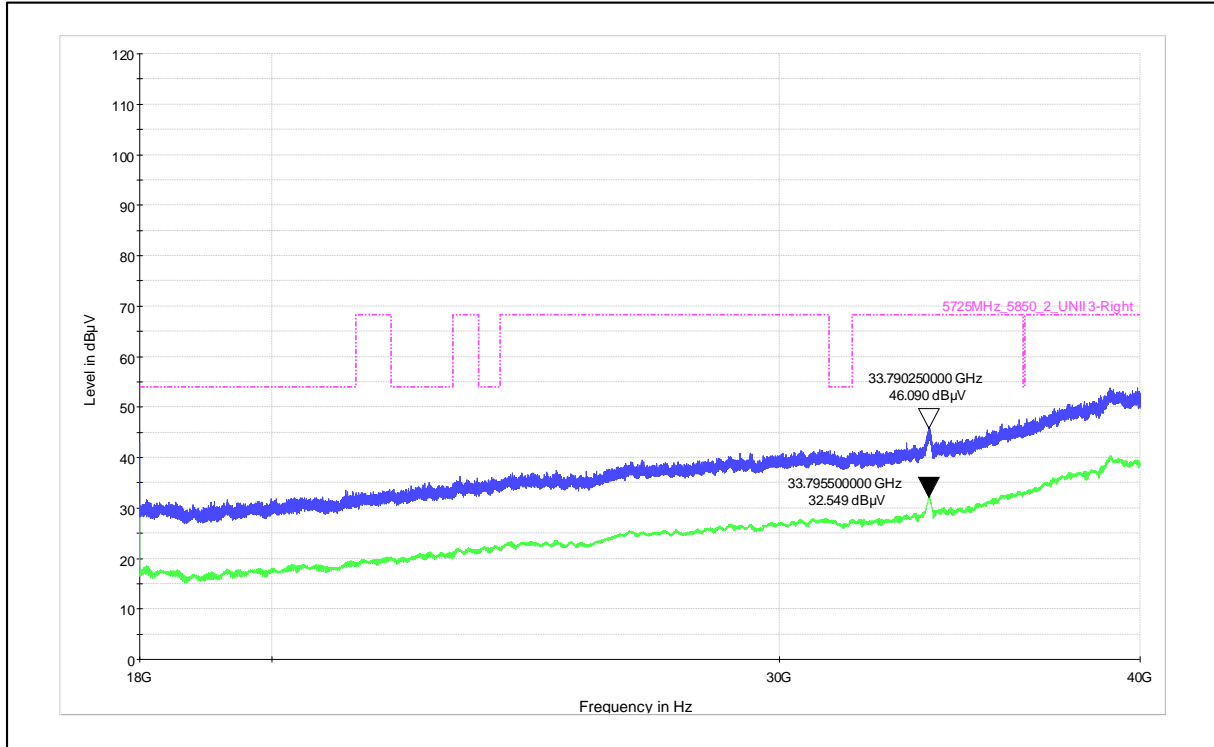
Frequency Range: 1 to 18GHz

Polarization: Vertical



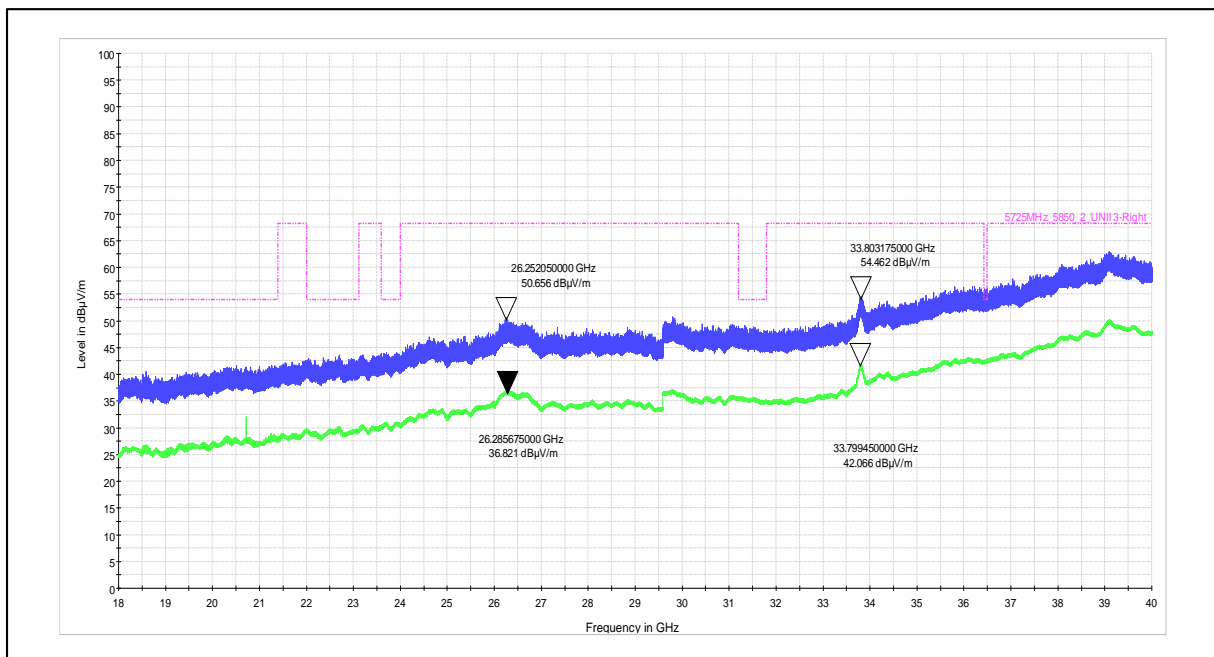
Frequency Range: 1 to 18GHz

Polarization: Horizontal



Frequency Range: 18-40GHz

Polarization: Vertical



Frequency Range: 18-40GHz

Polarization: Horizontal

7 Frequency Stability

Result

Pass

Test Specification

FCC part 15 Subpart C 15.407 (g) / RSS Gen Issue 5, Section 8.11

Test Method

Subclause 6.8.1 of ANSI C63.10

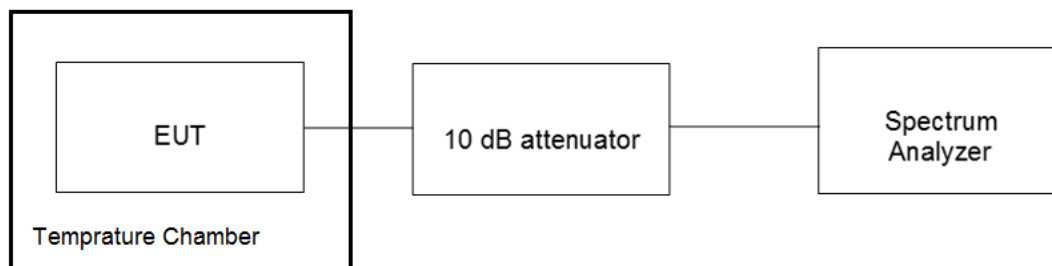
Port of testing

Antenna port

Requirement

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual

Test Method:



Test Condition:

Normal Test Condition:

Temperature (Norm) = + 25 °C

Voltage = 3.6V DC Li-Ion battery

Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 3 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Prüfbericht - Nr.:
Test Report No.:

ULR-TC568820300000050F

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Test results:

Channel Frequency (MHz)	Temperature (°C)	Frequency deviation for different time interval (MHz)				Limit
		0Min	2Min	5Min	10Min	
5180	0	0.32	-1.04	-1.04	-1.03	Emission drift measured are maintained within the authorised band
	25	2.24	1.70	1.70	1.70	
	35	-1.01	-1.43	-1.43	0.86	
5240	0	-2.03	-2.24	1.64	1.64	
	25	-5238.3	-5241.7	-5241.61	-5241.61	
	35	-5239.14	-5241.01	-5242.27	-5241.04	
5745	0	-5746.04	-1.04	-1.04	-1.04	
	25	-5746.61	-5747.24	-5747.24	-5747.24	
	35	-5746.04	-5745.8	-5747.27	-5747.27	
5825	0	-5823.6	-1.49	1.52	1.52	
	25	-5827.24	-5826.64	-5826.01	-5826.01	
	35	-5827.27	-5826.46	-5826.46	-5826.64	

Note: since the product Vscan Air CL is battery operated voltage variations are not applicable

