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VERITAS**

**Test Report No.: W7L-P22080003RF02**



BLE\_2M\_Ant1\_2440



BLE\_2M\_Ant1\_2480

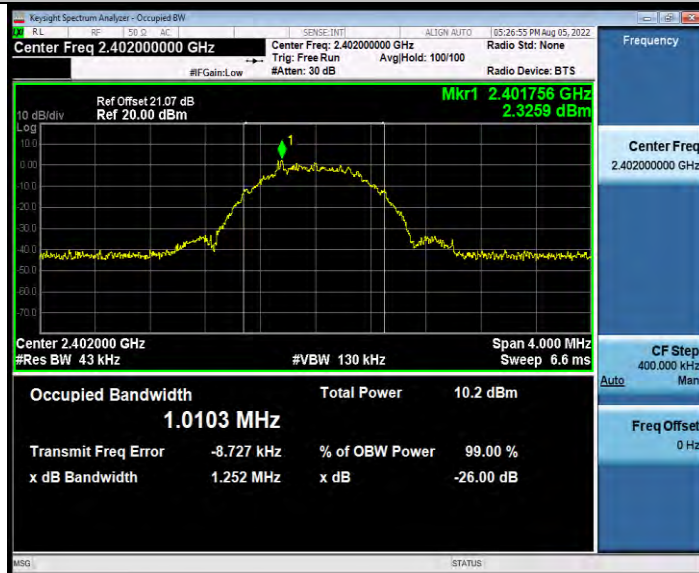


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**Test Report No.: W7L-P22080003RF02**



BLE\_500K\_Ant1\_2402

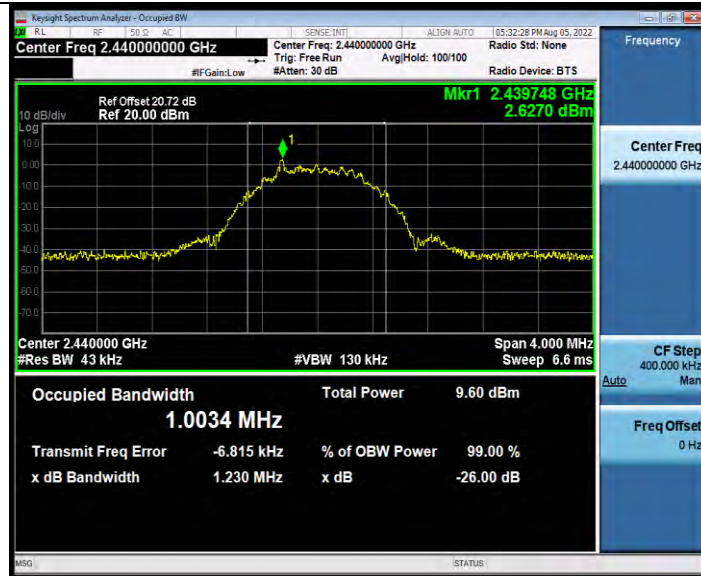


BLE\_500K\_Ant1\_2440

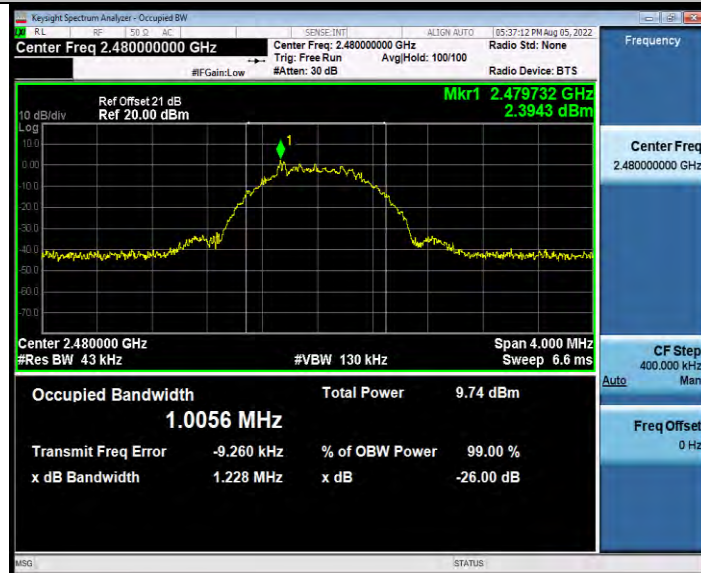


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**Test Report No.: W7L-P22080003RF02**



**BLE\_500K\_Ant1\_2480**



**MAXIMUM CONDUCTED OUTPUT POWER****TEST RESULT PEAK**

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Peak Power[mW]	Conducted Limit[dBm]	Verdict	Power setting
BLE_125K	Ant1	2402	3.58	2.28	≤30	PASS	Default
		2440	3.74	2.37	≤30	PASS	Default
		2480	3.50	2.24	≤30	PASS	Default
BLE_1M	Ant1	2402	4.44	2.78	≤30	PASS	Default
		2440	<b>4.50</b>	<b>2.82</b>	≤30	PASS	Default
		2480	4.24	2.65	≤30	PASS	Default
BLE_2M	Ant1	2402	3.90	2.45	≤30	PASS	Default
		2440	4.00	2.51	≤30	PASS	Default
		2480	3.75	2.37	≤30	PASS	Default
BLE_500K	Ant1	2402	3.85	2.43	≤30	PASS	Default
		2440	3.98	2.5	≤30	PASS	Default
		2480	3.70	2.34	≤30	PASS	Default

**TEST RESULT AVERAGE**

TestMode	Antenna	Frequency[MHz]	Average Power[dBm]	Average Power[mW]	Conducted Limit[dBm]	Power setting
BLE_125K	Ant1	2402	3.31	2.14	/	Default
		2440	3.40	2.19	/	Default
		2480	3.19	2.08	/	Default
BLE_1M	Ant1	2402	2.80	1.91	/	Default
		2440	2.98	1.99	/	Default
		2480	2.50	1.78	/	Default
BLE_2M	Ant1	2402	1.64	1.46	/	Default
		2440	1.66	1.47	/	Default
		2480	1.42	1.39	/	Default
BLE_500K	Ant1	2402	2.49	1.77	/	Default
		2440	2.59	1.82	/	Default
		2480	2.35	1.72	/	Default



