

# Test Report No.50052345 50052344 001

## Appendix D: Radiated and Mains Spurious Emission Data

(File: 50052345 50052344AppendixD)

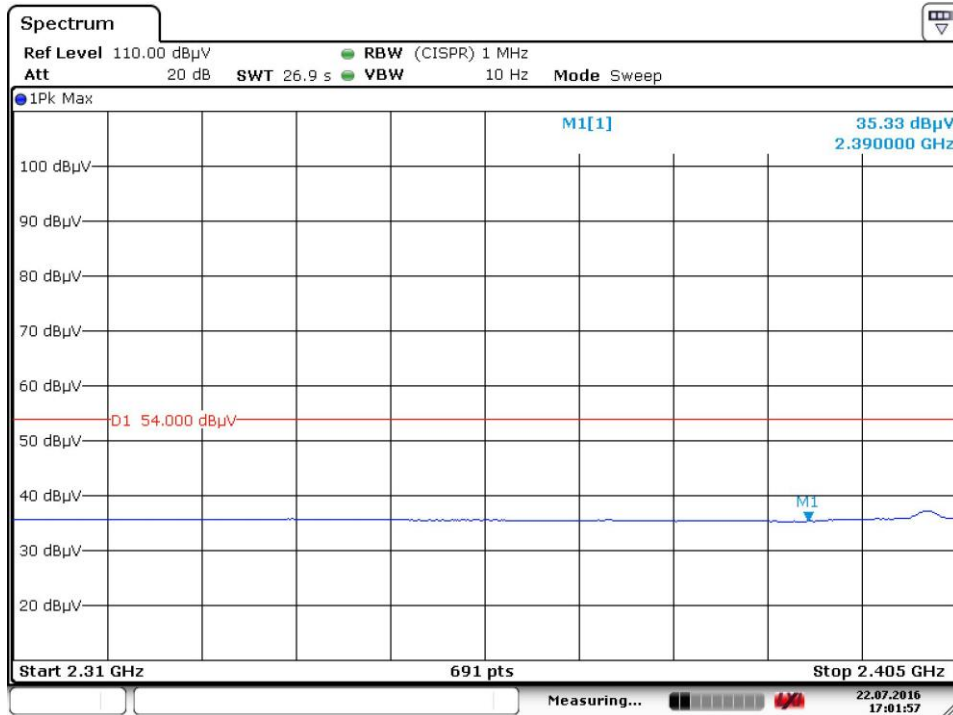
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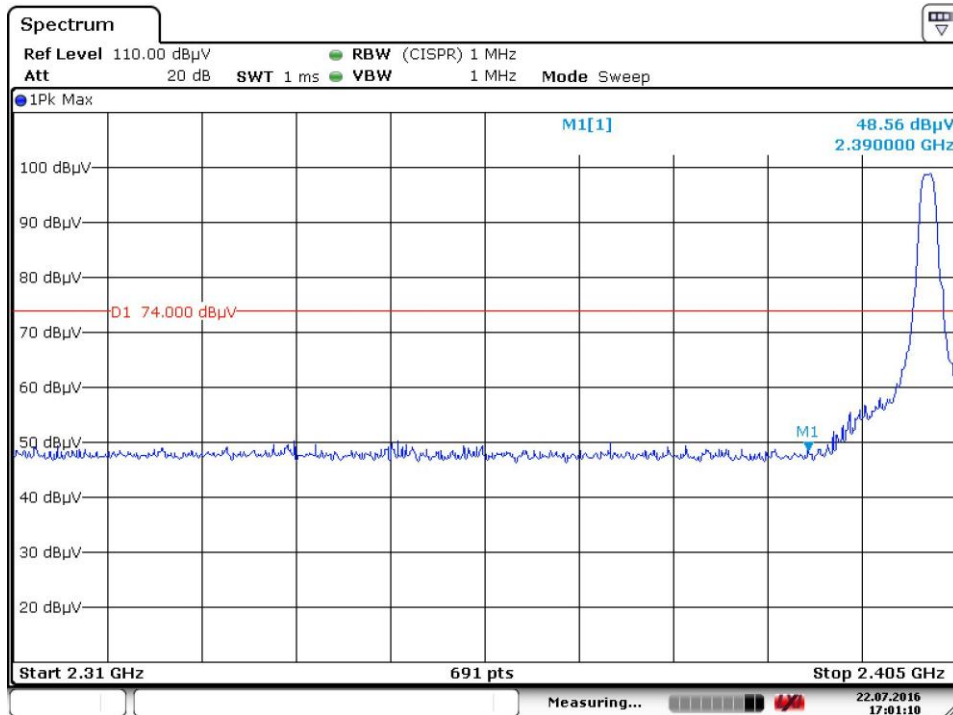
# Spurious Emissions, Band Edges, 2.35-2.5G

## Radiated Bandedge (GFSK)

### Low Channel (Hor)



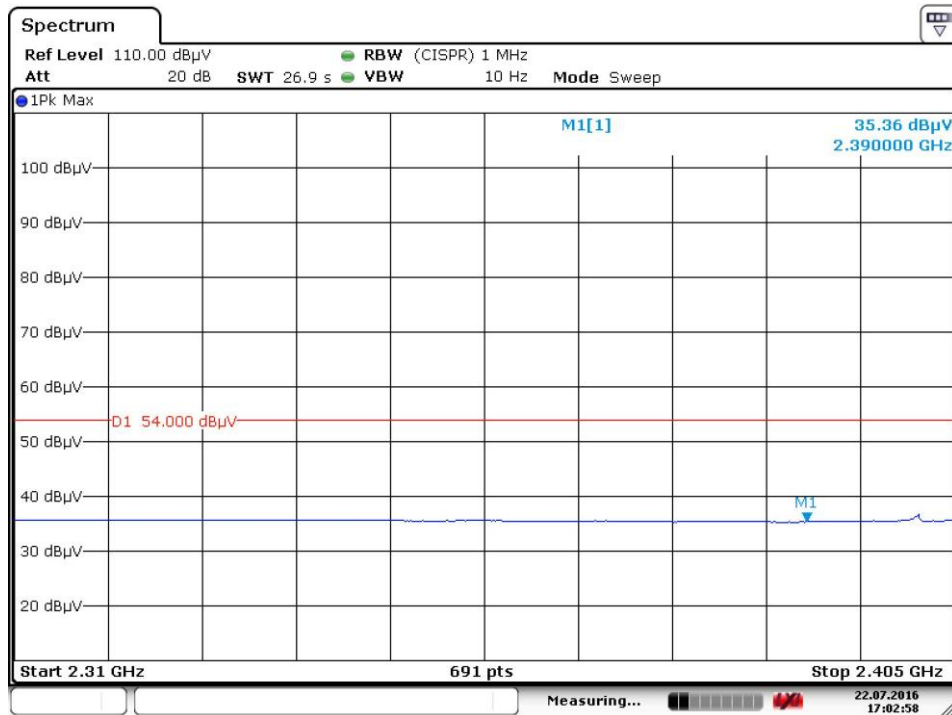
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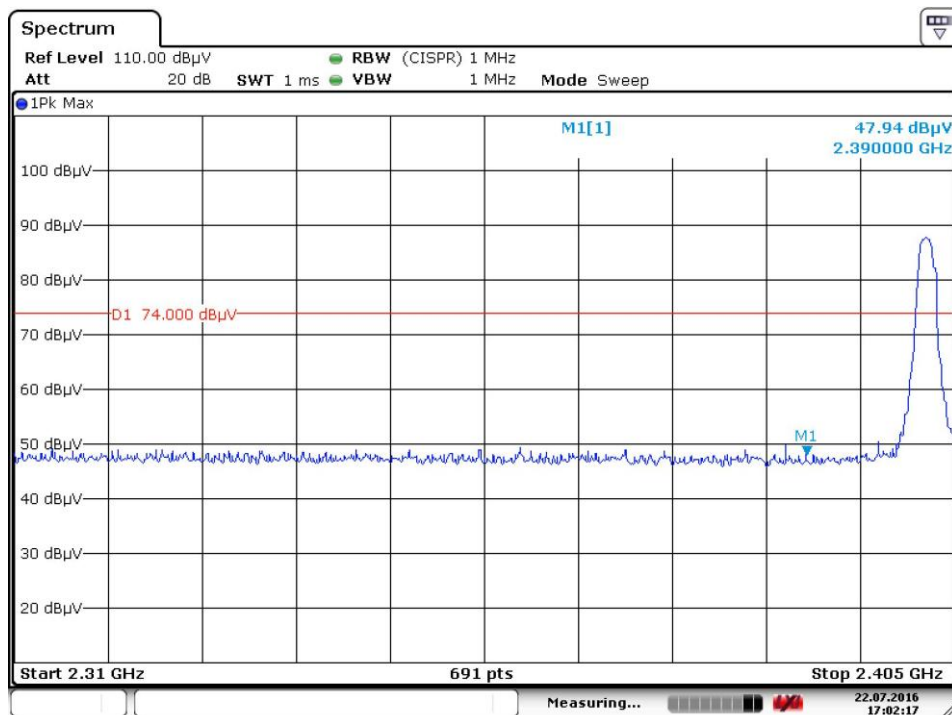
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# Spurious Emissions, Band Edge, 2.35-2.5G

