



**BUREAU  
VERITAS**

### Test Report No.: W7L-P22100003RF01



### BLE\_500K\_Ant1\_2480



BV 7Layers Communications Technology  
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## 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	4.09	2.57	≤30	PASS	Default
		2440	3.82	2.41	≤30	PASS	Default
		2480	3.43	2.21	≤30	PASS	Default
BLE_1M	Ant1	2402	4.12	2.58	≤30	PASS	Default
		2440	3.85	2.43	≤30	PASS	Default
		2480	3.42	2.20	≤30	PASS	Default
BLE_2M	Ant1	2402	4.10	2.57	≤30	PASS	Default
		2440	3.80	2.40	≤30	PASS	Default
		2480	3.42	2.20	≤30	PASS	Default
BLE_500K	Ant1	2402	4.11	2.58	≤30	PASS	Default
		2440	3.85	2.43	≤30	PASS	Default
		2480	3.44	2.21	≤30	PASS	Default

### TEST RESULT AVERAGE

TestMode	Antenna	Frequency[MHz]	Average Power[dBm]	Conducted Limit[dBm]	Verdict	Power Setting
BLE_125K	Ant1	2402	3.93	/	PASS	Default
		2440	3.68	/	PASS	Default
		2480	3.25	/	PASS	Default
BLE_1M	Ant1	2402	3.92	/	PASS	Default
		2440	3.67	/	PASS	Default
		2480	3.24	/	PASS	Default
BLE_2M	Ant1	2402	3.95	/	PASS	Default
		2440	3.66	/	PASS	Default
		2480	3.22	/	PASS	Default
BLE_500K	Ant1	2402	3.93	/	PASS	Default
		2440	3.67	/	PASS	Default
		2480	3.26	/	PASS	Default



## MAXIMUM POWER SPECTRAL DENSITY TEST RESULT

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_125K	Ant1	2402	-1.5	≤8.00	PASS
		2440	-2.65	≤8.00	PASS
		2480	-2.65	≤8.00	PASS
BLE_1M	Ant1	2402	-11.14	≤8.00	PASS
		2440	-12.3	≤8.00	PASS
		2480	-11.63	≤8.00	PASS
BLE_2M	Ant1	2402	-16.33	≤8.00	PASS
		2440	-17.51	≤8.00	PASS
		2480	-17.28	≤8.00	PASS
BLE_500K	Ant1	2402	-9.59	≤8.00	PASS
		2440	-10.93	≤8.00	PASS
		2480	-10.95	≤8.00	PASS



