

Appendix B Test Data:

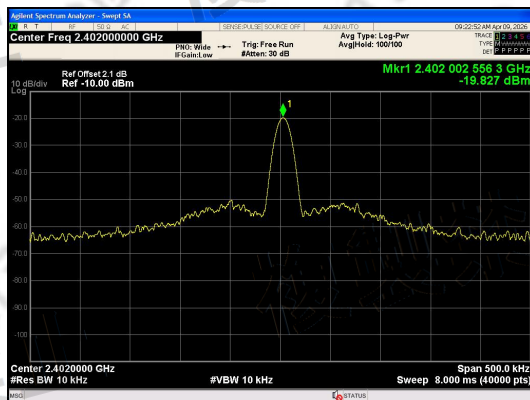
B1.Frequency Tolerance Measurement

Test Result

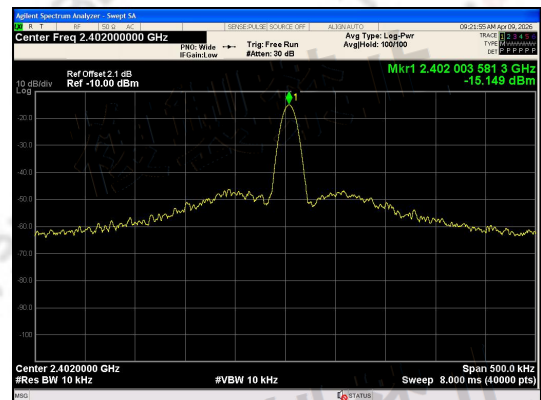
Condition	Mode	Ch.	Center Frequency (MHz)	Measured Value (MHz)	Deviation (ppm)	Limit (ppm)	Result
NT/NV	BLE 1M(CW)	0	2402	2402.0025563	1.06	± 50	PASS
		19	2440	2440.0038563	1.58		PASS
		39	2480	2480.0026688	1.08		PASS
	BLE 2M(CW)	0	2402	2402.0035813	1.49		PASS
		19	2440	2440.0028813	1.18		PASS
		39	2480	2480.0026688	1.08		PASS

Test Graphs

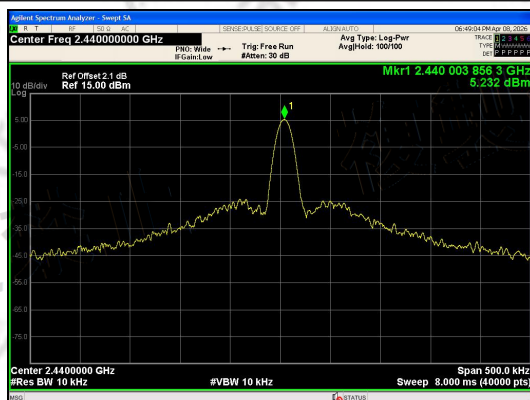
NT/NV



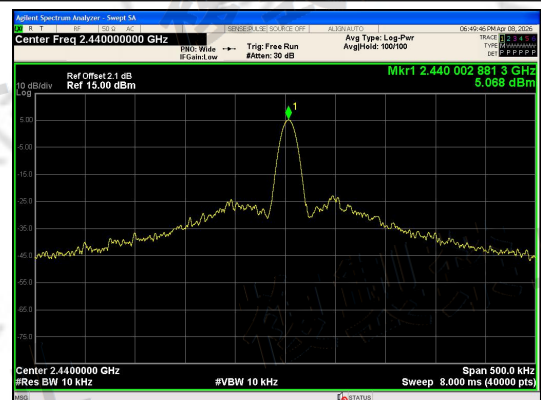
NT/NV_Channel 0



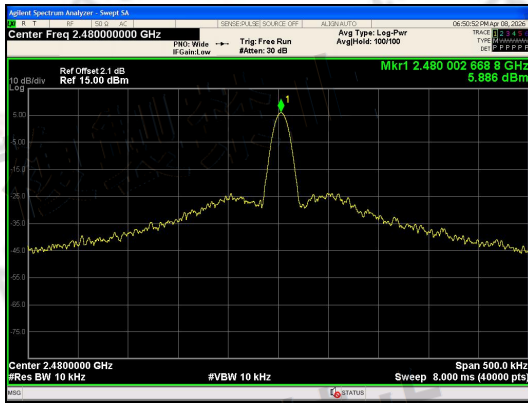
NT/NV_Channel 0



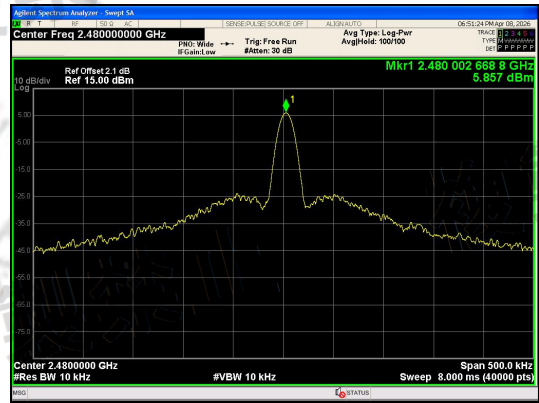
NT/NV_Channel 19



NT/NV_Channel 19



NT/NV_Channel 39



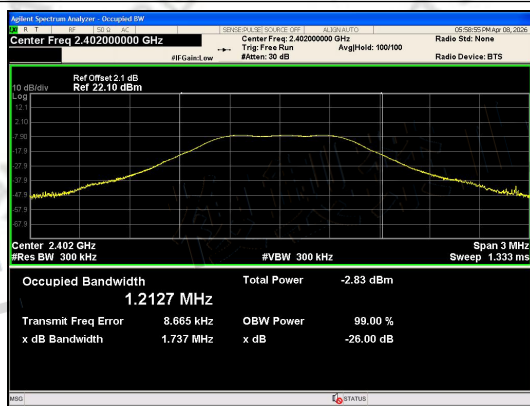
NT/NV_Channel 39

B2.Occupied Bandwidth Measurement(99% power bandwidth)

