Test Report No.50145995 001

Appendix D: Radiated and Mains Spurious Emission Data

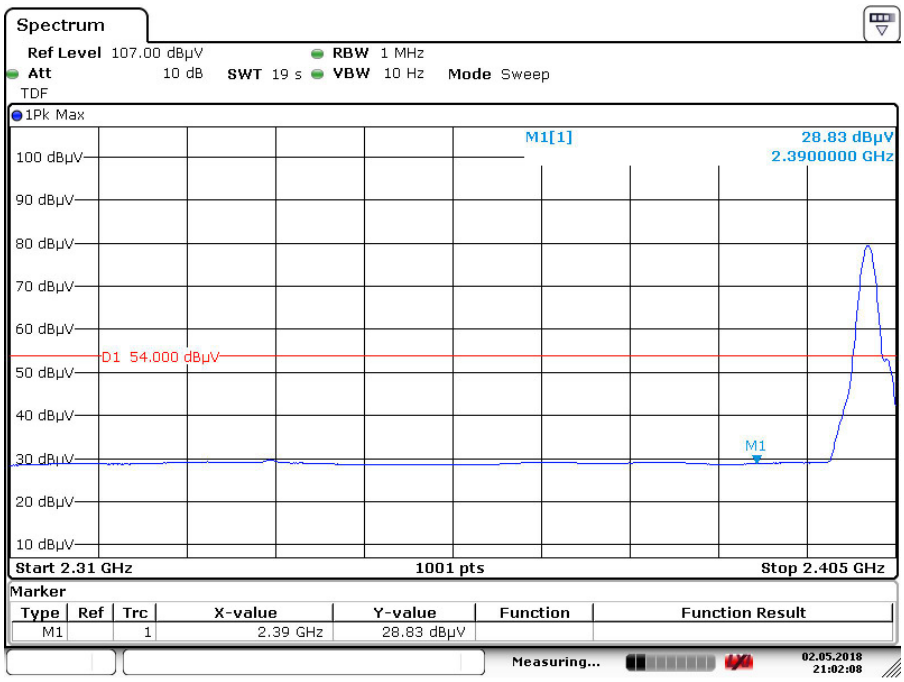
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Contents

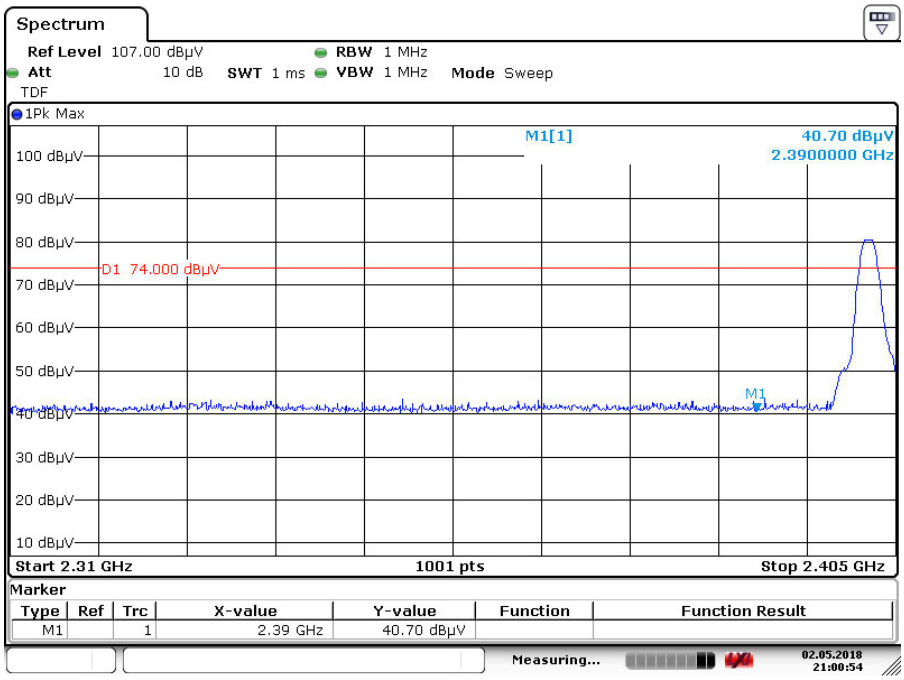
Spurious Emissions, Band Edges, 2.35-2.5G 2
Spurious Emissions, TX Mode, 1-18G..... 6
Spurious Emissions, TX Mode, 18-26G..... 12
Spurious Emissions, TX Mode, 30M-1G 18
Spurious Emissions, TX Mode, 9k-30M 20

Radiated Bandedge (GFSK)

Low Channel (Hor)

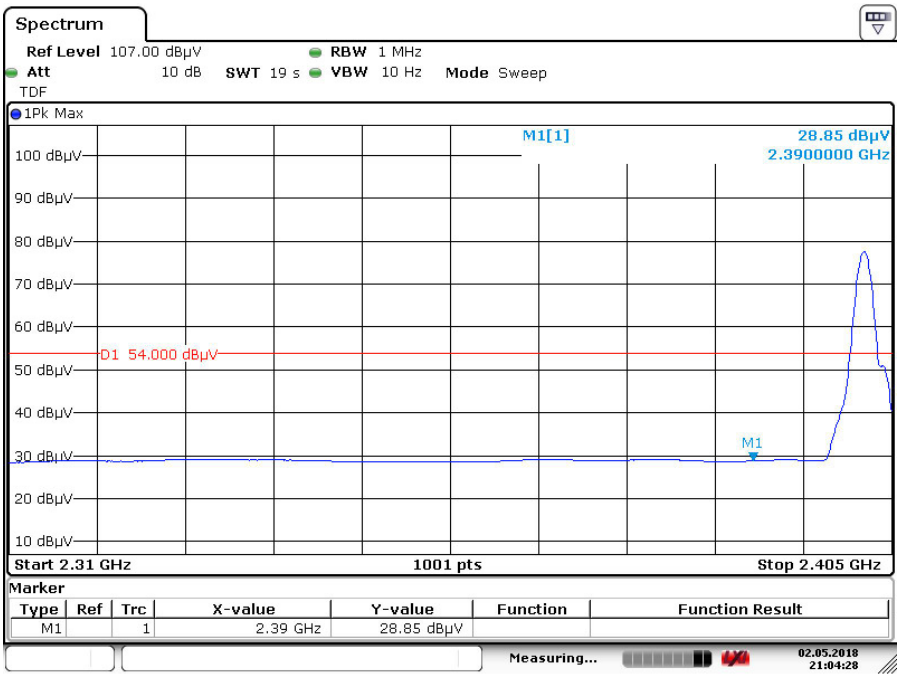


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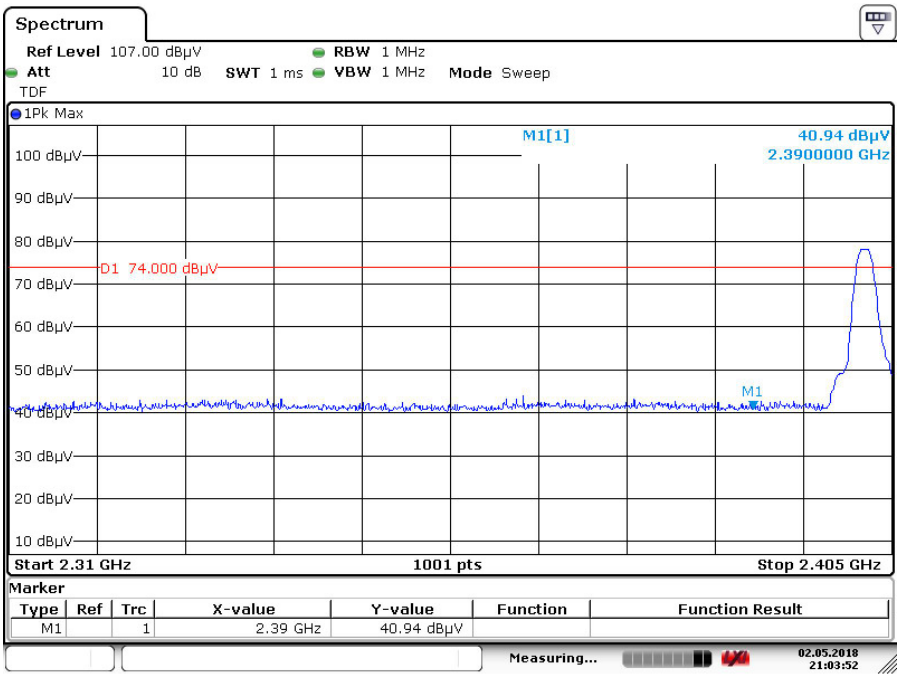


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Low Channel (Ver)