### TEST GRAPHS





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BLE\_1M\_Ant1\_2402

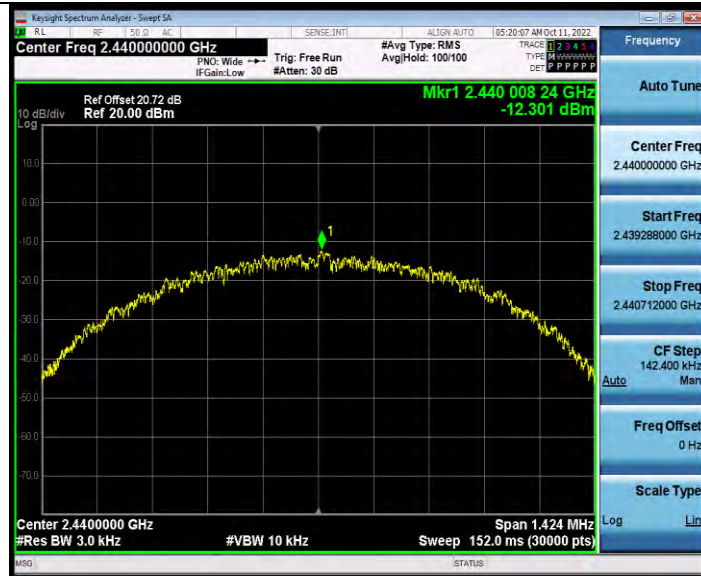


BLE\_1M\_Ant1\_2440



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BLE\_1M\_Ant1\_2480



BLE\_2M\_Ant1\_2402



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BLE\_2M\_Ant1\_2440



BLE\_2M\_Ant1\_2480

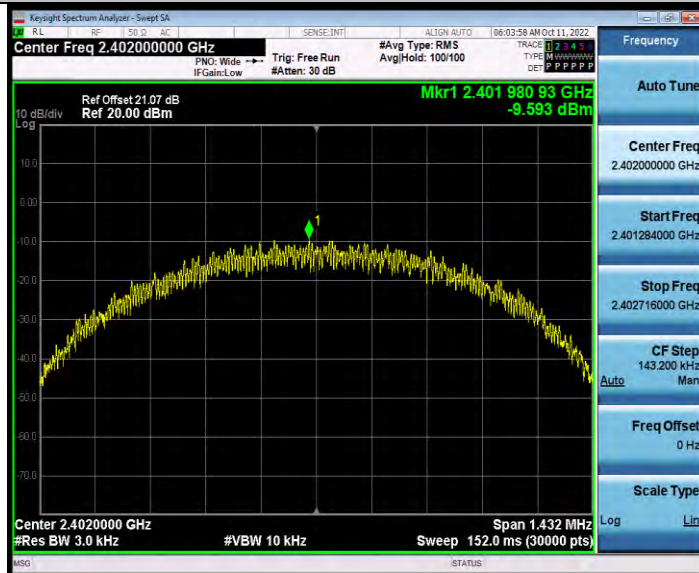


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BLE\_500K\_Ant1\_2402



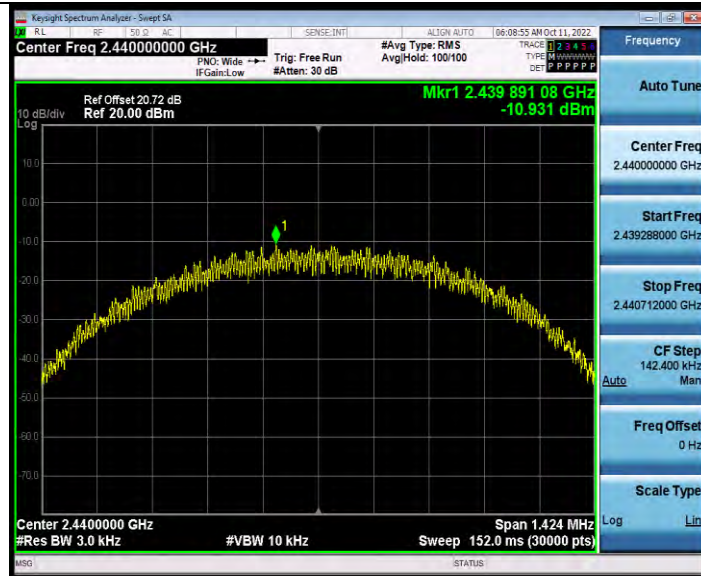
BLE\_500K\_Ant1\_2440





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BLE\_500K\_Ant1\_2480



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## **BAND EDGE MEASUREMENTS**

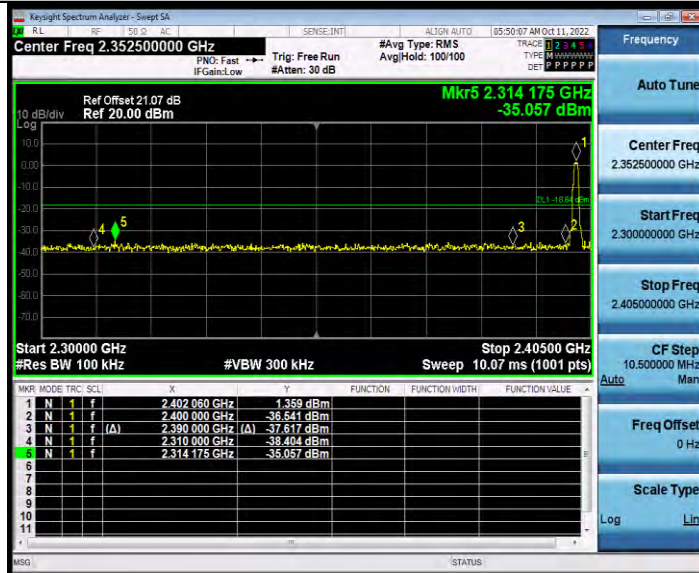
### **TEST RESULT**

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_125K	Ant1	Low	2402	1.36	-35.06	≤-18.64	PASS
		High	2480	-0.18	-34.46	≤-20.18	PASS
BLE_1M	Ant1	Low	2402	3.79	-33.93	≤-16.21	PASS
		High	2480	2.39	-34.56	≤-17.61	PASS
BLE_2M	Ant1	Low	2402	1.93	-30.59	≤-18.08	PASS
		High	2480	0.63	-34.64	≤-19.37	PASS
BLE_500K	Ant1	Low	2402	4.11	-34.81	≤-15.89	PASS
		High	2480	2.75	-34.13	≤-17.25	PASS