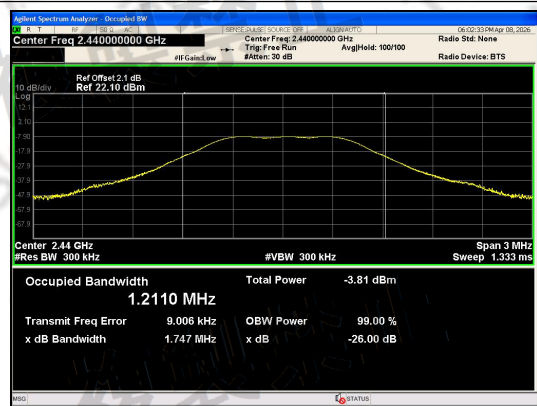
Test Result

Condition	Mode	Channel	Frequency (MHz)	99% BW (MHz)	Limit (MHz)	Result
NT/NV	BLE 1M	0	2402	1.2127	<26	PASS
		19	2440	1.2110		PASS
		39	2480	1.2125		PASS
	BLE 2M	0	2402	2.1306		PASS
		19	2440	2.1328		PASS
		39	2480	2.1331		PASS

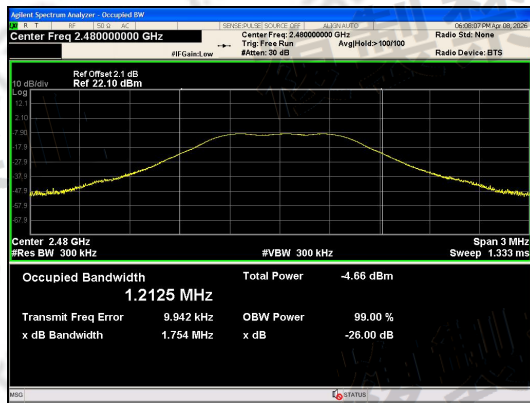
Test Graphs



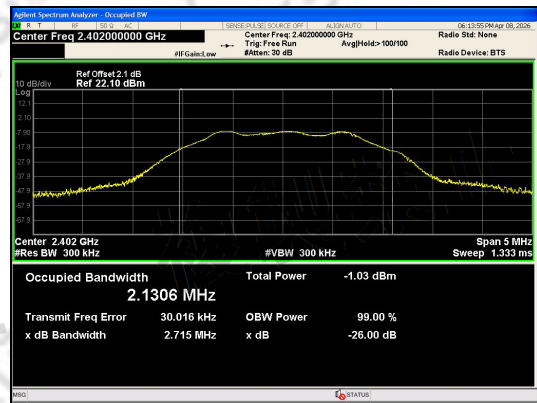
NT/NV_BLE 1M_Channel 0



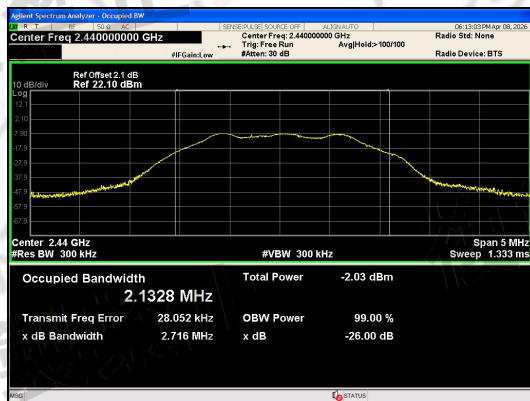
NT/NV_BLE 1M_Channel 19



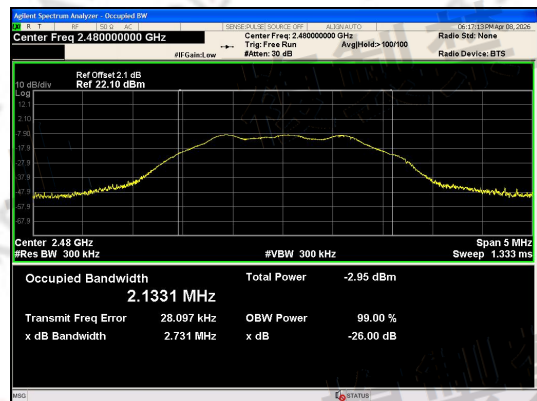
NT/NV_BLE 1M_Channel 39



NT/NV_BLE 2M_Channel 0



NT/NV_BLE 2M_Channel 19



NT/NV_BLE 2M_Channel 39

B3.Spending Bandwidth Measurement(90% power bandwidth)

Test Result

Condition	Mode	Channel	Frequency (MHz)	90% SBW (MHz)	Spreading factor	Result
NT/NV	BLE 1M	0	2402	0.81661	13.0658	PASS
		19	2440	0.81477	42.889	PASS
		39	2480	0.81465	23.6479	PASS
	BLE 2M	0	2402	1.4774	23.6384	PASS
		19	2440	1.4786	23.6572	PASS
		39	2480	1.4788	23.6603	PASS

Note: Spreading Factor = 90% Bandwidth / 0.0625.