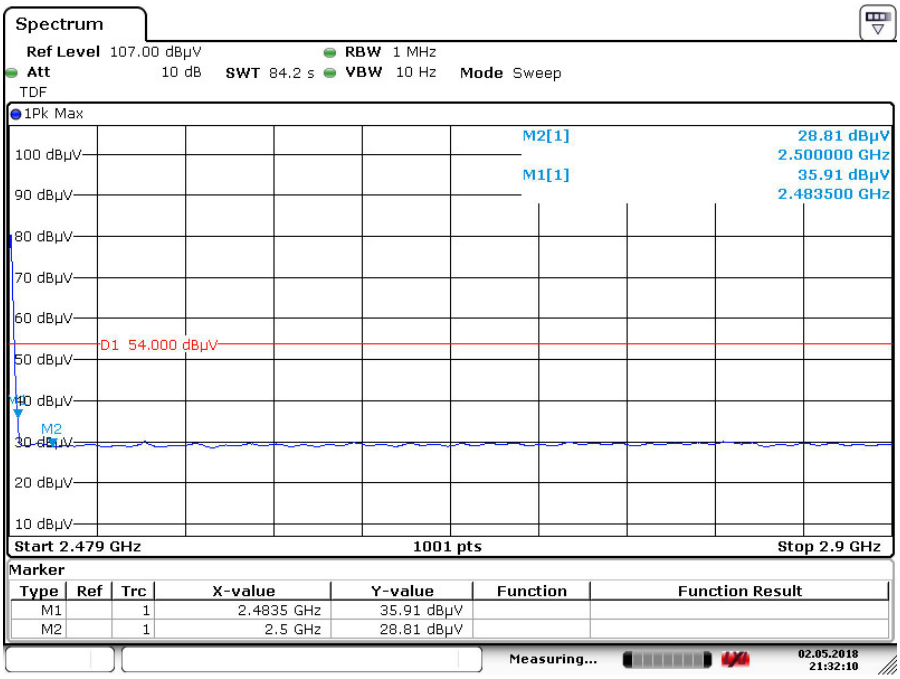
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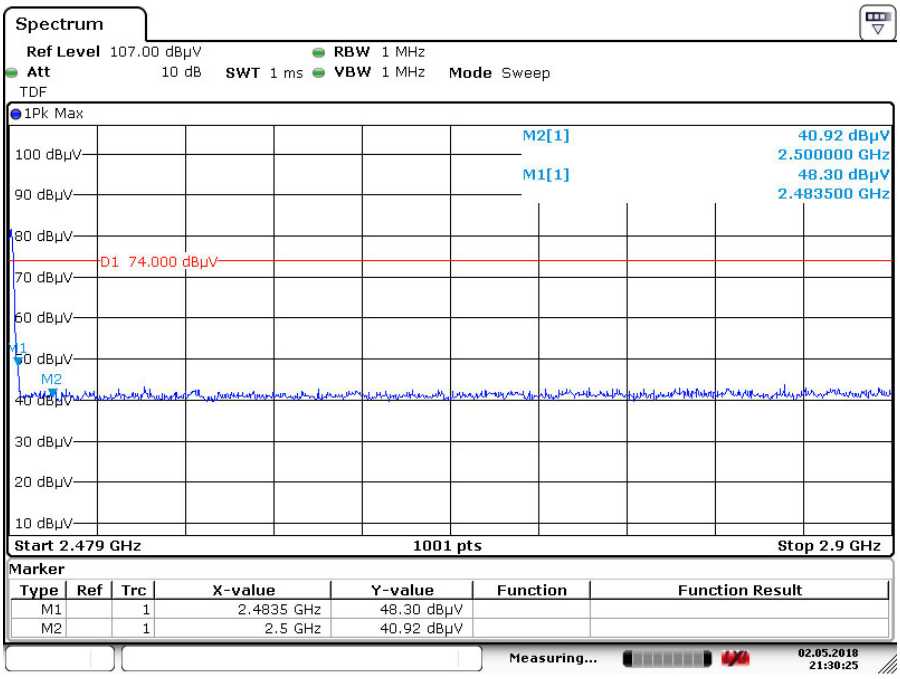
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Radiated Bandedge (GFSK)

High Channel (Hor)

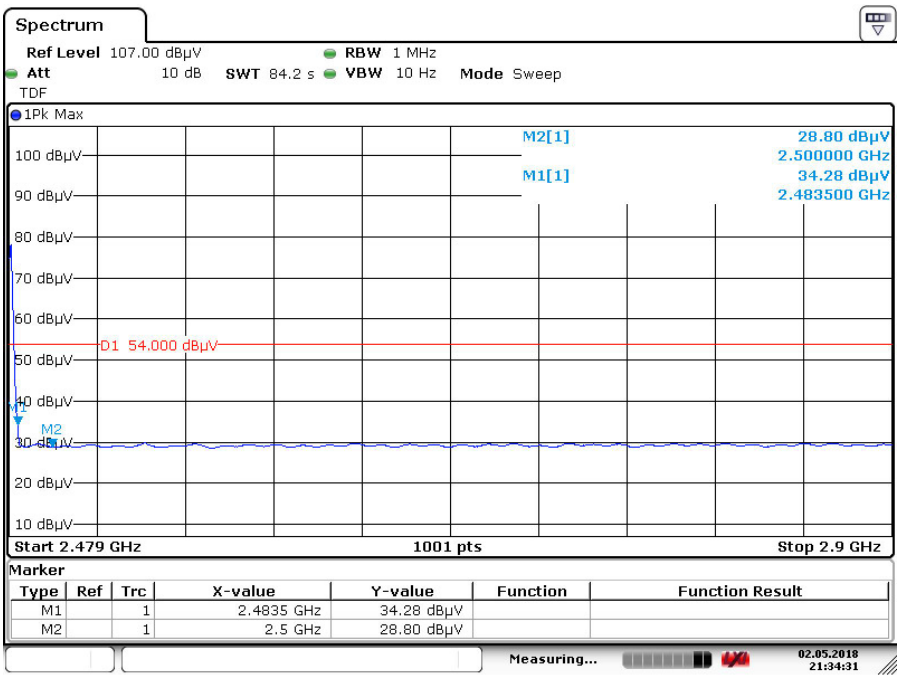


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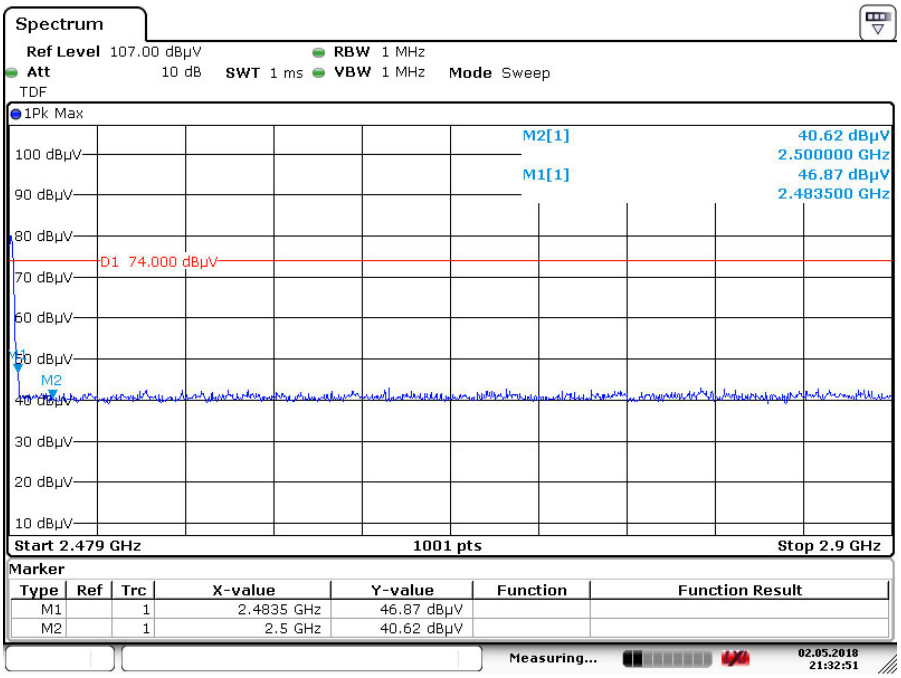


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High Channel (Ver)



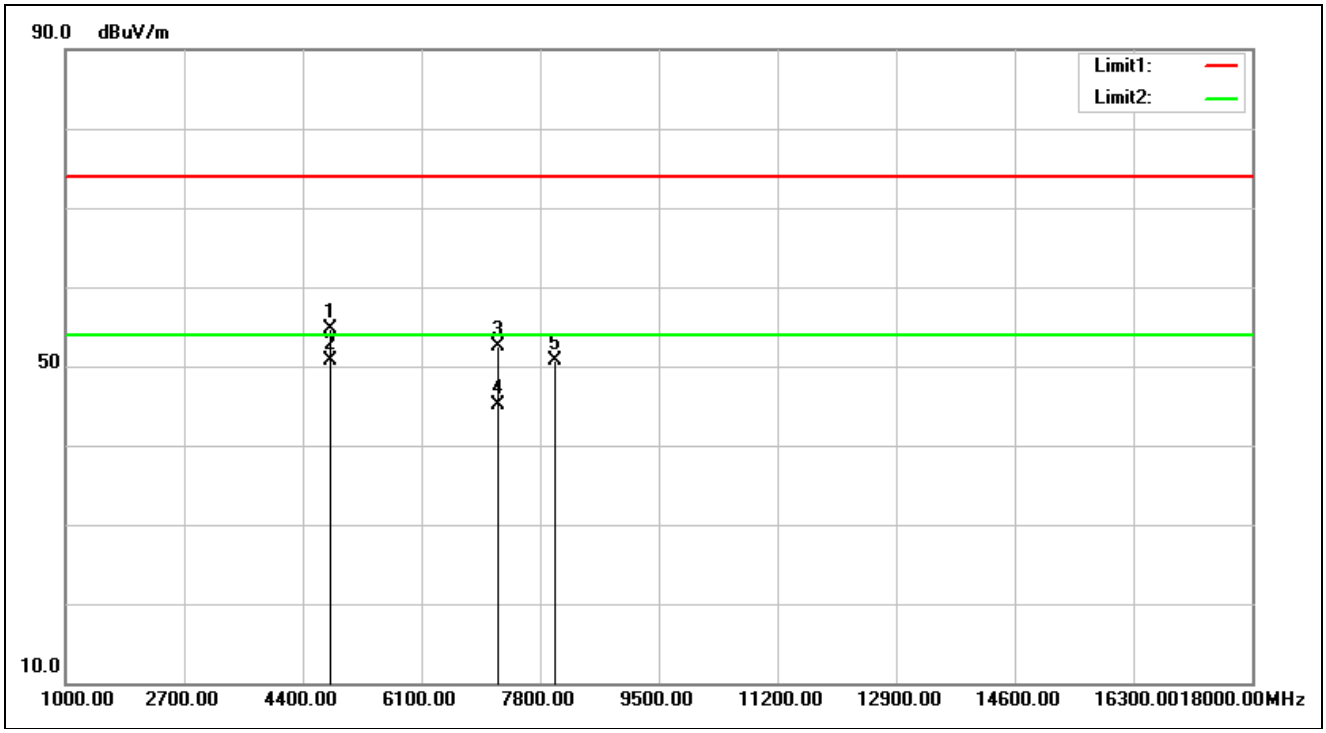
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Spurious Emissions, TX Mode, 1-18G

