

Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-19	Filter	2#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	2	00	2402	20	Pass



BLE-2Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

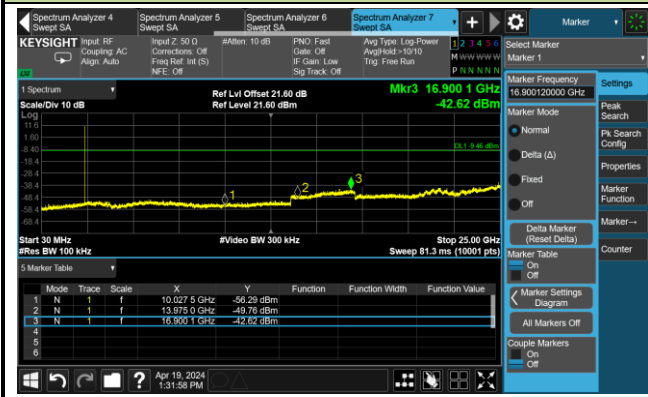
100kHz PSD Reference Level



Low Band Edge



Spurious Emission 30MHz ~ 25GHz



Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-19	Filter	3#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	39	2480	20	Pass
BLE	2	39	2480	20	Pass

BLE-1Mbps Out-of-Band Emissions

Channel 39 (2480MHz)

100kHz PSD Reference Level

Marker Frequency: 2.480244900 GHz
Mkr1 2.480 244.8 GHz
8.95 dBm

High Band Edge

Marker Frequency: 2.483675000 GHz
Mkr2 2.483 675 GHz
-44.48 dBm

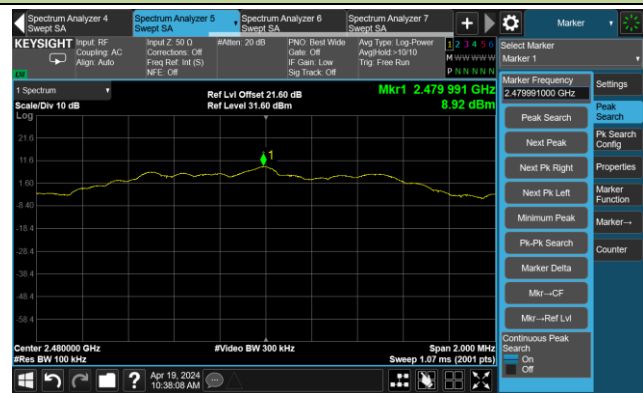
Spurious Emission 30MHz ~ 25GHz

Marker Frequency: 16.922530000 GHz
Mkr3 16.922 5 GHz
-43.55 dBm

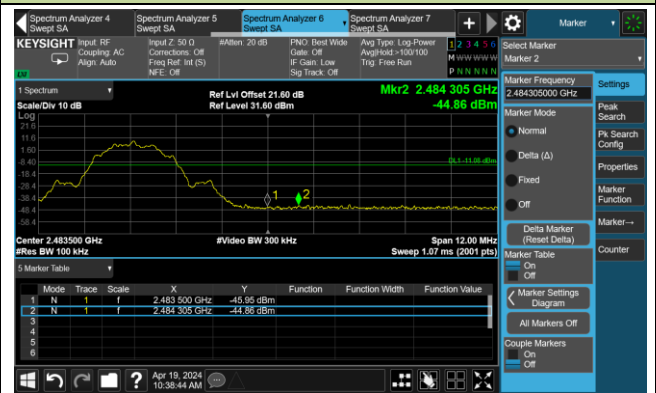
BLE-2Mbps Out-of-Band Emissions

Channel 39 (2480MHz)

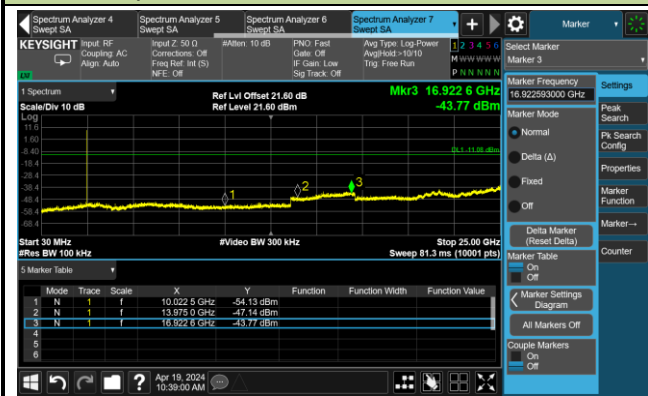
100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz

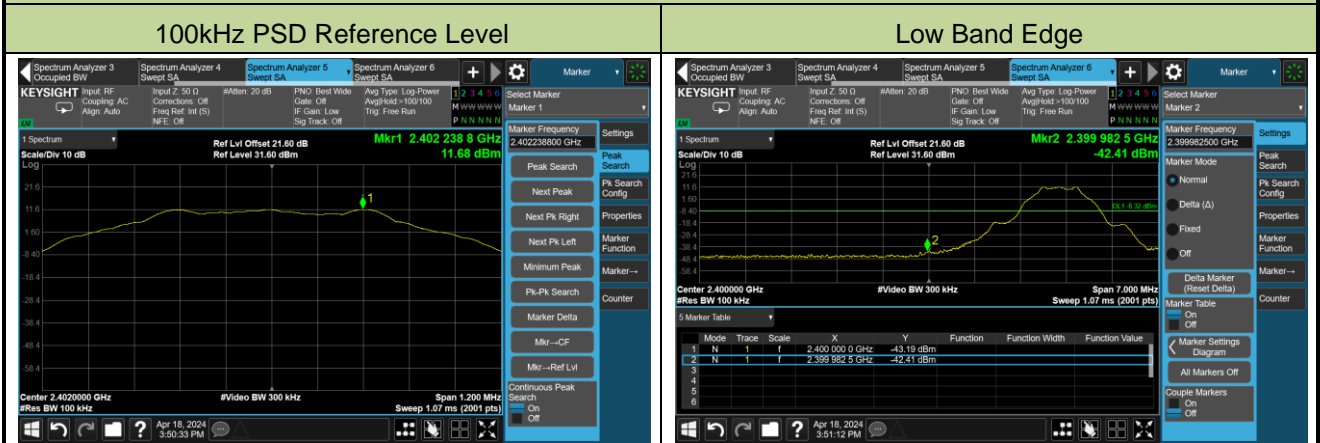


Mode 2

Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-18	Filter	4#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	1	19	2440	20	Pass
BLE	1	39	2480	20	Pass
BLE	2	00	2402	20	Pass
BLE	2	19	2440	20	Pass
BLE	2	39	2480	20	Pass

BLE-1Mbps Out-of-Band Emissions
Channel 00 (2402MHz)



Spurious Emission 30MHz ~ 25GHz



Channel 19 (2440MHz)

100kHz PSD Reference Level

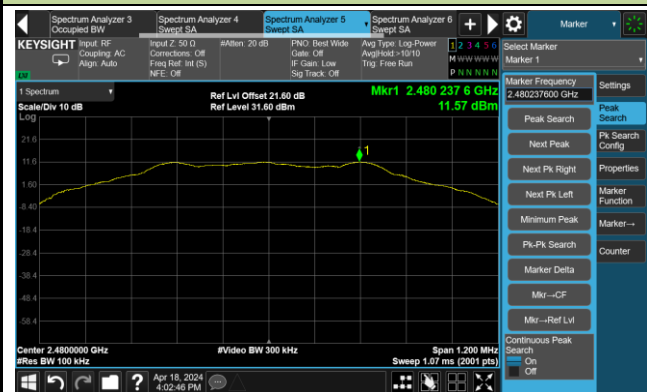


Spurious Emission 30MHz ~ 25GHz

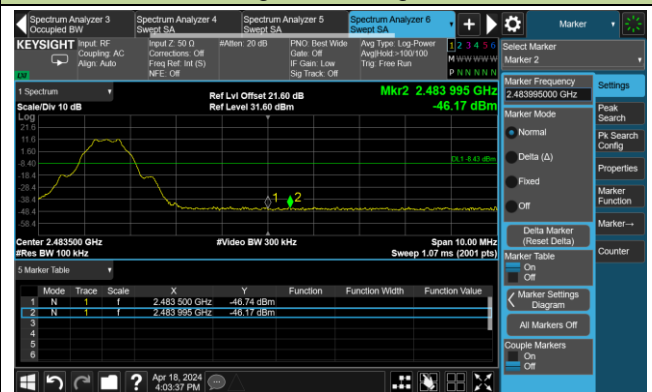


Channel 39 (2480MHz)

100kHz PSD Reference Level



High Band Edge



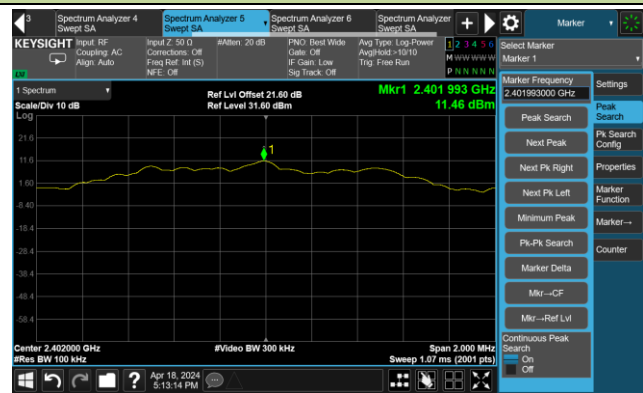
Spurious Emission 30MHz ~ 25GHz



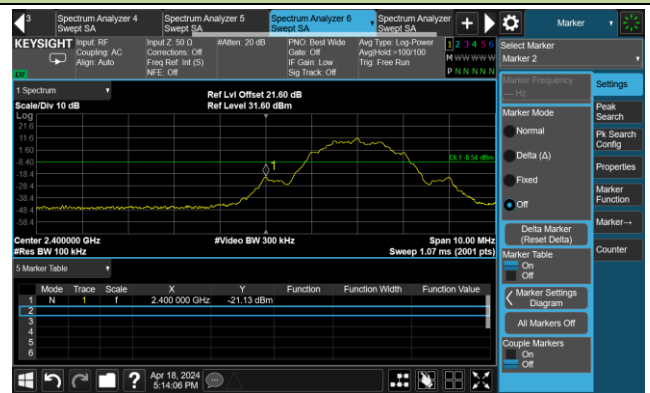
BLE-2Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