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## MAXIMUM POWER SPECTRAL DENSITY TEST RESULT

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_125K	Ant1	2402	-2.62	≤8.00	PASS
		2440	-3.38	≤8.00	PASS
		2480	-3.09	≤8.00	PASS
BLE_1M	Ant1	2402	-12.38	≤8.00	PASS
		2440	-13.11	≤8.00	PASS
		2480	-12.9	≤8.00	PASS
BLE_2M	Ant1	2402	-15.75	≤8.00	PASS
		2440	-16.42	≤8.00	PASS
		2480	-16.21	≤8.00	PASS
BLE_500K	Ant1	2402	-2.54	≤8.00	PASS
		2440	-3.3	≤8.00	PASS
		2480	-3.01	≤8.00	PASS

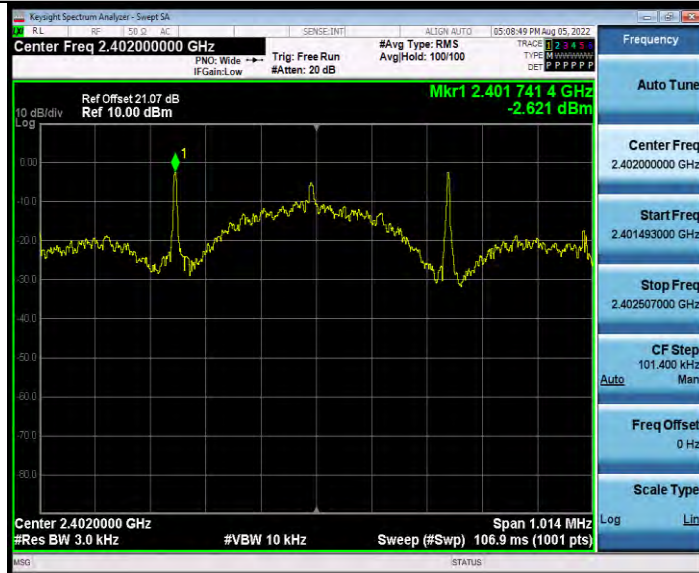


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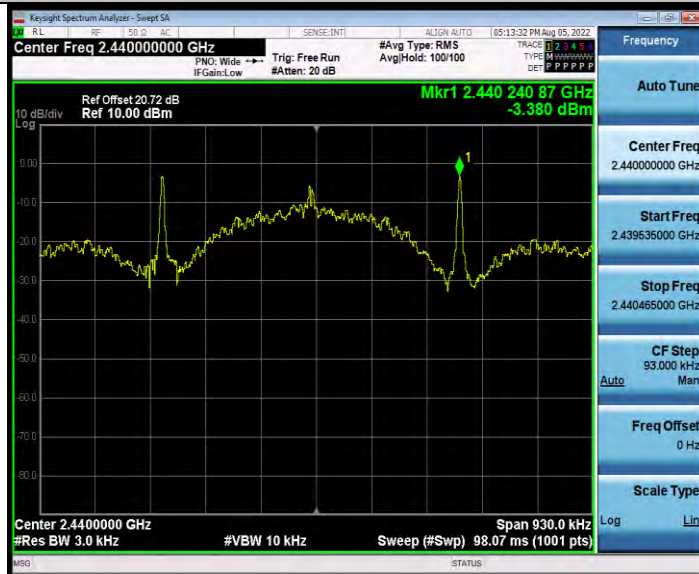
Test Report No.: W7L-P22080003RF02

### TEST GRAPHS

BLE\_125K\_Ant1\_2402



BLE\_125K\_Ant1\_2440



BLE\_125K\_Ant1\_2480



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### Test Report No.: W7L-P22080003RF02



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440





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Test Report No.: W7L-P22080003RF02



BLE\_1M\_Ant1\_2480



BLE\_2M\_Ant1\_2402



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Test Report No.: W7L-P22080003RF02



BLE\_2M\_Ant1\_2440



BLE\_2M\_Ant1\_2480



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Test Report No.: W7L-P22080003RF02



BLE\_500K\_Ant1\_2402



BLE\_500K\_Ant1\_2440



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**Test Report No.: W7L-P22080003RF02**



BLE\_500K\_Ant1\_2480





## REFERENCE LEVEL MEASUREMENT

### TEST RESULT

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_125K	Ant1	2402	2401.78	1.56
		2440	2439.76	2.32
		2480	2479.99	0.30
BLE_1M	Ant1	2402	2401.74	3.87
		2440	2439.74	3.01
		2480	2479.74	3.35
BLE_2M	Ant1	2402	2401.49	3.49
		2440	2439.50	2.65
		2480	2479.50	3.00
BLE_500K	Ant1	2402	2401.75	3.72
		2440	2439.74	3.05
		2480	2479.74	3.36



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## TEST GRAPHS





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BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



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BLE\_1M\_Ant1\_2480



BLE\_2M\_Ant1\_2402





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### Test Report No.: W7L-P22080003RF02



BLE\_2M\_Ant1\_2440



BLE\_2M\_Ant1\_2480



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BLE\_500K\_Ant1\_2402



BLE\_500K\_Ant1\_2440



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Test Report No.: W7L-P22080003RF02



BLE\_500K\_Ant1\_2480





## **BAND EDGE MEASUREMENTS**

### **TEST RESULT**

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_125K	Ant1	Low	2402	1.56	-34.81	≤-18.44	PASS
		High	2480	0.30	-34.65	≤-19.7	PASS
BLE_1M	Ant1	Low	2402	3.87	-34.1	≤-16.13	PASS
		High	2480	3.35	-34.91	≤-16.65	PASS
BLE_2M	Ant1	Low	2402	3.49	-34.34	≤-16.51	PASS
		High	2480	3.00	-34.03	≤-17	PASS
BLE_500K	Ant1	Low	2402	3.72	-34.97	≤-16.28	PASS
		High	2480	3.36	-34.76	≤-16.64	PASS