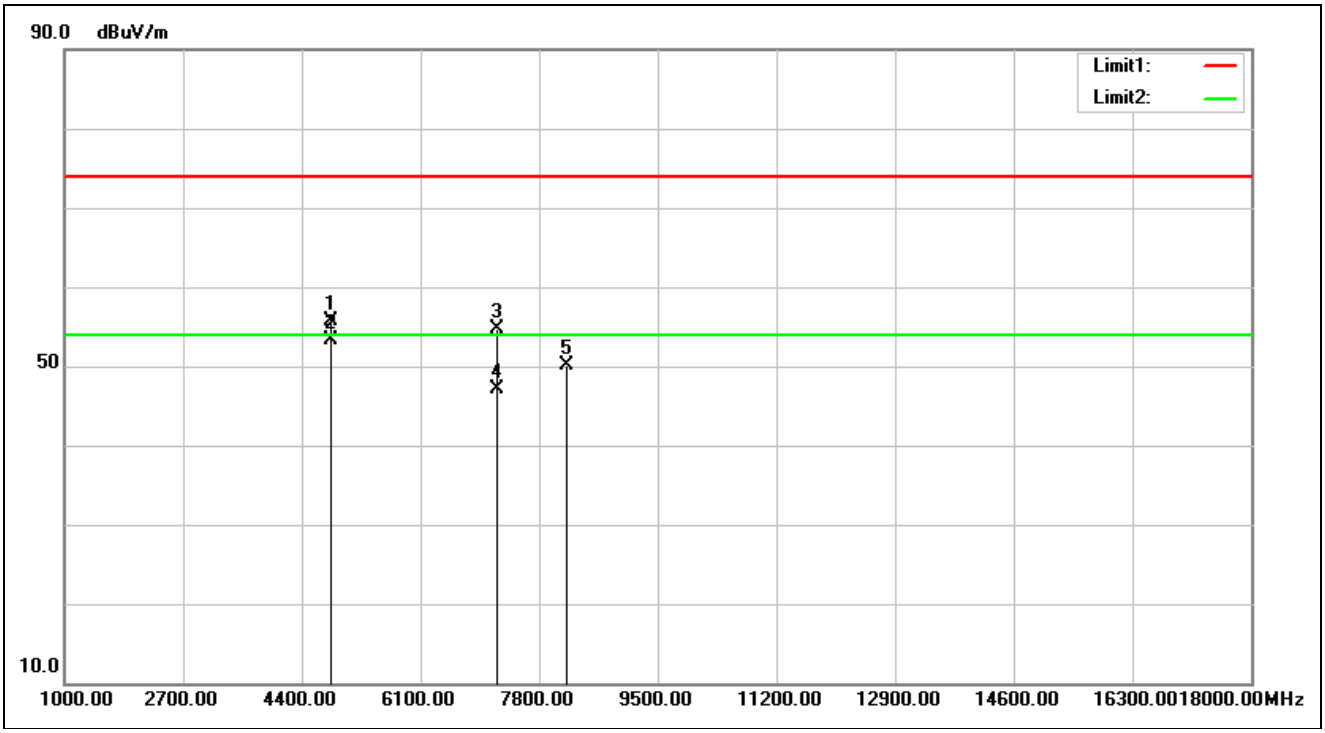
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:17:50**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2402-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4804.000	-2.72	57.37	54.65	74.00	-19.35	peak	100	169	
2	4804.000	-2.72	53.38	50.66	54.00	-3.34	AVG	100	169	
3	7206.000	5.25	47.26	52.51	74.00	-21.49	peak	100	94	
4	7206.000	5.25	39.86	45.11	54.00	-8.89	AVG	100	94	
5	8004.000	5.82	44.95	50.77	74.00	-23.23	peak	100	77	

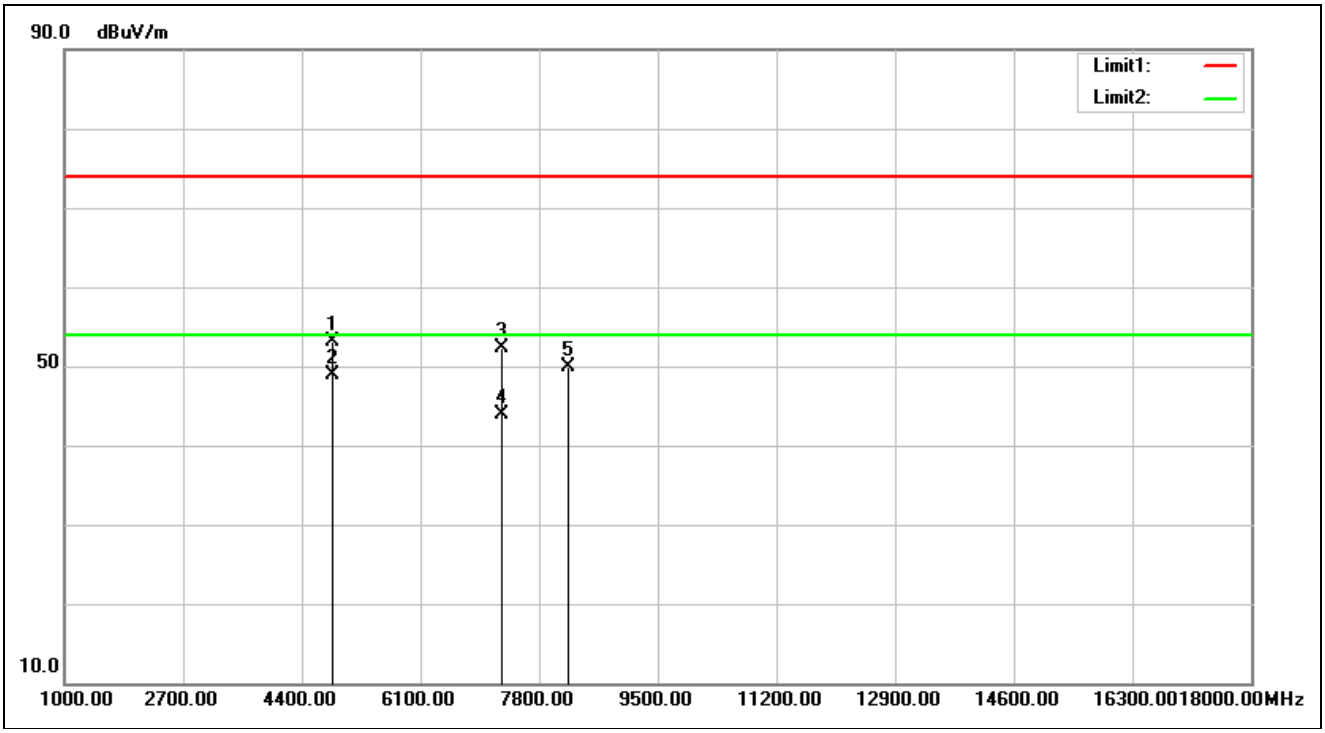
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Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:18:43**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2402-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4804.000	-2.72	58.38	55.66	74.00	-18.34	peak	100	187	
2	4804.000	-2.72	55.94	53.22	54.00	-0.78	AVG	100	187	
3	7206.000	5.25	49.36	54.61	74.00	-19.39	peak	100	54	
4	7206.000	5.25	41.83	47.08	54.00	-6.92	AVG	100	54	
5	8191.000	6.03	44.01	50.04	74.00	-23.96	peak	100	252	