## Low Channel (Ver)



Date: 22.JUL.2016 17:02:58

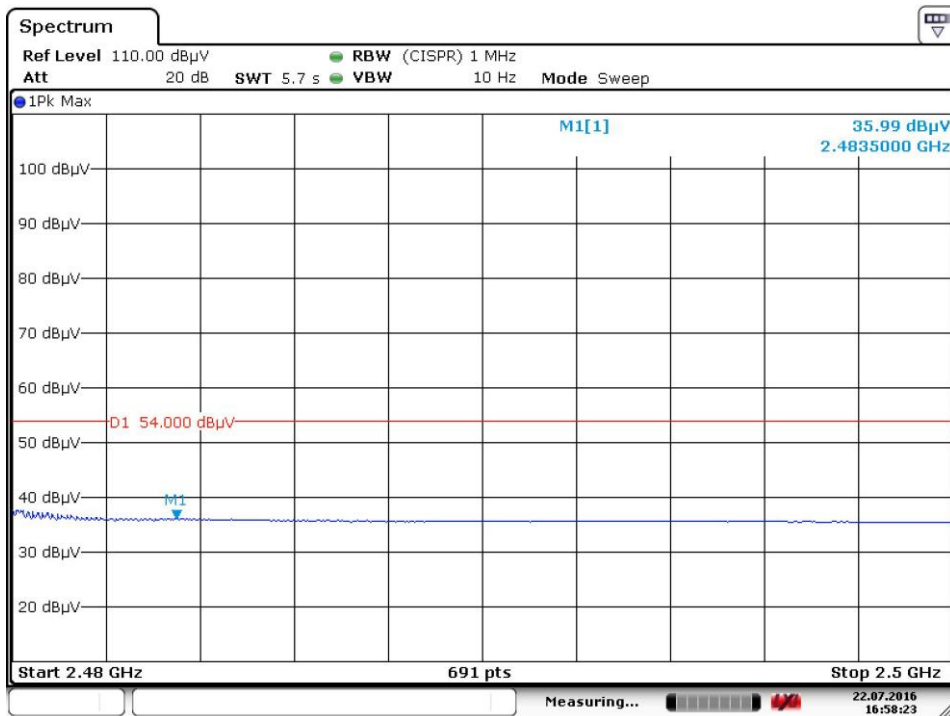


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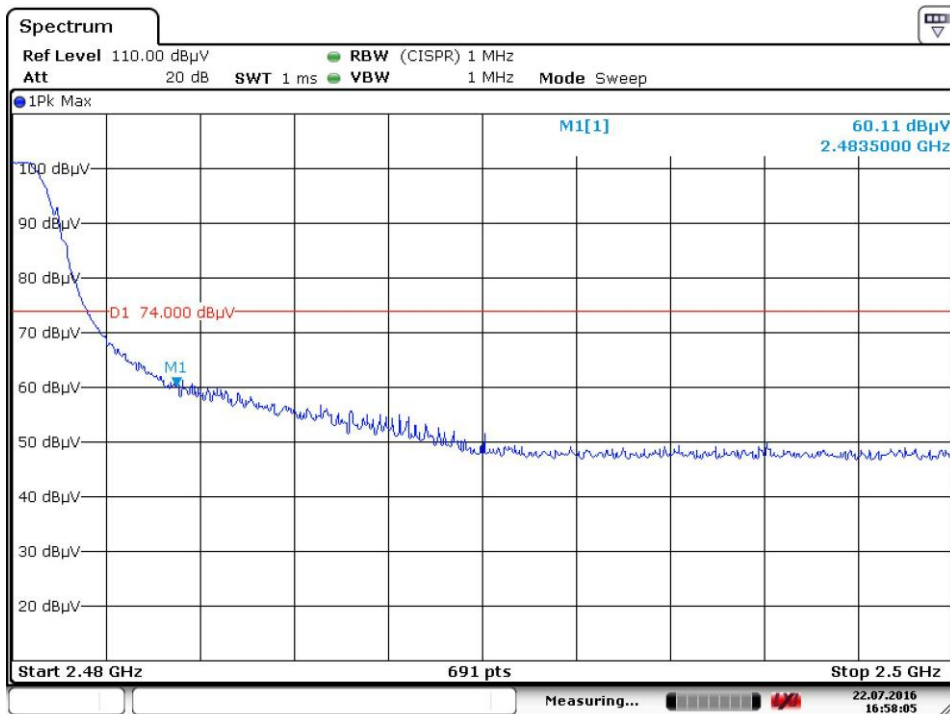
## Spurious Emissions, Band Edge, 2.35-2.5G