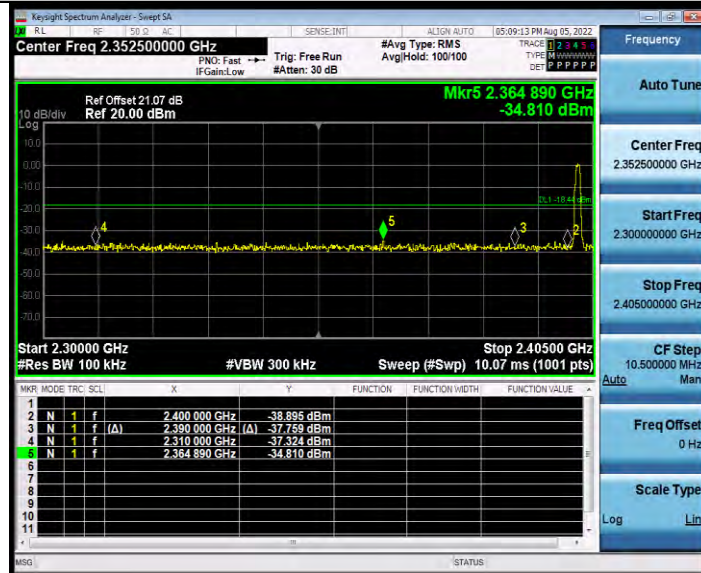


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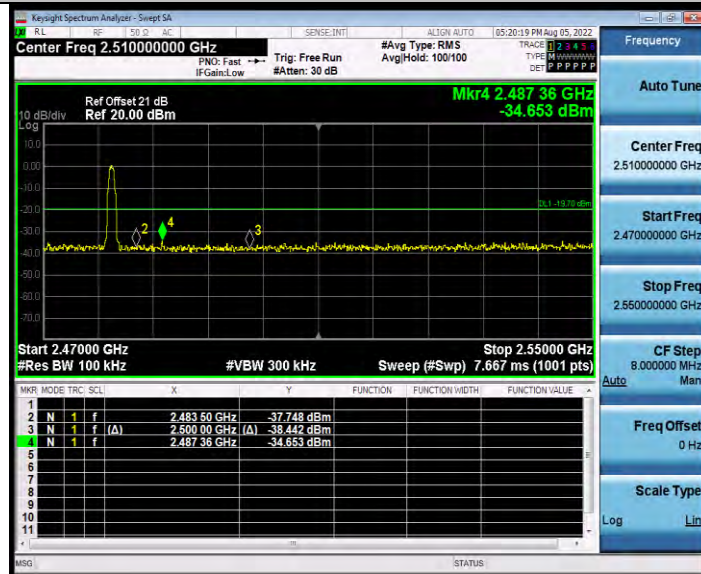
Test Report No.: W7L-P22080003RF02