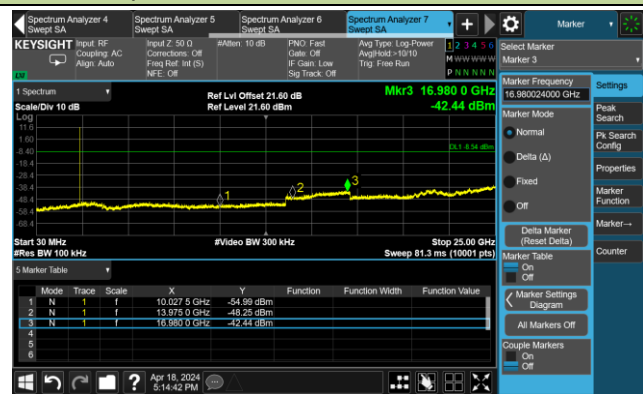
100kHz PSD Reference Level



Low Band Edge



Spurious Emission 30MHz ~ 25GHz



Channel 19 (2440MHz)

100kHz PSD Reference Level

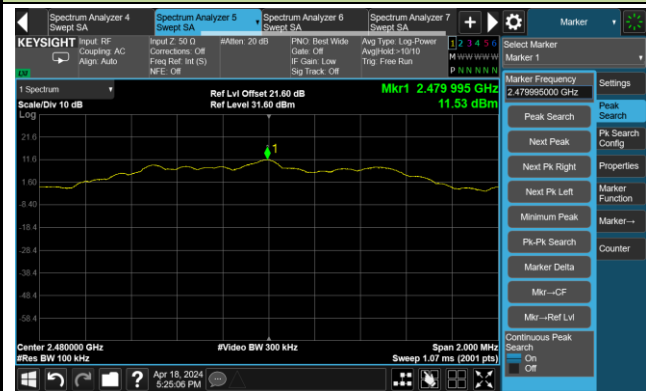


Spurious Emission 30MHz ~ 25GHz

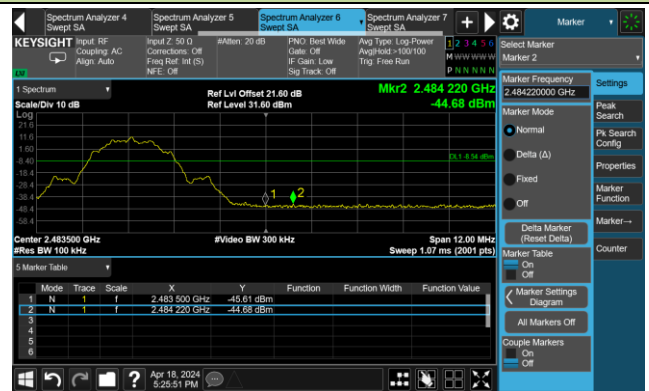


Channel 39 (2480MHz)

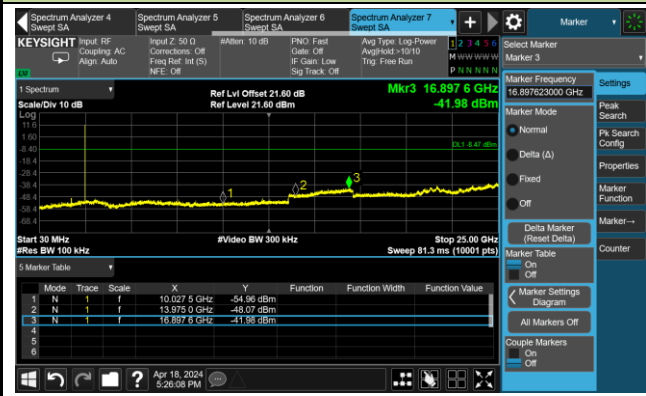
100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-18	Filter	5#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	2	00	2402	20	Pass

BLE-1Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

100kHz PSD Reference Level

Marker Frequency: 2.402239400 GHz
Mkr1 2.402 239 4 GHz
10.65 dBm

Low Band Edge

Center 2.400000 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Sweep 1.07 ms (2001 pts)

Spurious Emission 30MHz ~ 25GHz

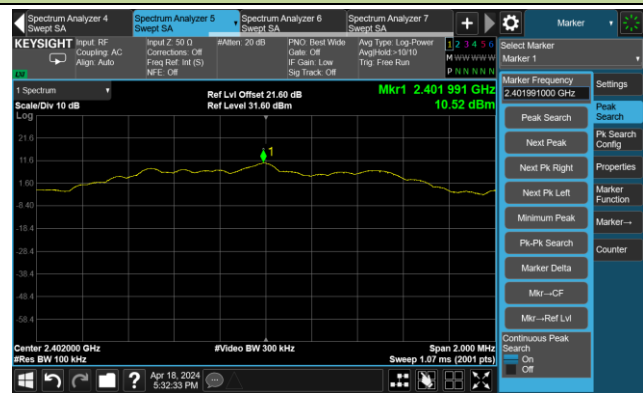
Mkr1 10.035 0 GHz
-53.05 dBm

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	f	10.035 0 GHz	-53.05 dBm			
2	N	f	13.975 0 GHz	-48.39 dBm			
3	N	f	16.997 5 GHz	-51.72 dBm			

