

RF Test Data for Bluetooth LE (Conducted Measurements)

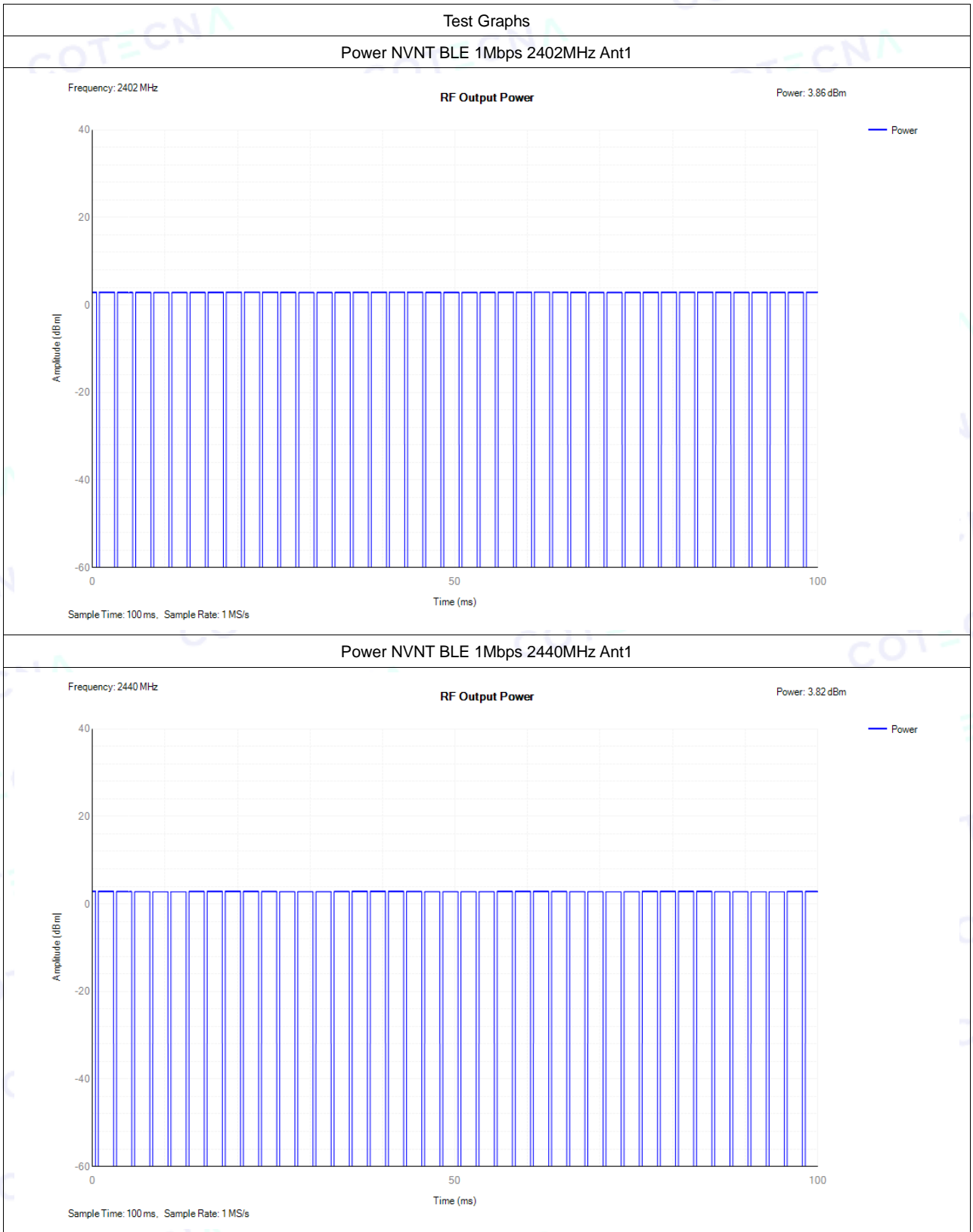
General Description of EUT	
Product Name:	WiFi LoRa 32
Test Model:	HTIT-WBR2H
Test Standards:	ETSI EN 300 328 V2.2.2:2019
Environmental Conditions	
Temperature:	23.8°C
Relative Humidity:	48%
Test Voltage:	DC 5V
Test Engineer:	Lily. zhang
Note: For a more detailed features description, please refer to the report TBR-C-202601-0040-5 The report only show the worst case data.	

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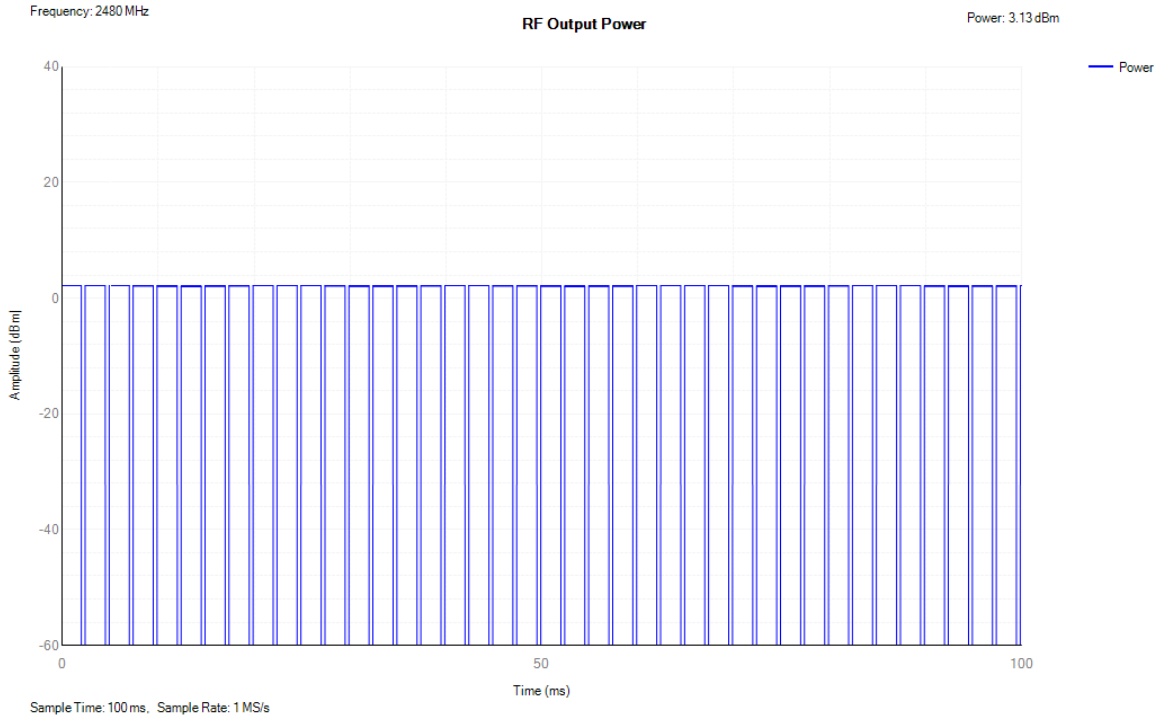
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1. RF Output Power

