

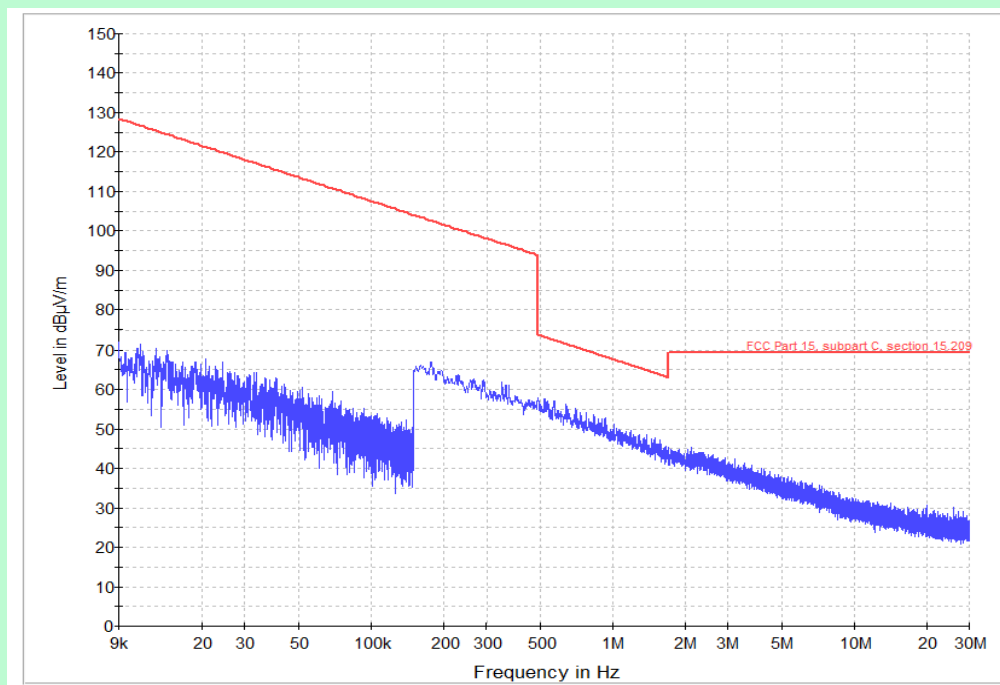
2.8 SPURIOUS RADIATED EMISSIONS

EUT Nomenclature	Wireless Display Driver	Test Request No.	EMC-1259-2
Model No.	W-DIS-D	Serial No.	05313
Test Start Date	11-Sep-2013	Temperature (°C)	23.5
Test End Date	23-Sep-2013	Humidity RH (%)	57.2
Tested By	Sasikala Subramani	Pressure (mbar)	NR
Input Voltage / Freq	24 Vdc		
Operating Mode	Refer Page 5 for Operating Mode Table		
Test configuration	Refer Page 5 for Test Configuration Table		
Deviation from Std	NA		
Comment			
TEST FREQUENCY RANGE			
Start Frequency	9KHz	Stop Frequency	10GHz
MAXIMUM OPERATING FREQUENCY			
902MHz - 928MHz			
TEST PARAMETERS			
Antenna Height	1m to 4m	Turntable Rotation	0° to 360°
Applicable standard	FCC Part 15.247 & 15.209	Test Method	DA 00-705
Equipment Class	NA	Measurement Distance	3m

TEST EQUIPMENT

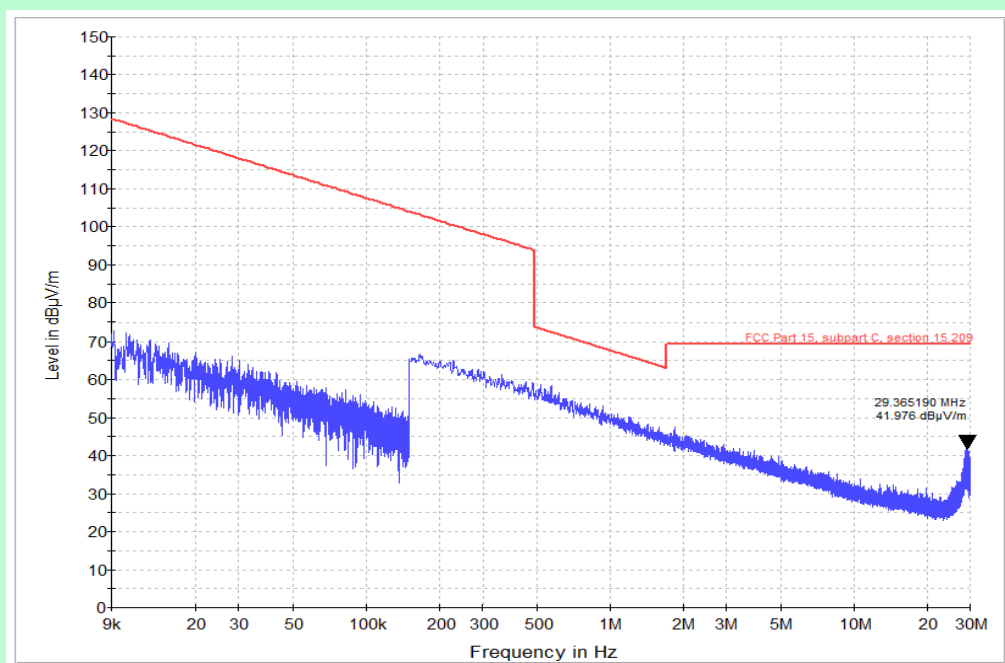
Y/N	Equipment	Make	Model	Serial Number	Cal Due Date
Y	EMI Test Receiver	R&S	ESU26	100229	04-Feb-2014
Y	3m Semi Anechoic Chamber	ETS Lindgren	DKE 6X7 DBL.DR	1625	31-Dec-2013
Y	Double Ridge Guide Horn Antenna	ETS Lindgren	3117	00064055	07-Nov-2013
Y	Bilog Antenna	ETS Lindgren	HLP3003C	130525	30-Nov-2013
Y	Loop Antenna	ETS Lindgren	6507	000103694	12-Mar-2014
Y	RF cable (9KHz to 1GHz)	COLEMAN	RG214	RE-1A	09-May-2014
Y	RF cable (9KHz to 1GHz)	COLEMAN	RG214	RE-1B	09-May-2014
Y	RF cable (1GHz to 18GHz)	AH Systems	SAC-18G-06	RE-2A	09-May-2014
Y	RF cable (1GHz to 18GHz)	AH Systems	SAC-18G-06	RE-2B	09-May-2014
Y	Signal Conditioning unit	R&S	SCU-18	10178	13-June-2014
Y	High Pass Filter	Wainwright	WHKX1.5/15G-12ST	1	09-May-2014
Y	EMC32 Software	R&S	8.30.0	820-OT101248	NA
Note: Switch ON/OFF the Internal Preamplifier based on carrier level and or noise floor without overloading the receiver.					