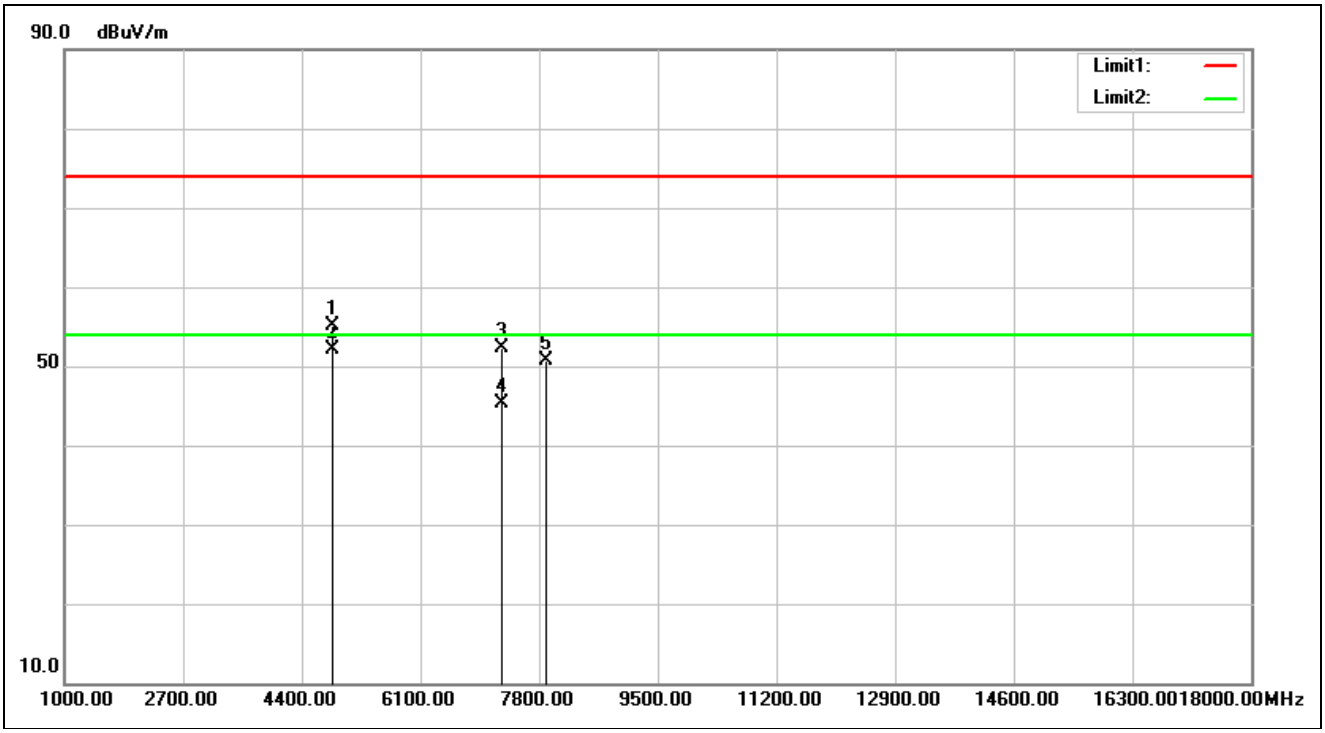
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:27:35**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4852.000	-2.58	55.63	53.05	74.00	-20.95	peak	100	163	
2	4852.000	-2.58	51.48	48.90	54.00	-5.10	AVG	100	163	
3	7278.000	5.43	46.82	52.25	74.00	-21.75	peak	100	252	
4	7278.000	5.43	38.42	43.85	54.00	-10.15	AVG	100	252	
5	8208.000	6.05	43.91	49.96	74.00	-24.04	peak	100	147	

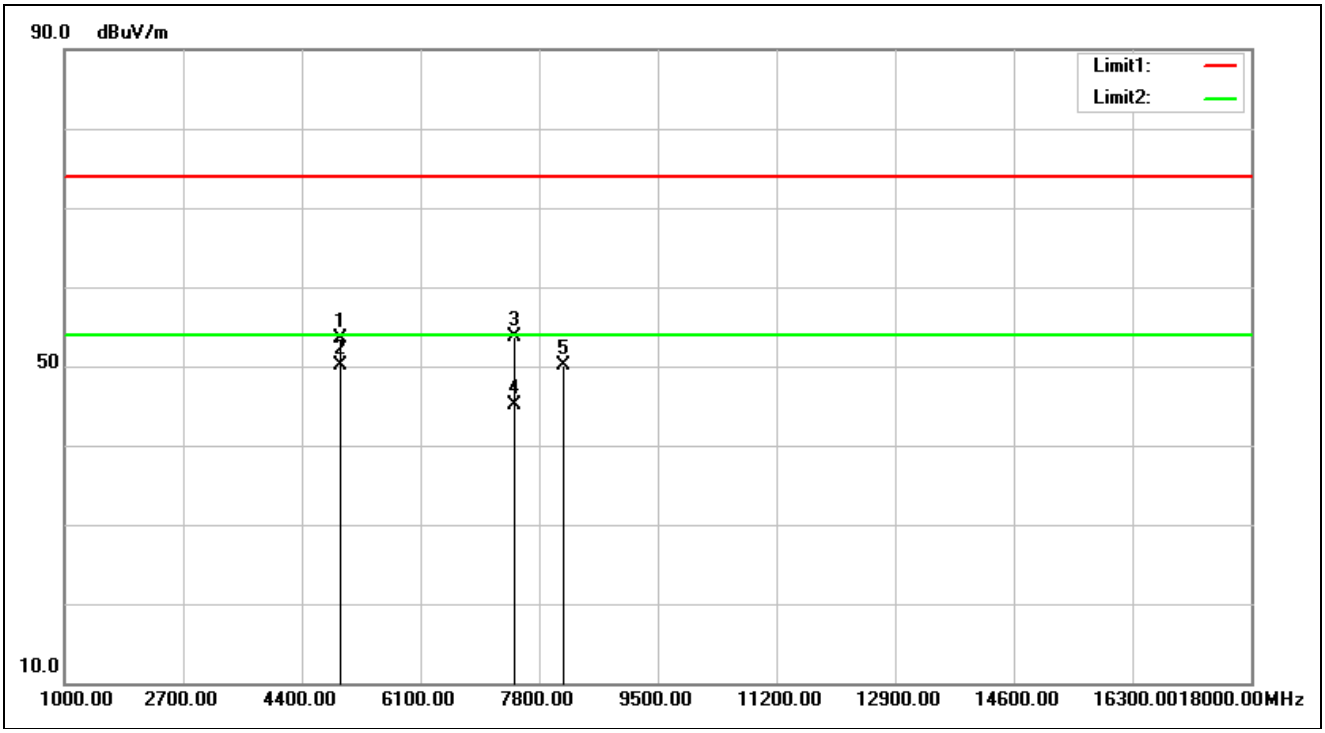
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:28:27**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4852.000	-2.58	57.63	55.05	74.00	-18.95	peak	100	173	
2	4852.000	-2.58	54.67	52.09	54.00	-1.91	AVG	100	173	
3	7278.000	5.43	46.89	52.32	74.00	-21.68	peak	100	43	
4	7278.000	5.43	39.96	45.39	54.00	-8.61	AVG	100	43	
5	7902.000	5.85	44.90	50.75	74.00	-23.25	peak	100	323	

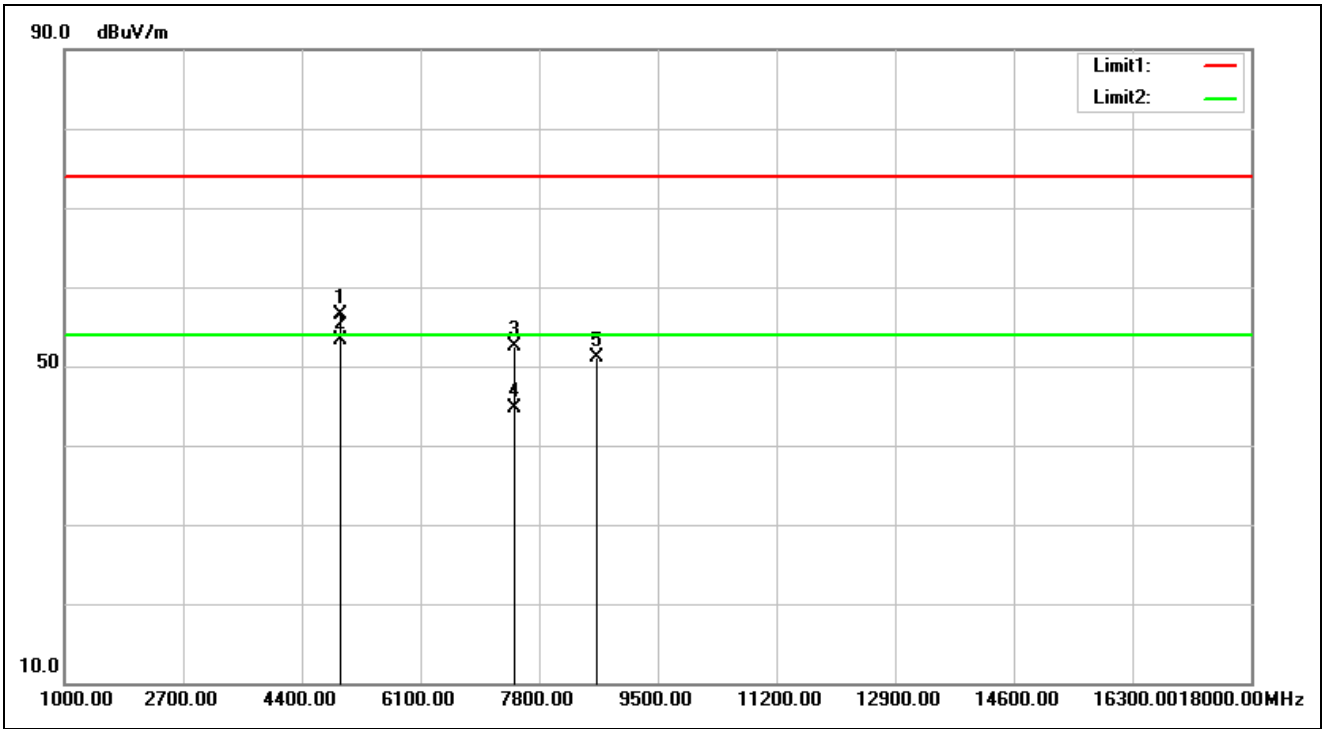
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:34:14**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2480-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4960.000	-2.28	55.75	53.47	74.00	-20.53	peak	100	278	
2	4960.000	-2.28	52.32	50.04	54.00	-3.96	AVG	100	278	
3	7440.000	5.84	47.77	53.61	74.00	-20.39	peak	100	74	
4	7440.000	5.84	39.31	45.15	54.00	-8.85	AVG	100	74	
5	8140.000	5.98	44.22	50.20	74.00	-23.80	peak	100	224	