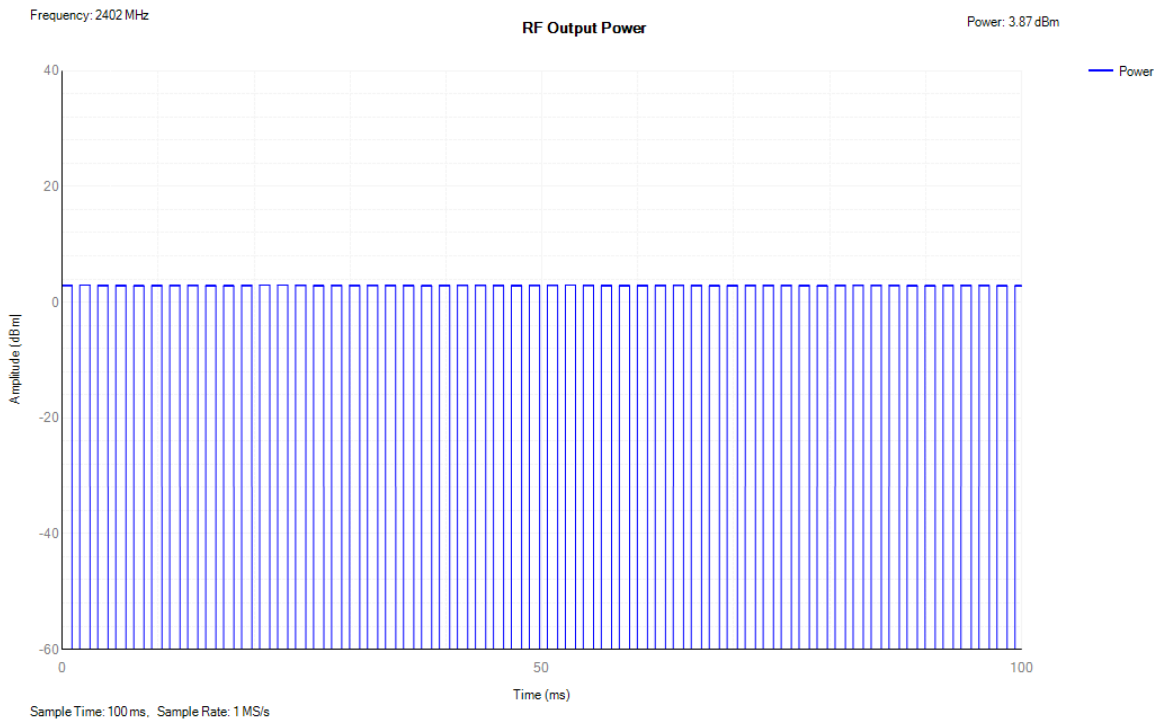
Condition	Mode	Frequency (MHz)	Antenna	Max Burst RMS Power (dBm)	Burst Number	Max EIRP (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	2.93	41	3.86	20	Pass
NVNT	BLE 1Mbps	2440	Ant1	2.89	41	3.82	20	Pass
NVNT	BLE 1Mbps	2480	Ant1	2.2	41	3.13	20	Pass
NVNT	BLE 2Mbps	2402	Ant1	2.94	54	3.87	20	Pass
NVNT	BLE 2Mbps	2440	Ant1	3.19	54	4.12	20	Pass
NVNT	BLE 2Mbps	2480	Ant1	2.57	54	3.5	20	Pass

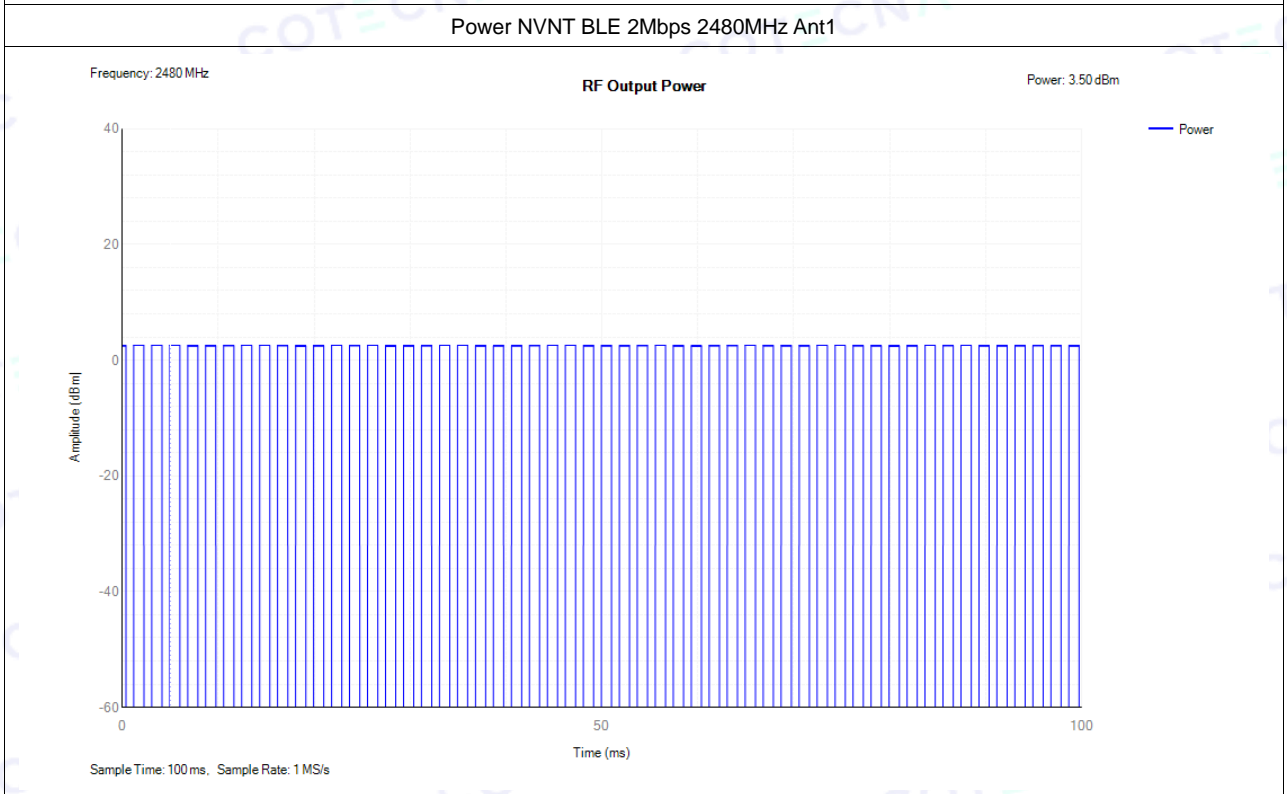
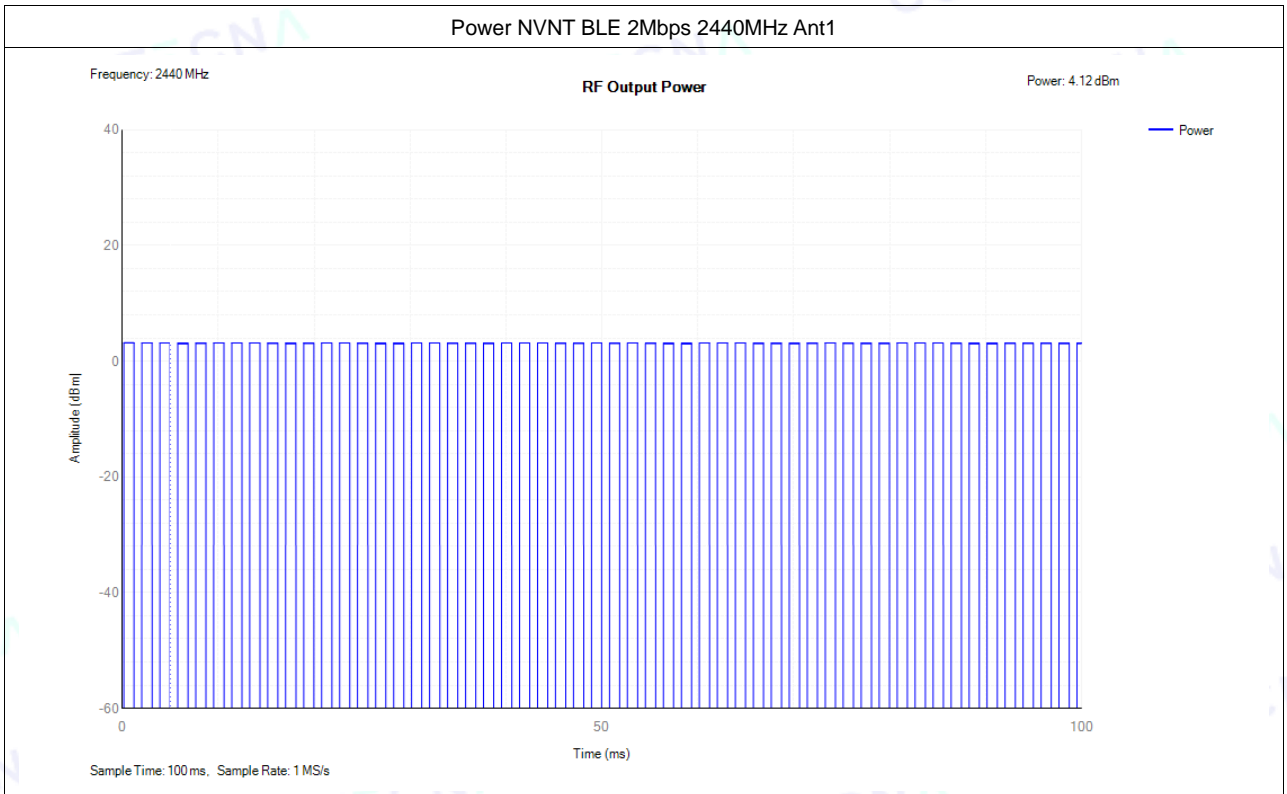