TEST GRAPHS – 9KHz to 30MHz



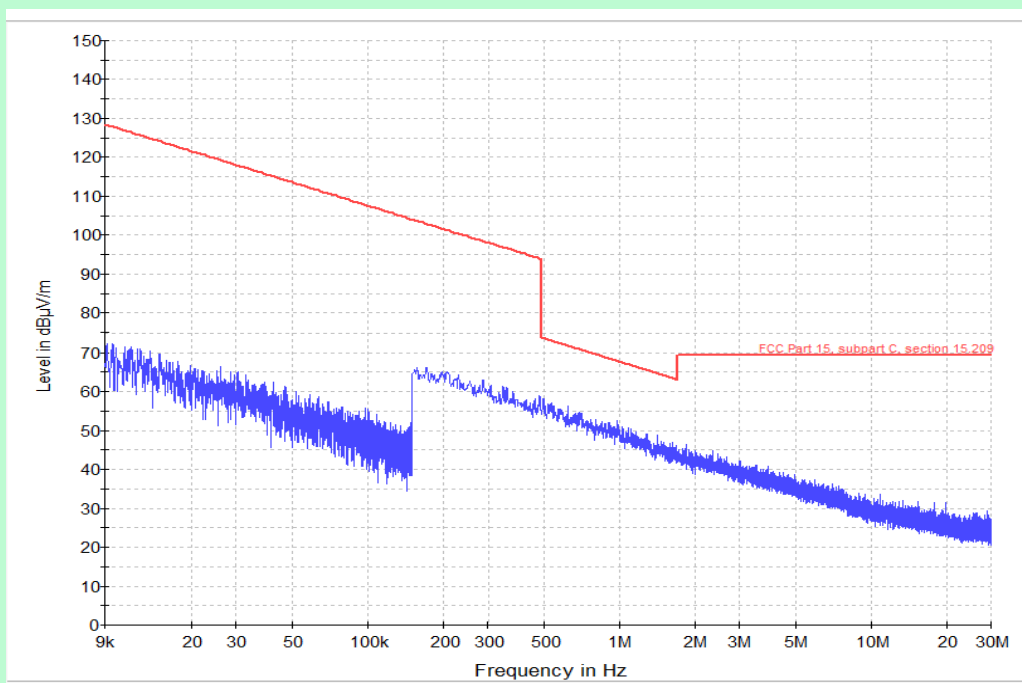
Channel 1 (903.55 MHz)

Note : Peak Graph - Parallel



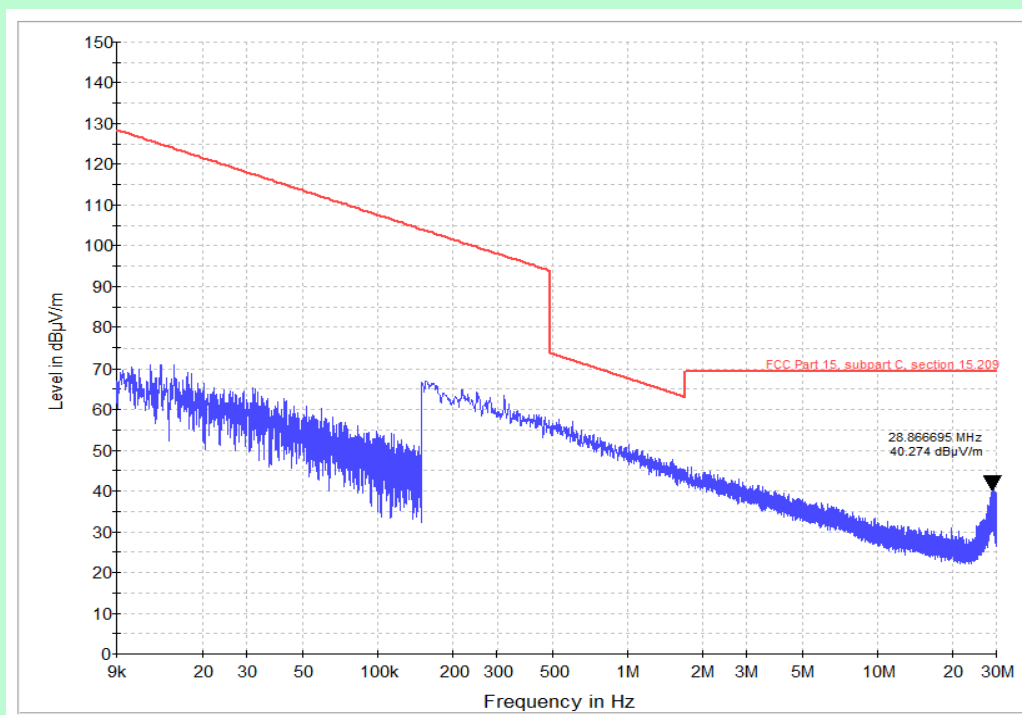
Channel 1 (903.55 MHz)

Note : Peak Graph - Perpendicular



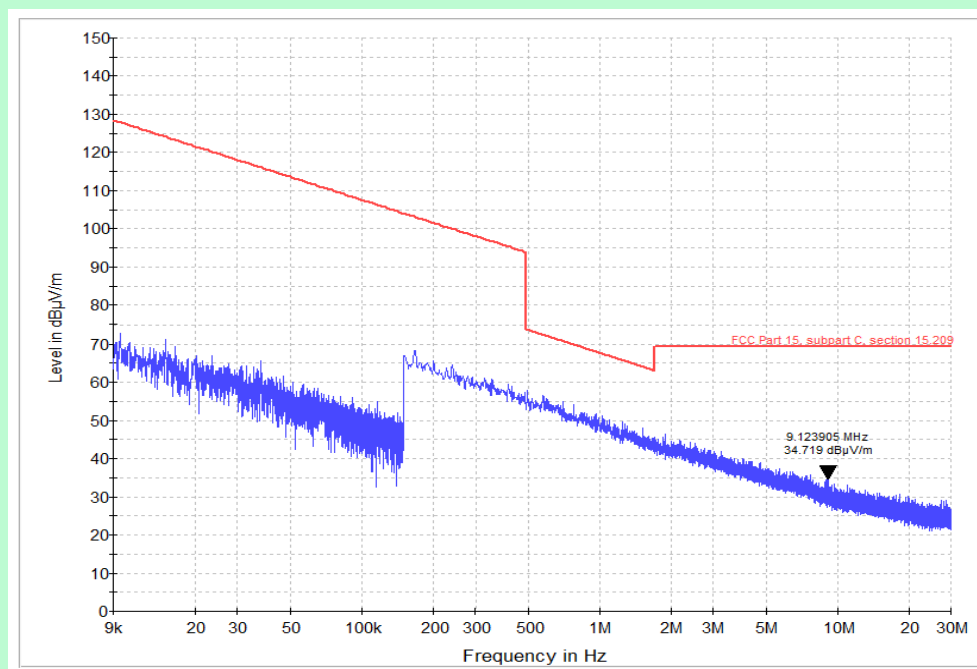
Channel 27 (916.35 MHz)