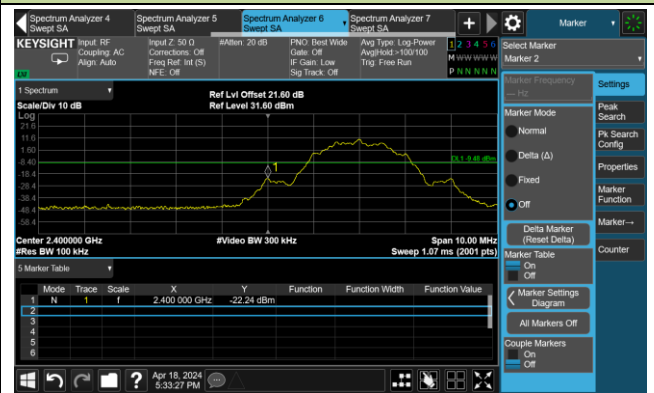
BLE-2Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

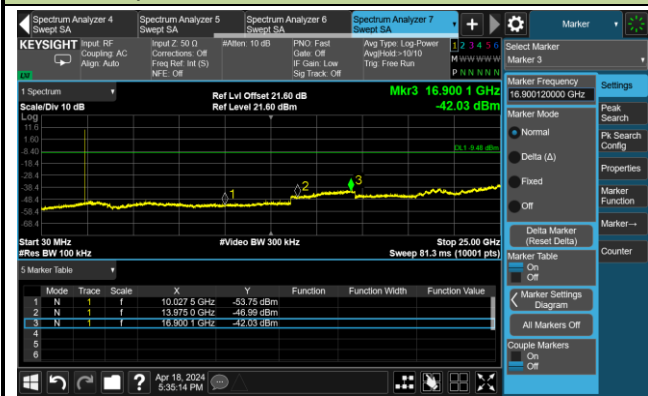
100kHz PSD Reference Level



Low Band Edge



Spurious Emission 30MHz ~ 25GHz



Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-18	Filter	6#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	39	2480	20	Pass
BLE	2	39	2480	20	Pass

BLE-1Mbps Out-of-Band Emissions

Channel 39 (2480MHz)

100kHz PSD Reference Level

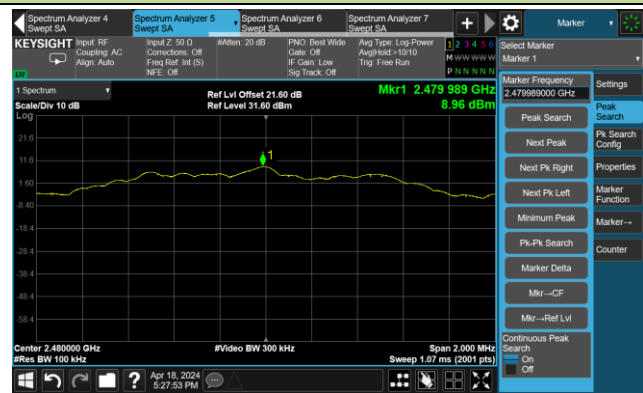
High Band Edge

Spurious Emission 30MHz ~ 25GHz

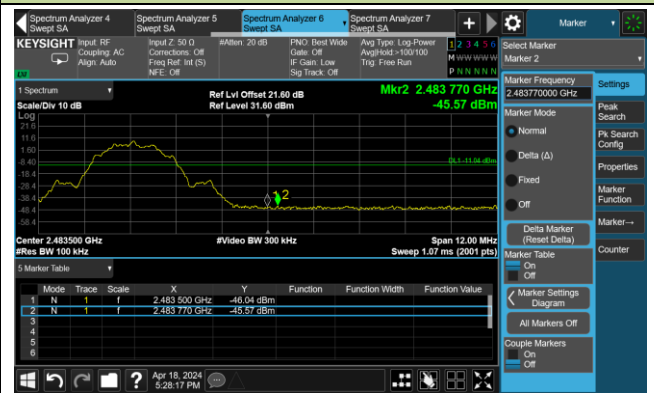
BLE-2Mbps Out-of-Band Emissions

Channel 39 (2480MHz)