Power NVNT BLE 1Mbps 2480MHz Ant1



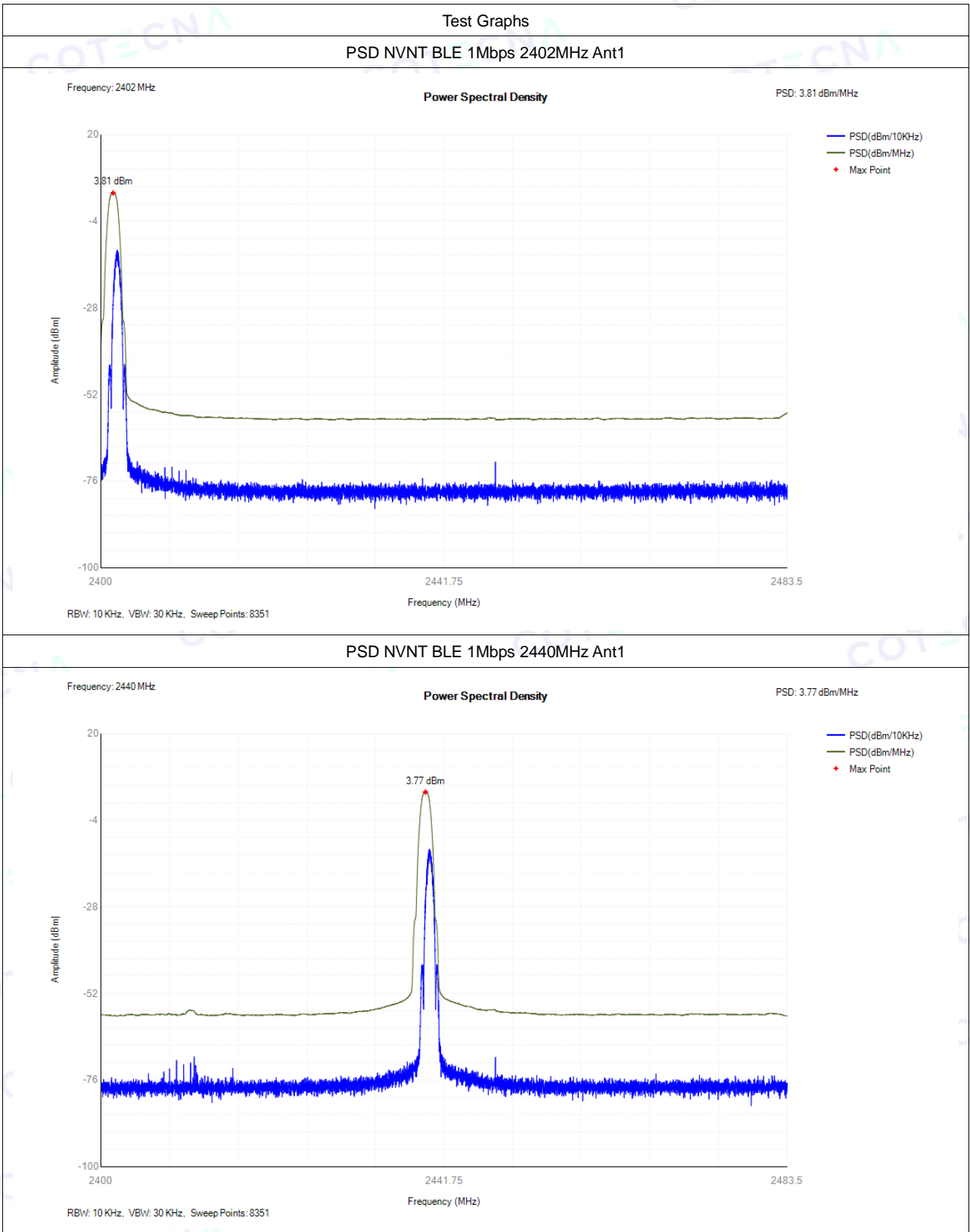
Power NVNT BLE 2Mbps 2402MHz Ant1

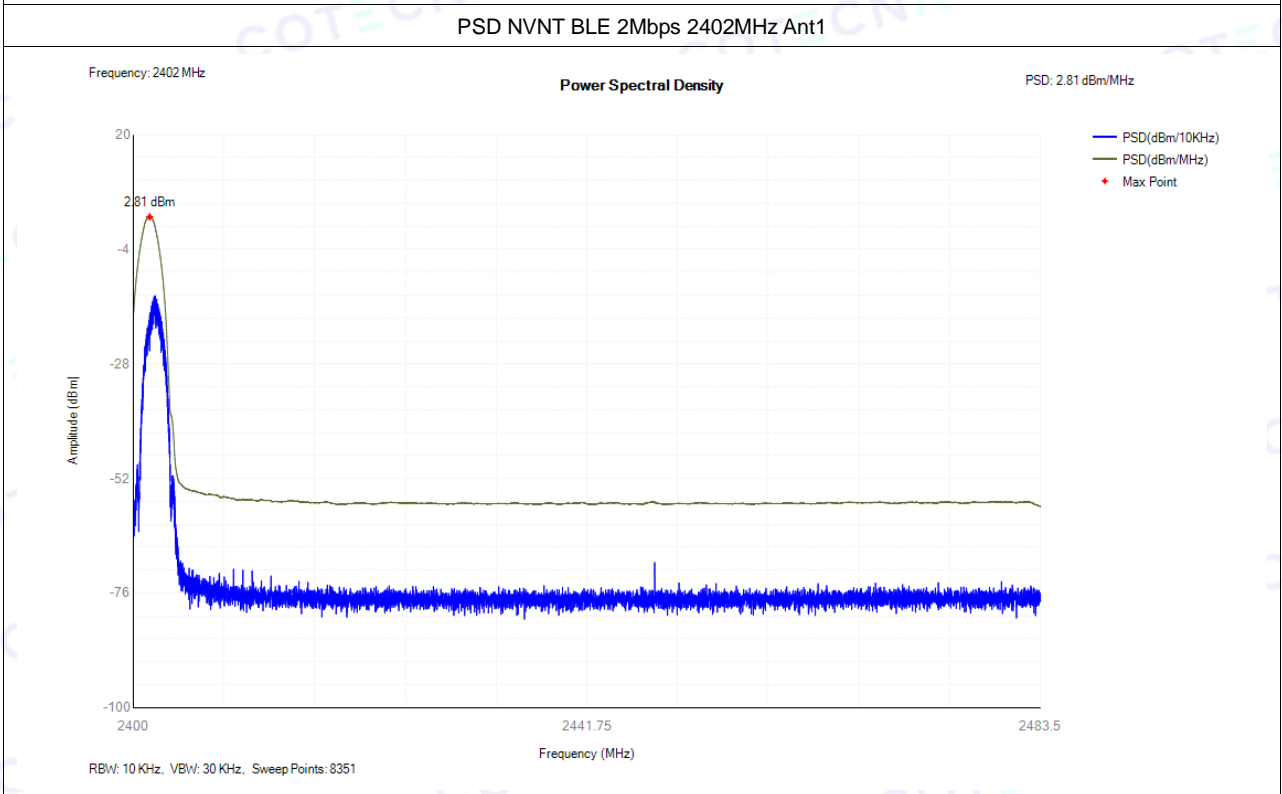
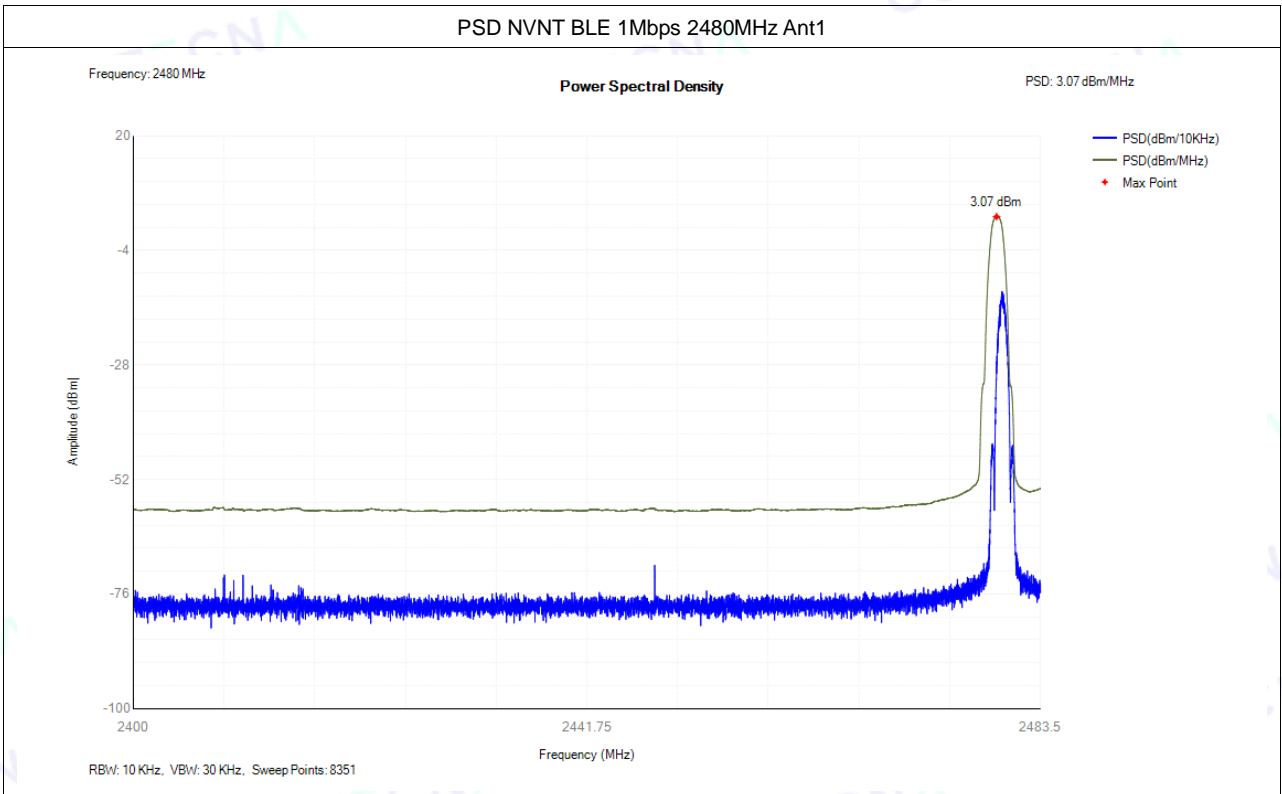