Note : Peak Graph - Parallel



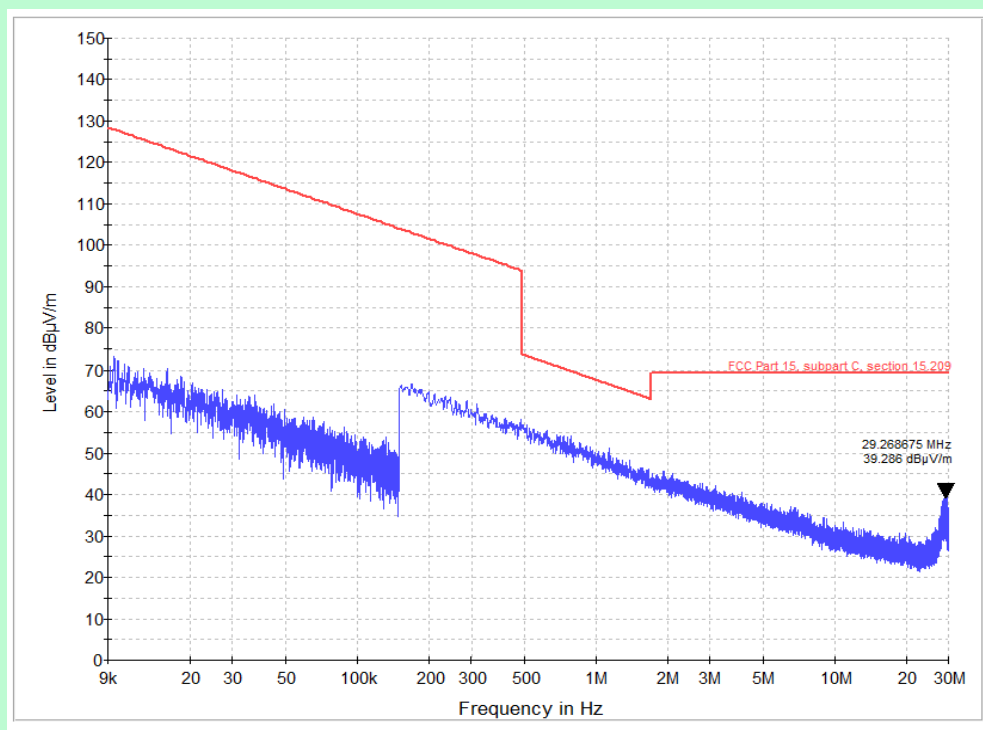
Channel 27 (916.35 MHz)

Note : Peak Graph - Perpendicular



Channel 52 (926.45 MHz)

Note : Peak Graph - Parallel

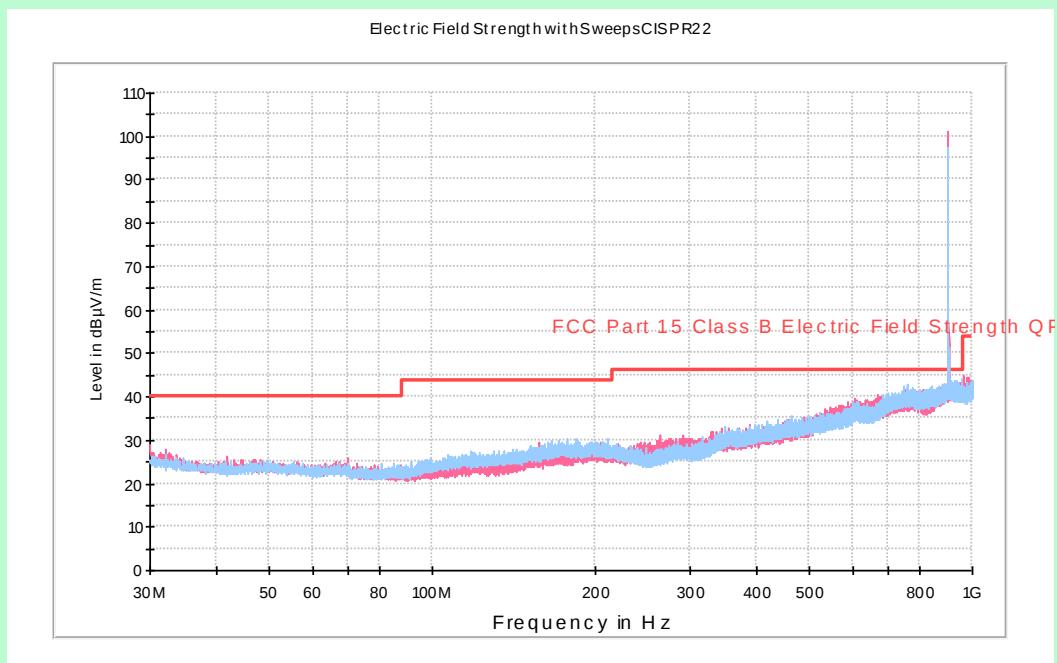


Channel 52 (926.45 MHz)

Note : Peak Graph - Perpendicular

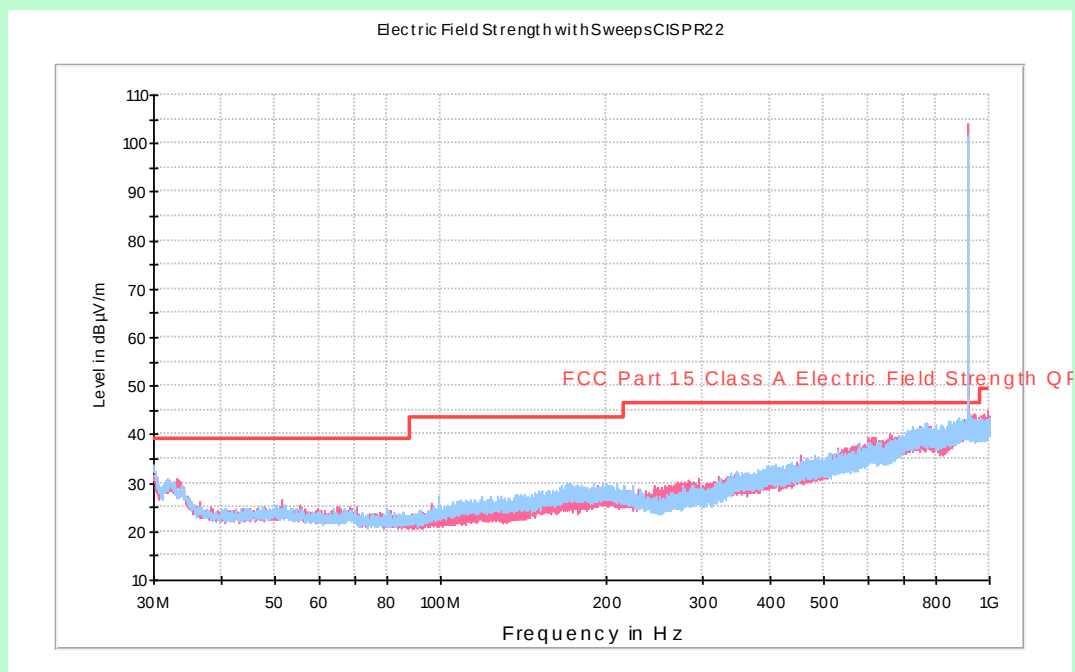
TEST RESULT – 9KHz to 30MHz									
Channel	Channel Frequency	Measured Spurious	Quasi Peak	Height	Ant Pol	Azimuth	Margin	Limit @ 3m Distance	Results
#	MHz	MHz	dBµV/m	cm	Parallel / Perpendicular	deg	dB	dBµV/m	
NO EMISSIONS FOUND									PASS
Note : Measured Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)									