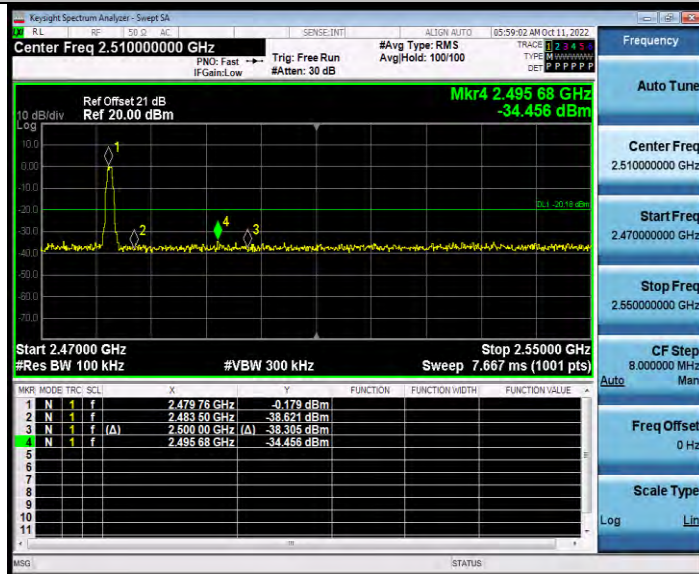


### TEST GRAPHS

BLE\_125K\_Ant1\_Low\_2402



BLE\_125K\_Ant1\_High\_2480

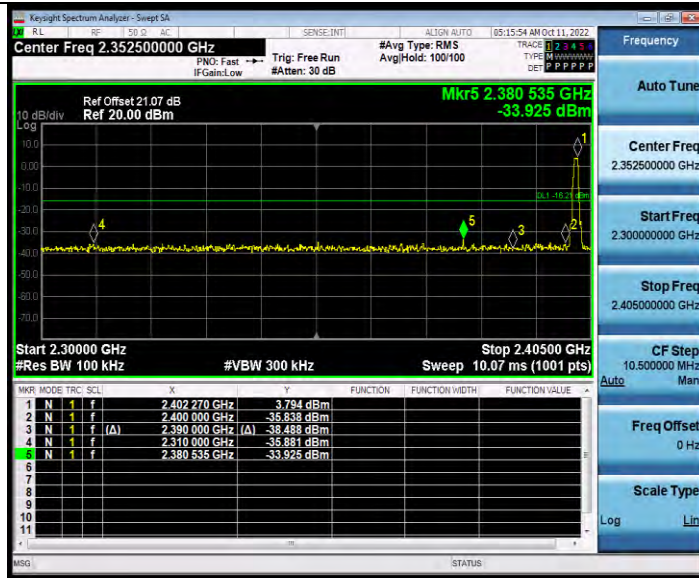


BLE\_1M\_Ant1\_Low\_2402

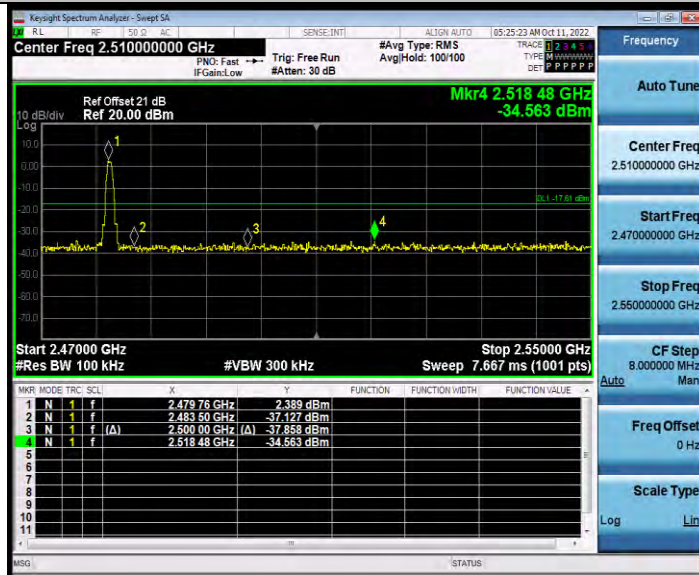