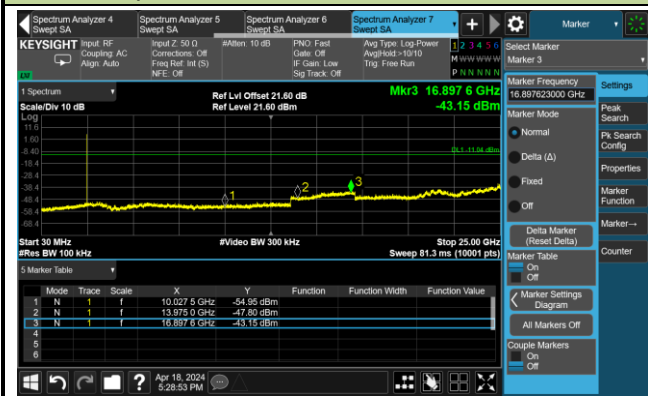
100kHz PSD Reference Level



High Band Edge



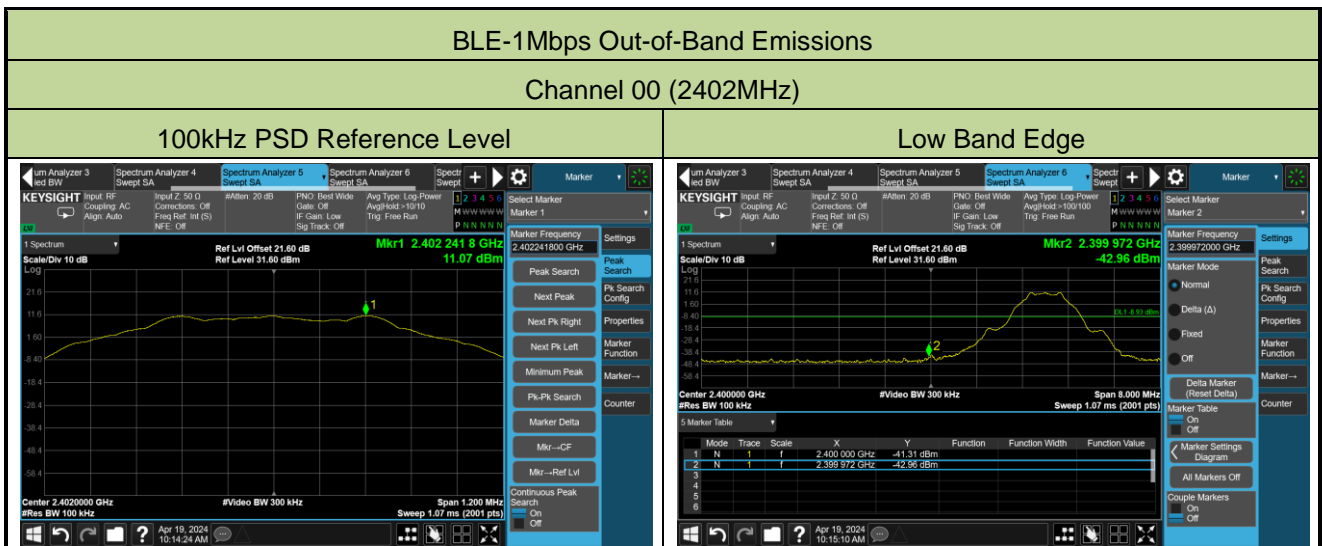
Spurious Emission 30MHz ~ 25GHz



Mode 3

Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-19	Filter	7#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	1	19	2440	20	Pass
BLE	1	39	2480	20	Pass
BLE	2	00	2402	20	Pass
BLE	2	19	2440	20	Pass
BLE	2	39	2480	20	Pass



Channel 19 (2440MHz)

100kHz PSD Reference Level

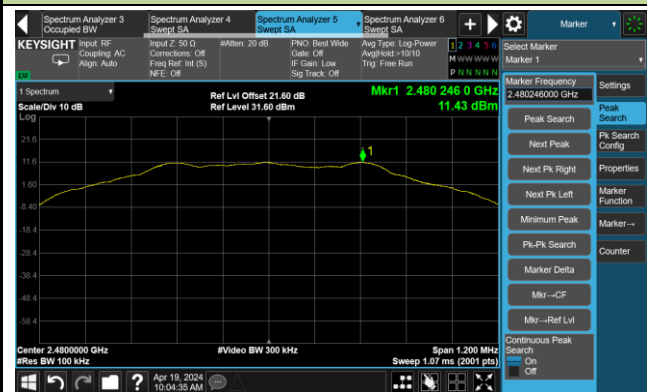


Spurious Emission 30MHz ~ 25GHz

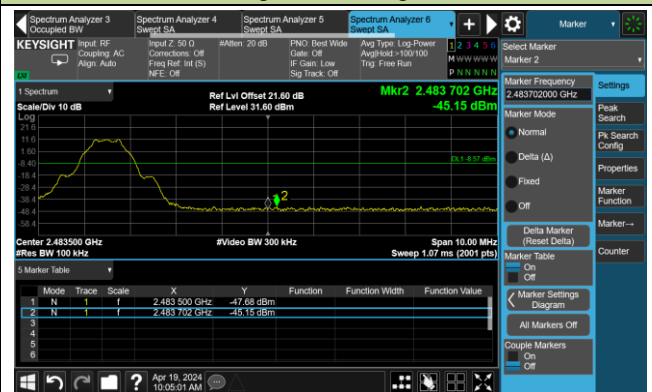


Channel 39 (2480MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



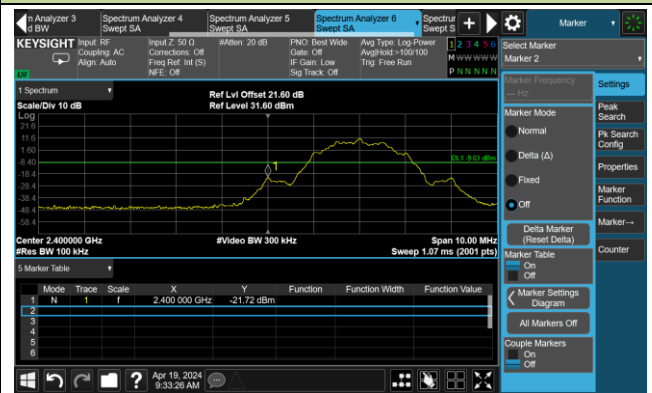
BLE-2Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