Test Graphs

NT/NV_BLE 1M_Channel 0	NT/NV_BLE 1M_Channel 19
NT/NV_BLE 1M_Channel 39	NT/NV_BLE 2M_Channel 0
NT/NV_BLE 2M_Channel 19	NT/NV_BLE 2M_Channel 39

B4.Spurious Emissions for Transmitter Measurement

Test Result

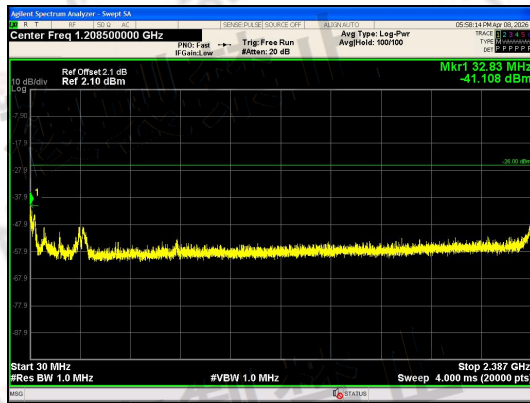
BLE 1M

Condition	Channel	Frequency Range (MHz)	Peak (MHz)	Measured Value ()		Limit (uW)	Result
				dBm	uW		
NT/NV	0	30 to 2387	32.829	-41.108	0.077	≤2.5	PASS
		2387 to 2400	2399.963	-42.857	0.052	≤25	PASS
		2483.5 to 2496.5	2490.723	-52.250	0.006	≤25	PASS
		2496.5 to 12500	5224.091	-45.670	0.027	≤2.5	PASS
	19	30 to 2387	33.418	-41.017	0.079	≤2.5	PASS
		2387 to 2400	2391.461	-50.491	0.009	≤25	PASS
		2483.5 to 2496.5	2488.967	-50.929	0.008	≤25	PASS
		2496.5 to 12500	5206.584	-47.040	0.02	≤2.5	PASS
	39	30 to 2387	33.536	-40.843	0.082	≤2.5	PASS
		2387 to 2400	2399.135	-51.901	0.006	≤25	PASS
		2483.5 to 2496.5	2494.313	-49.045	0.012	≤25	PASS
		2496.5 to 12500	5202.582	-48.221	0.015	≤2.5	PASS

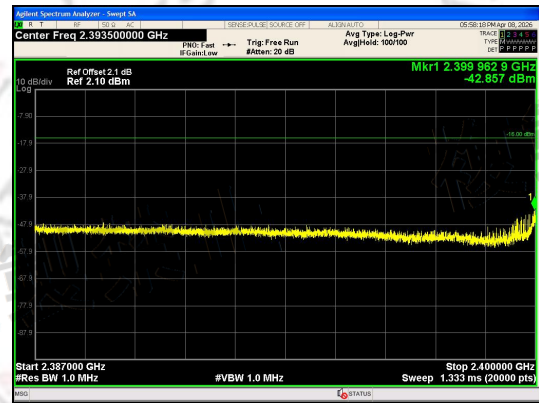
BLE 2M

Condition	Channel	Frequency Range (MHz)	Peak (MHz)	Measured Value		Limit (uW)	Result
				dBm	uW		
NT/NV	0	30 to 2387	33.418	-40.743	0.084	≤2.5	PASS
		2387 to 2400	2399.988	-30.753	0.841	≤25	PASS
		2483.5 to 2496.5	2492.409	-52.089	0.006	≤25	PASS
		2496.5 to 12500	2545.019	-56.090	0.002	≤2.5	PASS
	19	30 to 2387	33.771	-40.974	0.08	≤2.5	PASS
		2387 to 2400	2392.473	-51.028	0.008	≤25	PASS
		2483.5 to 2496.5	2486.493	-51.561	0.007	≤25	PASS
		2496.5 to 12500	5239.097	-46.445	0.023	≤2.5	PASS
	39	30 to 2387	32.475	-40.705	0.085	≤2.5	PASS
		2387 to 2400	2396.612	-51.887	0.006	≤25	PASS
		2483.5 to 2496.5	2491.738	-48.754	0.013	≤25	PASS
		2496.5 to 12500	2505.003	-53.185	0.005	≤2.5	PASS

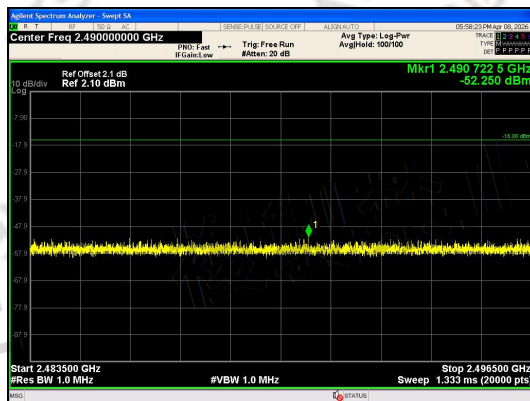
Test Graphs



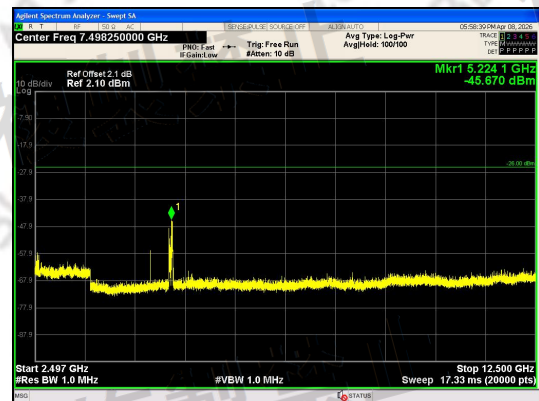
30 to 2387MHz
NT/NV_BLE 1M_Channel 0



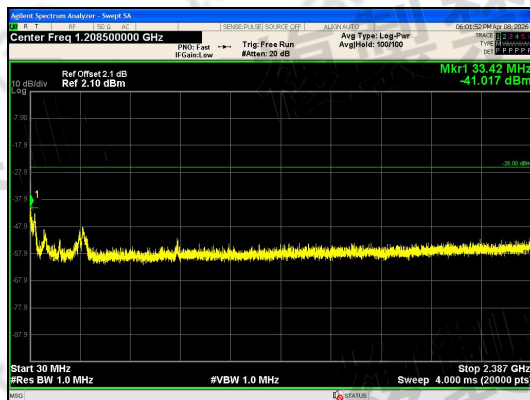
2387 to 2400MHz
NT/NV_BLE 1M_Channel 0



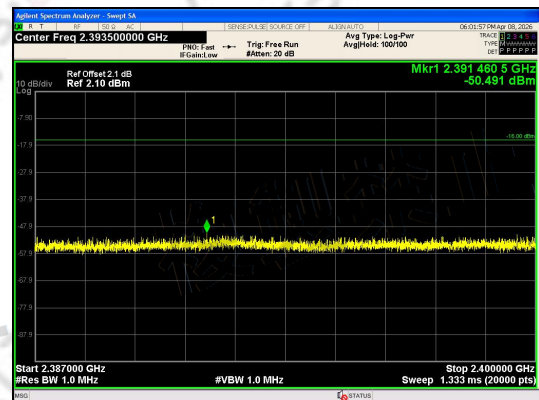
2483.5 to 2496.5MHz
NT/NV_BLE 1M_Channel 0