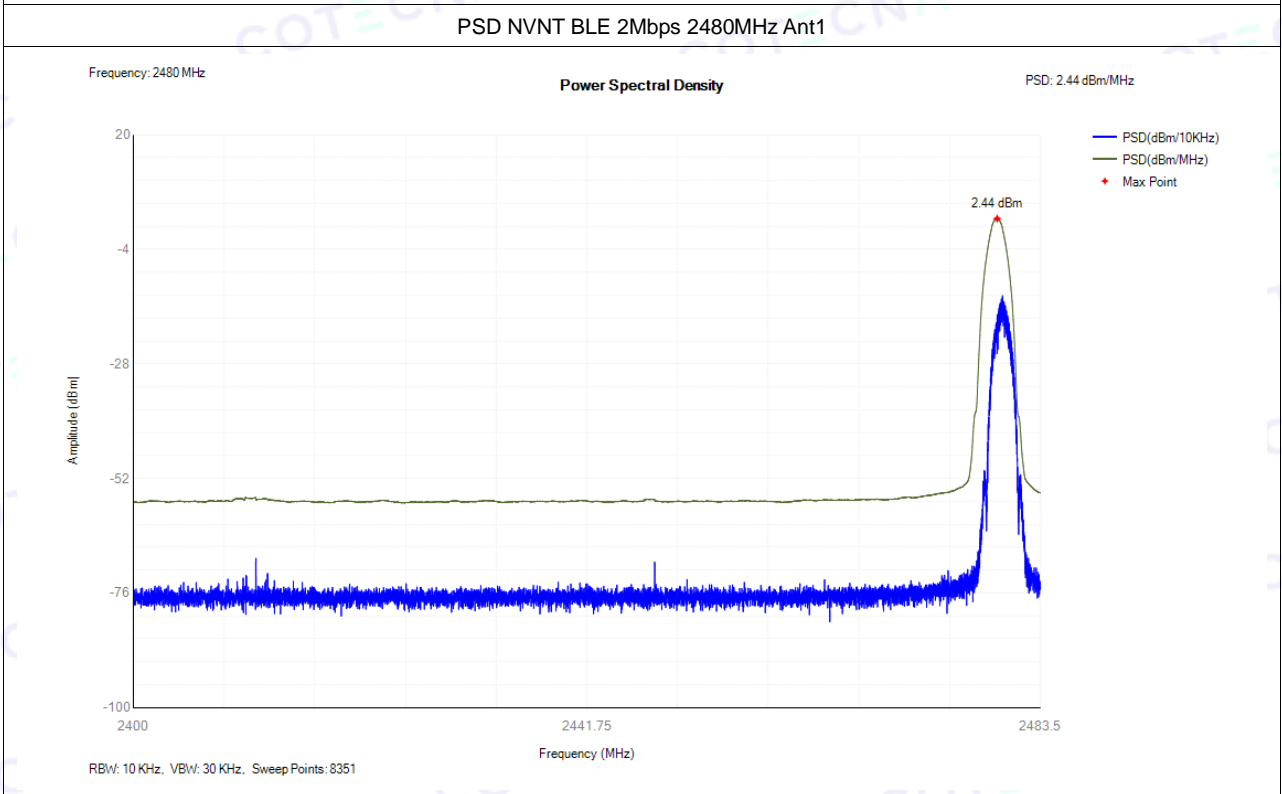
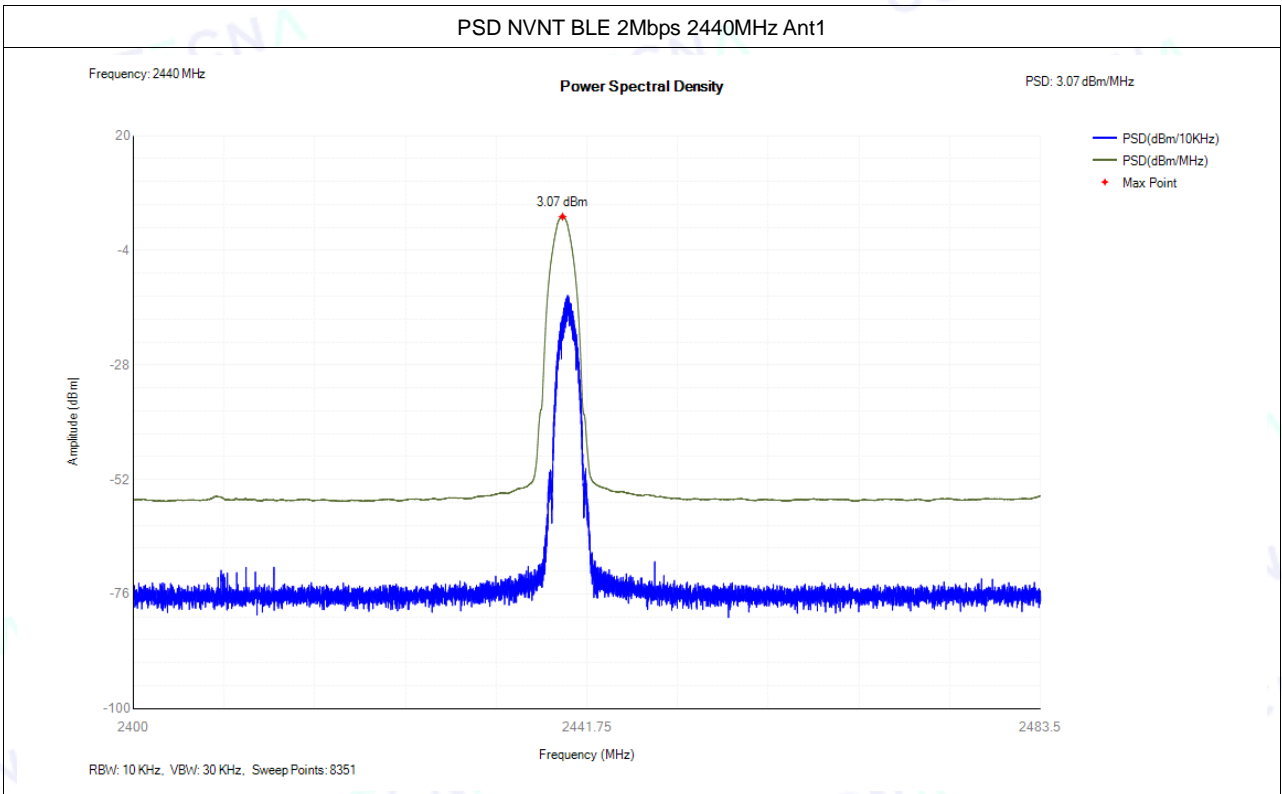