### TEST GRAPHS

BLE\_125K\_Ant1\_Low\_2402



BLE\_125K\_Ant1\_High\_2480

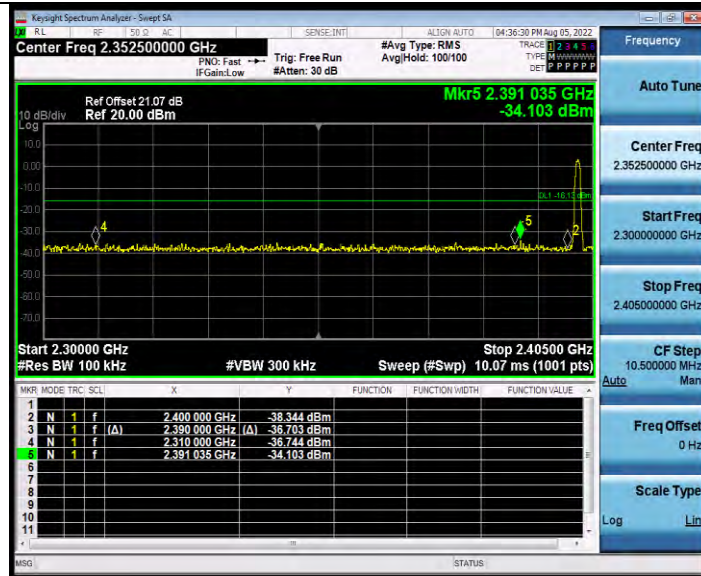


BLE\_1M\_Ant1\_Low\_2402

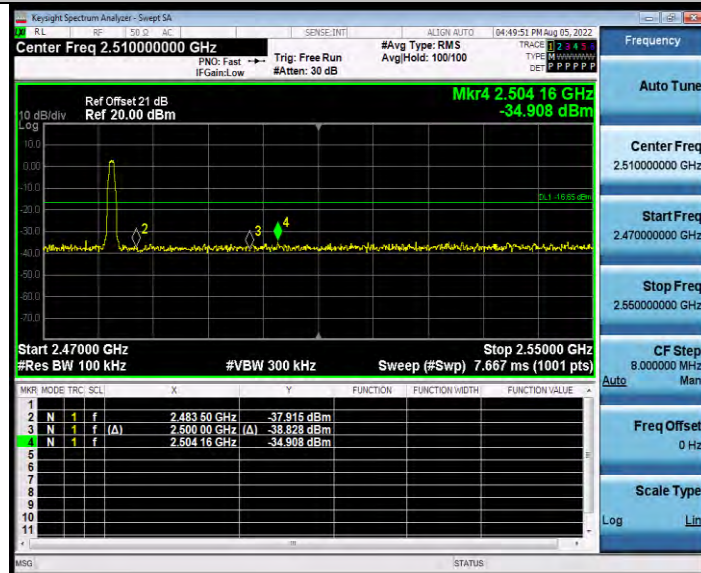


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BLE\_1M\_Ant1\_High\_2480

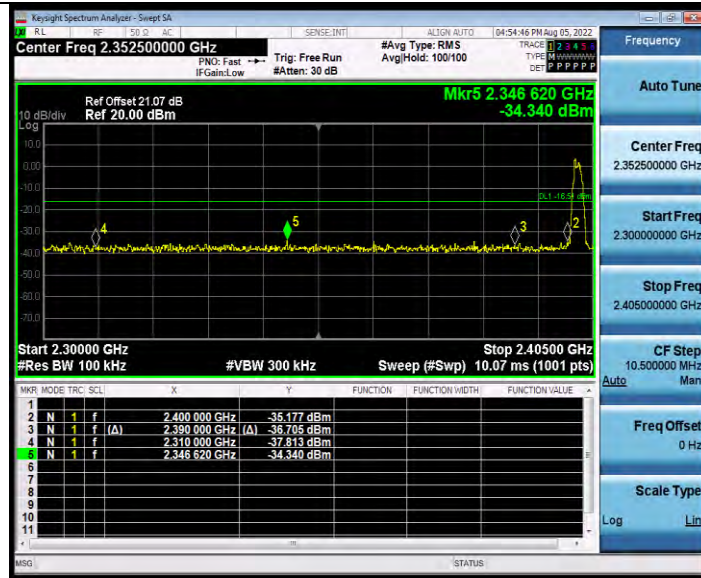


BLE\_2M\_Ant1\_Low\_2402

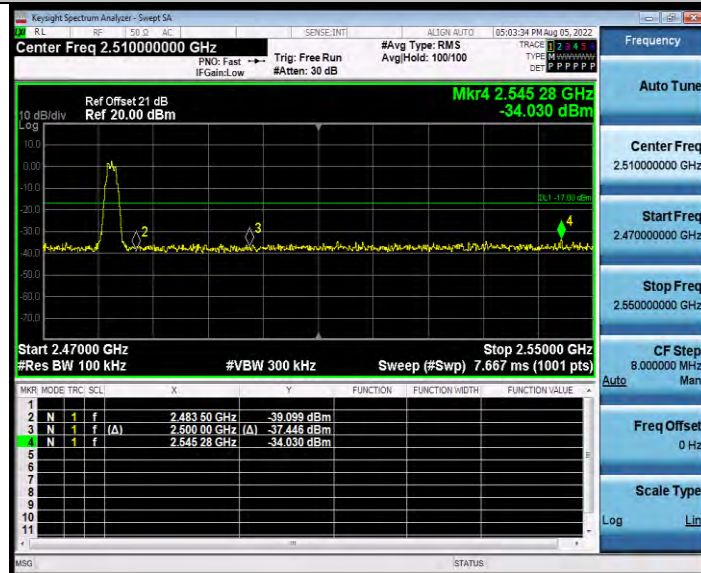


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# Test Report No.: W7L-P22080003RF02



BLE\_2M\_Ant1\_High\_2480



BLE\_500K\_Ant1\_Low\_2402

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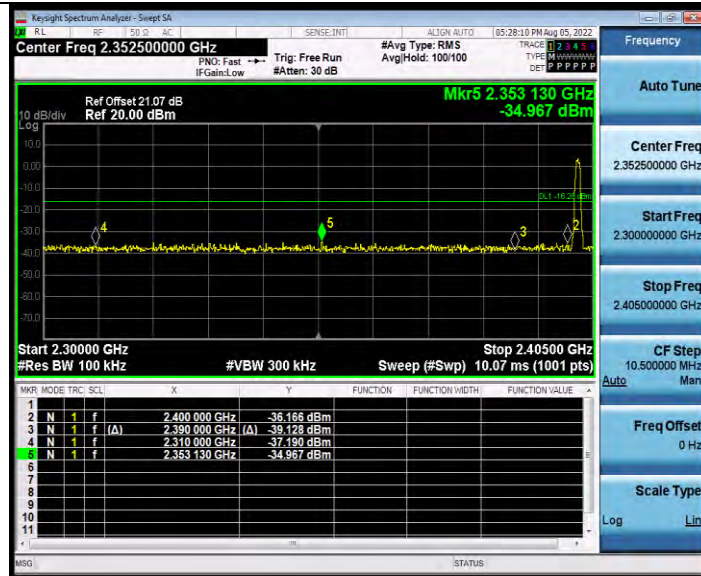
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

Tel: +86 755 8869 6566  
Fax: +86 755 8869 6577  
Email: [customerservice.sw@bureauveritas.com](mailto:customerservice.sw@bureauveritas.com)

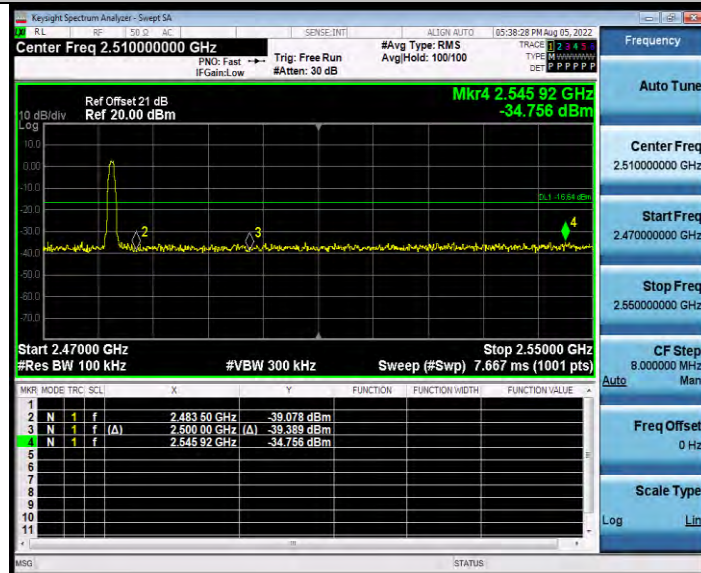


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# Test Report No.: W7L-P22080003RF02



BLE\_500K\_Ant1\_High\_2480



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### CONDUCTED SPURIOUS EMISSION

### TEST RESULT

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_125K	Ant1	2402	30~1000	1.56	-42.83	≤-18.44	PASS
			1000~26500	1.56	-26.48	≤-18.44	PASS
		2440	30~1000	2.32	-44.25	≤-17.68	PASS
			1000~26500	2.32	-27.64	≤-17.68	PASS
		2480	30~1000	0.30	-43	≤-19.7	PASS
			1000~26500	0.30	-28.07	≤-19.7	PASS
BLE_1M	Ant1	2402	30~1000	3.87	-43.2	≤-16.13	PASS
			1000~26500	3.87	-28.03	≤-16.13	PASS
		2440	30~1000	3.01	-44.27	≤-16.99	PASS
			1000~26500	3.01	-28.27	≤-16.99	PASS
		2480	30~1000	3.35	-43.38	≤-16.65	PASS
			1000~26500	3.35	-28.04	≤-16.65	PASS
BLE_2M	Ant1	2402	30~1000	3.49	-44.23	≤-16.51	PASS
			1000~26500	3.49	-27.65	≤-16.51	PASS
		2440	30~1000	2.65	-44.54	≤-17.35	PASS
			1000~26500	2.65	-28.16	≤-17.35	PASS
		2480	30~1000	3.00	-43.77	≤-17	PASS
			1000~26500	3.00	-27.96	≤-17	PASS
BLE_500K	Ant1	2402	30~1000	3.72	-42.86	≤-16.28	PASS
			1000~26500	3.72	-27.64	≤-16.28	PASS
		2440	30~1000	3.05	-43.58	≤-16.95	PASS
			1000~26500	3.05	-28.22	≤-16.95	PASS
		2480	30~1000	3.36	-43.68	≤-16.64	PASS
			1000~26500	3.36	-28.44	≤-16.64	PASS