# Radiated Bandedge (GFSK)

## High Channel (Hor)



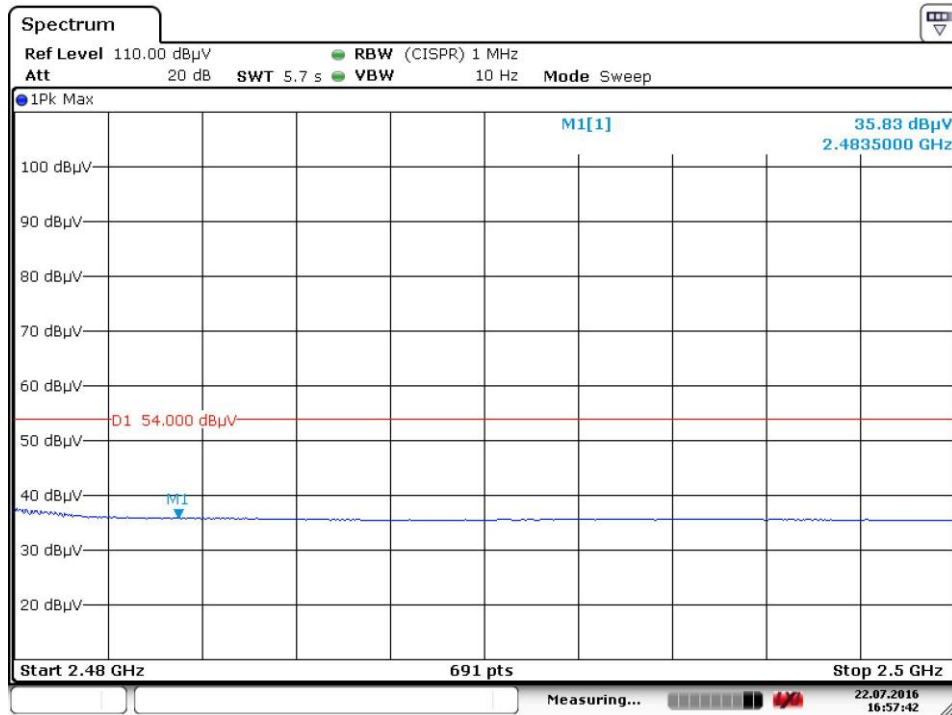
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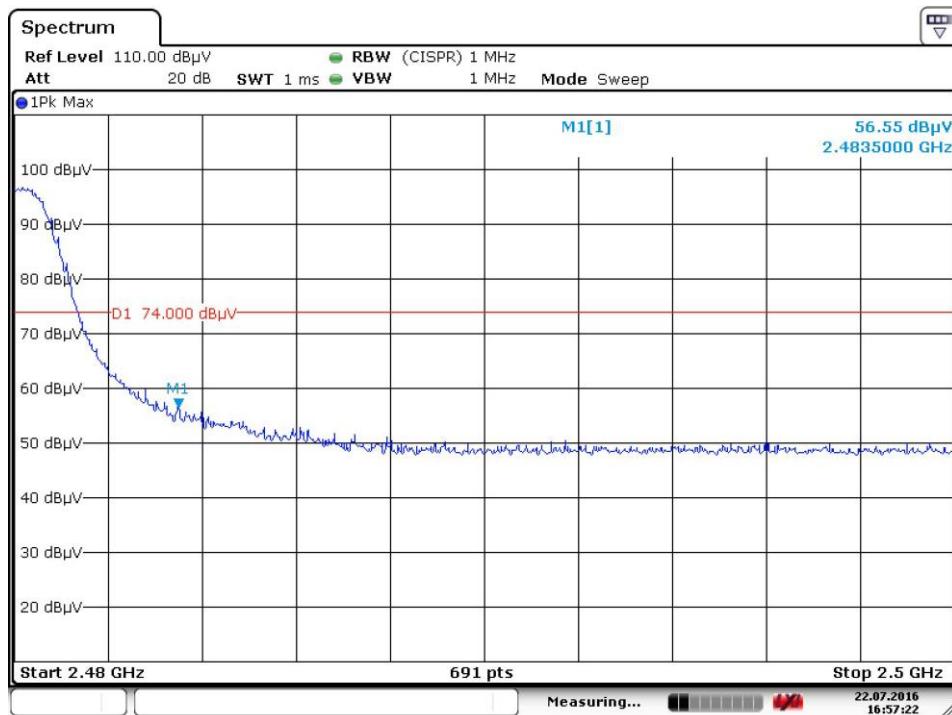
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## Spurious Emissions, Band Edge, 2.35-2.5G

# High Channel (Ver)



Date: 22.JUL.2016 16:57:42



Date: 22.JUL.2016 16:57:23

## Spurious Emissions, Band Edge, 2.35-2.5G

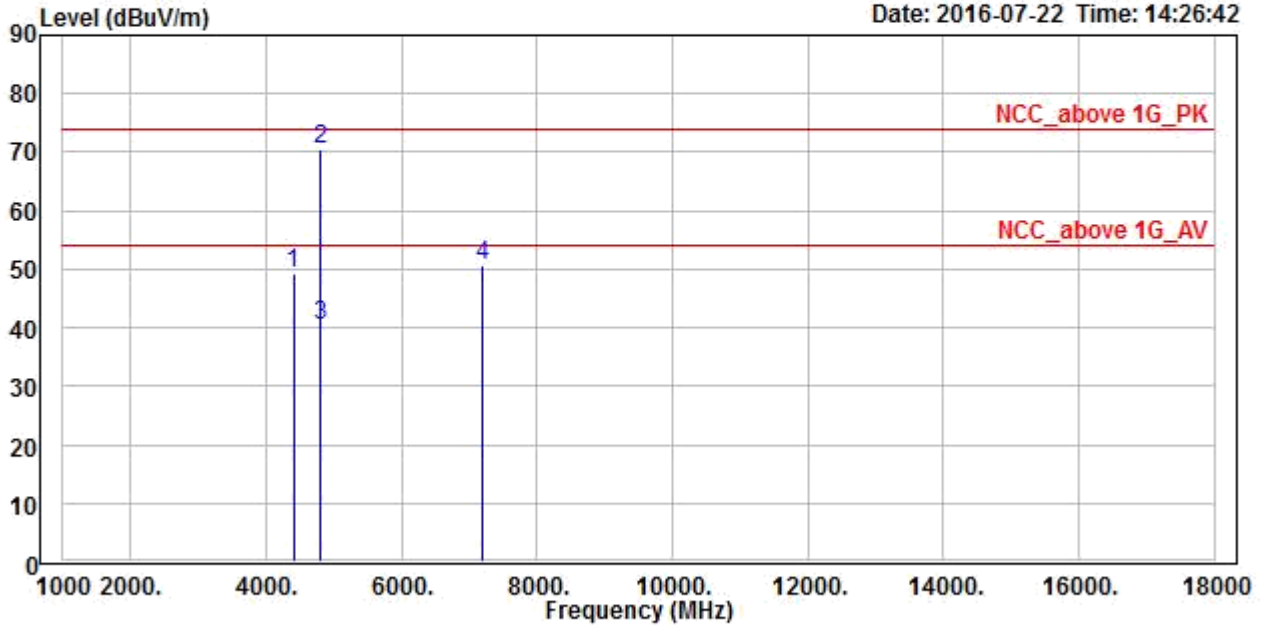
# Spurious Emissions, TX Mode, 1-18G

TUV Taiwan  
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File: C:\EMC\Report\2016\Cub\114049139(VS-80G001)\114049139\_00007.EMI