TEST GRAPHS – 30 MHz to 1 GHz



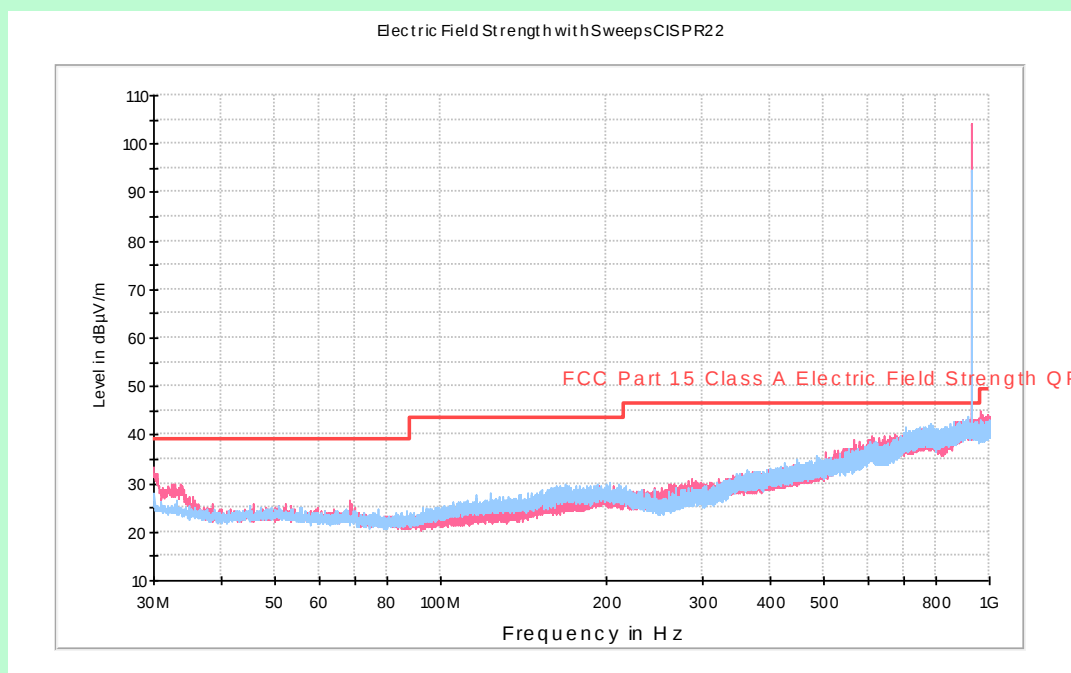
Channel 1 (903.55 MHz)

Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)



Channel 27 (916.35 MHz)

Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)



Channel 52 (926.45 MHz)

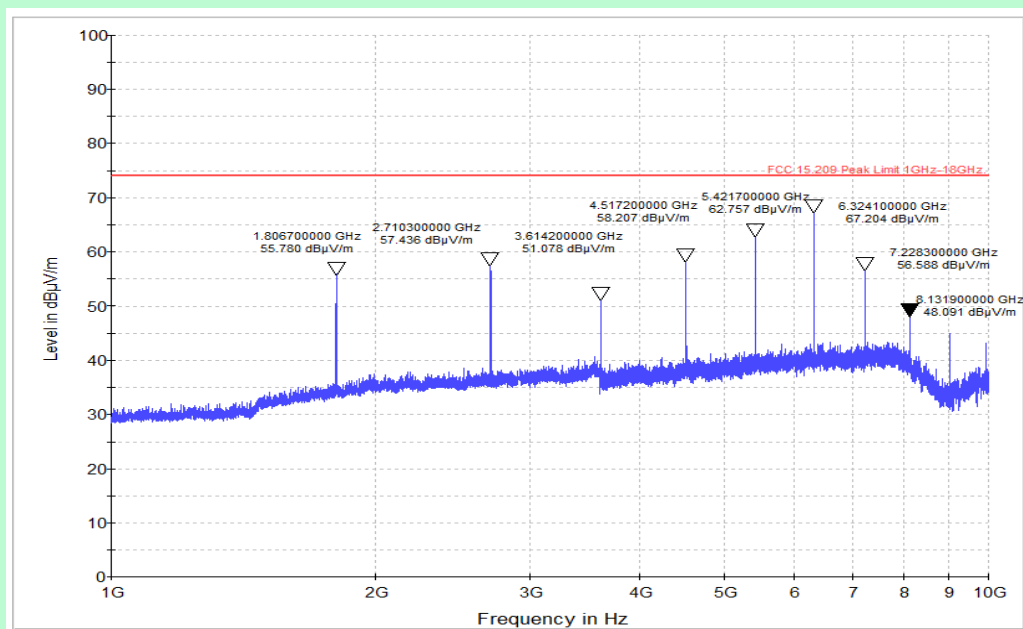
Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)

TEST RESULT – 30 MHz to 1 GHz

Channel	Measured Spurious	Quasi Peak	Height	Ant Pol	Azimuth	Margin	Limit @ 3m Distance	Results
#	MHz	dB μ V/m	cm	H / V	deg	dB	dB μ V/m	
1	30.11	23.2	100	V	240	16.8	40	PASS
1	44.42	21.5	100	V	120	18.5	40	PASS
1	69.56	18.3	200	V	240	21.7	40	PASS
1	87.74	17.8	400	H	90	22.2	40	PASS
1	165.96	22.4	100	V	0	21.1	43.5	PASS
1	209.72	23.2	300	H	120	20.3	43.5	PASS
1	344.57	25.8	100	H	60	20.2	46	PASS
1	461.61	27.8	400	V	240	18.2	46	PASS
1	697.85	34.4	300	H	300	11.6	46	PASS
1	903.61	108.6	100	V	180	-50.6	46	Intended Frequency
27	30.13	26.7	100	V	150	12.3	39	PASS
27	50.53	18.6	400	H	60	20.4	39	PASS
27	65.08	17.8	100	H	180	21.2	39	PASS
27	86.15	17.6	100	H	330	21.4	39	PASS
27	172.45	23.2	300	H	0	20.3	43.5	PASS
27	208.34	23.1	100	H	180	20.4	43.5	PASS

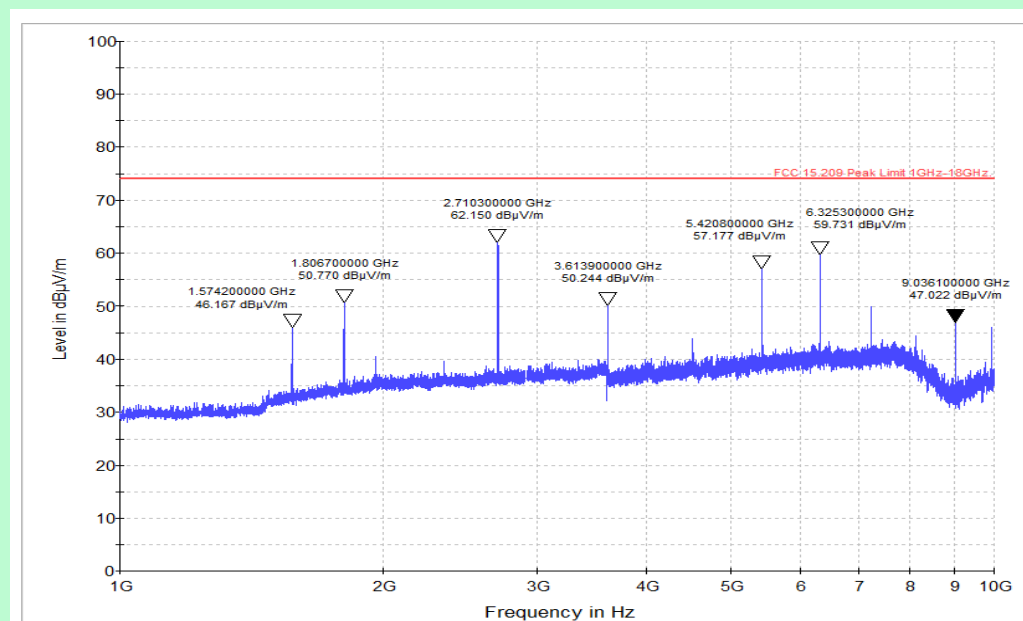
27	346.35	25.8	300	H	120	20.6	46.4	PASS
27	479.52	28.1	200	V	210	18.3	46.4	PASS
27	656.63	33.2	300	V	240	13.2	46.4	PASS
27	916.41	107.3	100	V	0	-48.9	46.4	Intended Frequency
52	30.02	27.4	100	V	330	11.6	39	PASS
52	52.16	18.4	400	H	0	20.6	39	PASS
52	67.51	18.1	100	V	210	20.9	39	PASS
52	85.97	17	300	V	180	22	39	PASS
52	168.33	23.1	200	H	0	20.4	43.5	PASS
52	202.74	23.5	400	H	240	20	43.5	PASS
52	346.92	25.9	300	H	330	20.5	46.4	PASS
52	483.89	28.7	300	H	30	17.7	46.4	PASS
52	701.08	34.5	300	H	60	11.9	46.4	PASS
52	926.5	110.6	100	V	330	-52.2	46.4	Intended Frequency
NOTE: Measured Field Strength –dBuV/m (9 KHz to 1GHz) = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)								