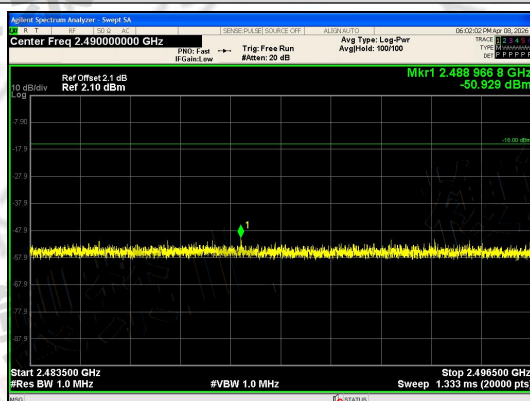
2496.5 to 12500MHz
NT/NV_BLE 1M_Channel 0



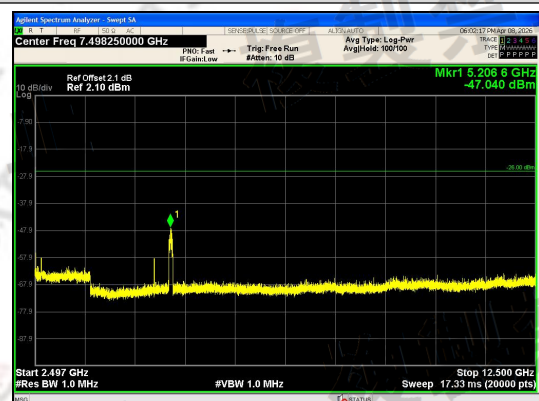
30 to 2387MHz
NT/NV_BLE 1M_Channel 19



2387 to 2400MHz
NT/NV_BLE 1M_Channel 19

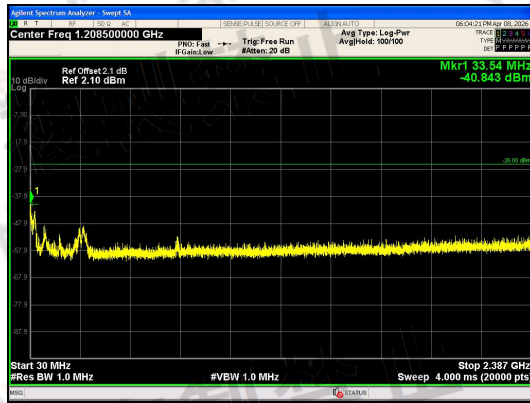


2483.5 to 2496.5MHz

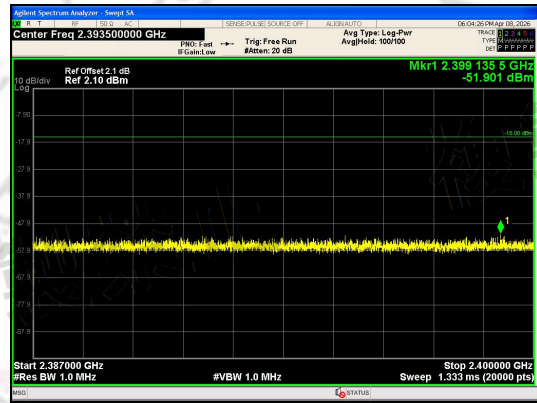


2496.5 to 12500MHz

NT/NV_BLE 1M_Channel 19

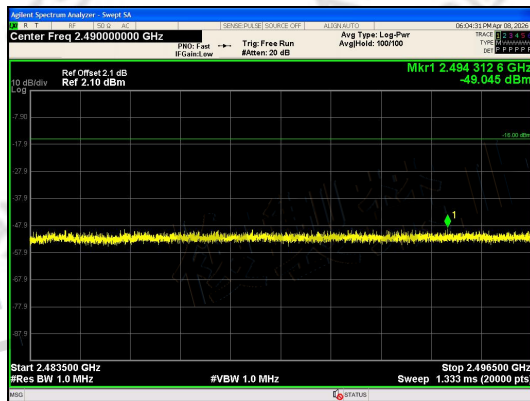


NT/NV_BLE 1M_Channel 19



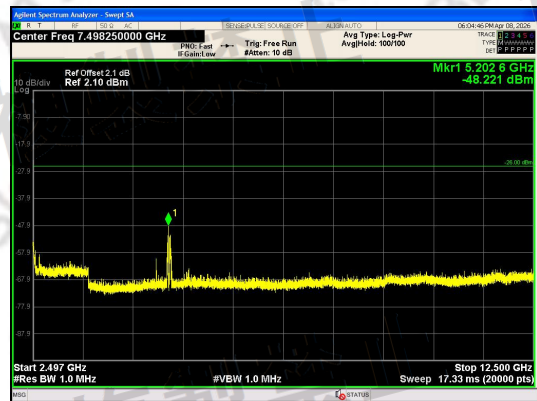
30 to 2387MHz

NT/NV_BLE 1M_Channel 39



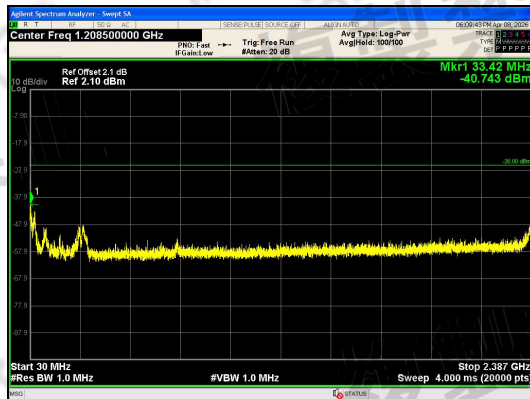
2387 to 2400MHz

NT/NV_BLE 1M_Channel 39



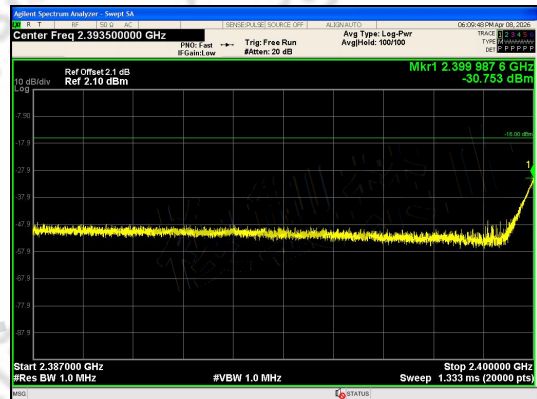
2483.5 to 2496.5MHz

NT/NV_BLE 1M_Channel 39



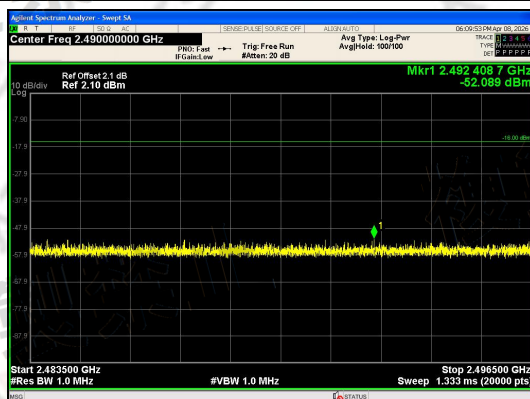
2496.5 to 12500MHz

NT/NV_BLE 1M_Channel 39



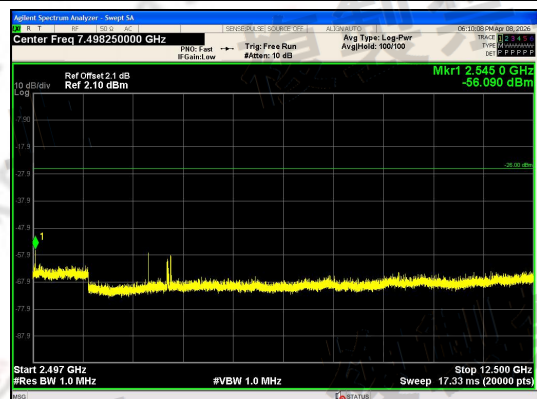
30 to 2387MHz

NT/NV_BLE 2M_Channel 0



2387 to 2400MHz

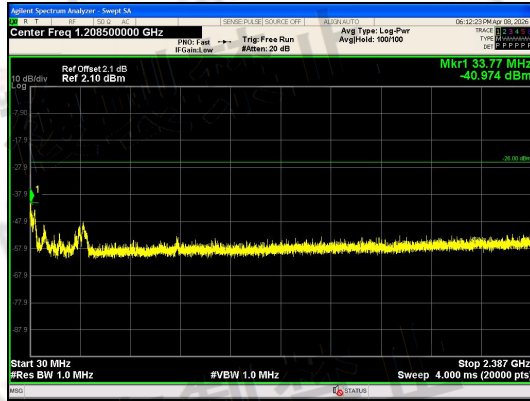
NT/NV_BLE 2M_Channel 0



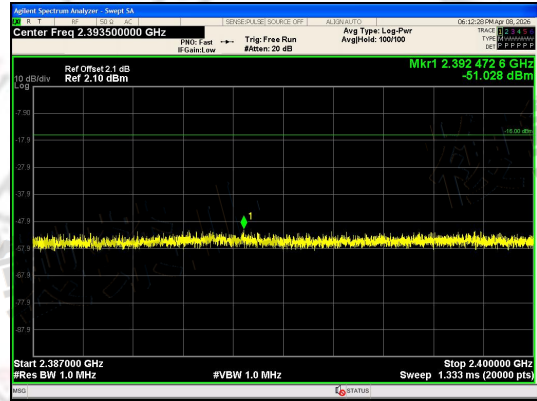
2483.5 to 2496.5MHz

2496.5 to 12500MHz

NT/NV_BLE 2M_Channel 0

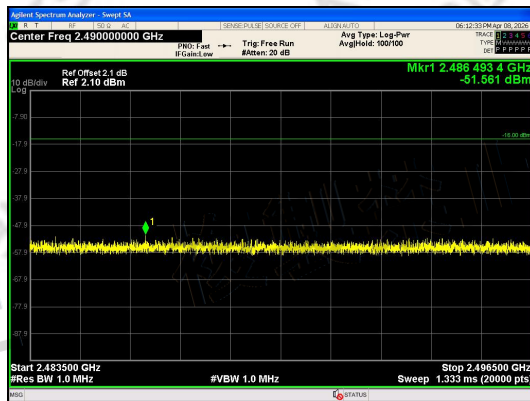


NT/NV_BLE 2M_Channel 0



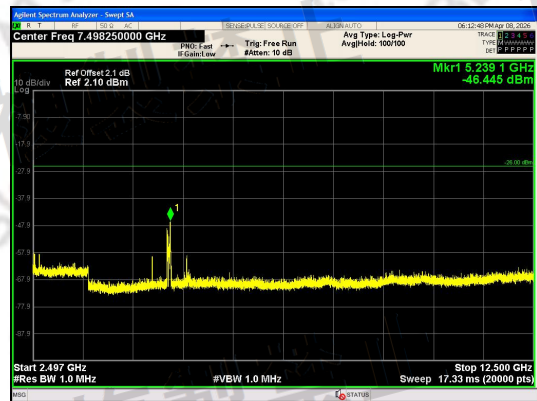
30 to 2387MHz

NT/NV_BLE 2M_Channel 19