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BLE\_1M\_Ant1\_High\_2480

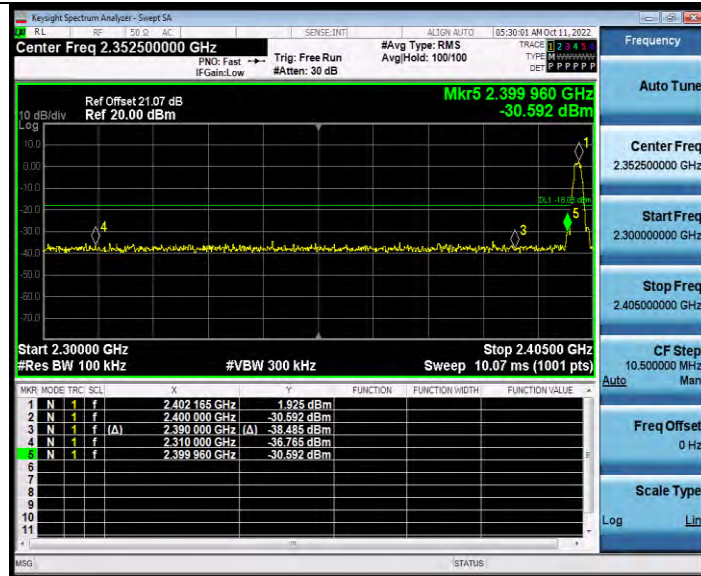


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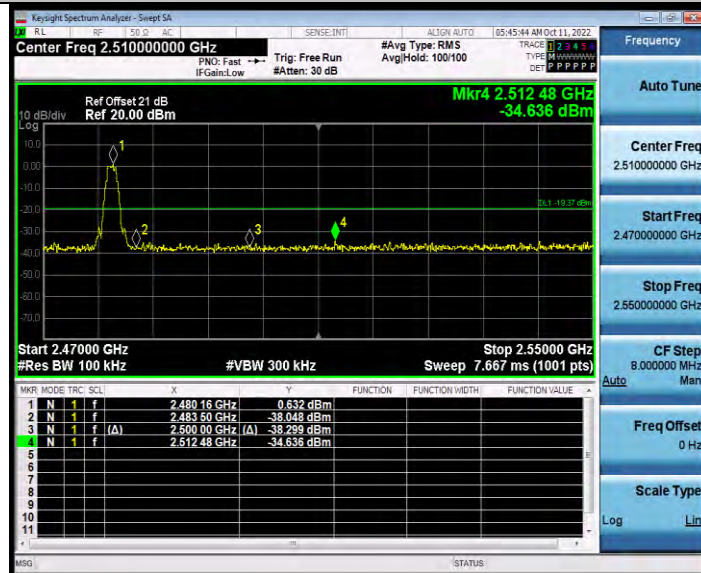