100kHz PSD Reference Level



Low Band Edge



Spurious Emission 30MHz ~ 25GHz



Channel 19 (2440MHz)

100kHz PSD Reference Level



Spurious Emission 30MHz ~ 25GHz

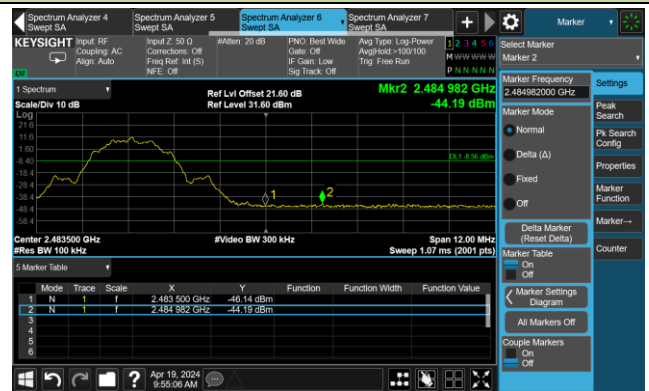


Channel 39 (2480MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-19	Filter	8#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	2	00	2402	20	Pass

BLE-1Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

100kHz PSD Reference Level

Center 2.4020000 GHz
#Res BW 100 kHz
Sweep 1.07 ms (2001 pts)

Low Band Edge

Center 2.4000000 GHz
#Video BW 300 kHz
Sweep 1.07 ms (2001 pts)

Spurious Emission 30MHz ~ 25GHz

Start 30 MHz
#Res BW 100 kHz
Sweep 81.3 ms (10001 pts)

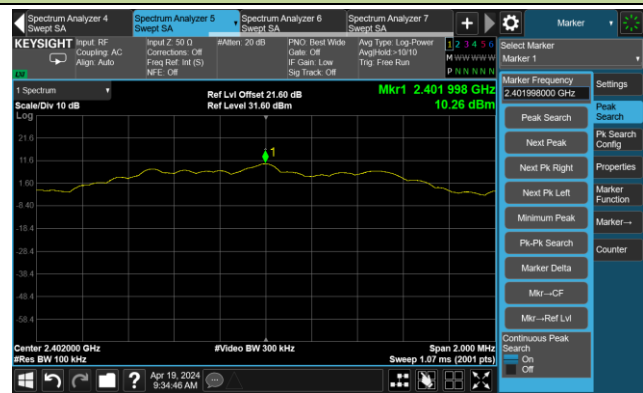
Spurious Emission 30MHz ~ 25GHz

Start 30 MHz
#Res BW 100 kHz
Sweep 81.3 ms (10001 pts)

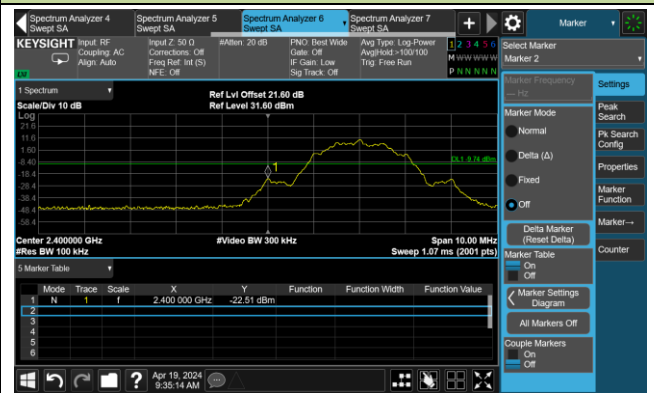
BLE-2Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

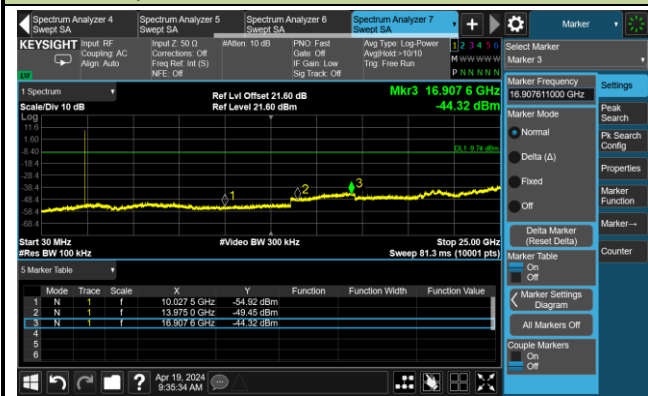
100kHz PSD Reference Level



Low Band Edge



Spurious Emission 30MHz ~ 25GHz



Test Site	WZ-SR5	Test Engineer	Jeff Yang
Test Date	2024-04-19	Filter	9#

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	39	2480	20	Pass
BLE	2	39	2480	20	Pass

BLE-1Mbps Out-of-Band Emissions

Channel 39 (2480MHz)