2. Power Spectral Density

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	3.81	10	Pass
NVNT	BLE 1Mbps	2440	Ant1	3.77	10	Pass
NVNT	BLE 1Mbps	2480	Ant1	3.07	10	Pass
NVNT	BLE 2Mbps	2402	Ant1	2.81	10	Pass
NVNT	BLE 2Mbps	2440	Ant1	3.07	10	Pass
NVNT	BLE 2Mbps	2480	Ant1	2.44	10	Pass





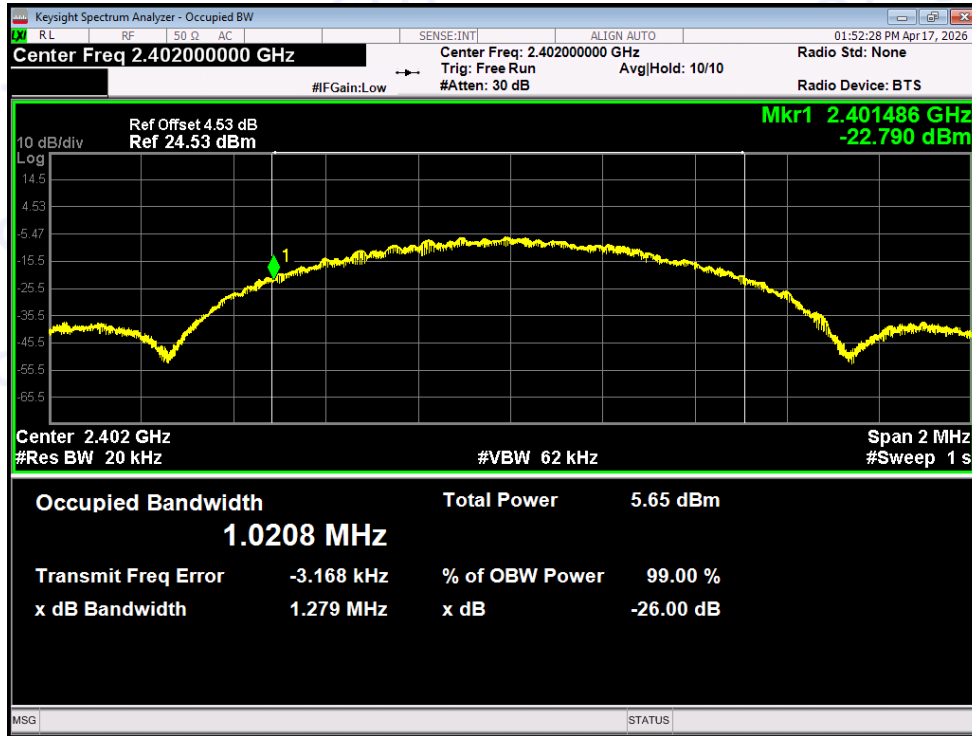


3. Occupied Channel Bandwidth

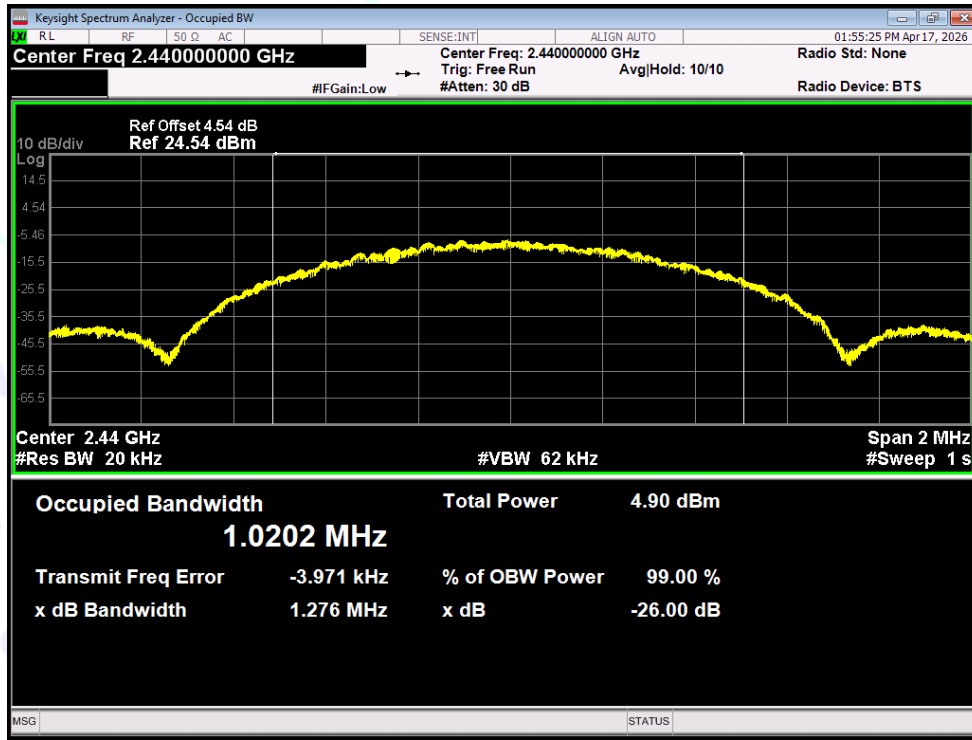
Condition	Mode	Frequency (MHz)	Antenna	Center Frequency (MHz)	OBW (MHz)	Lower Edge (MHz)	Upper Edge (MHz)	Limit OBW (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	2401.997	1.021	2401.486	2402.507	2400 - 2483.5MHz	Pass
NVNT	BLE 1Mbps	2440	Ant1	2439.996	1.02	2439.486	2440.506	2400 - 2483.5MHz	Pass
NVNT	BLE 1Mbps	2480	Ant1	2479.996	1.022	2479.485	2480.507	2400 - 2483.5MHz	Pass
NVNT	BLE 2Mbps	2402	Ant1	2401.994	2.034	2400.977	2403.011	2400 - 2483.5MHz	Pass
NVNT	BLE 2Mbps	2440	Ant1	2439.995	2.032	2438.979	2441.011	2400 - 2483.5MHz	Pass
NVNT	BLE 2Mbps	2480	Ant1	2479.994	2.031	2478.978	2481.009	2400 - 2483.5MHz	Pass