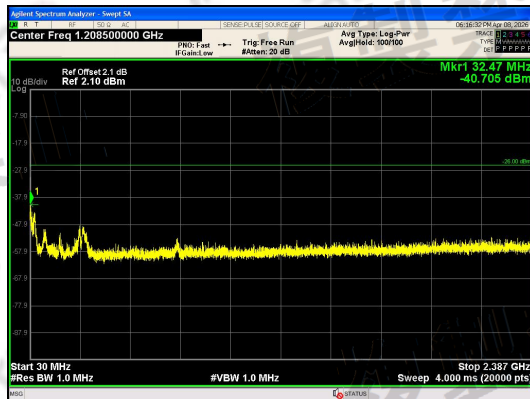
2387 to 2400MHz

NT/NV_BLE 2M_Channel 19



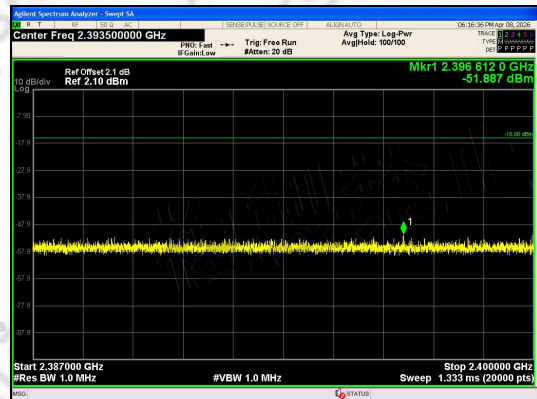
2483.5 to 2496.5MHz

NT/NV_BLE 2M_Channel 19



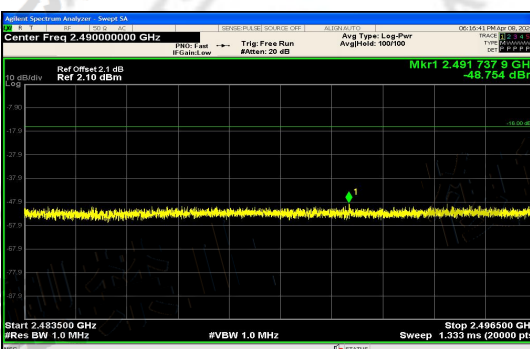
2496.5 to 12500MHz

NT/NV_BLE 2M_Channel 19



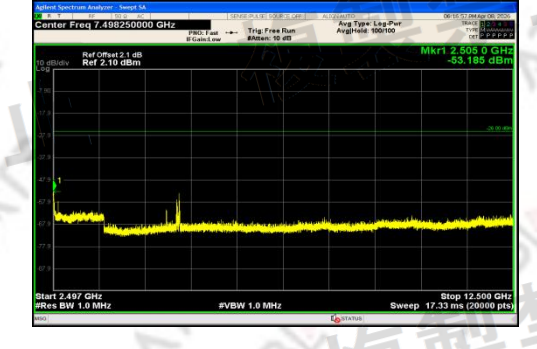
30 to 2387MHz

NT/NV_BLE 2M_Channel 39



2387 to 2400MHz

NT/NV_BLE 2M_Channel 39



2483.5 to 2496.5MHz

NT/NV_BLE 2M_Channel 39

2496.5 to 12500MHz

NT/NV_BLE 2M_Channel 39

B5.Antenna Power Measurement

Test Result

Left ear headphones

Condition	Modulation	Frequency (MHz)	Antenna power (dBm)	Antenna power density (mW)	Limit (mW)	Result
NT/NV	BLE 1M	2402	-7.9625	0.1599	10	PASS
		2440	-8.8067	0.1316	10	PASS
		2480	-10.0916	0.0979	10	PASS
	BLE 2M	2402	-9.812	0.1044	10	PASS
		2440	-10.6461	0.0862	10	PASS
		2480	-11.5324	0.0703	10	PASS

Condition	Modulation	Frequency (MHz)	Tolerance (%)	Tolerance Limit (%)	Rated power (mW)	Result
NT/NV	BLE 1M	2402	-20.00%	+20	0.2	PASS
	BLE 1M	2440	-34.00%	+20	0.2	PASS
	BLE 1M	2480	-51.00%	+20	0.2	PASS
	BLE 2M	2402	-48.00%	+20	0.2	PASS
	BLE 2M	2440	-57.00%	+20	0.2	PASS
	BLE 2M	2480	-65.00%	+20	0.2	PASS

Condition	Mode	Frequency (MHz)	EIRP(dBm)	Gain(dBi)	Limit (dBm)	Result