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### TEST GRAPHS

BLE\_125K\_Ant1\_2402\_30~1000



BLE\_125K\_Ant1\_2402\_1000~26500



BLE\_125K\_Ant1\_2440\_30~1000



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BLE\_125K\_Ant1\_2440\_1000~26500



BLE\_125K\_Ant1\_2480\_30~1000

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BLE\_125K\_Ant1\_2480\_1000~26500

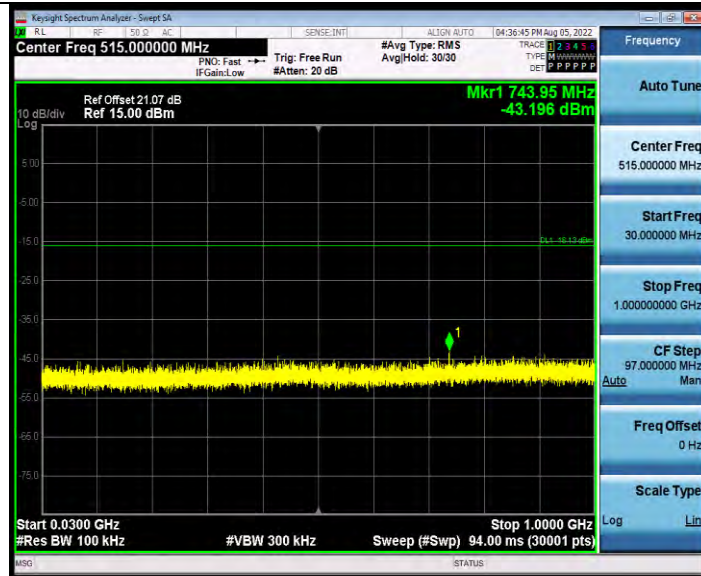


BLE\_1M\_Ant1\_2402\_30~1000



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BLE\_1M\_Ant1\_2402\_1000~26500



BLE\_1M\_Ant1\_2440\_30~1000

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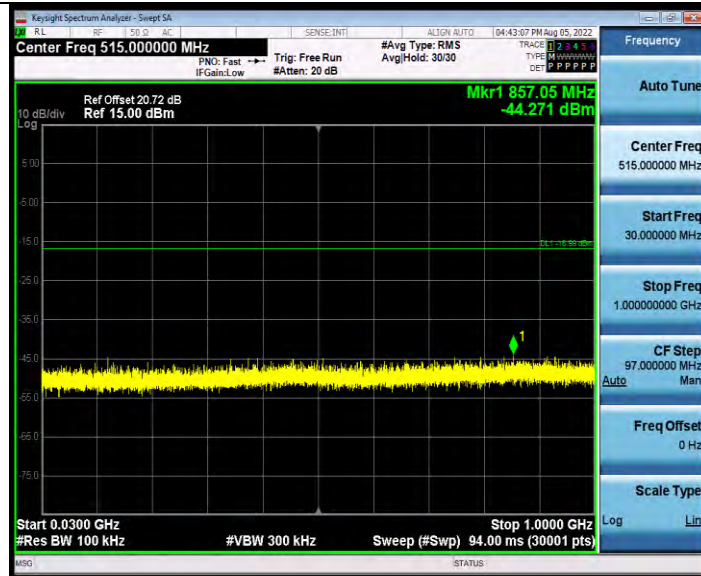
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

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BLE\_1M\_Ant1\_2440\_1000~26500

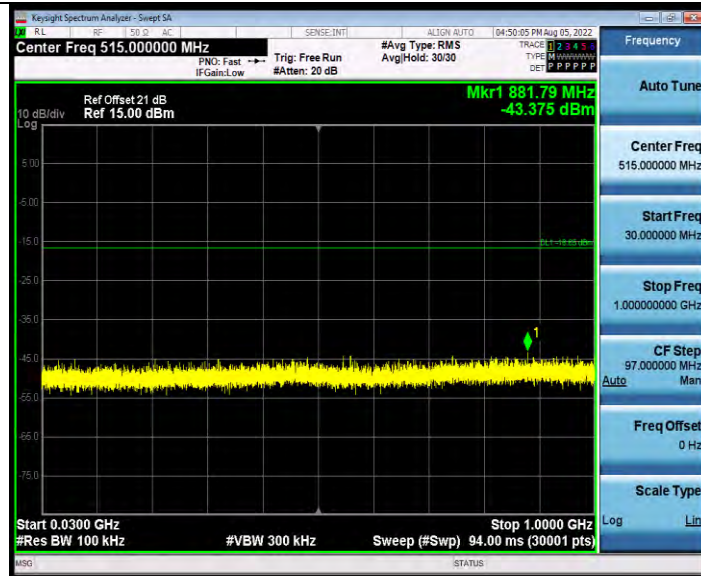


BLE\_1M\_Ant1\_2480\_30~1000



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BLE\_1M\_Ant1\_2480\_1000~26500



BLE\_2M\_Ant1\_2402\_30~1000



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BLE\_2M\_Ant1\_2402\_1000~26500



BLE\_2M\_Ant1\_2440\_30~1000

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District, Shenzhen, Guangdong, China