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BLE\_2M\_Ant1\_High\_2480

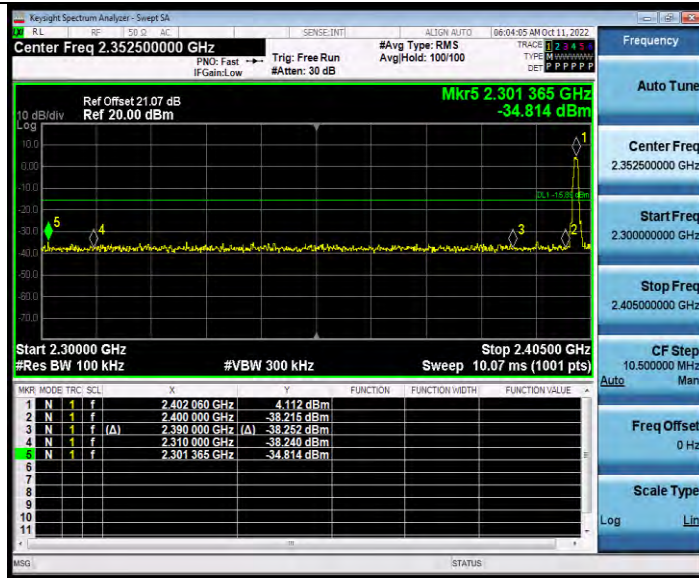


BLE\_500K\_Ant1\_Low\_2402

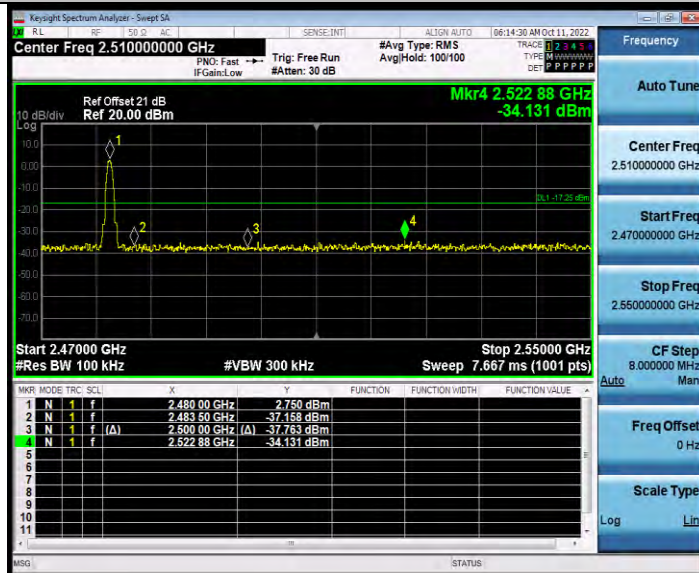


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BLE\_500K\_Ant1\_High\_2480





## CONDUCTED SPURIOUS EMISSION

### TEST RESULT

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_125K	Ant1	2402	Reference	0.99	0.99	---	PASS
			30~1000	0.99	-43.25	≤-19.01	PASS
			1000~26500	0.99	-28.06	≤-19.01	PASS
		2440	Reference	-0.07	-0.07	---	PASS
			30~1000	-0.07	-44.16	≤-20.07	PASS
			1000~26500	-0.07	-27.69	≤-20.07	PASS
		2480	Reference	-0.01	-0.01	---	PASS
			30~1000	-0.01	-43.93	≤-20.01	PASS
			1000~26500	-0.01	-28.07	≤-20.01	PASS
BLE_1M	Ant1	2402	Reference	3.43	3.43	---	PASS
			30~1000	3.43	-43.73	≤-16.57	PASS
			1000~26500	3.43	-27.61	≤-16.57	PASS
		2440	Reference	1.98	1.98	---	PASS
			30~1000	1.98	-44.22	≤-18.02	PASS
			1000~26500	1.98	-28.13	≤-18.02	PASS
		2480	Reference	2.12	2.12	---	PASS
			30~1000	2.12	-43.97	≤-17.88	PASS
			1000~26500	2.12	-28	≤-17.88	PASS
BLE_2M	Ant1	2402	Reference	1.03	1.03	---	PASS
			30~1000	1.03	-43.22	≤-18.97	PASS
			1000~26500	1.03	-27.75	≤-18.97	PASS
		2440	Reference	-0.18	-0.18	---	PASS
			30~1000	-0.18	-43.62	≤-20.18	PASS
			1000~26500	-0.18	-28.43	≤-20.18	PASS
		2480	Reference	-0.13	-0.13	---	PASS
			30~1000	-0.13	-43.59	≤-20.13	PASS
			1000~26500	-0.13	-28.19	≤-20.13	PASS
BLE_500K	Ant1	2402	Reference	3.44	3.44	---	PASS
			30~1000	3.44	-43.85	≤-16.56	PASS