Test Graphs

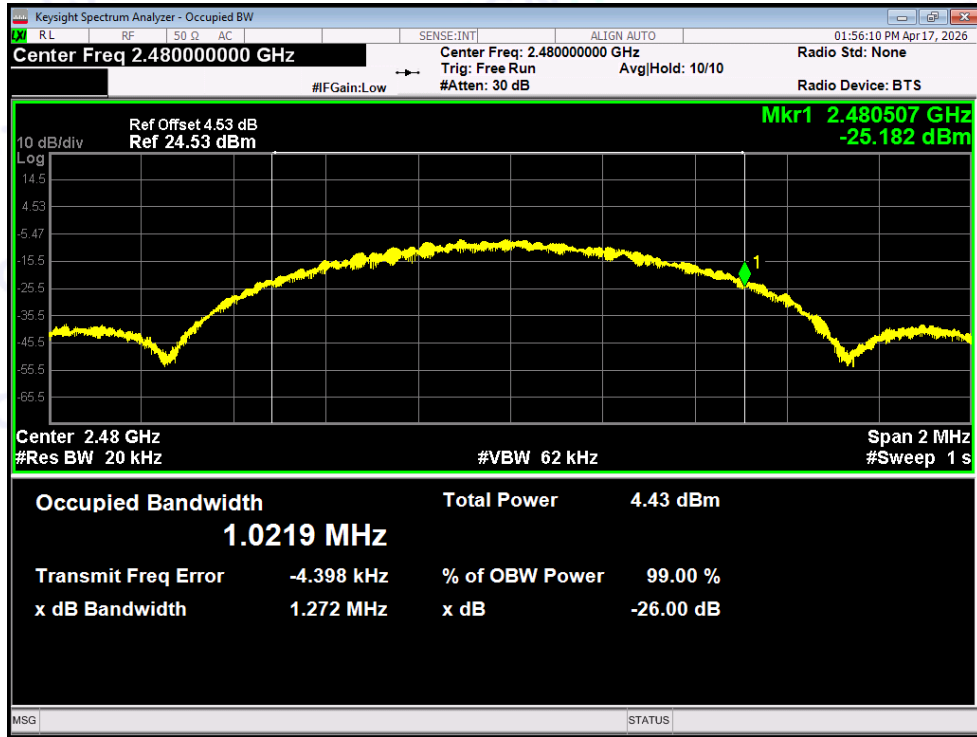
OBW NVNT BLE 1Mbps 2402MHz Ant1



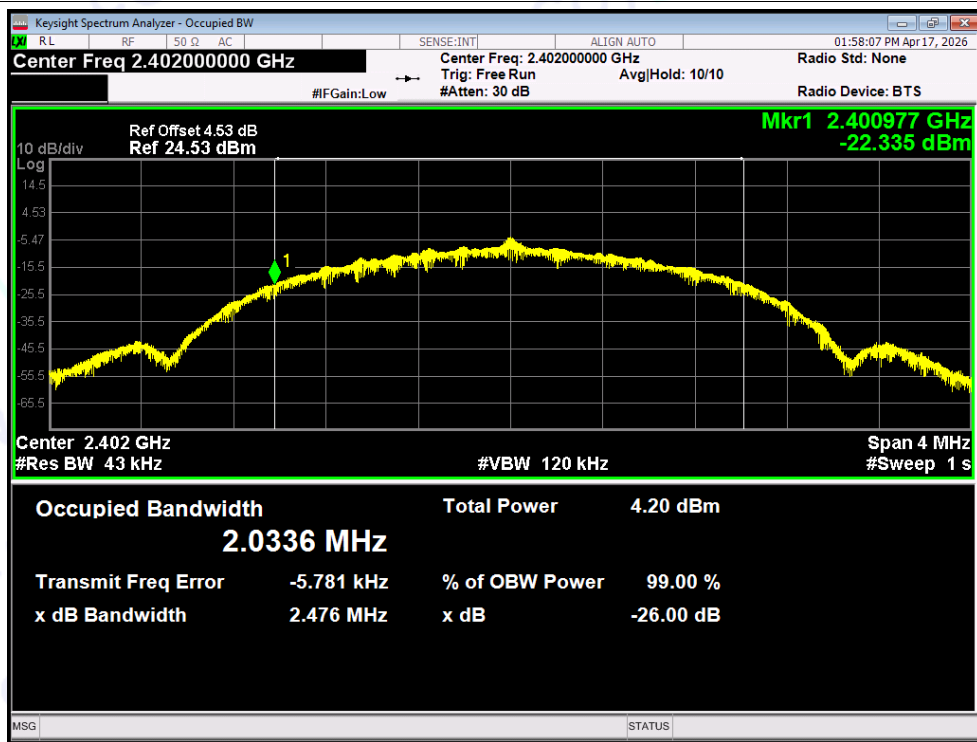
OBW NVNT BLE 1Mbps 2440MHz Ant1



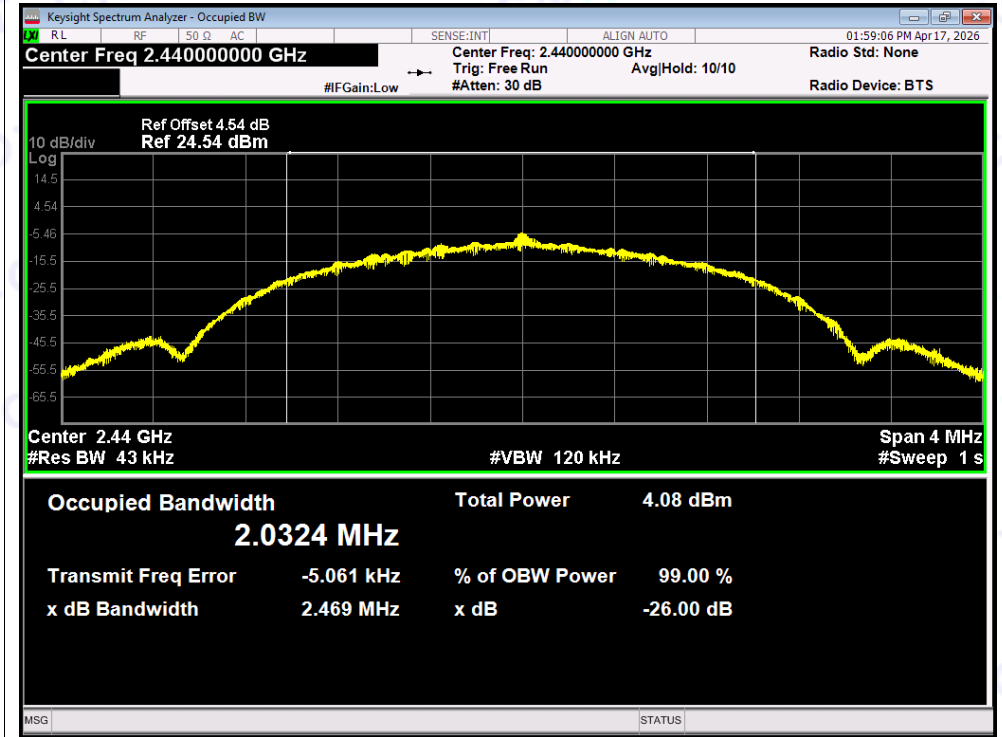
OBW NVNT BLE 1Mbps 2480MHz Ant1



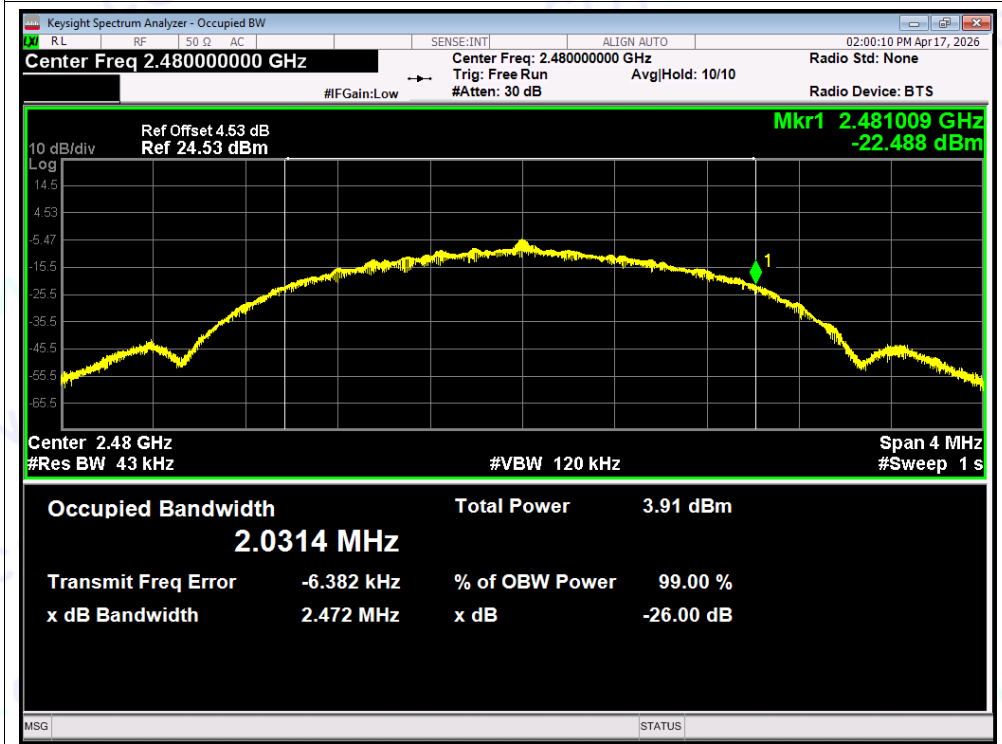
OBW NVNT BLE 2Mbps 2402MHz Ant1



OBW NVNT BLE 2Mbps 2440MHz Ant1

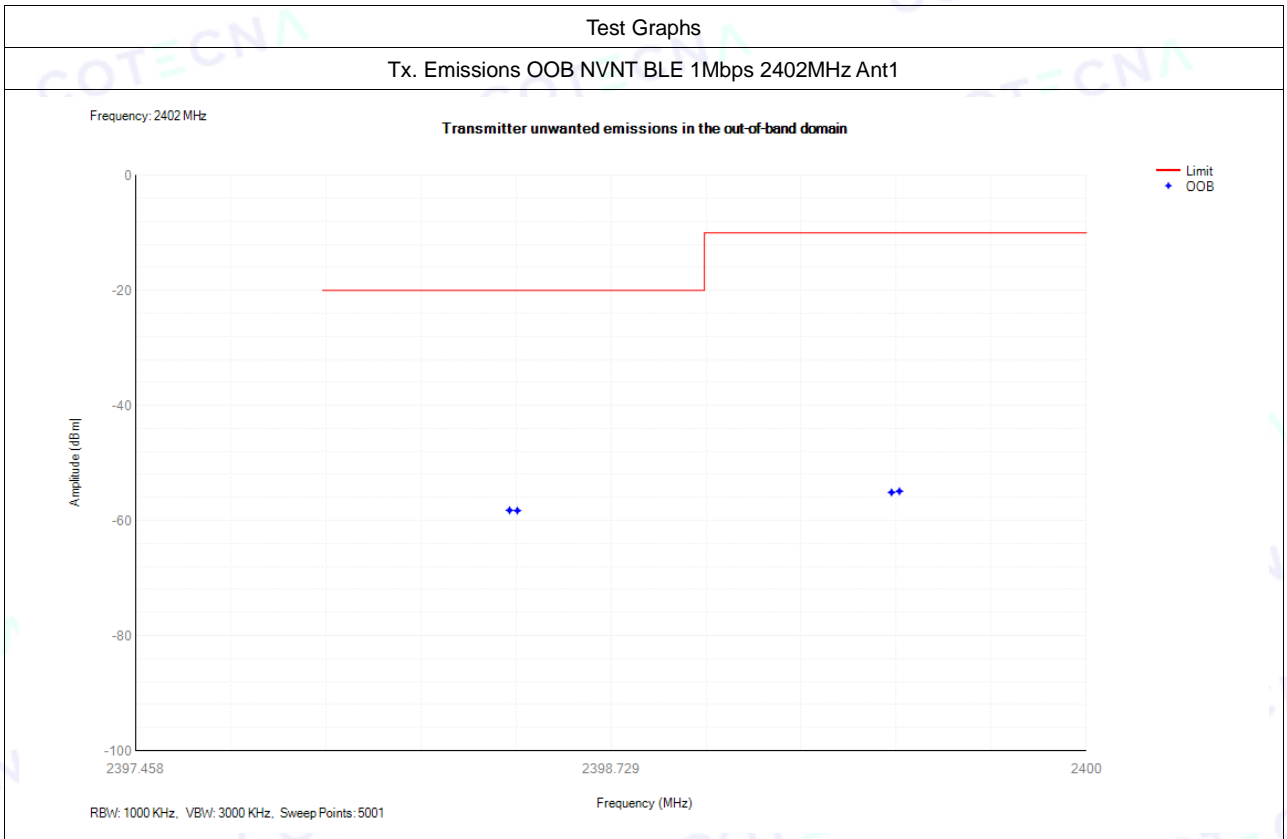


OBW NVNT BLE 2Mbps 2480MHz Ant1

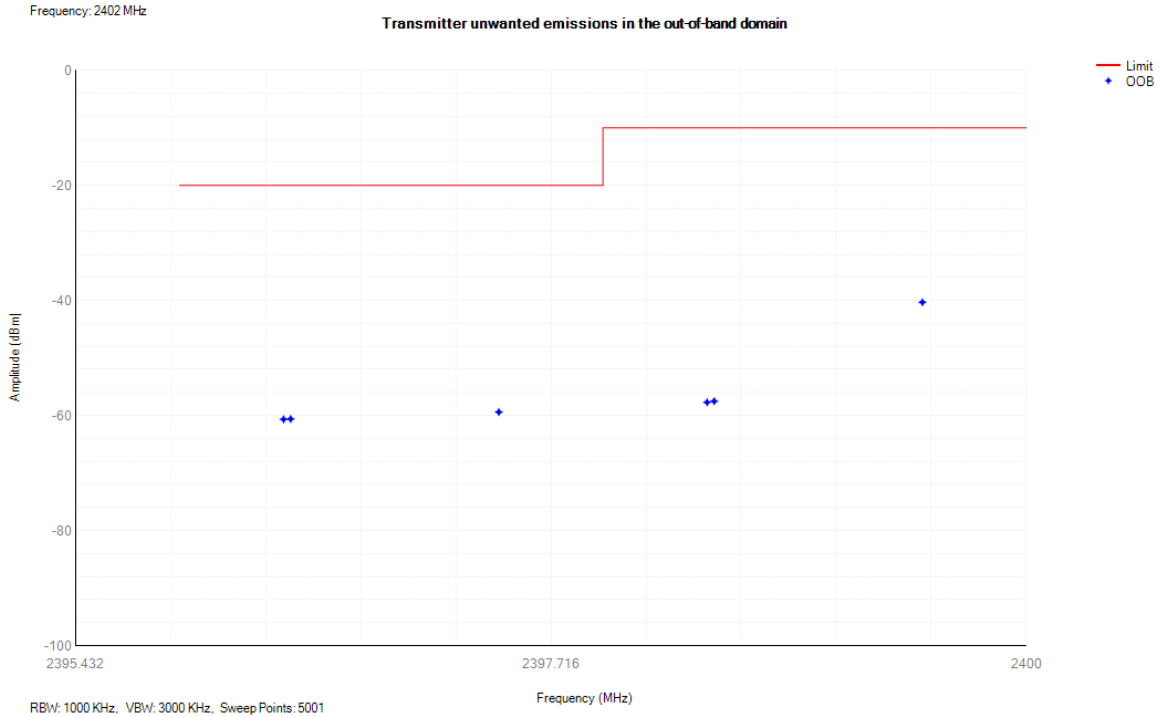


4. Transmitter unwanted emissions in the out-of-band domain

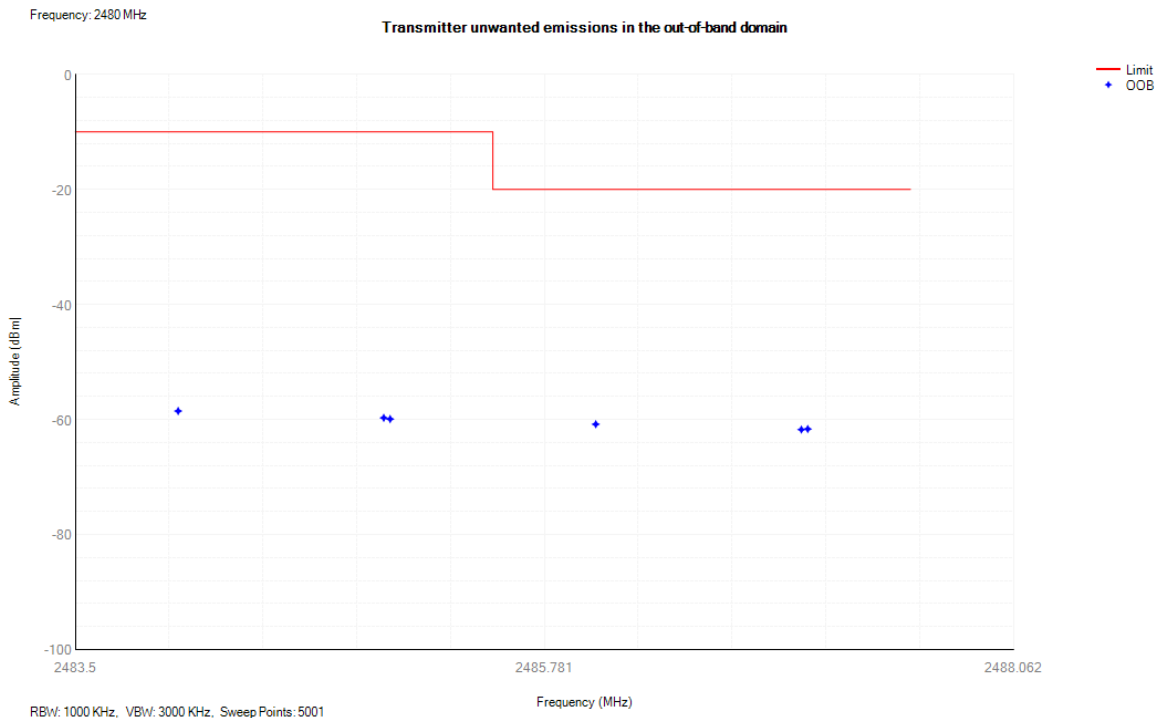
Condition	Mode	Frequency (MHz)	Antenna	OOB Frequency (MHz)	Level (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	2399.5	-54.9	-10	Pass
NVNT	BLE 1Mbps	2402	Ant1	2399.479	-55.1	-10	Pass
NVNT	BLE 1Mbps	2402	Ant1	2398.479	-58.27	-20	Pass