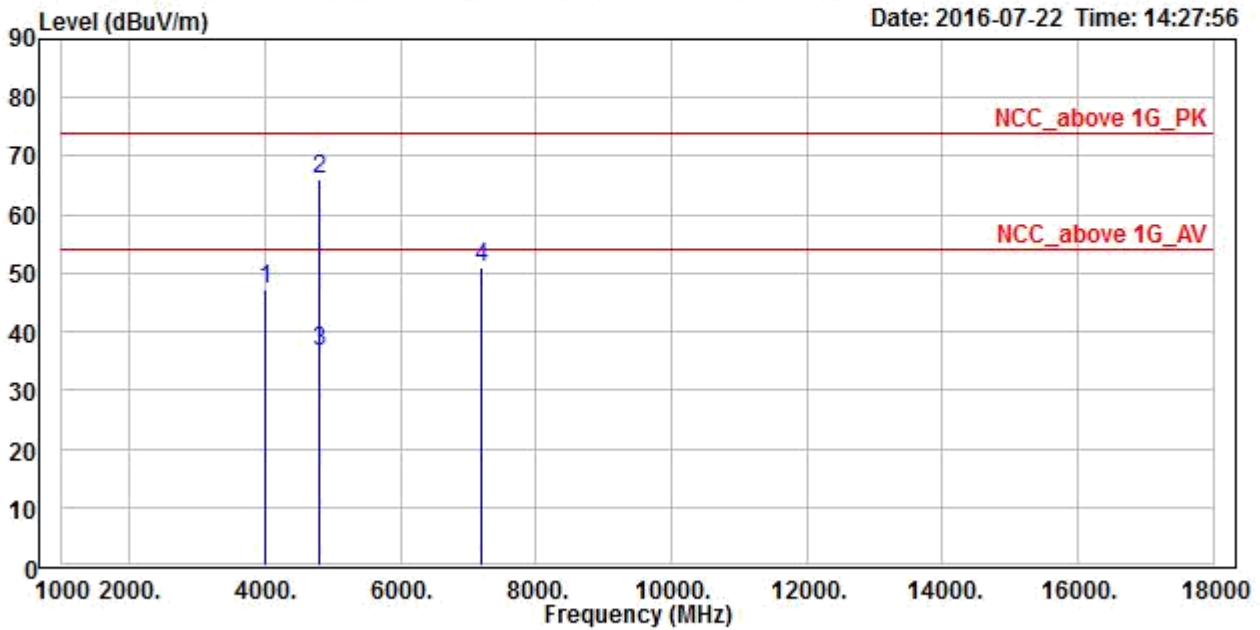
Date: 2016-07-22 Time: 14:26:42



Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m horizontal  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C /60%  
 Memo : 2402-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	4400.000	49.23	44.81	4.42	74.00	-24.77	Peak	
2	4804.000	70.32	64.22	6.10	74.00	-3.68	Peak	
3	4804.000	40.30	34.20	6.10	54.00	-13.70	Average	
4	7206.000	50.70	42.49	8.21	74.00	-23.30	Peak	

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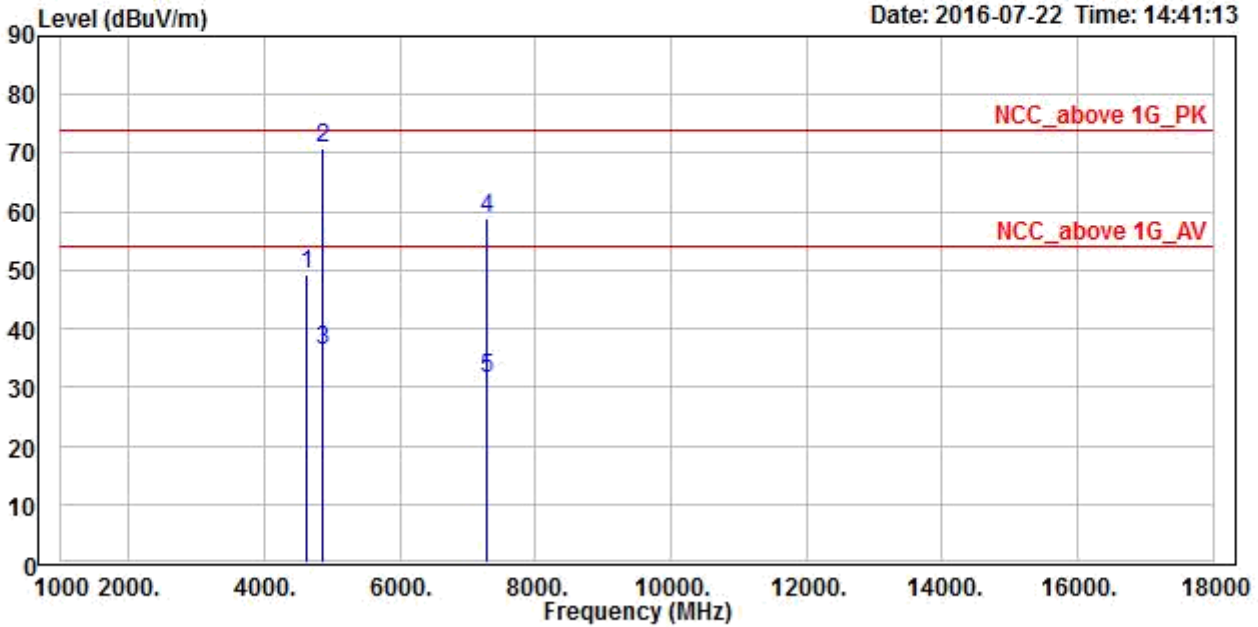


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m vertical  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C/60%  
 Memo : 2402-TX

	Freq	Level	Read	Limit	Over	Remark	Note
	MHz	dBuV/m	Level	Line	Limit		
			dBuV	dB/m	dBuV/m	dB	
1	4005.797	47.07	44.16	2.91	74.00	-26.93	Peak
2	4804.000	66.16	60.06	6.10	74.00	-7.84	Peak
3	4804.000	36.48	30.38	6.10	54.00	-17.52	Average
4	7206.000	51.00	42.79	8.21	74.00	-23.00	Peak

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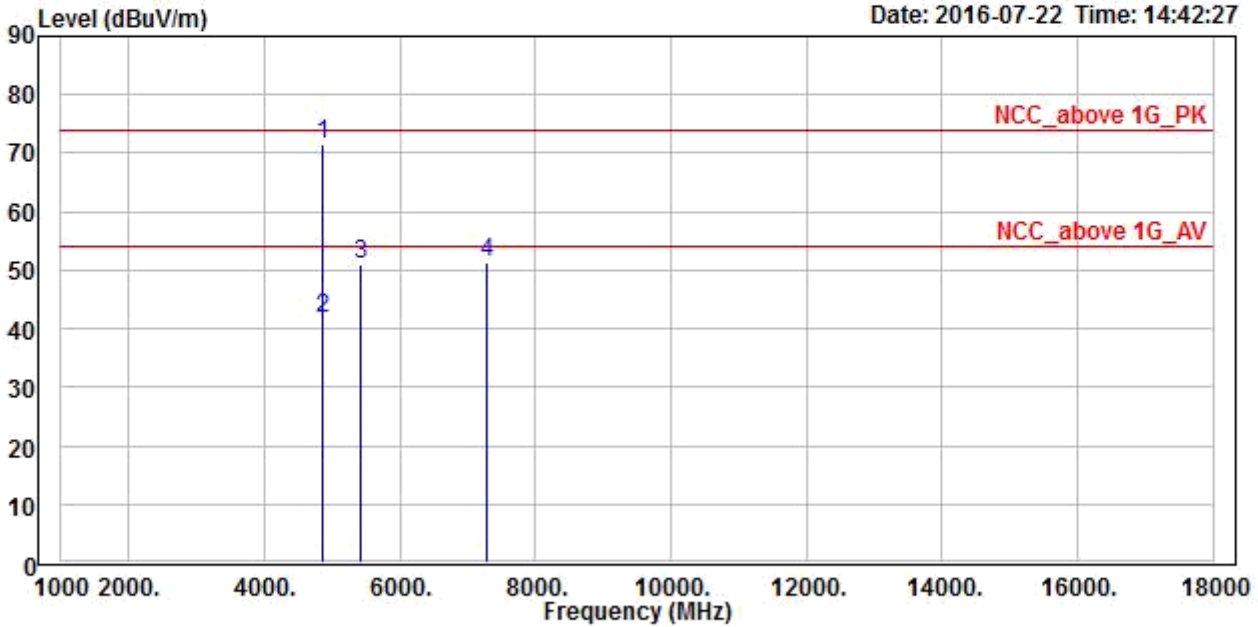
Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m horizontal  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C /60%  
 Memo : 2426-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	4621.739	49.31	43.98	5.33	74.00	-24.69	Peak	
2	4852.000	70.98	64.67	6.31	74.00	-3.02	Peak	
3	4852.000	36.35	30.04	6.31	54.00	-17.65	Average	
4	7278.000	58.84	50.64	8.20	74.00	-15.16	Peak	
5	7278.000	31.58	23.38	8.20	54.00	-22.42	Average	