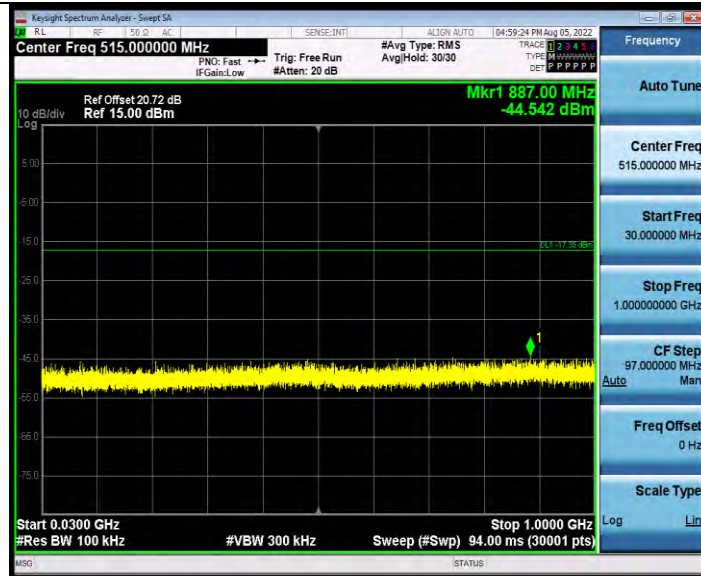
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BLE\_2M\_Ant1\_2440\_1000~26500

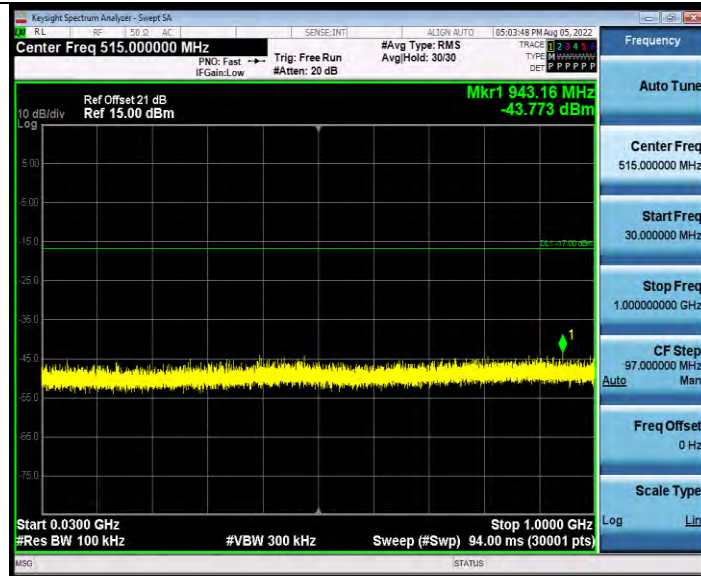


BLE\_2M\_Ant1\_2480\_30~1000



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**Test Report No.: W7L-P22080003RF02**



BLE\_2M\_Ant1\_2480\_1000~26500



BLE\_500K\_Ant1\_2402\_30~1000

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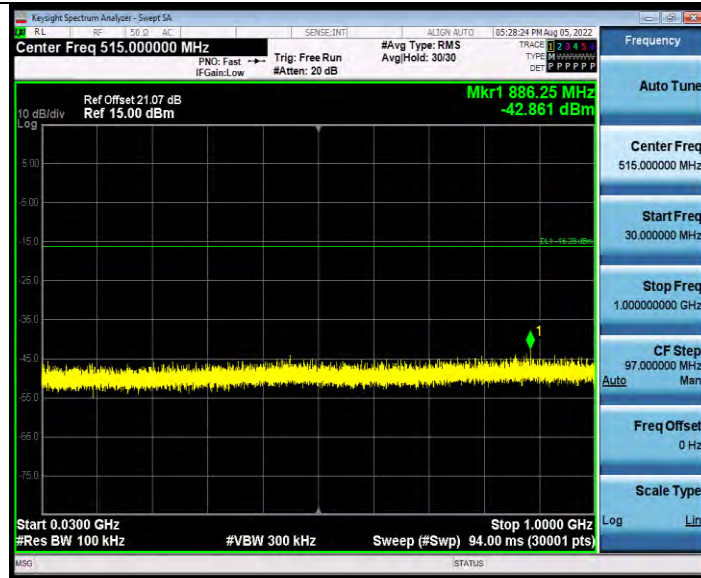
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BLE\_500K\_Ant1\_2402\_1000~26500

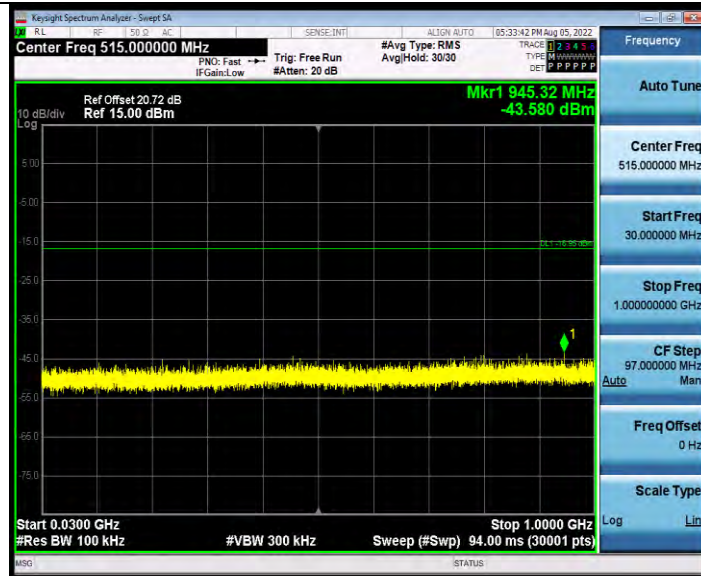


BLE\_500K\_Ant1\_2440\_30~1000



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BLE\_500K\_Ant1\_2440\_1000~26500



BLE\_500K\_Ant1\_2480\_30~1000

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BLE\_500K\_Ant1\_2480\_1000~26500



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## DUTY CYCLE

### TEST RESULT

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]
BLE_125K	Ant1	2402	13.05	13.75	94.91
		2440	13.05	13.75	94.91
		2480	13.05	13.75	94.91
BLE_1M	Ant1	2402	1.64	1.88	87.23
		2440	1.64	1.88	87.23
		2480	1.64	1.88	87.23
BLE_2M	Ant1	2402	0.82	1.25	65.60
		2440	0.82	1.25	65.60
		2480	0.82	1.25	65.60
BLE_500K	Ant1	2402	3.56	4.38	81.28
		2440	3.56	4.38	81.28
		2480	3.56	4.38	81.28