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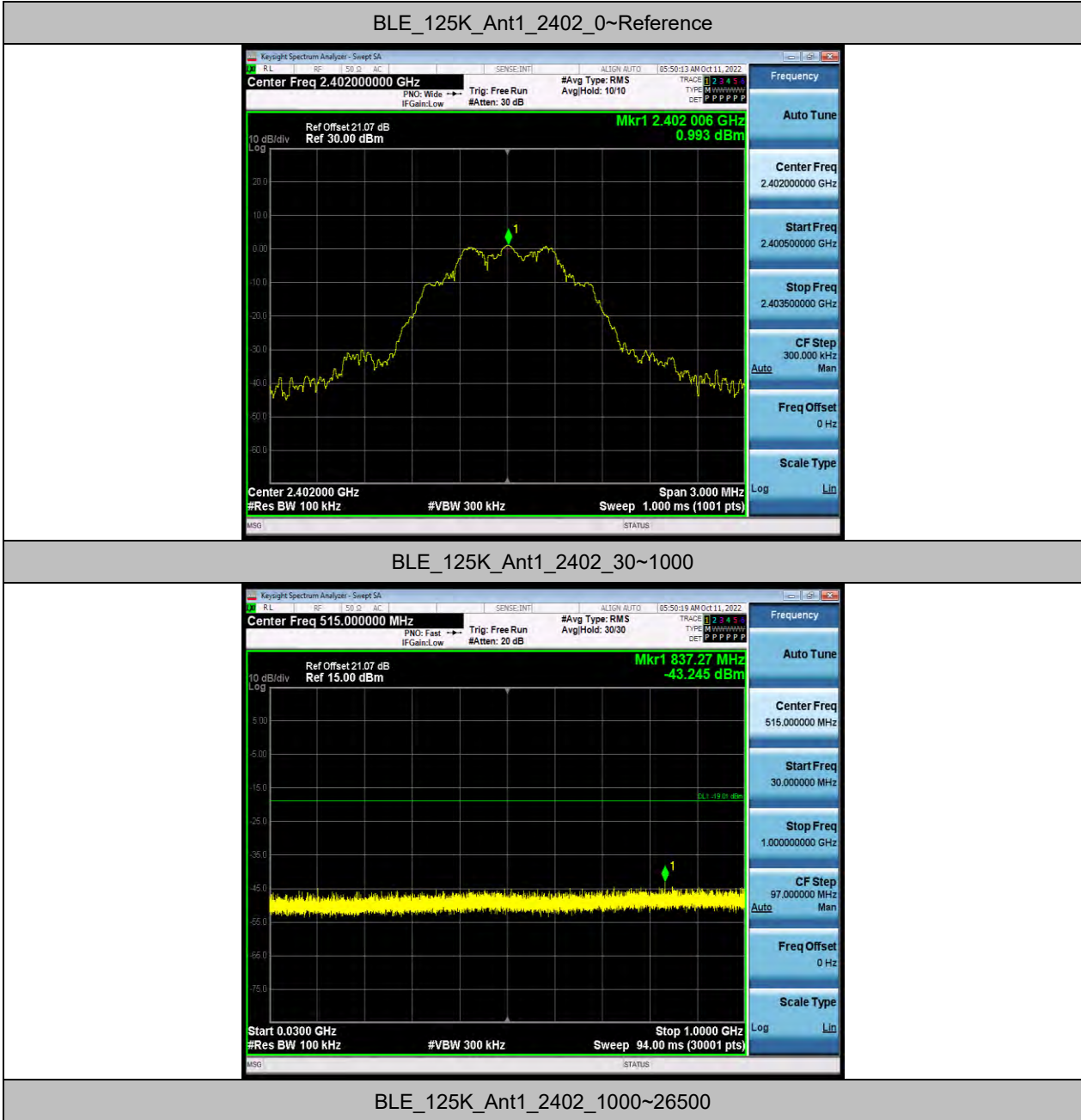
**Test Report No.: W7L-P22100003RF01**

			1000~26500	3.44	-28.11	$\leq -16.56$	PASS
		2440	Reference	2.41	2.41	---	PASS
			30~1000	2.41	-43.83	$\leq -17.59$	PASS
			1000~26500	2.41	-28.36	$\leq -17.59$	PASS
		2480	Reference	1.93	1.93	---	PASS
			30~1000	1.93	-44.14	$\leq -18.07$	PASS
			1000~26500	1.93	-26.93	$\leq -18.07$	PASS





### TEST GRAPHS





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BLE\_125K\_Ant1\_2440\_0~Reference