NT/NV	BLE 1M	2402	-5.2625	2.7	12.14	PASS
		2440	-6.1067	2.7	12.14	PASS
		2480	-7.3916	2.7	12.14	PASS
	BLE 2M	2402	-7.112	2.7	12.14	PASS
		2440	-7.9461	2.7	12.14	PASS
		2480	-8.8324	2.7	12.14	PASS

Right ear headphones

Condition	Modulation	Frequency (MHz)	Antenna power (dBm)	Antenna power density (mW)	Limit (mW)	Result
NT/NV	BLE 1M	2402	-8.1272	0.1539	10	PASS
		2440	-8.9614	0.1270	10	PASS
		2480	-10.2473	0.0945	10	PASS
	BLE 2M	2402	-9.9987	0.1000	10	PASS
		2440	-10.8023	0.0831	10	PASS
		2480	-11.6981	0.0676	10	PASS

Condition	Modulation	Frequency (MHz)	Tolerance (%)	Tolerance Limit (%)	Rated power (mW)	Result
NT/NV	BLE 1M	2402	-23.05%	+20	0.2	PASS
	BLE 1M	2440	-36.50%	+20	0.2	PASS
	BLE 1M	2480	-52.75%	+20	0.2	PASS
	BLE 2M	2402	-50.00%	+20	0.2	PASS
	BLE 2M	2440	-58.45%	+20	0.2	PASS
	BLE 2M	2480	-66.20%	+20	0.2	PASS

Condition	Mode	Frequency (MHz)	EIRP(dBm)	Gain(dBi)	Limit (dBm)	Result
NT/NV	BLE 1M	2402	-5.4272	2.7	12.14	PASS
		2440	-6.2614	2.7	12.14	PASS
		2480	-7.5473	2.7	12.14	PASS
	BLE 2M	2402	-7.2987	2.7	12.14	PASS
		2440	-8.1023	2.7	12.14	PASS
		2480	-8.9981	2.7	12.14	PASS

Note:

1. The value of EIRP densities are "calculated" values.
2. Formula: EIRP output power = Conducted RF output power + Antenna Gain.