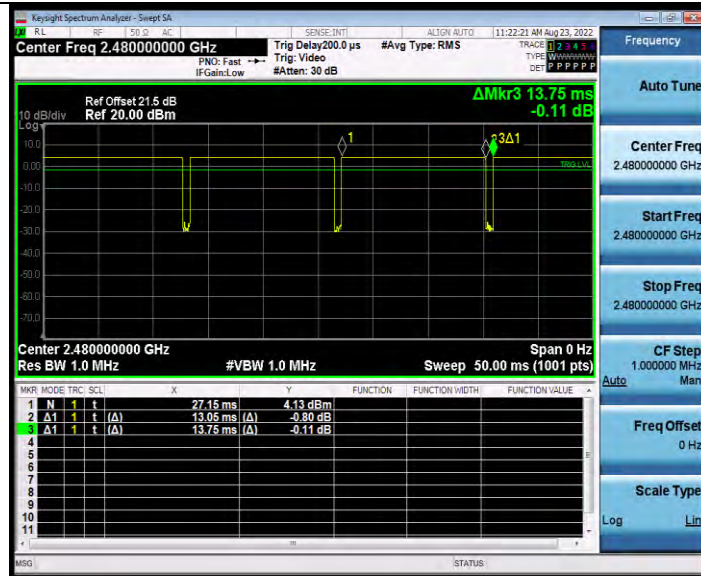
### TEST GRAPHS





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BLE\_1M\_Ant1\_2402



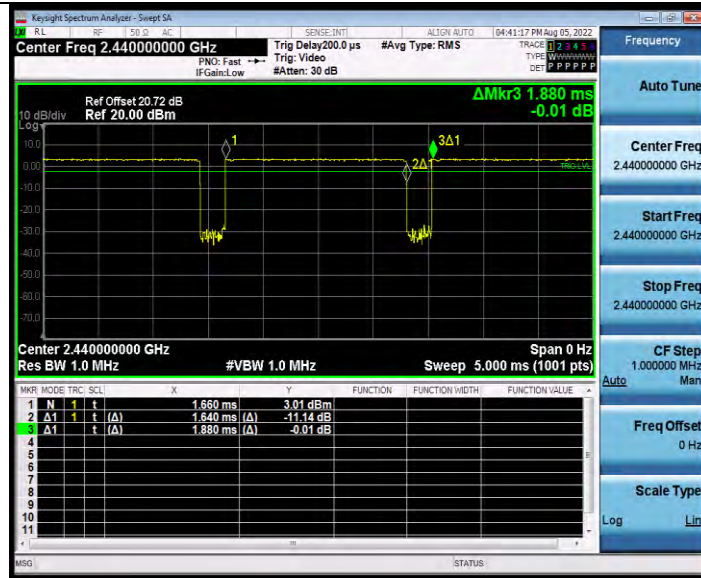
BLE\_1M\_Ant1\_2440



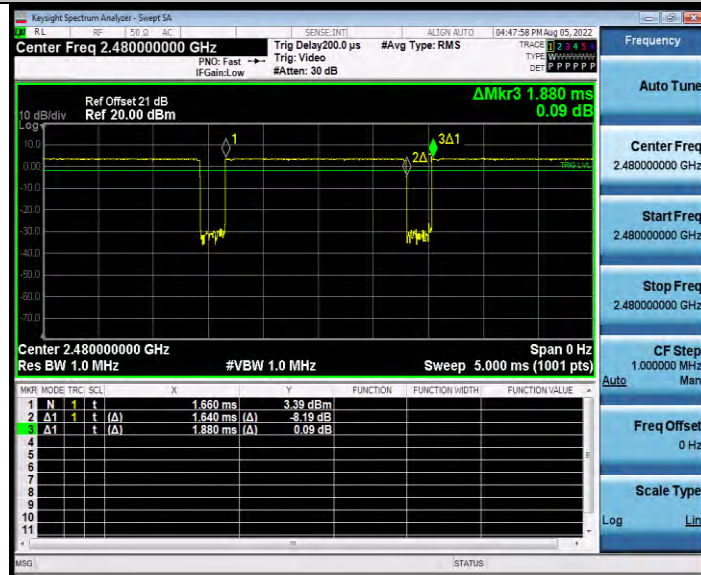


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BLE\_1M\_Ant1\_2480

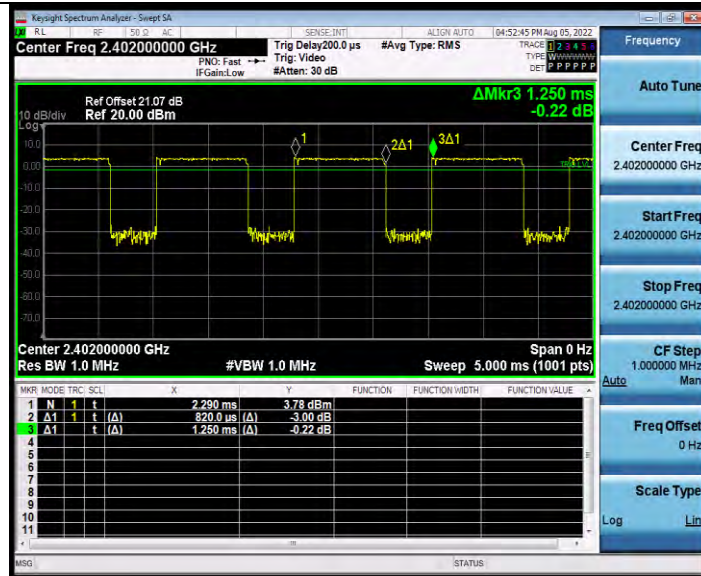


BLE\_2M\_Ant1\_2402

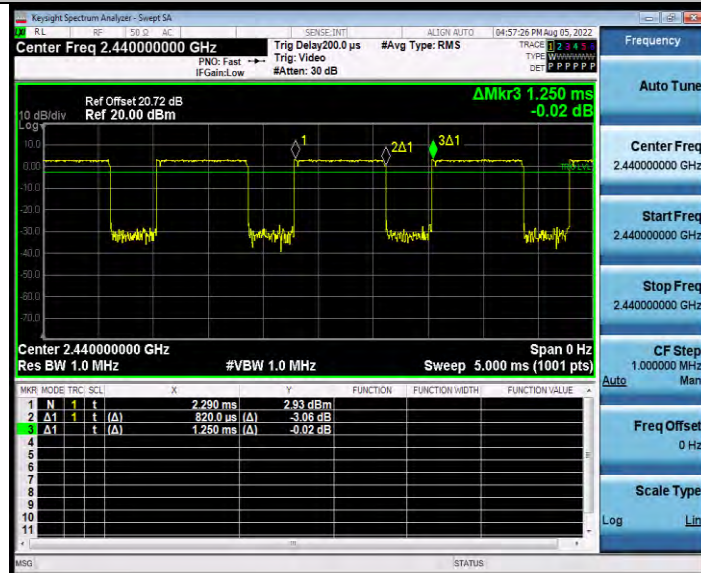


**BUREAU  
VERITAS**