TEST GRAPHS – 1 GHz to 10 GHz



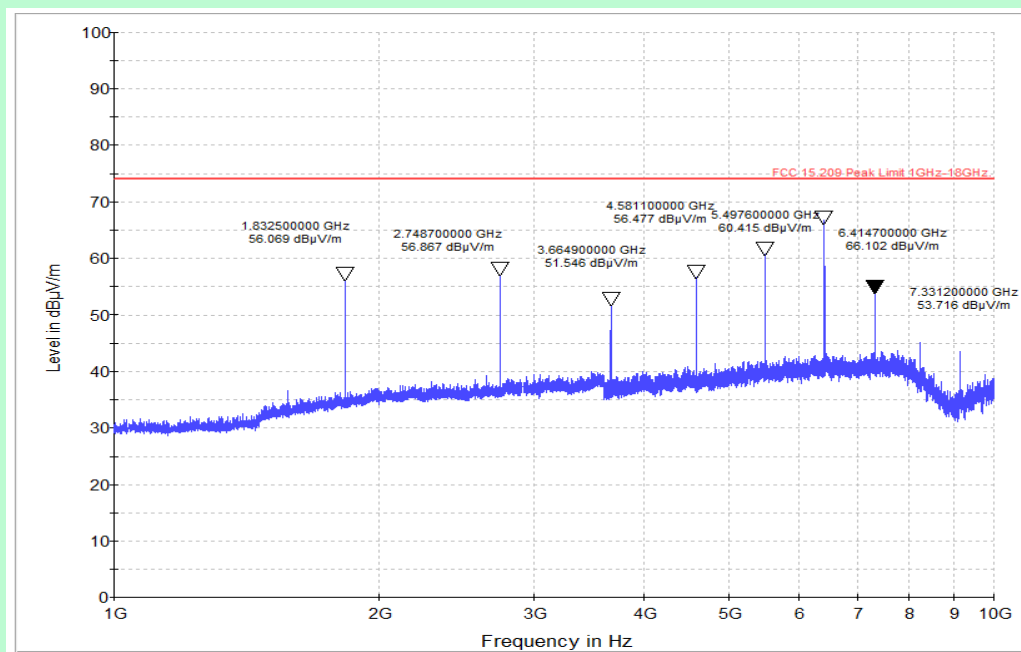
Channel 1 (903.55 MHz)

Note: Peak Graph - Horizontal



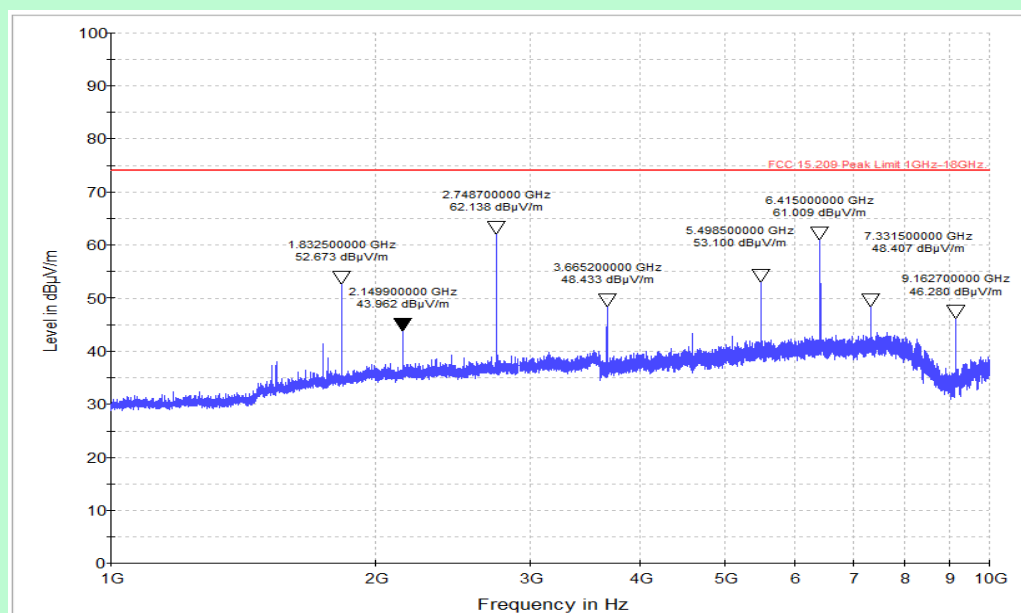
Channel 1 (903.55 MHz)

Note: Peak Graph – Vertical



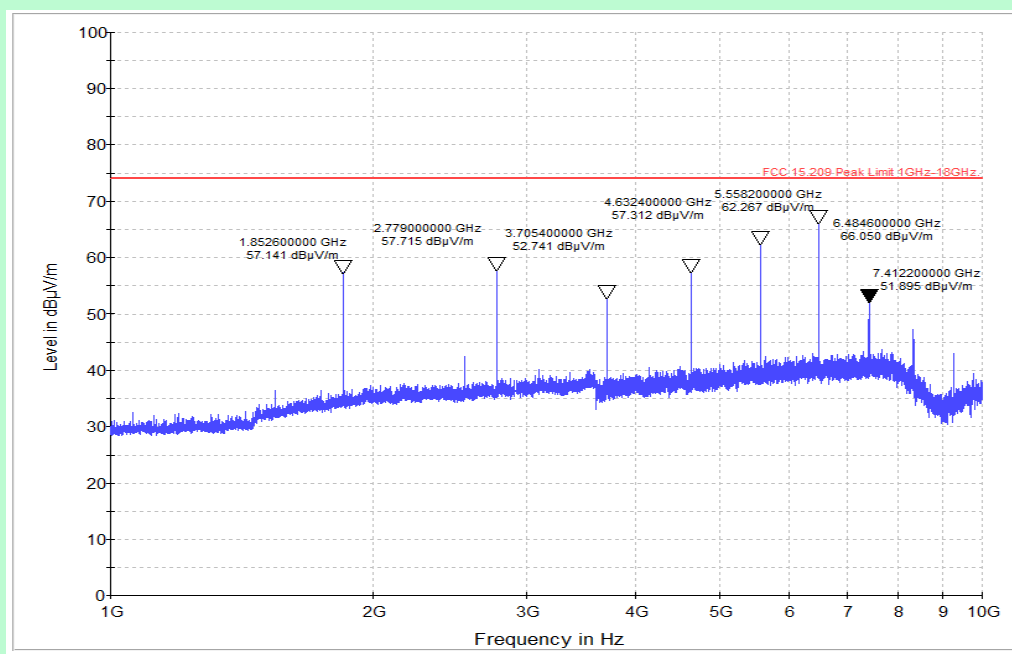
Channel 27 (916.35 MHz)