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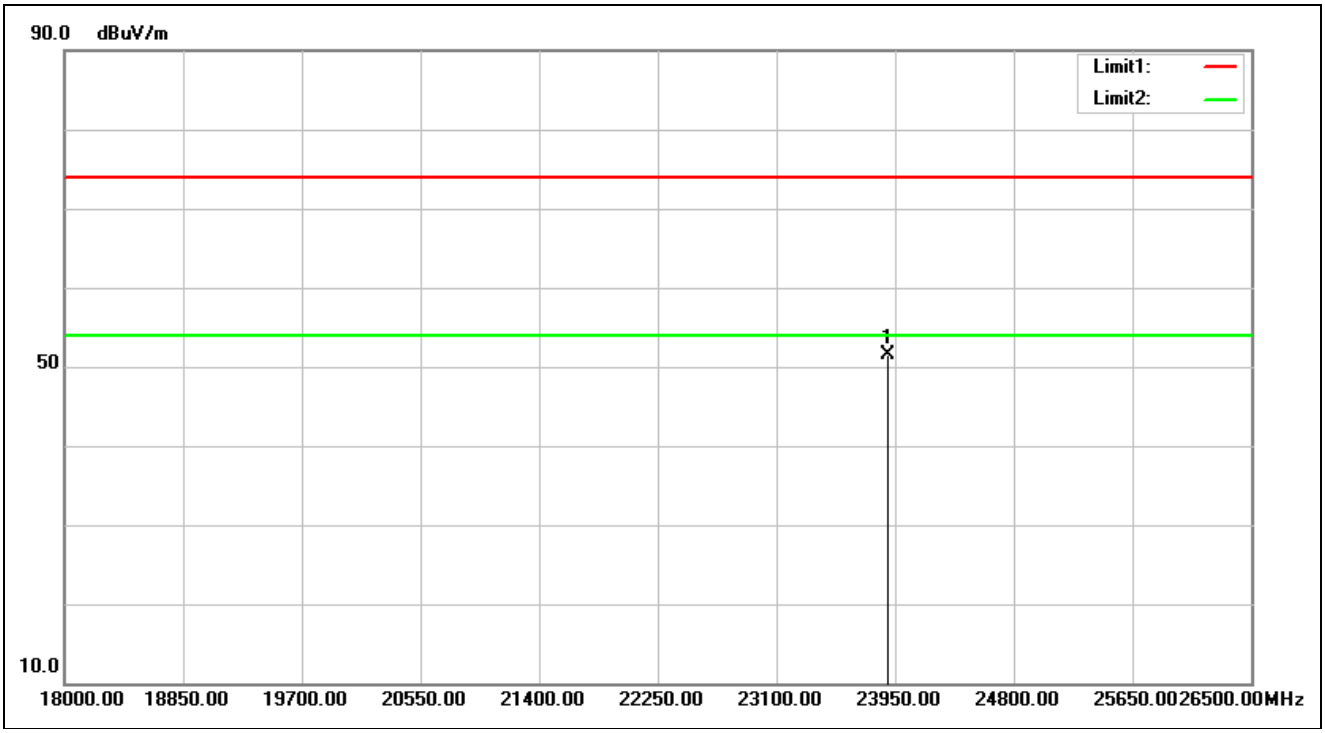


Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:35:07**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2480-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4960.000	-2.28	58.72	56.44	74.00	-17.56	peak	100	157	
2	4960.000	-2.28	55.56	53.28	54.00	-0.72	AVG	100	157	
3	7440.000	5.84	46.73	52.57	74.00	-21.43	peak	100	40	
4	7440.000	5.84	38.87	44.71	54.00	-9.29	AVG	100	40	
5	8633.000	6.39	44.81	51.20	74.00	-22.80	peak	100	345	

Spurious Emissions, TX Mode, 18-26G

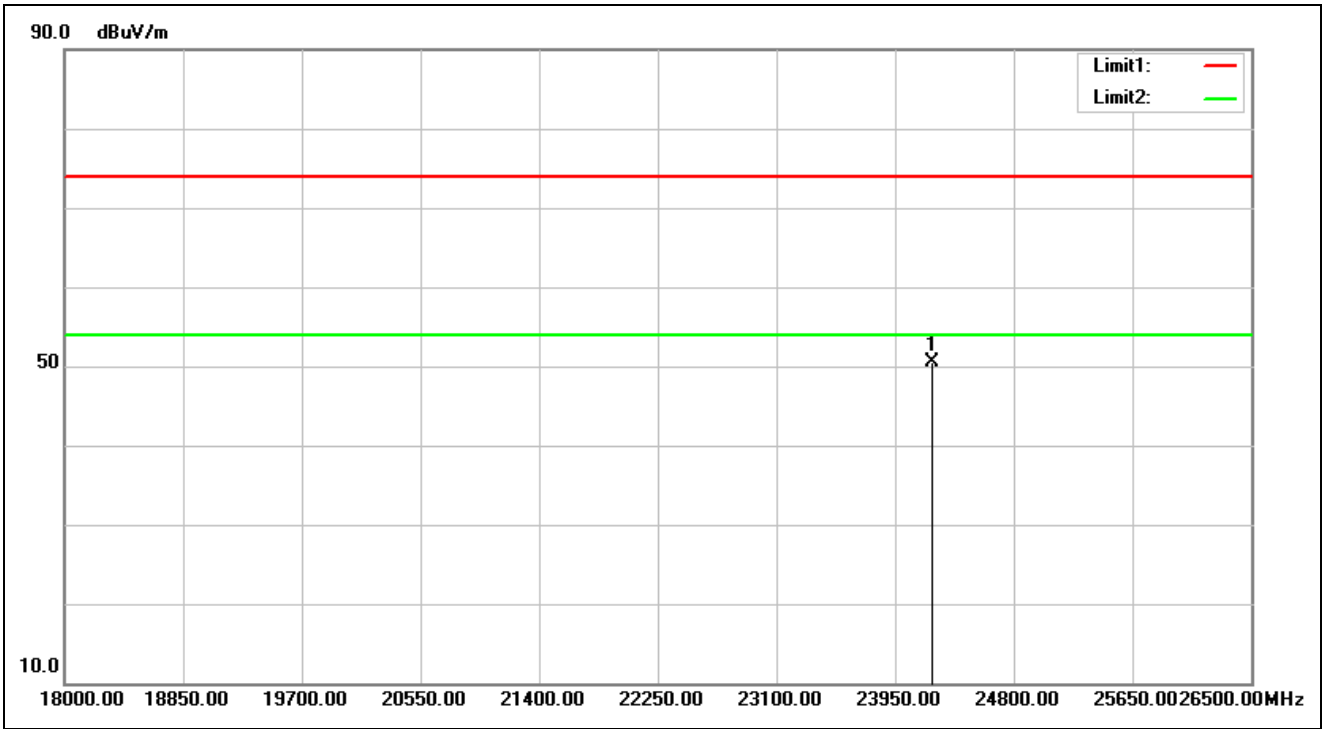
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:54:17**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2402-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	23899.000	33.01	18.48	51.49	74.00	-22.51	peak			