100kHz PSD Reference Level

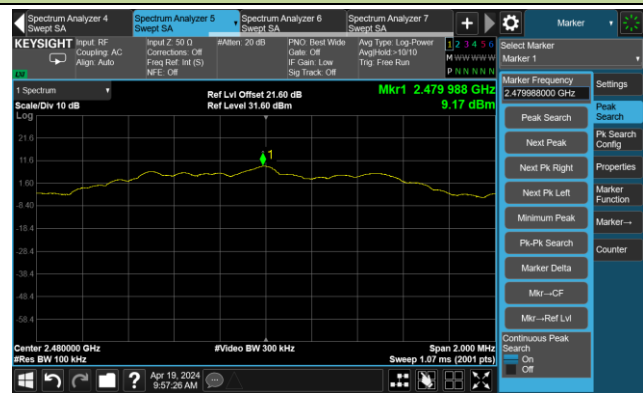
High Band Edge

Spurious Emission 30MHz ~ 25GHz

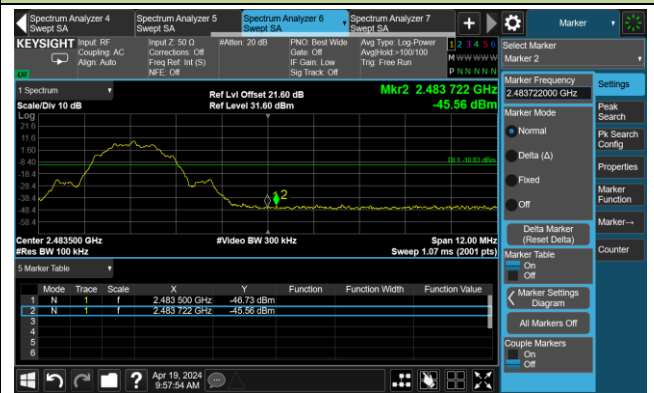
BLE-2Mbps Out-of-Band Emissions

Channel 39 (2480MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



A.6 Radiated Spurious Emission Test Result
Mode 1

Test Site	SIP-AC3	Test Engineer	Justin Guo
Test Date	2024-04-19	Filter	1#
Test Mode	BLE-1Mbps		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	11710.0	49.0	-1.6	47.4	74.0	-26.6	Peak	Horizontal
	15883.5	46.4	5.1	51.5	74.0	-22.5	Peak	Horizontal
	15883.5	34.9	5.1	40.0	54.0	-14.0	Average	Horizontal
	17855.5	45.9	7.9	53.8	74.0	-20.2	Peak	Horizontal
	17855.5	35.0	7.9	42.9	54.0	-11.1	Average	Horizontal
	11183.0	48.6	-1.7	46.9	74.0	-27.1	Peak	Vertical
	15892.0	46.0	5.0	51.0	74.0	-23.0	Peak	Vertical
	17906.5	44.1	8.2	52.3	74.0	-21.7	Peak	Vertical
	17906.5	35.0	8.2	43.2	54.0	-10.8	Average	Vertical
19	8310.0	49.1	-3.1	46.0	74.0	-28.0	Peak	Horizontal
	11412.5	48.8	-1.5	47.3	74.0	-26.7	Peak	Horizontal
	15909.0	46.1	5.2	51.3	74.0	-22.7	Peak	Horizontal
	15909.0	36.1	5.2	41.3	54.0	-12.7	Average	Horizontal
	8250.5	48.8	-3.2	45.6	74.0	-28.4	Peak	Vertical
	10945.0	48.2	-1.3	46.9	74.0	-27.1	Peak	Vertical
	15807.0	45.6	4.9	50.5	74.0	-23.5	Peak	Vertical
39	8191.0	49.1	-3.4	45.7	74.0	-28.3	Peak	Horizontal
	12143.5	49.8	-1.7	48.1	74.0	-25.9	Peak	Horizontal
	15722.0	45.6	4.6	50.2	74.0	-23.8	Peak	Horizontal
	8259.0	48.7	-3.3	45.4	74.0	-28.6	Peak	Vertical
	11701.5	48.1	-1.6	46.5	74.0	-27.5	Peak	Vertical
	15688.0	45.3	4.8	50.1	74.0	-23.9	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Justin Guo
Test Date	2024-04-19	Filter	1#
Test Mode	BLE-2Mbps		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	8259.0	49.2	-3.3	45.9	74.0	-28.1	Peak	Horizontal
	11395.5	47.9	-1.7	46.2	74.0	-27.8	Peak	Horizontal
	15866.5	45.8	4.8	50.6	74.0	-23.4	Peak	Horizontal
	8157.0	49.6	-3.4	46.2	74.0	-27.8	Peak	Vertical
	11047.0	48.4	-1.4	47.0	74.0	-27.0	Peak	Vertical
	15900.5	45.4	5.1	50.5	74.0	-23.5	Peak	Vertical
19	8250.5	48.8	-3.2	45.6	74.0	-28.4	Peak	Horizontal
	11344.5	48.2	-1.5	46.7	74.0	-27.3	Peak	Horizontal
	15807.0	46.0	4.9	50.9	74.0	-23.1	Peak	Horizontal
	8369.5	49.2	-3.4	45.8	74.0	-28.2	Peak	Vertical
	11234.0	48.9	-1.5	47.4	74.0	-26.6	Peak	Vertical
	15883.5	45.5	5.1	50.6	74.0	-23.4	Peak	Vertical
39	8276.0	49.1	-3.3	45.8	74.0	-28.2	Peak	Horizontal
	11897.0	49.1	-1.7	47.4	74.0	-26.6	Peak	Horizontal
	15926.0	47.0	5.1	52.1	74.0	-21.9	Peak	Horizontal
	15926.0	36.1	5.1	41.2	54.0	-12.8	Average	Horizontal
	7672.5	49.7	-4.2	45.5	74.0	-28.5	Peak	Vertical
	11676.0	48.2	-1.7	46.5	74.0	-27.5	Peak	Vertical
	15790.0	44.6	5.0	49.6	74.0	-24.4	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Justin Guo
Test Date	2024-04-19	Filter	2#
Test Mode	BLE-1Mbps		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	8293.0	49.6	-3.2	46.4	74.0	-27.6	Peak	Horizontal
	12092.5	48.5	-1.8	46.7	74.0	-27.3	Peak	Horizontal
	15883.5	46.4	5.1	51.5	74.0	-22.5	Peak	Horizontal
	15883.5	35.5	5.1	40.6	54.0	-13.4	Average	Horizontal
	8344.0	49.3	-3.4	45.9	74.0	-28.1	Peak	Vertical
	11310.5	48.4	-1.6	46.8	74.0	-27.2	Peak	Vertical
	15773.0	45.0	4.9	49.9	74.0	-24.1	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Justin Guo
Test Date	2024-04-19	Filter	2#
Test Mode	BLE-2Mbps		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	8310.0	49.7	-3.1	46.6	74.0	-27.4	Peak	Horizontal
	11693.0	47.8	-1.6	46.2	74.0	-27.8	Peak	Horizontal
	15875.0	47.0	5.1	52.1	74.0	-21.9	Peak	Horizontal
	15875.0	36.6	5.1	41.7	54.0	-12.3	Average	Horizontal
	8216.5	50.7	-3.2	47.5	74.0	-26.5	Peak	Vertical
	11234.0	48.2	-1.5	46.7	74.0	-27.3	Peak	Vertical
	15781.5	45.3	5.0	50.3	74.0	-23.7	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Justin Guo
Test Date	2024-04-19	Filter	3#
Test Mode	BLE-1Mbps		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
39	8386.5	49.4	-3.4	46.0	74.0	-28.0	Peak	Horizontal
	11030.0	48.8	-1.4	47.4	74.0	-26.6	Peak	Horizontal
	15756.0	45.8	4.3	50.1	74.0	-23.9	Peak	Horizontal
	8378.0	49.3	-3.5	45.8	74.0	-28.2	Peak	Vertical
	11157.5	48.0	-1.3	46.7	74.0	-27.3	Peak	Vertical
	15798.5	46.2	4.9	51.1	74.0	-22.9	Peak	Vertical
	15798.5	36.1	4.9	41.0	54.0	-13.0	Average	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Justin Guo
Test Date	2024-04-19	Filter	3#
Test Mode	BLE-2Mbps		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
39	9066.5	50.1	-2.4	47.7	74.0	-26.3	Peak	Horizontal
	10868.5	48.6	-1.5	47.1	74.0	-26.9	Peak	Horizontal
	15781.5	45.6	5.0	50.6	74.0	-23.4	Peak	Horizontal
	8097.5	49.7	-3.8	45.9	74.0	-28.1	Peak	Vertical
	11115.0	48.3	-1.5	46.8	74.0	-27.2	Peak	Vertical
	15713.5	44.9	4.8	49.7	74.0	-24.3	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Mode 2