Note: Peak Graph - Horizontal



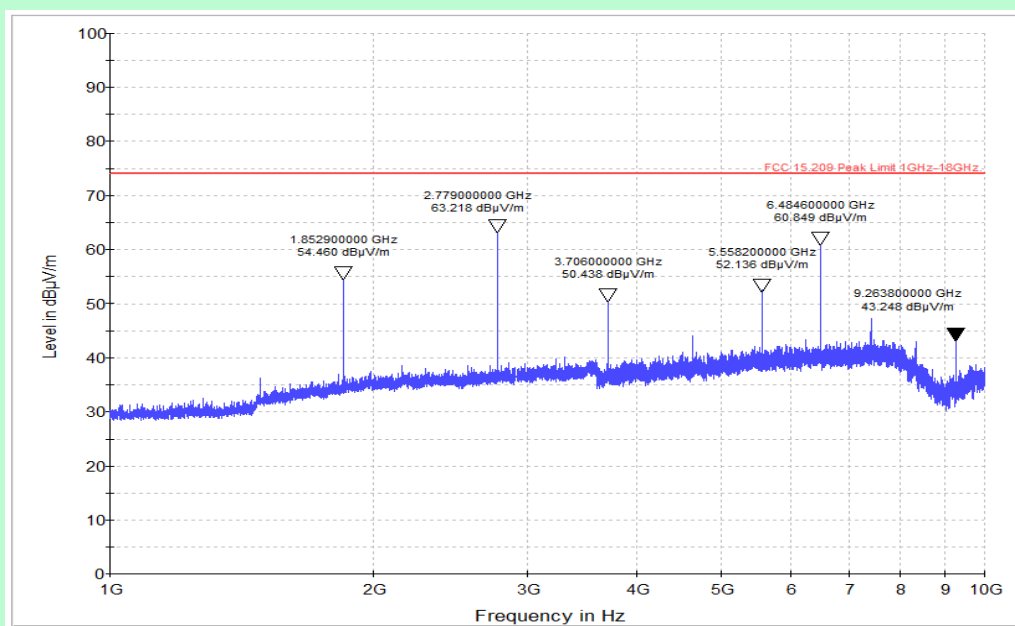
Channel 27 (916.35 MHz)

Note: Peak Graph - Vertical



Channel 52 (926.45 MHz)

Note: Peak Graph – Horizontal



Channel 52 (926.45 MHz)

Note: Peak Graph – Vertical

TEST RESULT – 1 GHz to 10 GHz							RESTRICTED BAND – PEAK & AVERAGE			
Channel	Spurious Frequency	Spurious Peak Level	Height	Ant Pol	Peak Limit	Peak Margin	Calculated Average Reading [Peak – Duty cycle]	Average Limit	Margin	Results
#	GHz	dBμV/m	cm	H / V	dBμV/m	dB	dBμV/m	dBμV/m	dB	
1	2.7103	57.436	100	H	74	16.564	39.356	54	14.644	PASS
1	3.6141	51.078	100	H	74	22.922	32.998	54	21.002	PASS
1	4.5172	58.207	100	H	74	15.793	40.127	54	13.873	PASS
1	5.4217	27.757	100	H	74	46.243	9.677	54	44.323	PASS
1	6.3241	67.204	400	H	74	6.796	49.124	54	4.876	PASS
1	7.2283	56.588	100	H	74	17.412	38.508	54	15.492	PASS
1	8.1319	48.091	100	H	74	25.909	30.011	54	23.989	PASS
1	1.5742	46.167	100	V	74	27.833	28.087	54	25.913	PASS
1	2.7103	62.15	100	V	74	11.85	44.07	54	9.93	PASS
1	3.6139	50.244	100	V	74	23.756	32.164	54	21.836	PASS
1	5.4208	57.177	100	V	74	16.823	39.097	54	14.903	PASS
1	6.3253	59.731	100	V	74	14.269	41.651	54	12.349	PASS
1	9.0361	47.022	100	V	74	26.978	28.942	54	25.058	PASS
27	2.7487	56.867	100	H	74	17.133	38.787	54	15.213	PASS
27	3.6649	51.546	100	H	74	22.454	33.466	54	20.534	PASS
27	4.5811	56.477	100	H	74	17.523	38.397	54	15.603	PASS
27	5.4985	60.415	100	H	74	13.585	42.335	54	11.665	PASS
27	6.4147	66.102	100	H	74	7.898	48.022	54	5.978	PASS
27	7.3312	53.716	100	H	74	20.284	35.636	54	18.364	PASS
27	2.1499	43.962	100	V	74	30.038	25.882	54	28.118	PASS
27	2.7487	62.138	100	V	74	11.862	44.058	54	9.942	PASS
27	3.6652	48.433	100	V	74	25.567	30.353	54	23.647	PASS
27	5.4985	53.1	100	V	74	20.9	35.02	54	18.98	PASS
27	6.415	61.009	100	V	74	12.991	42.929	54	11.071	PASS
27	7.3315	48.407	100	V	74	25.593	30.327	54	23.673	PASS
27	9.1627	46.28	100	V	74	27.72	28.2	54	25.8	PASS
52	2.779	57.715	100	H	74	16.285	39.635	54	14.365	PASS
52	3.7054	52.741	100	H	74	21.259	34.661	54	19.339	PASS
52	4.6324	57.312	100	H	74	16.688	39.232	54	14.768	PASS
52	5.5582	62.267	100	H	74	11.733	44.187	54	9.813	PASS
52	6.4846	66.05	100	H	74	7.95	47.97	54	6.03	PASS
52	7.4122	51.895	100	H	74	22.105	33.815	54	20.185	PASS
52	2.779	63.218	100	V	74	10.782	45.138	54	8.862	PASS
52	3.706	53.232	100	V	74	20.768	35.152	54	18.848	PASS
52	5.5582	52.136	100	V	74	21.864	34.056	54	19.944	PASS
52	6.4846	60.849	100	V	74	13.151	42.769	54	11.231	PASS
52	9.2638	43.248	100	V	74	30.752	25.168	54	28.832	PASS

Note :

* Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss – Ext. Pre amplifier Gain (dB)

* Duty Cycle Correction Factor is calculated using the guidelines provided in DA 00-705 (Spurious Radiated Emissions)
Duty Cycle correction Factor = $20 \log (1.560 * 8 / 100) = -18.08 \text{ dB}$

* Duty Cycle Factor = $20 * \log (\text{Dwell time} / 100 \text{ msec})$, Number of Transmission for 100 msec: 8, Dwell time per Transmission: 1.560 msec

TEST RESULT – 1 GHz to 10 GHz						NON-RESTRICTED BAND - PEAK		
Channel	Measured Fundamental	Spurious Emission	Measured Harmonic	Height	Ant Pol	Limit	Margin	Results
						[Fundamental – 20dBc]		
#	dBμV/m	GHz	dBμV/m	cm	H / V	dBuV/m	dB	
1	108.6	1.8067	55.78	100	H	88.6	32.82	PASS
1	108.6	1.8067	50.77	100	V	88.6	37.83	PASS
27	107.3	1.8325	56.069	100	H	87.3	31.231	PASS
27	107.3	1.8325	52.673	100	V	87.3	34.627	PASS
52	110.6	1.8526	57.141	100	H	90.6	33.459	PASS
52	110.6	1.8529	54.46	100	V	90.6	36.14	PASS

Note :
 Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss - Pre amplifier Gain (dB)