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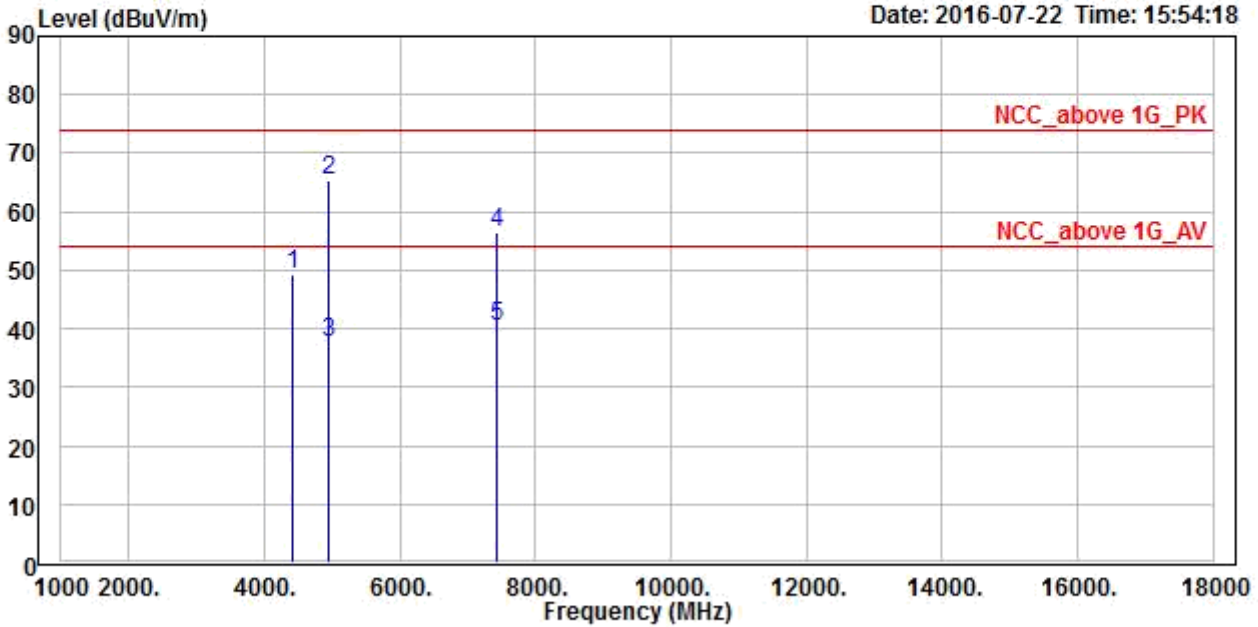


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m vertical  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C/60%  
 Memo : 2426-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	4852.000	71.50	65.19	6.31	74.00	-2.50	Peak	
2	4852.000	41.91	35.60	6.31	54.00	-12.09	Average	
3	5410.145	50.95	43.29	7.66	74.00	-23.05	Peak	
4	7278.000	51.41	43.21	8.20	74.00	-22.59	Peak	

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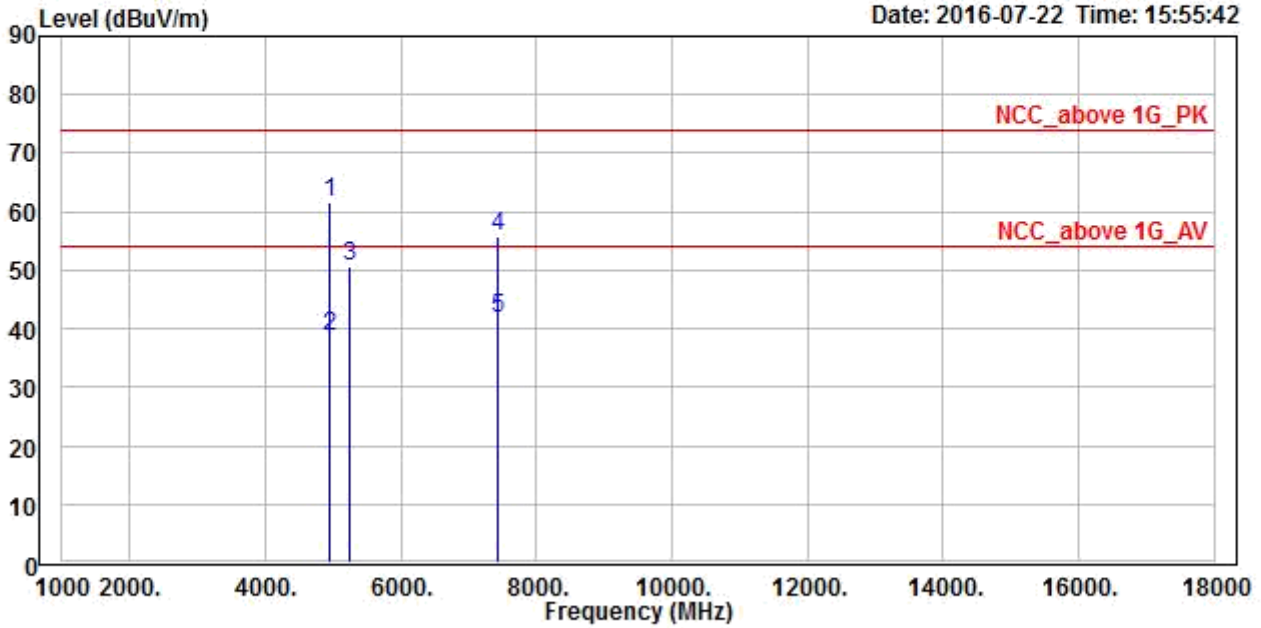


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m horizontal  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C/60%  
 Memo : 2480-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	4424.638	49.29	44.76	4.53	74.00	-24.71	Peak	
2	4960.000	65.26	58.51	6.75	74.00	-8.74	Peak	
3	4960.000	37.76	31.01	6.75	54.00	-16.24	Average	
4	7440.000	56.41	48.23	8.18	74.00	-17.59	Peak	
5	7440.000	40.42	32.24	8.18	54.00	-13.58	Average	

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Date: 2016-07-22 Time: 15:55:42



Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m vertical  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C/60%  
 Memo : 2480-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	4960.000	61.60	54.85	6.75	74.00	-12.40	Peak	
2	4960.000	38.60	31.85	6.75	54.00	-15.40	Average	
3	5237.681	50.50	43.15	7.35	74.00	-23.50	Peak	
4	7440.000	55.66	47.48	8.18	74.00	-18.34	Peak	
5	7440.000	41.66	33.48	8.18	54.00	-12.34	Average	