BLE\_125K\_Ant1\_2440\_30~1000

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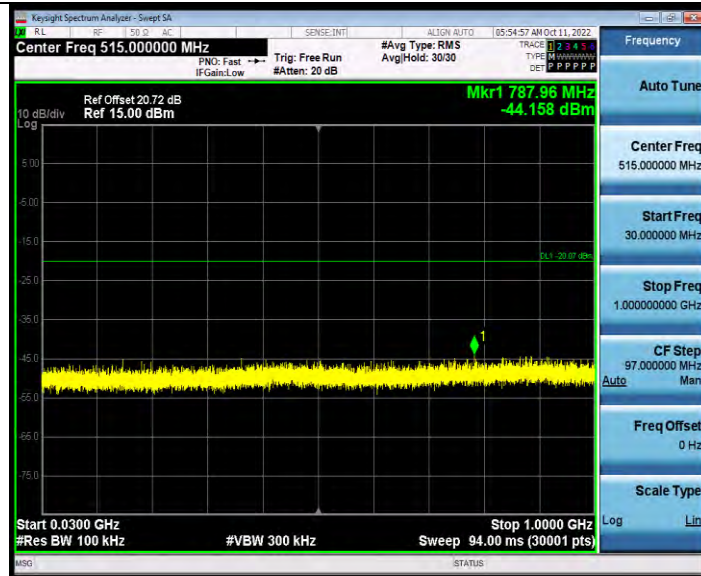
No.B102, Dazu Chuangxin Mansion, North of Beihuan  
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BLE\_125K\_Ant1\_2440\_1000~26500



BLE\_125K\_Ant1\_2480\_0~Reference

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BLE\_125K\_Ant1\_2480\_30~1000



BLE\_125K\_Ant1\_2480\_1000~26500



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BLE\_1M\_Ant1\_2402\_0~Reference

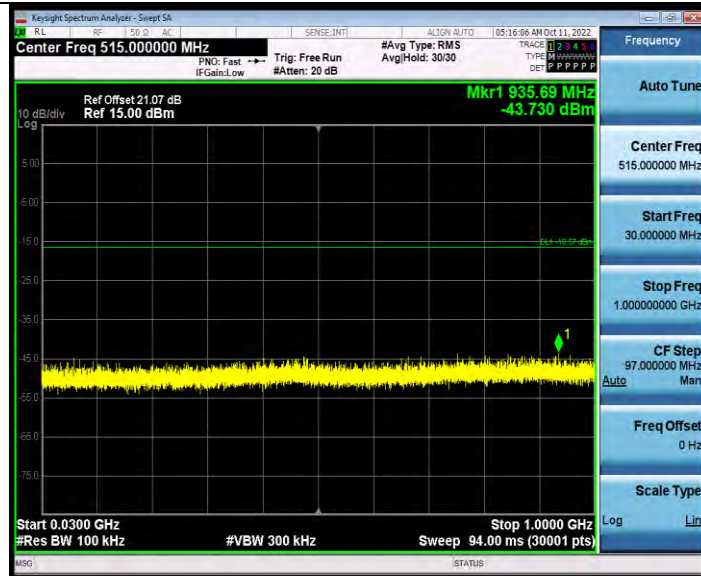


BLE\_1M\_Ant1\_2402\_30~1000



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BLE\_1M\_Ant1\_2402\_1000~26500



BLE\_1M\_Ant1\_2440\_0~Reference

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BLE\_1M\_Ant1\_2440\_30~1000



BLE\_1M\_Ant1\_2440\_1000~26500

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BLE\_1M\_Ant1\_2480\_0~Reference



BLE\_1M\_Ant1\_2480\_30~1000

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BLE\_1M\_Ant1\_2480\_1000~26500



BLE\_2M\_Ant1\_2402\_0~Reference

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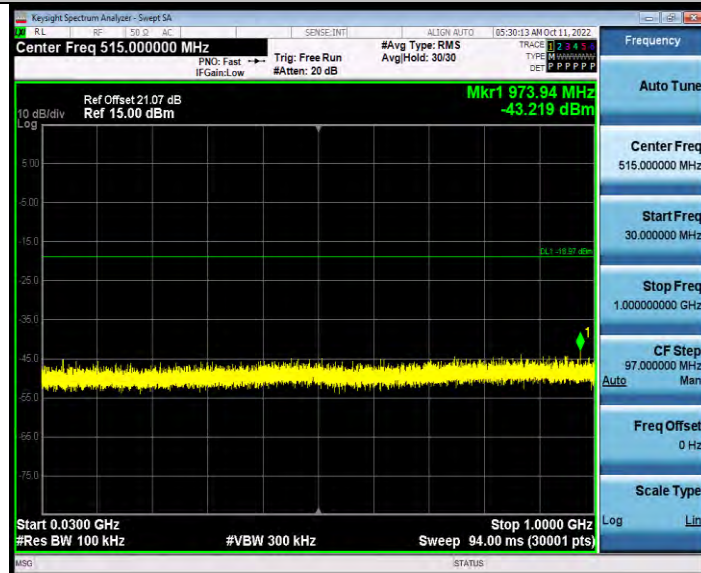