TEST SETUP PHOTOGRAPHS

Refer Annexure 1

Radiated Emission Test Setup

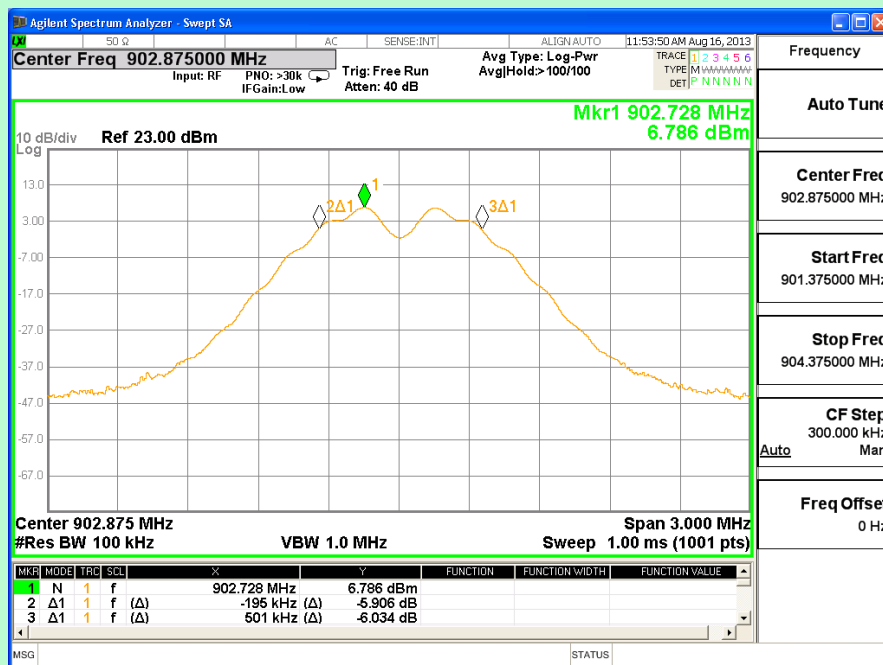
3 DTS CHANNELS

3.1 DTS 6dB BANDWIDTH

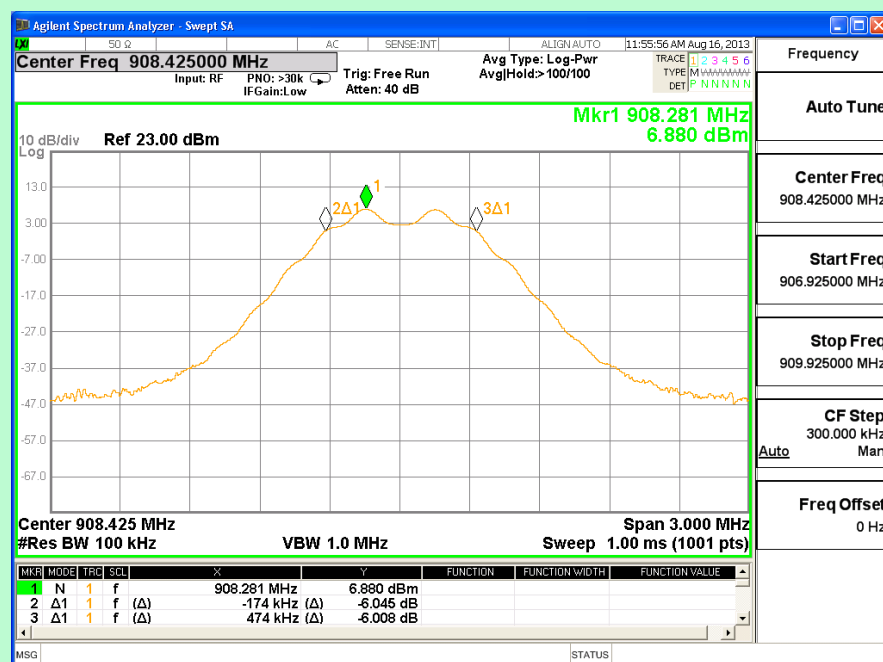
EUT Nomenclature	Wireless Display Driver	Test Request No.	EMC-1259-2
Model No.	W-DIS-D	Serial No.	05313
Test Start Date	16-Aug-2013	Temperature (°C)	23.2
Test End Date	16-Aug-2013	Humidity RH (%)	55.1
Tested By	Loganathan Joghee	Pressure (mbar)	NR
Input Voltage / Freq	24 Vdc		
Operating Mode	Refer Page 5 for Operating Mode Table		
Test configuration	Refer Page 5 for Test Configuration Table		
Deviation from Std	NA		
Applicable standard	FCC Part 15.247		
Test Method	KDB 558074		
Comment			
TEST DETAILS			
Method	☒ Conducted , ☐ Radiated		
TEST PARAMETERS			
Antenna Height	NA	Turntable Rotation	NA
Equipment Class	NA	Measurement Distance	NA

TEST EQUIPMENT					
Y/N	Equipment	Make	Model	Serial Number	Cal Due Date
Y	Spectrum Analyzer	Agilent	N9010A	MY48031005	28-Nov-2014
Y	RF Cable	Huber- Suhner	SF104/2X11PC3542/500	NA	NA

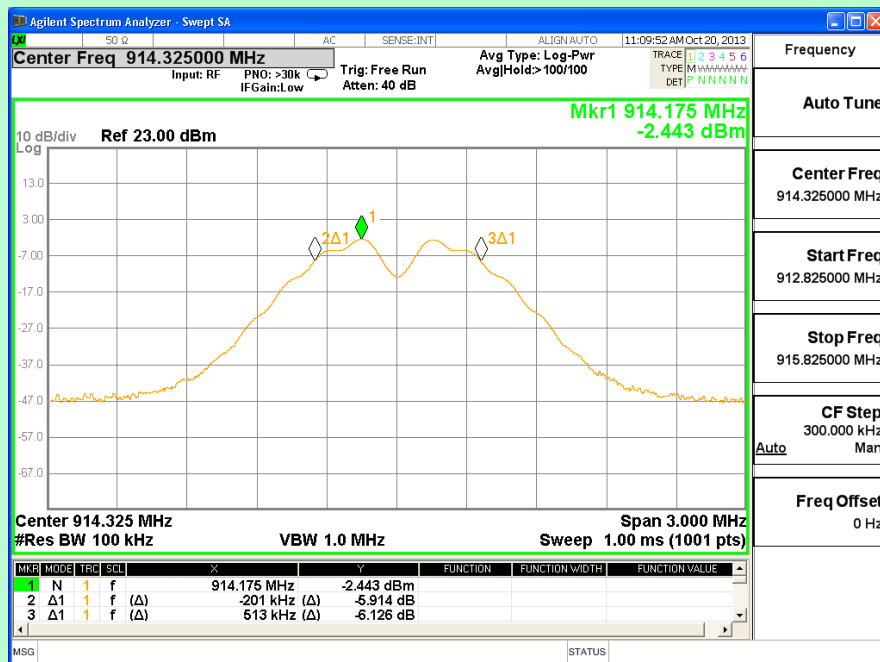
TEST GRAPHS



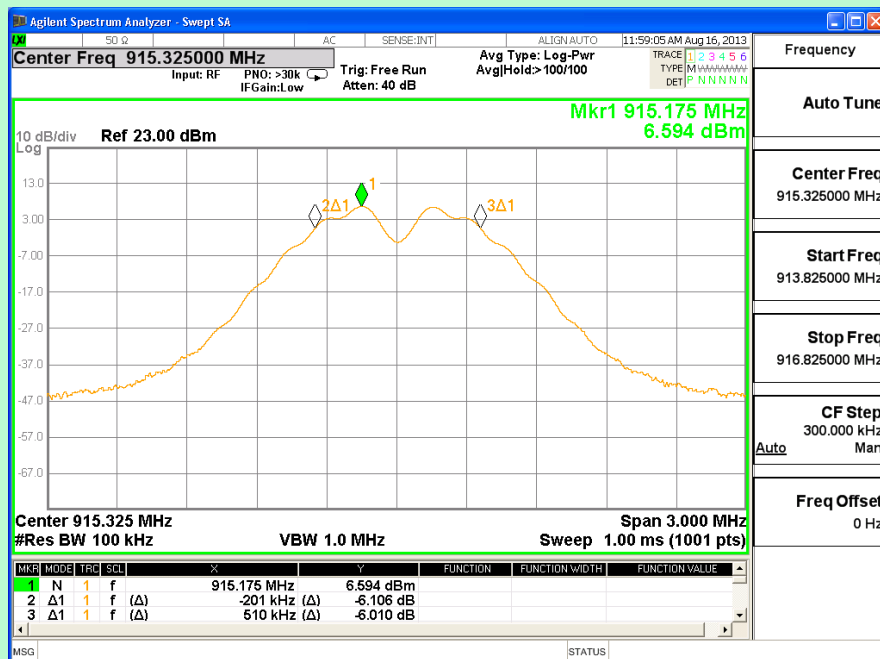
Channel 1 (902.875 MHz)