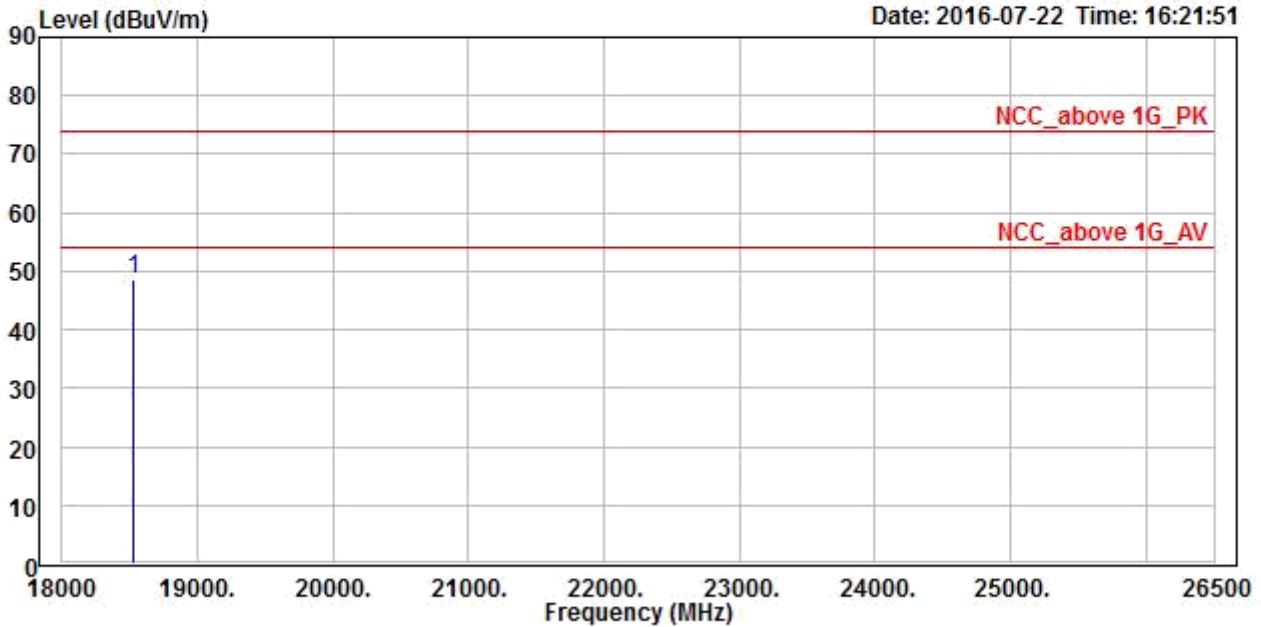
# Spurious Emissions, TX Mode, 18-26G



TUV Taiwan  
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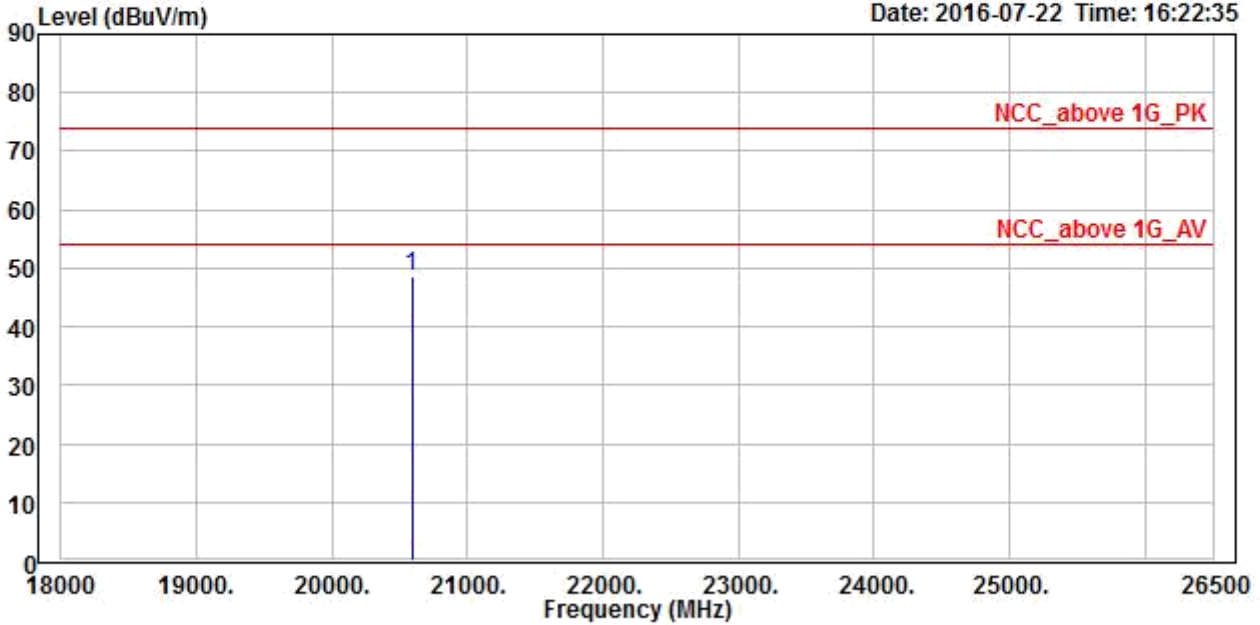


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m Horizontal  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C /60%  
 Memo : 2402-TX

	Freq	Level	Read Level	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dBuV/m	dB		
1	18529.710	48.56	20.82	74.00	-25.44	Peak	

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Date: 2016-07-22 Time: 16:22:35

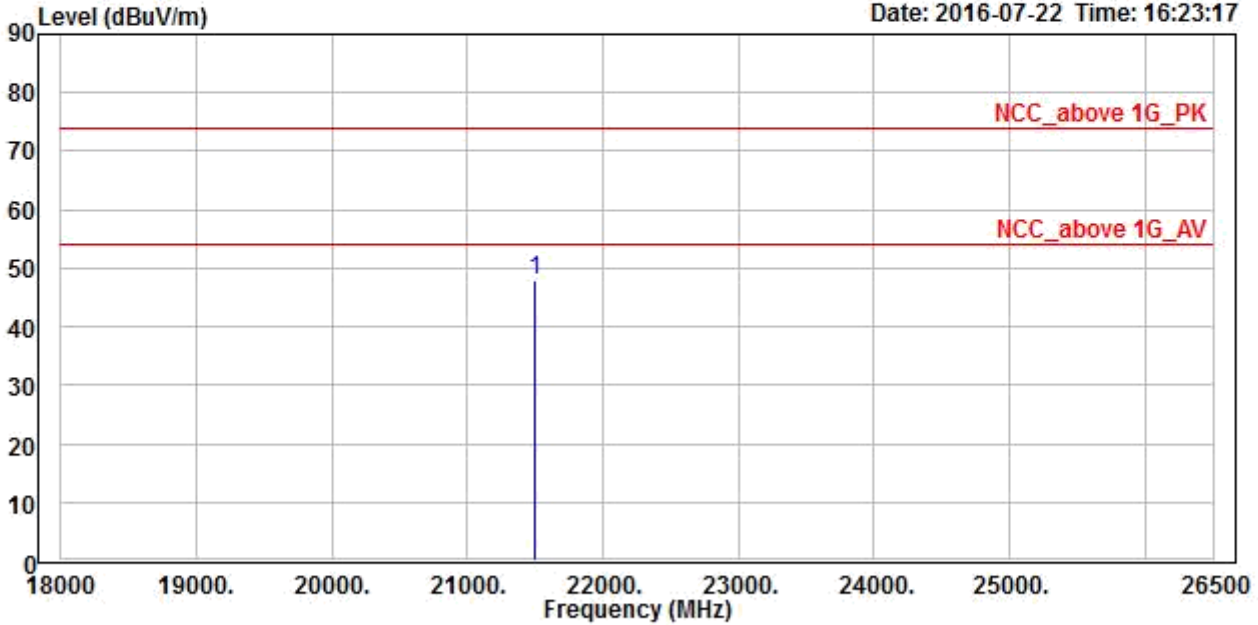


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m Vertical  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C / 60%  
 Memo : 2402-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	20586.960	48.63	19.07	29.56	74.00	-25.37	Peak	