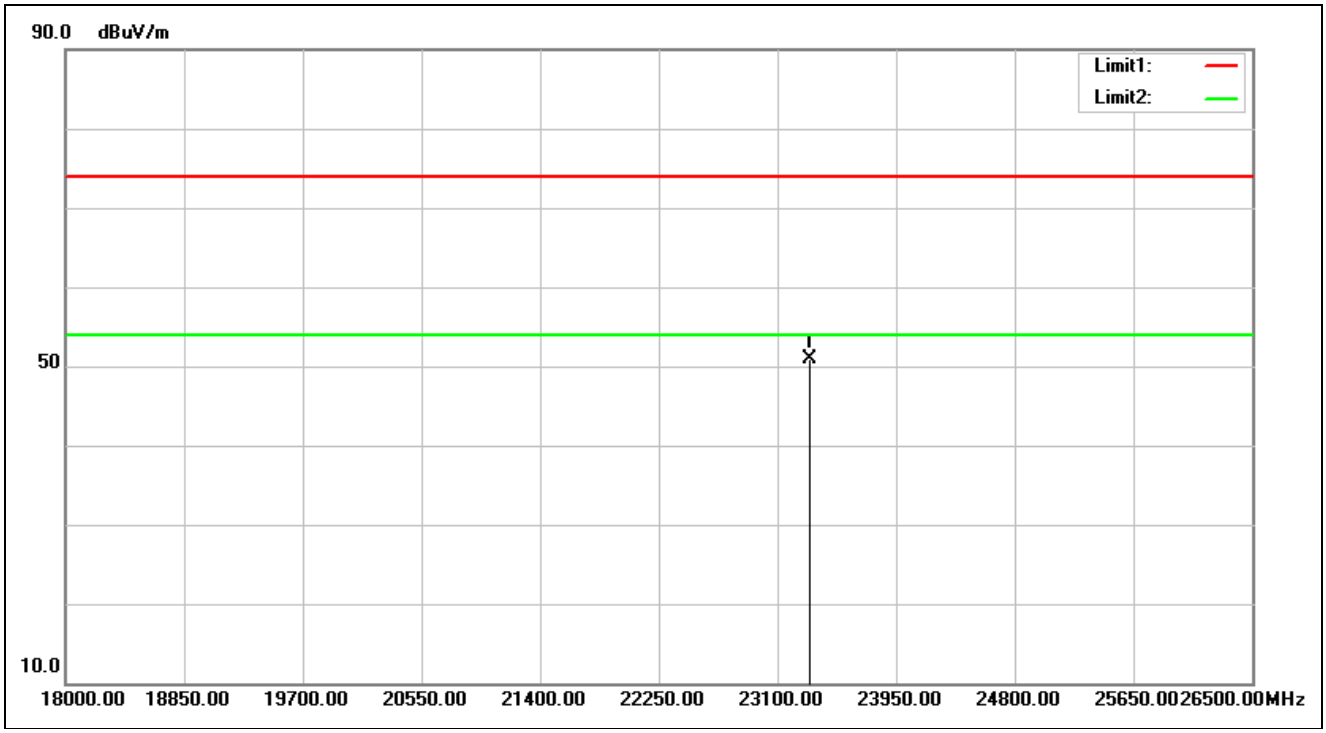
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:54:23**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2402-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	24213.500	33.05	17.37	50.42	74.00	-23.58	peak			

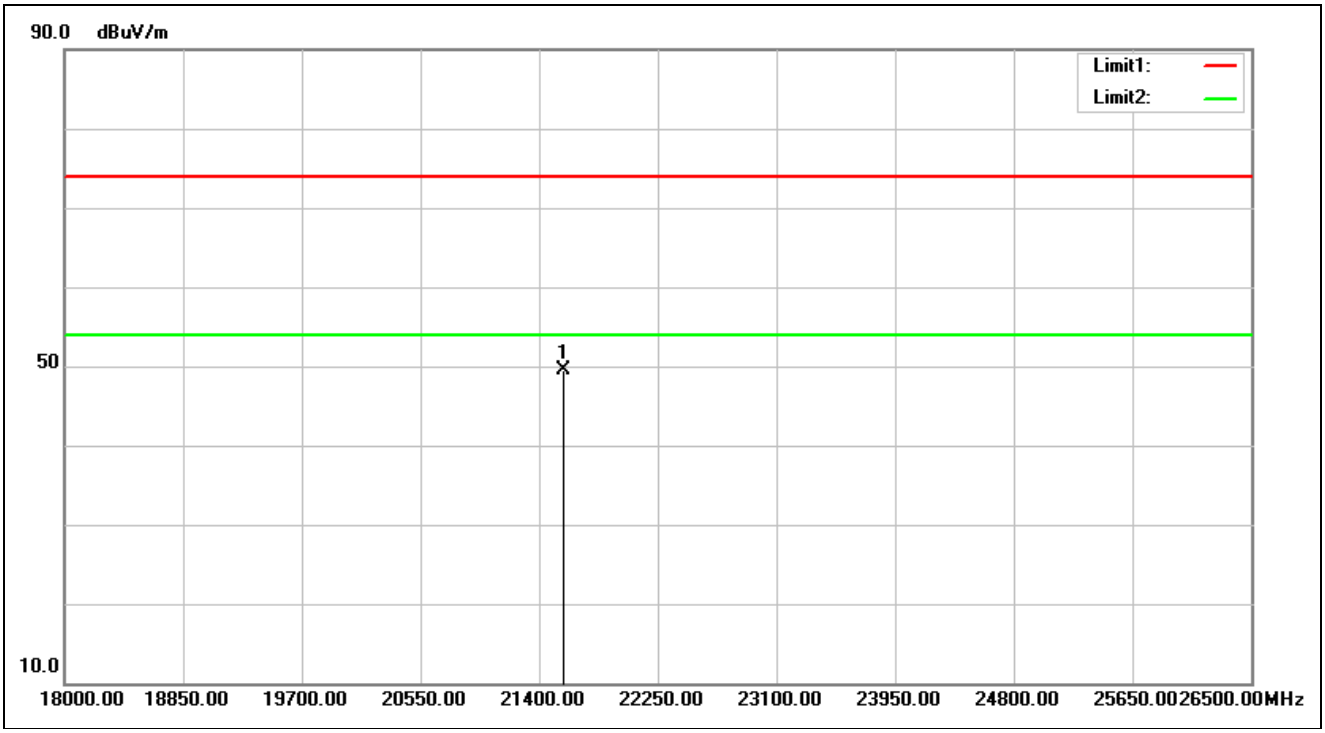
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:55:09**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	23329.500	33.11	17.80	50.91	74.00	-23.09	peak			

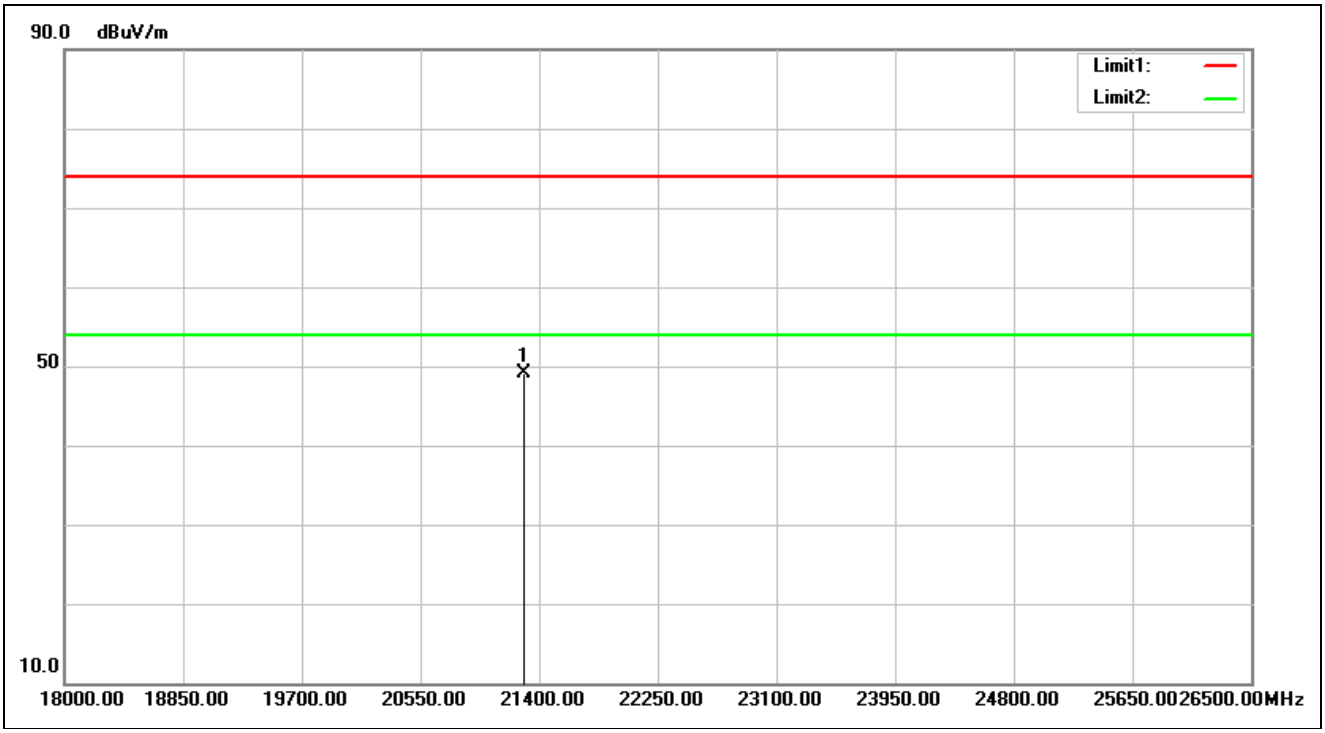
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:55:15**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	21570.000	32.85	16.75	49.60	74.00	-24.40	peak			