B6.Spurious Emissions for Receiver

Test Result

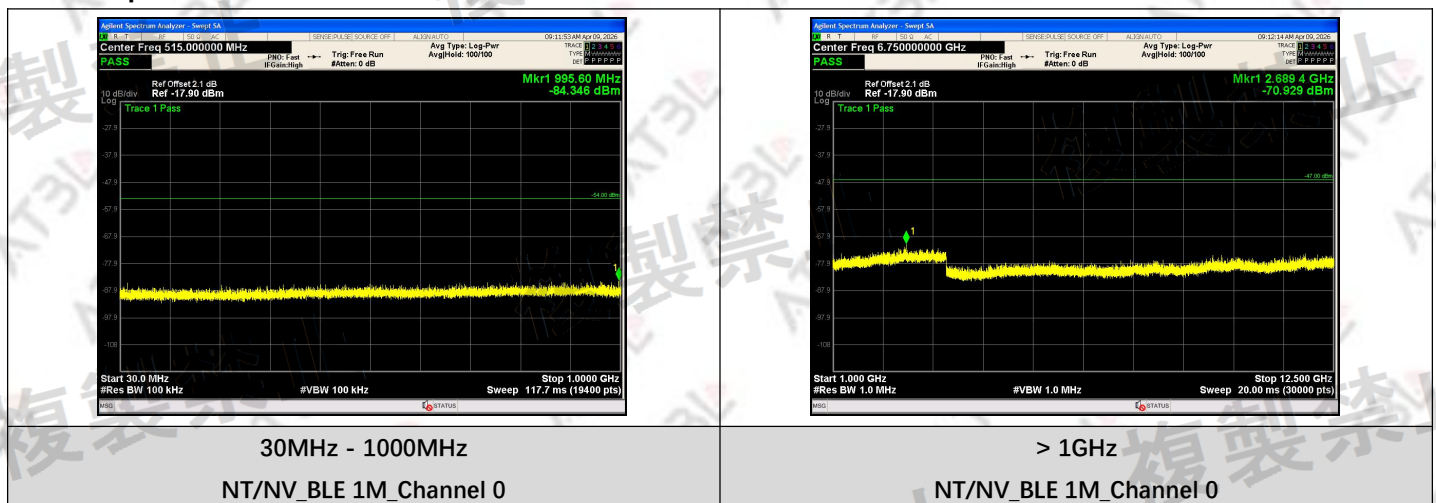
BLE 1M

Condition	Channel	Frequency Range (MHz)	Peak (MHz)	Measured Value (dBm)	Limit		Result
					dBm	nW	
NT/NV	0	30 to 1000	995.600	-84.346	-54	≤4	PASS
		1000 to 12500	2689.406	-70.929	-47	≤20	PASS
	19	30 to 1000	994.650	-83.667	-54	≤4	PASS
		1000 to 12500	3387.480	-71.388	-47	≤20	PASS
	39	30 to 1000	861.993	-84.317	-54	≤4	PASS
		1000 to 12500	3178.939	-71.622	-47	≤20	PASS

BLE 2M

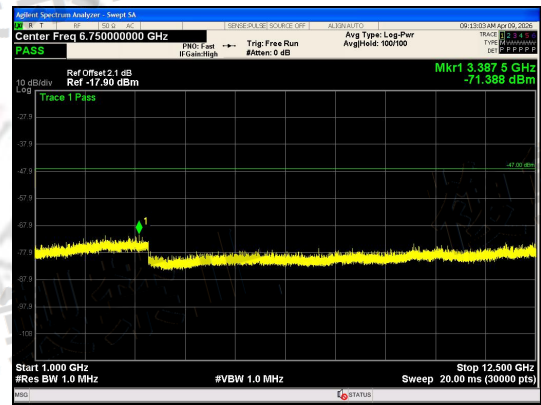
Condition	Channel	Frequency Range (MHz)	Peak (MHz)	Measured Value (dBm)	Limit		Result
					dBm	nW	
NT/NV	0	30 to 1000	794.989	-84.020	-54	≤4	PASS
		1000 to 12500	3593.336	-71.787	-47	≤20	PASS
	19	30 to 1000	995.600	-84.613	-54	≤4	PASS
		1000 to 12500	3178.939	-72.135	-47	≤20	PASS
	39	30 to 1000	775.038	-84.284	-54	≤4	PASS
		1000 to 12500	3190.823	-70.967	-47	≤20	PASS