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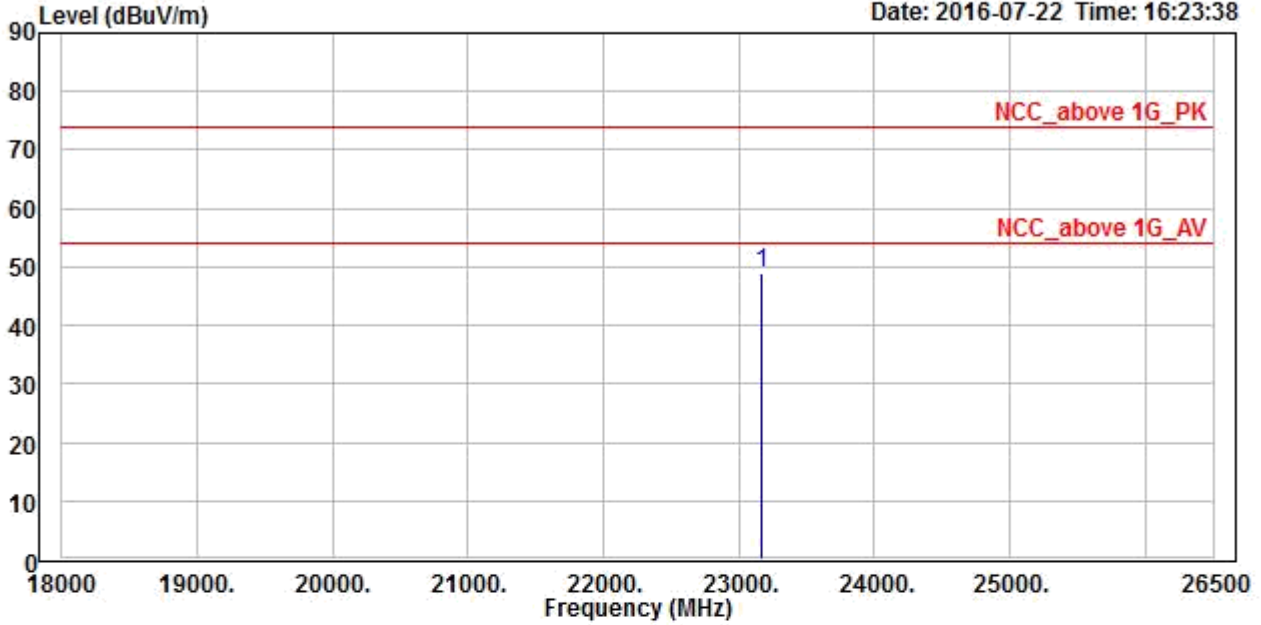


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m Horizontal  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C / 60%  
 Memo : 2426-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	21498.550	47.97	18.83	29.14	74.00	-26.03	Peak	

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Date: 2016-07-22 Time: 16:23:38

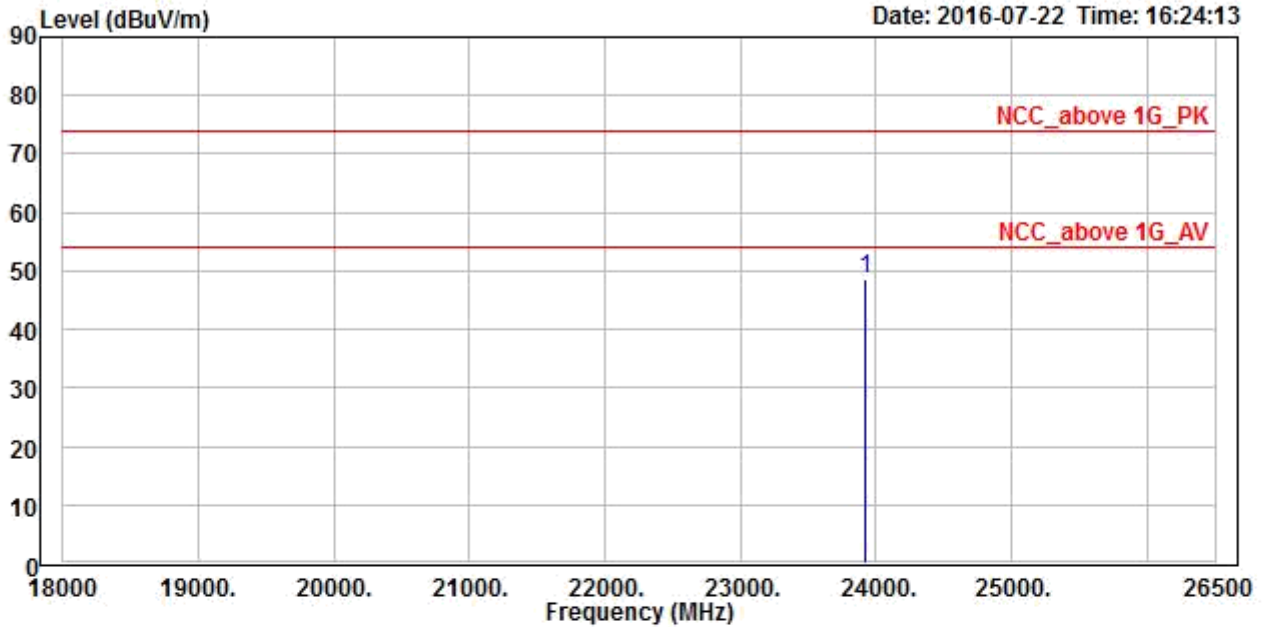


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m Vertical  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C /60%  
 Memo : 2426-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	23161.590	49.06	19.23	29.83	74.00	-24.94	Peak	

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Date: 2016-07-22 Time: 16:24:13

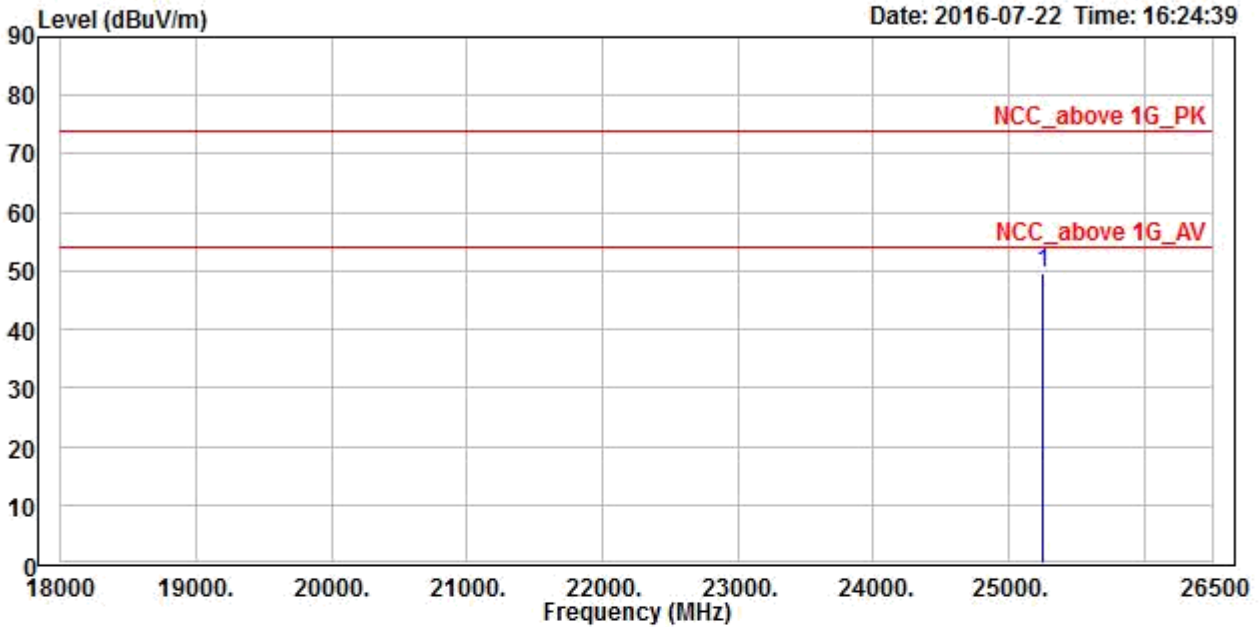


Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m Horizontal  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C / 60%  
 Memo : 2480-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	23925.360	48.64	19.23	29.41	74.00	-25.36	Peak	