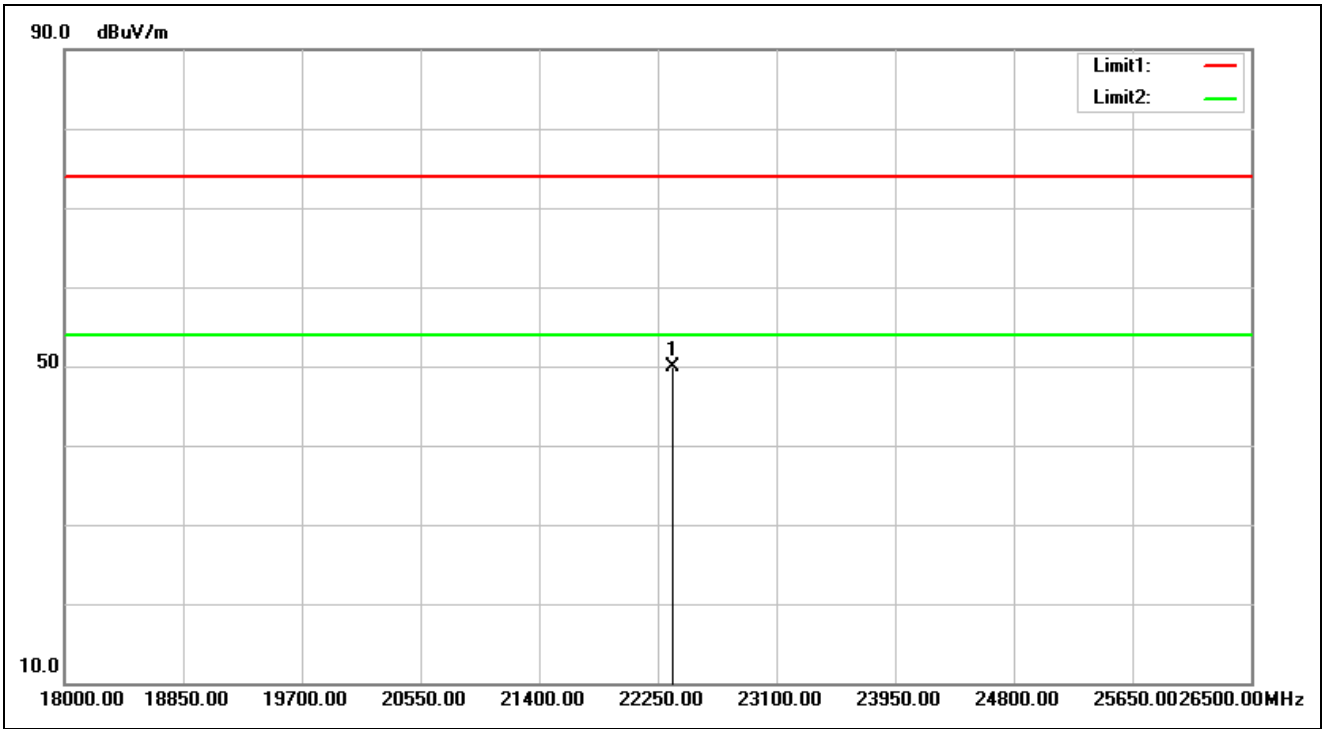
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:55:38**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2480-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	21289.500	32.69	16.47	49.16	74.00	-24.84	peak			

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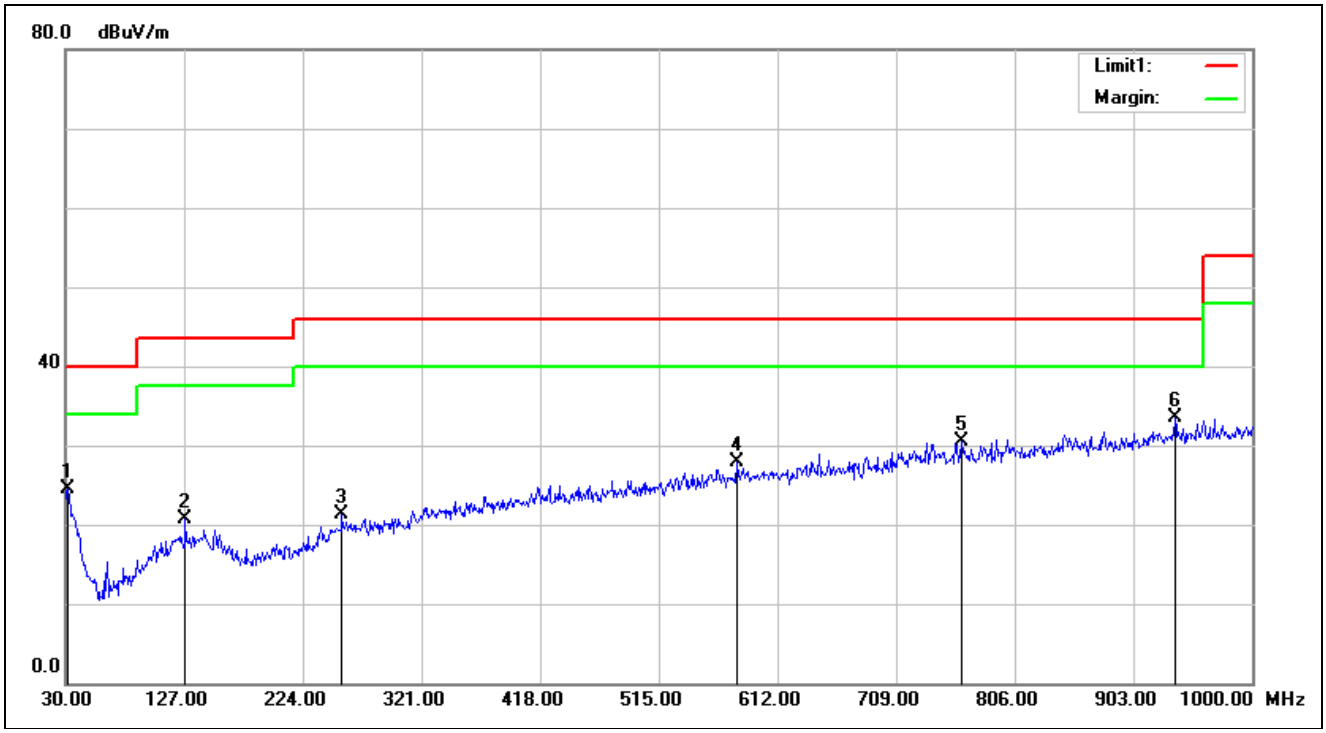


Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 20:55:44**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2480-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	22360.500	32.62	17.34	49.96	74.00	-24.04	peak			

Spurious Emissions, TX Mode, 30M-1G

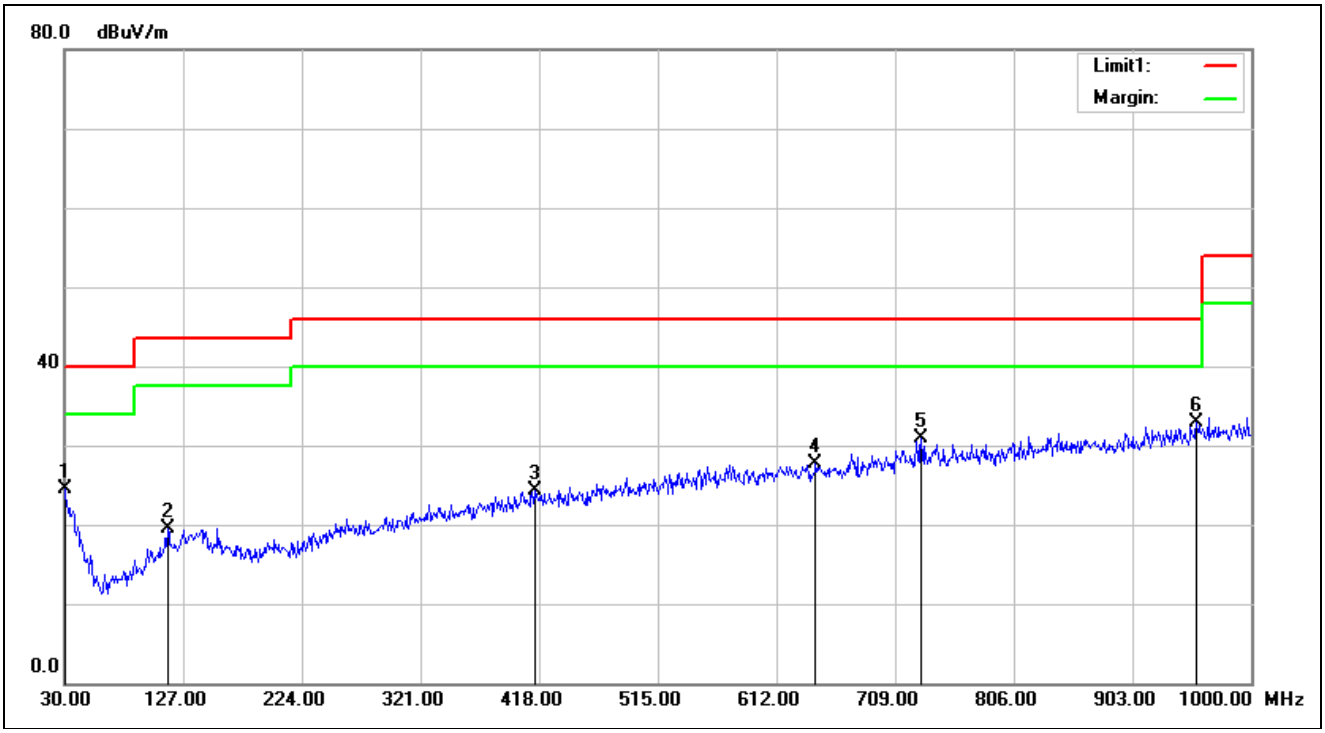
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Class B 3M Radiation**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 21:39:30**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	31.9400	-1.36	25.80	24.44	40.00	-15.56	QP	100	190	
2	127.9700	-7.24	27.89	20.65	43.50	-22.85	QP	100	219	
3	256.0100	-5.27	26.55	21.28	46.00	-24.72	QP	100	36	
4	579.0200	-0.14	28.08	27.94	46.00	-18.06	QP	100	335	
5	762.3500	2.47	28.06	30.53	46.00	-15.47	QP	100	134	
6	936.9500	5.12	28.48	33.60	46.00	-12.40	QP	100	6	