NVNT	BLE 1Mbps	2402	Ant1	2398.458	-58.21	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	2484	-59.06	-10	Pass
NVNT	BLE 1Mbps	2480	Ant1	2484.022	-59.19	-10	Pass
NVNT	BLE 1Mbps	2480	Ant1	2485.022	-60.18	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	2485.044	-60.23	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	2399.5	-40.3	-10	Pass
NVNT	BLE 2Mbps	2402	Ant1	2398.5	-57.51	-10	Pass
NVNT	BLE 2Mbps	2402	Ant1	2398.466	-57.7	-10	Pass
NVNT	BLE 2Mbps	2402	Ant1	2397.466	-59.39	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	2396.466	-60.6	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	2396.432	-60.65	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	2484	-58.52	-10	Pass
NVNT	BLE 2Mbps	2480	Ant1	2485	-59.7	-10	Pass
NVNT	BLE 2Mbps	2480	Ant1	2485.031	-59.91	-10	Pass
NVNT	BLE 2Mbps	2480	Ant1	2486.031	-60.81	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	2487.031	-61.74	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	2487.062	-61.64	-20	Pass



Tx. Emissions OOB NVNT BLE 2Mbps 2402MHz Ant1

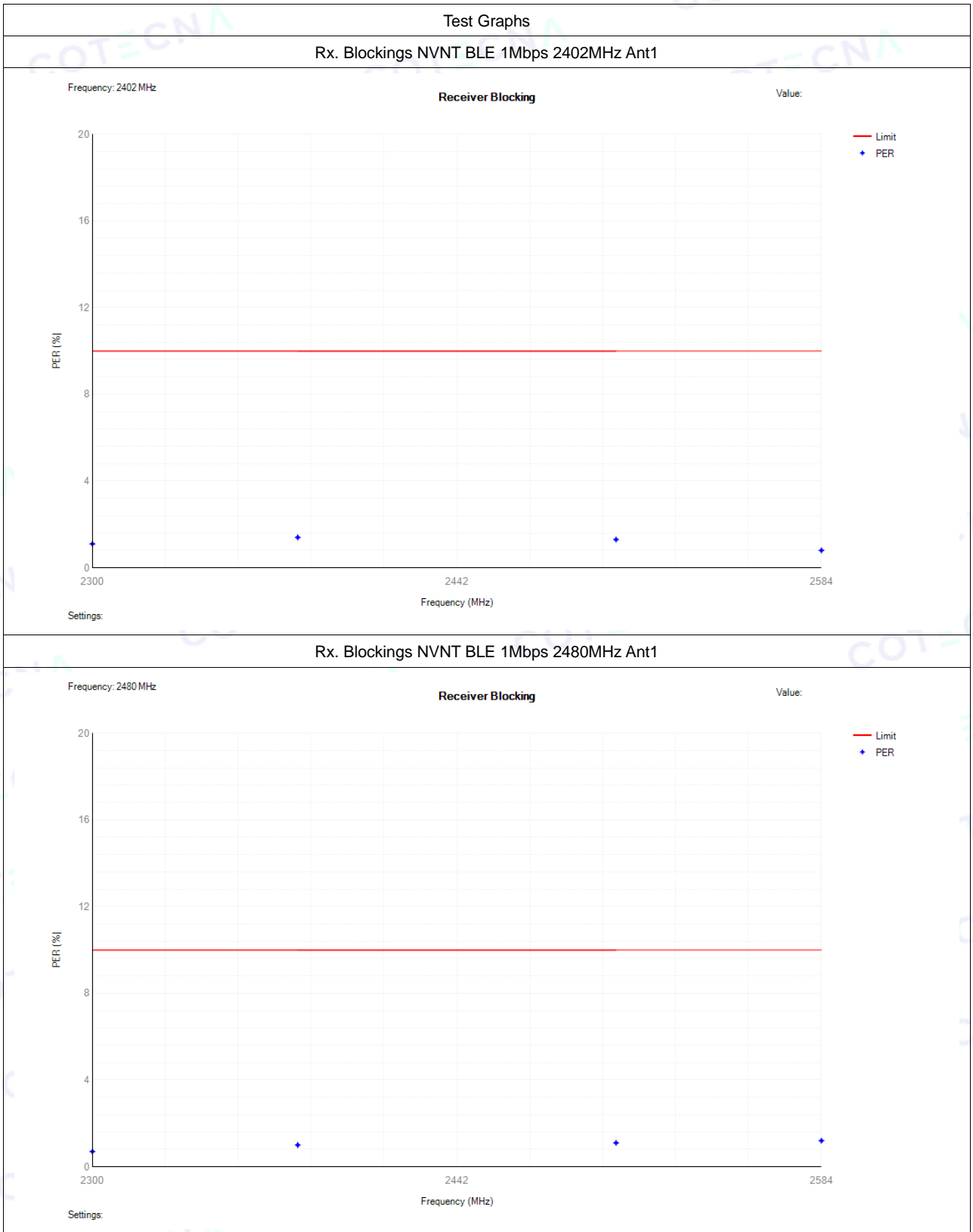


Tx. Emissions OOB NVNT BLE 2Mbps 2480MHz Ant1



5. Receiver Blocking

Condition	Mode	Frequency (MHz)	Antenna	Wanted Power (dBm)	Blocking Frequency (MHz)	Blocking Power (dBm)	PER (%)	Limit (%)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-68.91	2380	-33.07	1.4	10	Pass
NVNT	BLE 1Mbps	2402	Ant1	-68.91	2504	-33.07	1.3	10	Pass
NVNT	BLE 1Mbps	2402	Ant1	-68.91	2300	-33.07	1.1	10	Pass
NVNT	BLE 1Mbps	2402	Ant1	-68.91	2584	-33.07	0.8	10	Pass
NVNT	BLE 1Mbps	2480	Ant1	-68.91	2380	-33.07	1	10	Pass
NVNT	BLE 1Mbps	2480	Ant1	-68.91	2504	-33.07	1.1	10	Pass
NVNT	BLE 1Mbps	2480	Ant1	-68.91	2300	-33.07	0.7	10	Pass
NVNT	BLE 1Mbps	2480	Ant1	-68.91	2584	-33.07	1.2	10	Pass



-----END OF THE REPORT-----