8 Conducted Spurious Emission test on AC Power Line

Result

Pass

Test Specification : FCC Part 15 Section 15.207 / RSS Gen Issue 5 Section 8.8
 Test Method : ANSI C 63.10-2013
 Testing Location : Screened room
 Measurement Bandwidth : 9kHz
 Frequency Range : 150kHz – 30MHz
 Supply Voltage : 110VAC,60Hz
 Test Method : Refer TEST METHODOLOGY

***Note: The product has tested with AC to DC adapter and Wireless Qi charger**

Limits of section 15.207

Frequency of emission (MHz)	QP Limit (dBµV)	AV Limit (dBµV/m)
0.15 – 0.5	66 – 56*	56 – 46*
0.5 – 5	56	46
5 – 30	60	50

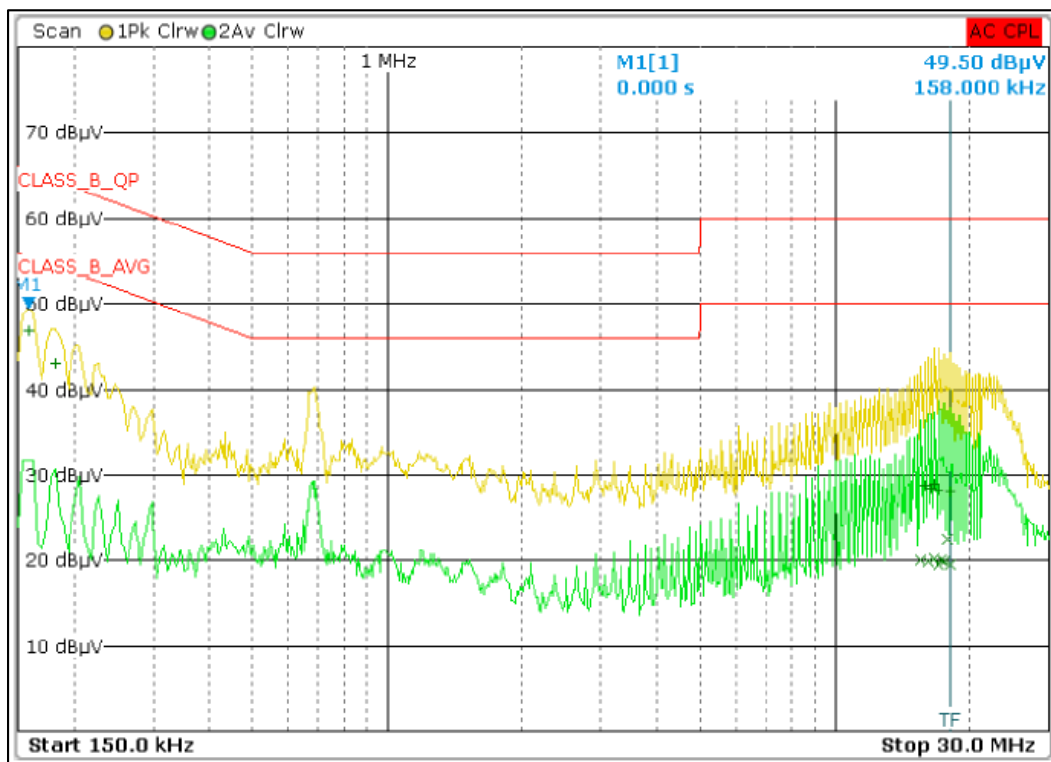
* Decreases with the logarithm of the frequency

Test Conditions:

Normal Temperature = +24°C Voltage (V norm) = 110V AC (Through AC to DC Adapter and Qi Charger)
 RH = 64 %

Test result:

Power: 110V 60HZ_LINE

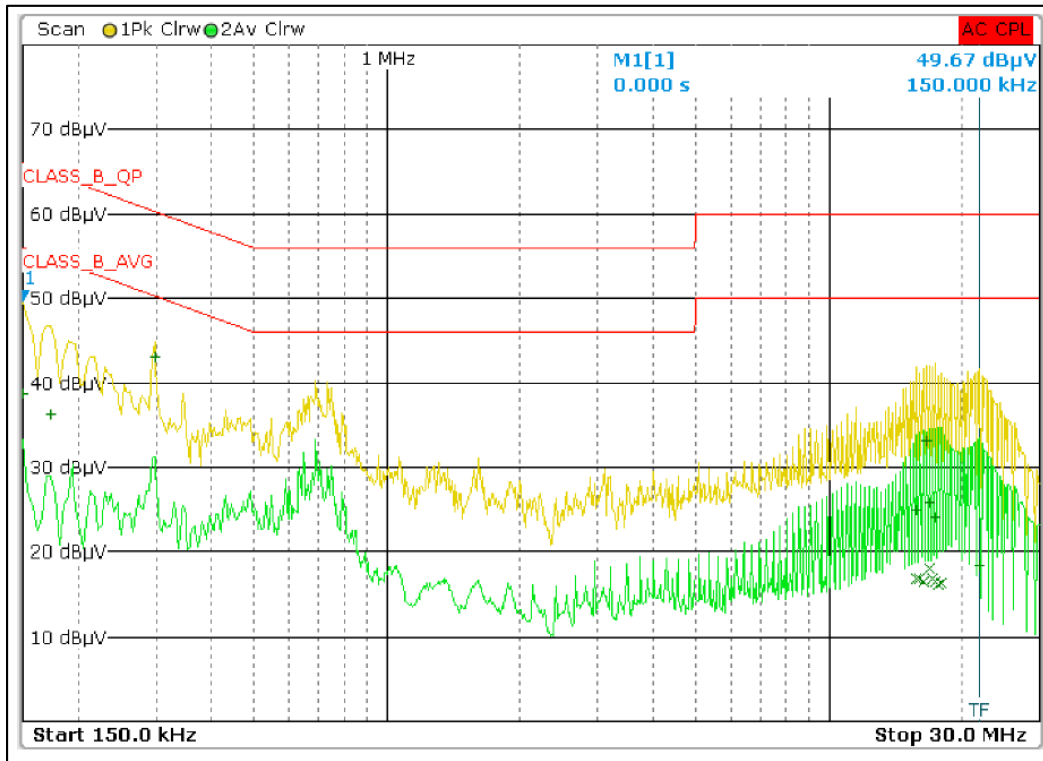


Line Graph

Trace	Frequency	Level (dBµV)	Phase	Detector	Delta Limit/dB
1	158.00000000 kHz	46.94		Quasi Peak	-18.63
1	182.00000000 kHz	43.09		Quasi Peak	-21.30
2	17.81000000 MHz	22.47		Average	-27.53
2	16.69400000 MHz	20.24		Average	-29.76
2	15.58200000 MHz	20.08		Average	-29.92
2	17.25000000 MHz	20.05		Average	-29.95
2	17.53000000 MHz	19.90		Average	-30.10
2	16.13800000 MHz	19.81		Average	-30.19
2	16.97400000 MHz	19.57		Average	-30.43
2	18.08600000 MHz	19.45		Average	-30.55
1	16.69400000 MHz	28.89		Quasi Peak	-31.11
1	15.86200000 MHz	28.82		Quasi Peak	-31.18
1	16.41800000 MHz	28.44		Quasi Peak	-31.56
1	16.97400000 MHz	28.30		Quasi Peak	-31.70
1	18.08600000 MHz	28.04		Quasi Peak	-31.96

Line Table

Power: 110V60HZ_NEUTRAL



Line Graph

Trace	Frequency	Level (dBµV)	Phase	Detector	Delta Limit/dB
1	298.000000000 kHz	43.13		Quasi Peak	-17.17
1	16.602000000 MHz	33.17		Quasi Peak	-26.83
1	150.000000000 kHz	38.64		Quasi Peak	-27.36
1	174.000000000 kHz	36.20		Quasi Peak	-28.57
2	16.870000000 MHz	18.16		Average	-31.84
2	15.798000000 MHz	16.87		Average	-33.13
2	16.066000000 MHz	16.86		Average	-33.14
2	17.138000000 MHz	16.82		Average	-33.18
2	16.334000000 MHz	16.64		Average	-33.36
2	17.406000000 MHz	16.53		Average	-33.47
2	17.942000000 MHz	16.45		Average	-33.55
2	17.674000000 MHz	16.29		Average	-33.71
1	16.870000000 MHz	25.85		Quasi Peak	-34.15
1	15.798000000 MHz	24.99		Quasi Peak	-35.01
1	17.406000000 MHz	24.06		Quasi Peak	-35.94
1	21.958000000 MHz	18.52		Quasi Peak	-41.48

Line Table

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*****END OF TEST REPORT*****