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BLE\_2M\_Ant1\_2402\_30~1000



BLE\_2M\_Ant1\_2402\_1000~26500



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BLE\_2M\_Ant1\_2440\_0~Reference



BLE\_2M\_Ant1\_2440\_30~1000

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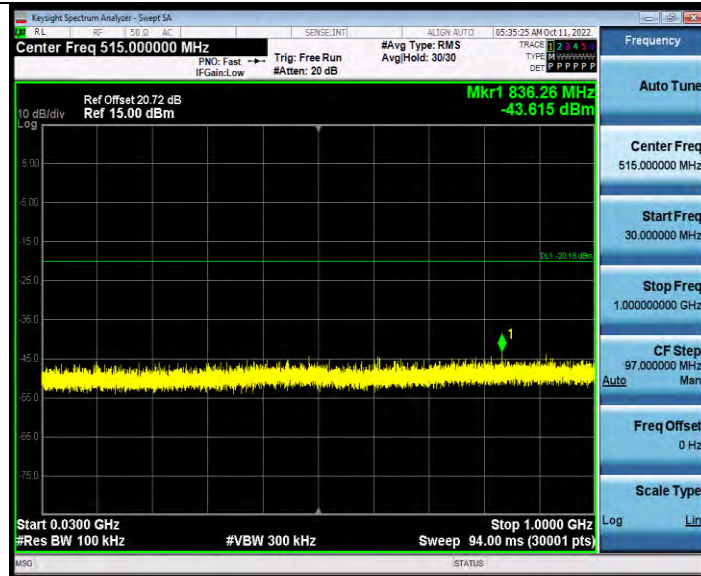
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BLE\_2M\_Ant1\_2440\_1000~26500



BLE\_2M\_Ant1\_2480\_0~Reference

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BLE\_2M\_Ant1\_2480\_30~1000



BLE\_2M\_Ant1\_2480\_1000~26500

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BLE\_500K\_Ant1\_2402\_0~Reference

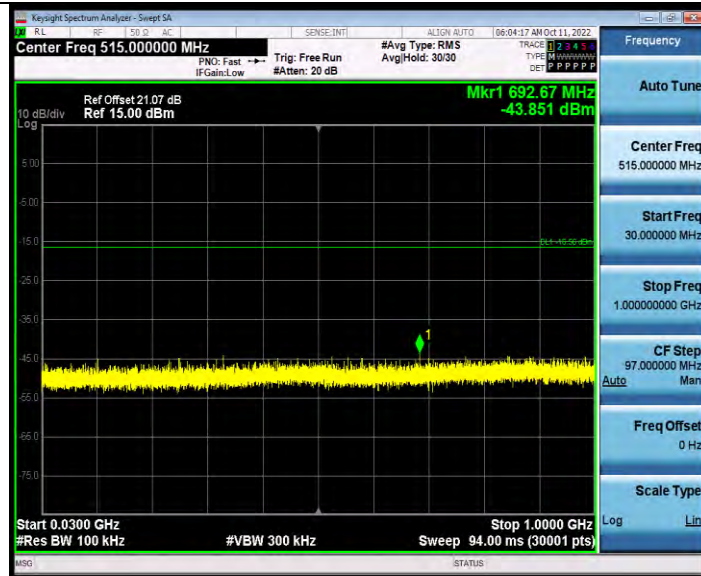


BLE\_500K\_Ant1\_2402\_30~1000



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BLE\_500K\_Ant1\_2402\_1000~26500



BLE\_500K\_Ant1\_2440\_0~Reference



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BLE\_500K\_Ant1\_2440\_30~1000



BLE\_500K\_Ant1\_2440\_1000~26500





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Test Report No.: W7L-P22100003RF01



BLE\_500K\_Ant1\_2480\_0~Reference



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 [%]	Duty Cycle Factor[dB]
BLE_125K	Ant1	2402	100	100	100	0.00
BLE_1M	Ant1	2402	100	100	100	0.00
BLE_2M	Ant1	2402	100	100	100	0.00
BLE_500K	Ant1	2402	100	100	100	0.00