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Site : 966B Chamber  
 Condition : NCC\_above 1G\_PK 3m Vertical  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C / 60%  
 Memo : 2480-TX

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	25255.800	49.71	19.01	30.70	74.00	-24.29	Peak	

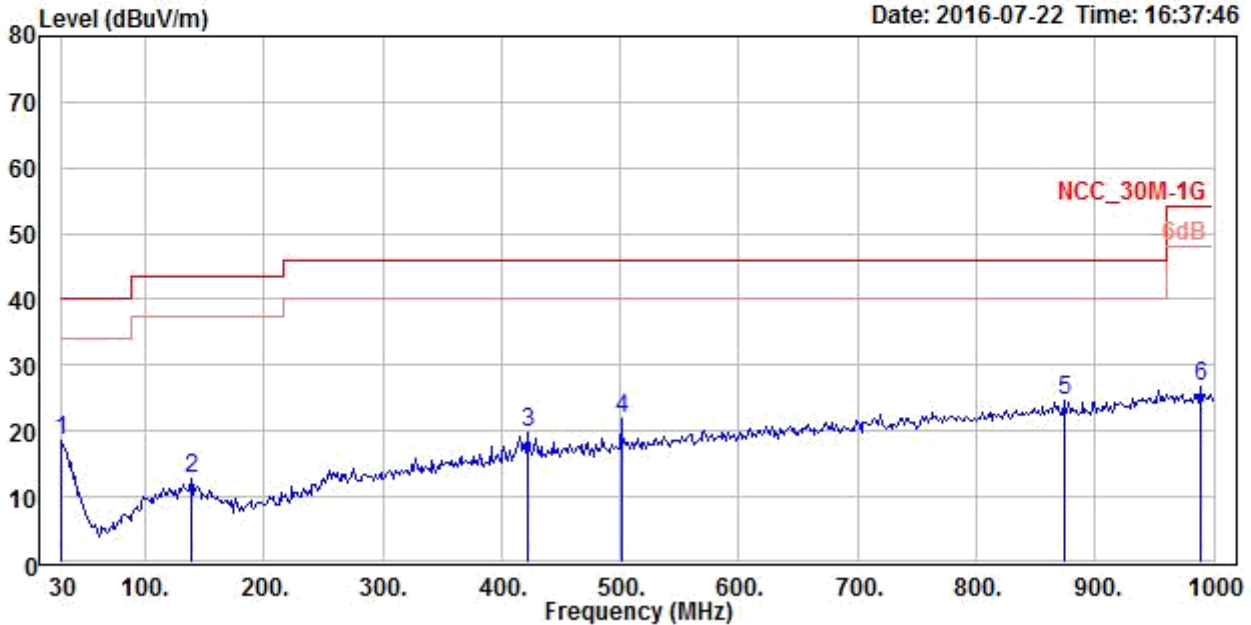
# Spurious Emissions, TX Mode, 30M-1



TUV Taiwan  
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Date: 2016-07-22 Time: 16:37:46

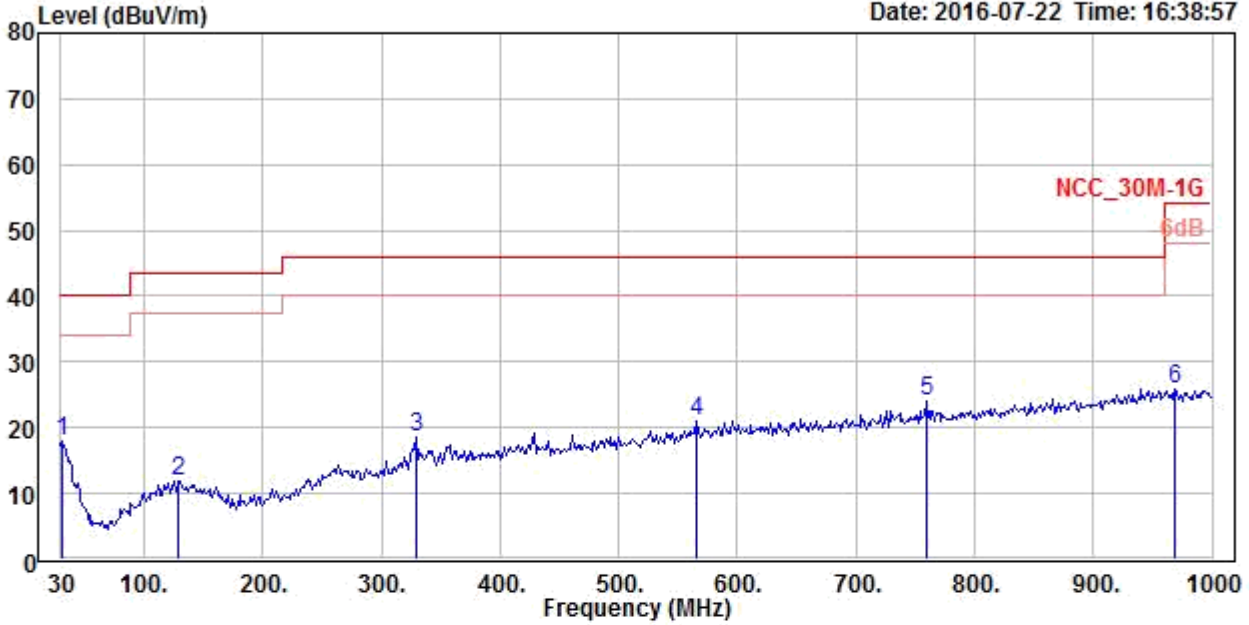


Site : 966B Chamber  
 Condition : NCC\_30M-1G 3m horizontal  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C / 60%  
 Memo : 2426-TX

	Freq	Level	Read Level	Limit Factor	Limit Line	Over Limit	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB		
1	30.000	18.61	27.81	-9.20	40.00	-21.39	QP	
2	138.246	12.70	29.12	-16.42	43.50	-30.80	QP	
3	422.217	19.71	31.21	-11.50	46.00	-26.29	QP	
4	500.942	21.82	32.33	-10.51	46.00	-24.18	QP	
5	874.884	24.56	29.40	-4.84	46.00	-21.44	QP	
6	988.754	26.88	29.67	-2.79	54.00	-27.12	QP	

File: C:\EMC\Report\2016\Cub\114049139(VS-80G001)\114049139\_00020.EMI

Date: 2016-07-22 Time: 16:38:57



Site : 966B Chamber  
 Condition : NCC\_30M-1G 3m vertical  
 Test Engineer: George Yang  
 Applicant : Cub Elecparts  
 Product : TPMS Sensor  
 Model No. : VS-80G001  
 Test Rating : DC 3V  
 Tmp/Hum : 22.2°C / 60%  
 Memo : 2426-TX

	Freq	Level	Read	Limit	Over	Remark	Note
	MHz	dBuV/m	Level	Line	Limit		
			dBuV	dB/m	dBuV/m	dB	
1	31.406	18.07	28.01	-9.94	40.00	-21.93	QP
2	128.406	11.96	28.32	-16.36	43.50	-31.54	QP
3	329.435	18.42	31.48	-13.06	46.00	-27.58	QP
4	565.609	21.03	30.53	-9.50	46.00	-24.97	QP
5	759.609	24.01	30.66	-6.65	46.00	-21.99	QP
6	969.072	25.72	28.60	-2.88	54.00	-28.28	QP