Test Site	SIP-AC3	Test Engineer	Justin Guo
Test Date	2024-04-19	Filter	4#
Test Mode	BLE-1Mbps		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	7689.5	49.8	-4.2	45.6	74.0	-28.4	Peak	Horizontal
	11030.0	47.9	-1.4	46.5	74.0	-27.5	Peak	Horizontal
	15671.0	44.4	4.6	49.0	74.0	-25.0	Peak	Horizontal
	8259.0	49.6	-3.3	46.3	74.0	-27.7	Peak	Vertical
	11030.0	48.5	-1.4	47.1	74.0	-26.9	Peak	Vertical
	15909.0	46.7	5.2	51.9	74.0	-22.1	Peak	Vertical
	15909.0	36.2	5.2	41.4	54.0	-12.6	Average	Vertical
19	7596.0	49.2	-4.4	44.8	74.0	-29.2	Peak	Horizontal
	11055.5	48.7	-1.5	47.2	74.0	-26.8	Peak	Horizontal
	15883.5	46.5	5.1	51.6	74.0	-22.4	Peak	Horizontal
	15883.5	36.1	5.1	41.2	54.0	-12.8	Average	Horizontal
	8284.5	49.4	-3.3	46.1	74.0	-27.9	Peak	Vertical
	11387.0	48.9	-1.8	47.1	74.0	-26.9	Peak	Vertical
	15832.5	46.0	4.4	50.4	74.0	-23.6	Peak	Vertical
39	8233.5	49.0	-3.2	45.8	74.0	-28.2	Peak	Horizontal
	11412.5	48.8	-1.5	47.3	74.0	-26.7	Peak	Horizontal
	15773.0	45.4	4.9	50.3	74.0	-23.7	Peak	Horizontal
	8174.0	49.5	-3.5	46.0	74.0	-28.0	Peak	Vertical
	12143.5	48.9	-1.7	47.2	74.0	-26.8	Peak	Vertical
	15917.5	45.2	5.1	50.3	74.0	-23.7	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)