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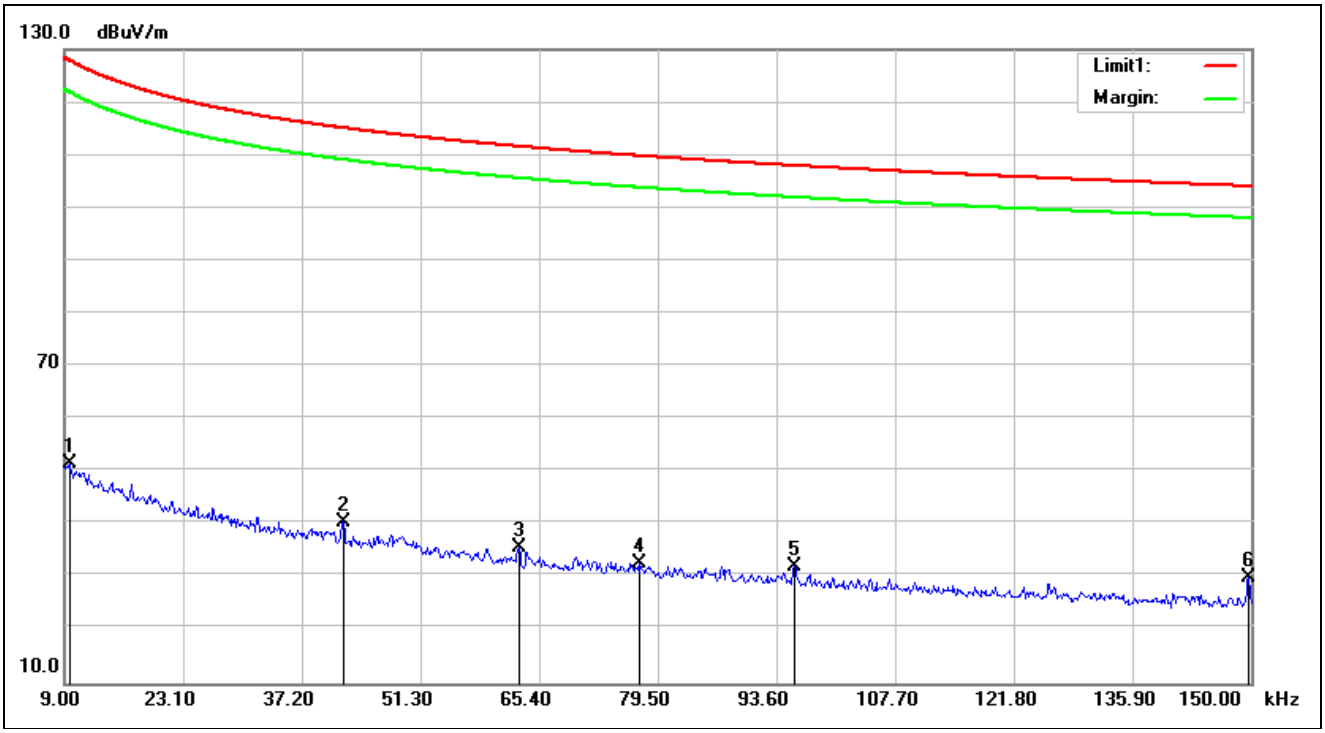


Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED Class B 3M Radiation**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 21:40:24**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	30.0000	-0.25	24.73	24.48	40.00	-15.52	QP	100	81	
2	114.3900	-7.88	27.48	19.60	43.50	-23.90	QP	100	278	
3	414.1200	-2.28	26.51	24.23	46.00	-21.77	QP	100	239	
4	644.0100	0.47	27.18	27.65	46.00	-18.35	QP	100	311	
5	730.3400	1.94	28.95	30.89	46.00	-15.11	QP	100	360	
6	955.3800	5.52	27.39	32.91	46.00	-13.09	QP	100	143	

Spurious Emissions, TX Mode, 9k-30M

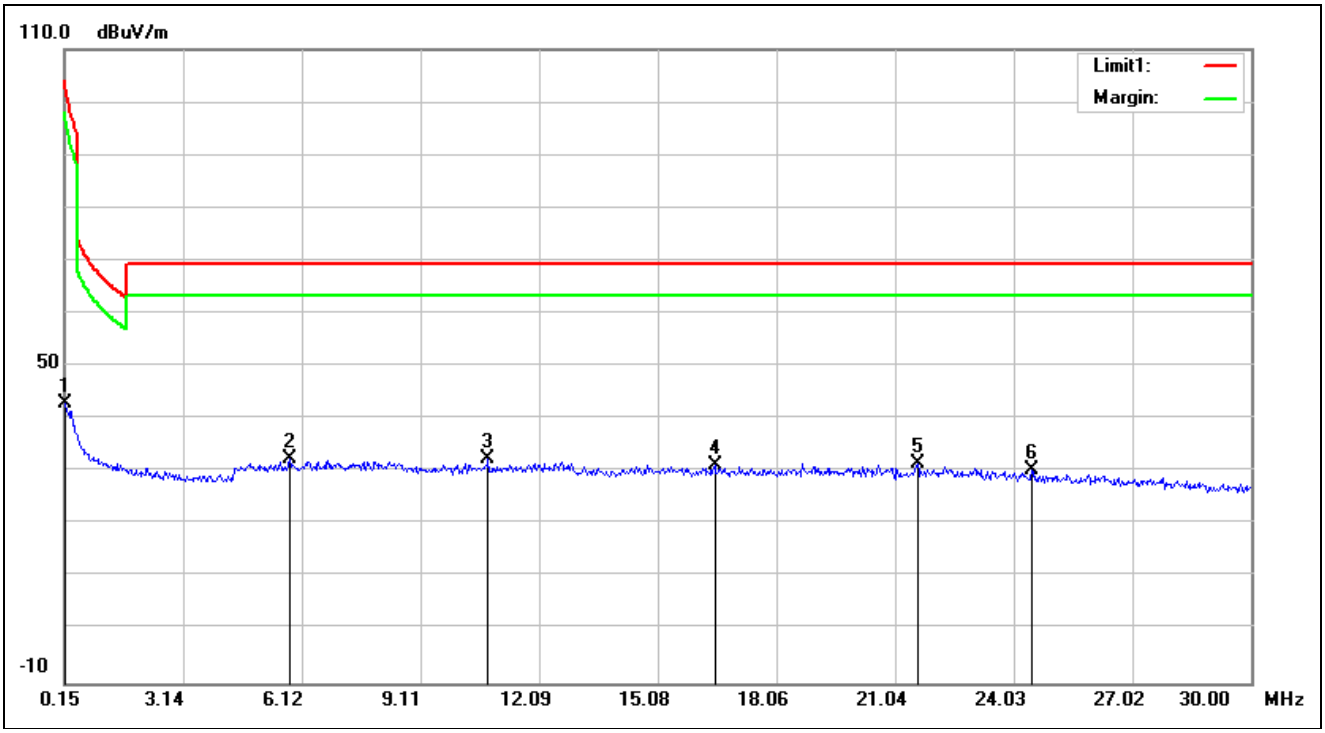
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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED2.8_9k-1G_3m**	**Ant. Polarization:**	**N/A**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 21:45:00**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	0.0095	19.73	31.85	51.58	128.03	-76.45	QP	100	82	
2	0.0421	19.71	20.79	40.50	115.11	-74.61	QP	100	196	
3	0.0630	19.35	16.16	35.51	111.61	-76.10	QP	100	358	
4	0.0773	19.27	13.45	32.72	109.83	-77.11	QP	100	26	
5	0.0957	19.16	13.01	32.17	107.98	-75.81	QP	100	360	
6	0.1497	19.08	10.81	29.89	104.09	-74.20	QP	100	22	

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Service No.:	**114075991**	**Test Distance:**	**3m**
Test Standard:	**FCC&ISED2.8_9k-1G_3m**	**Ant. Polarization:**	**N/A**
Test item:	**Radiation Emission**	**Test Time:**	**2018/5/2 21:46:39**
Applicant:	**CUB ELECPARTS INC.,**	**Test Rating:**	**DC 3V**
Product:	**BLE TPMS SENSOR**	**Temp.(℃)/Hum.(%):**	**23(℃)/60%**
Model No.:	**BLE SENSOR 4**	**Test Engineer:**	**Curry Chen**
Test Mode:	**2426-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	0.1500	19.08	23.82	42.90	104.08	-61.18	QP	100	41	
2	5.8215	19.84	12.52	32.36	69.50	-37.14	QP	100	242	
3	10.8065	20.37	12.12	32.49	69.50	-37.01	QP	100	3	
4	16.5078	21.37	9.94	31.31	69.50	-38.19	QP	100	265	
5	21.6122	22.10	9.51	31.61	69.50	-37.89	QP	100	337	
6	24.4778	22.28	8.13	30.41	69.50	-39.09	QP	100	9	