**Test Report No.: W7L-P22080003RF02**



BLE\_2M\_Ant1\_2440

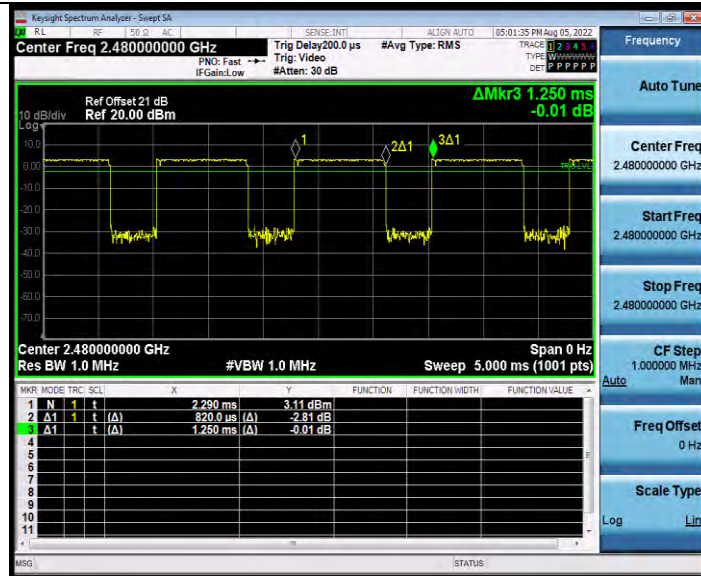


BLE\_2M\_Ant1\_2480

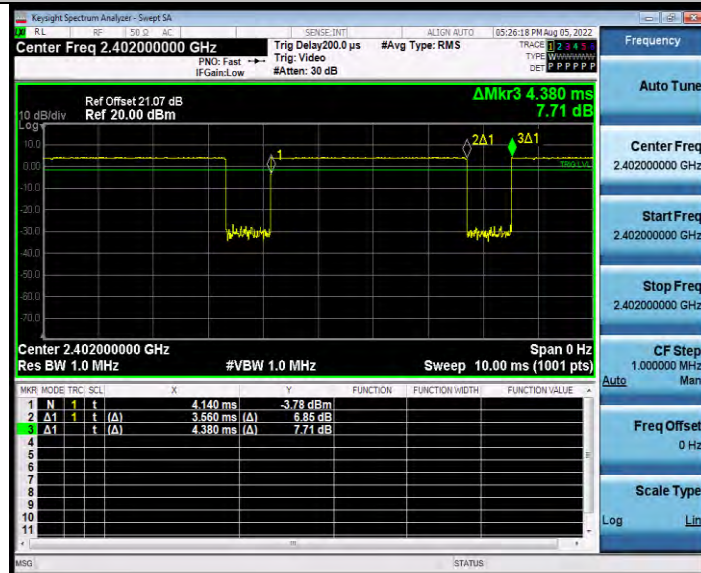


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BLE\_500K\_Ant1\_2402

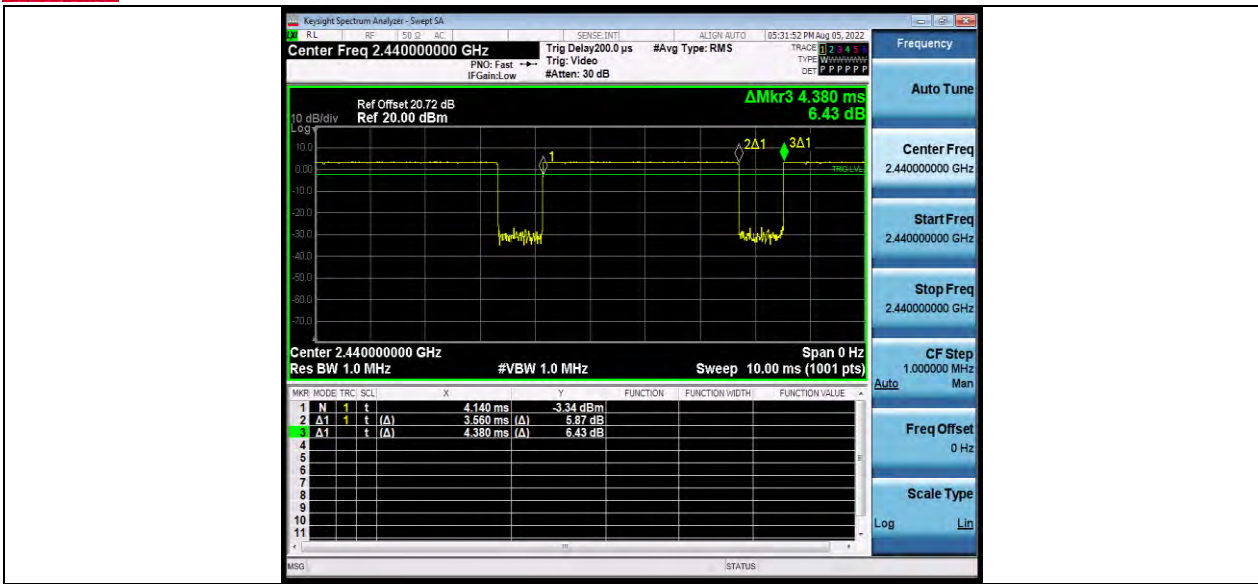


BLE\_500K\_Ant1\_2440



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**Test Report No.: W7L-P22080003RF02**



BLE\_500K\_Ant1\_2480