Test Graphs

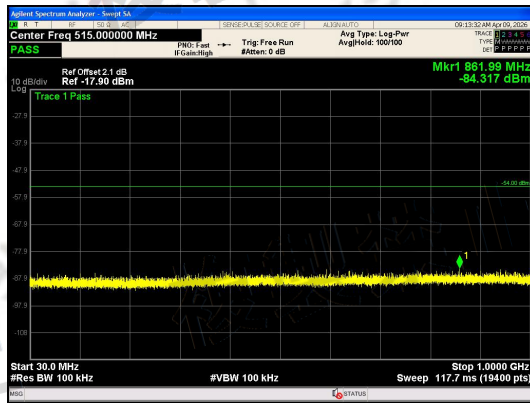




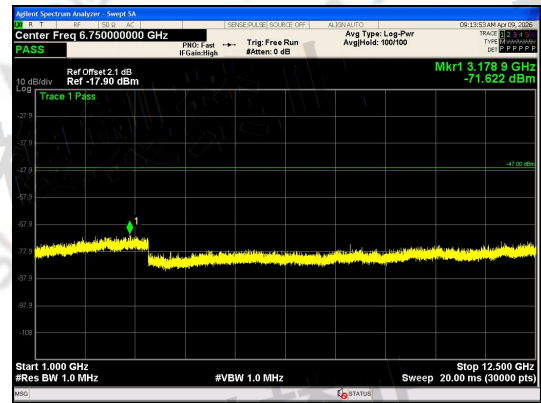
30MHz - 1000MHz
NT/NV_BLE 1M_Channel 19



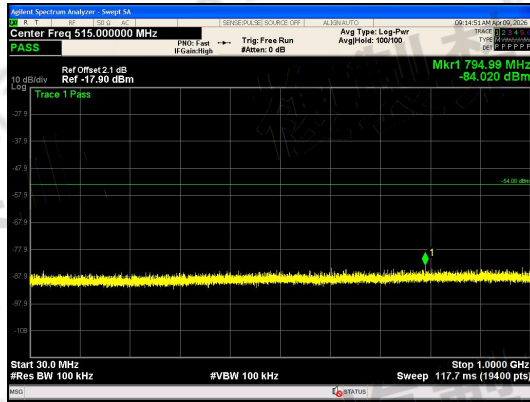
> 1GHz
NT/NV_BLE 1M_Channel 19



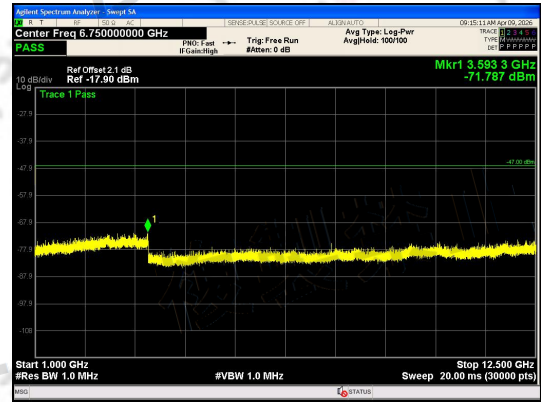
30MHz - 1000MHz
NT/NV_BLE 1M_Channel 39



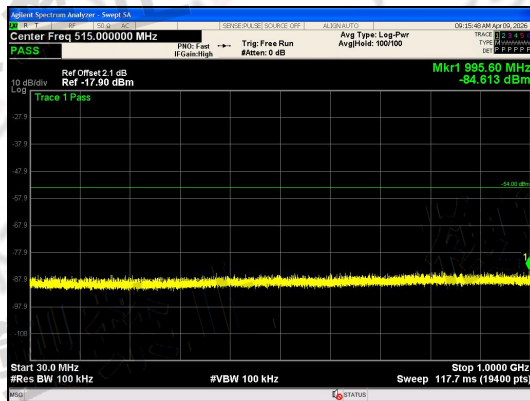
> 1GHz
NT/NV_BLE 1M_Channel 39



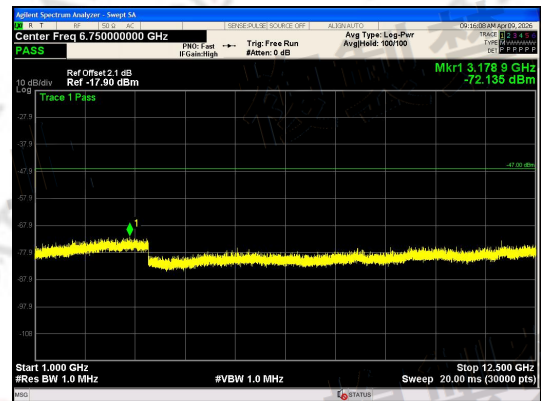
30MHz - 1000MHz
NT/NV_BLE 2M_Channel 0



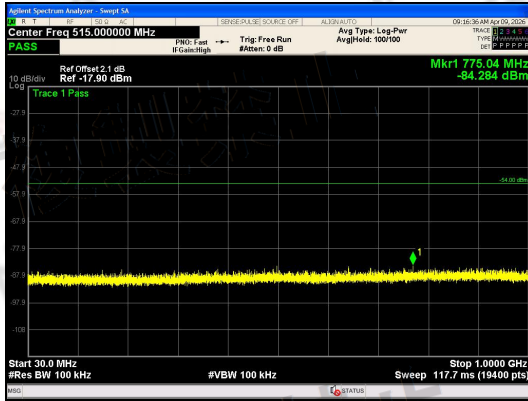
> 1GHz
NT/NV_BLE 2M_Channel 0



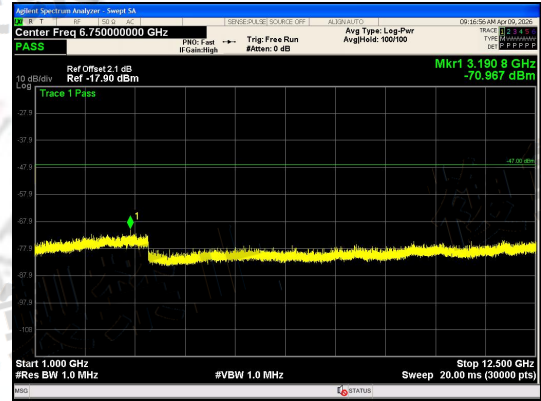
30MHz - 1000MHz
NT/NV_BLE 2M_Channel 19



> 1GHz
NT/NV_BLE 2M_Channel 19



30MHz - 1000MHz
NT/NV_BLE 2M_Channel 39



> 1GHz
NT/NV_BLE 2M_Channel 39

-----END-----