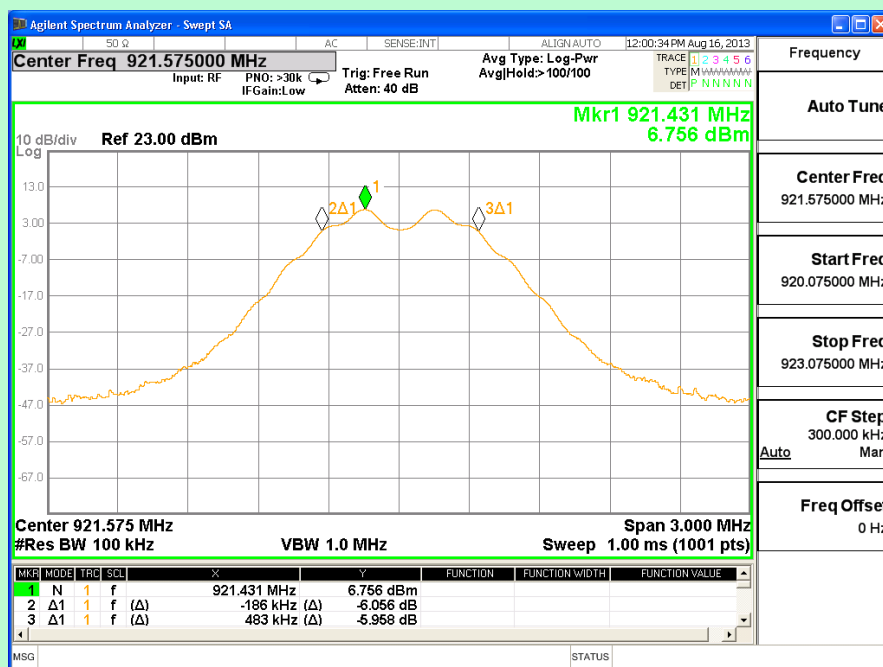
Channel 2 (908.425 MHz)



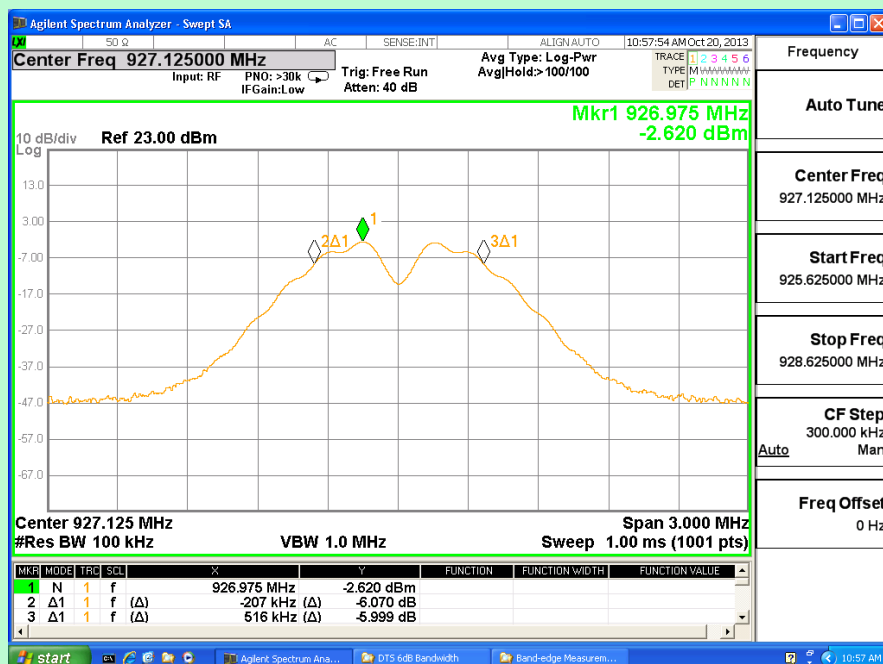
Channel 3 (914.325 MHz)



Channel 4 (915.325 MHz)



Channel 5 (921.575 MHz)



Channel 6 (927.125 MHz)

TEST RESULT				
Channel	Frequency	Measured Value	Limit	Result
#	MHz	KHz	KHz	
1	902.875	696	≥500	PASS
2	908.425	648	≥500	PASS
3	914.325	714	≥500	PASS
4	915.325	711	≥500	PASS
5	921.575	669	≥500	PASS
6	927.125	723	≥500	PASS

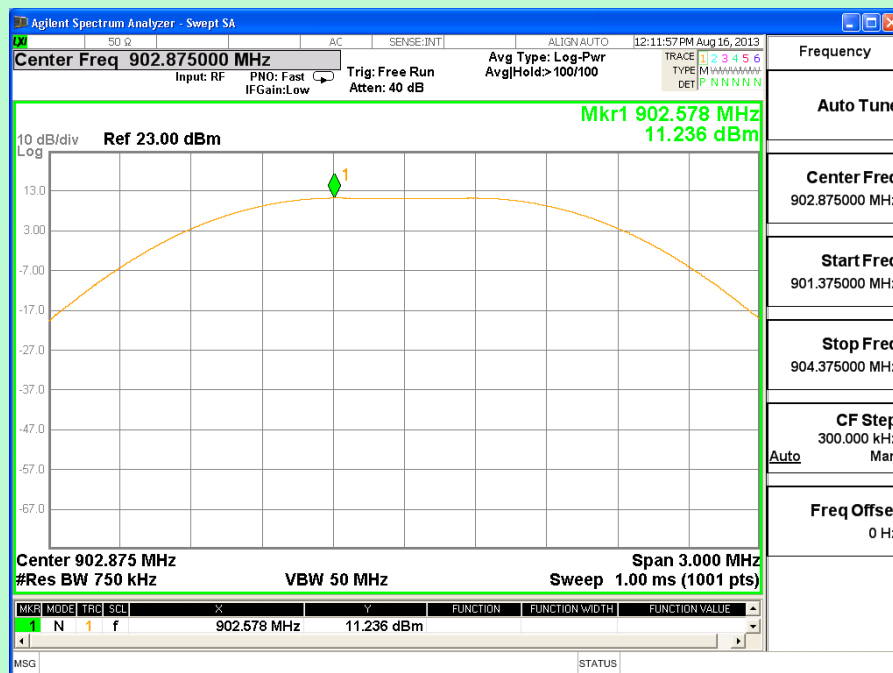
TEST SETUP PHOTOGRAPHS	
Refer Annexure-1	
Conducted RF Test Setup	

3.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER

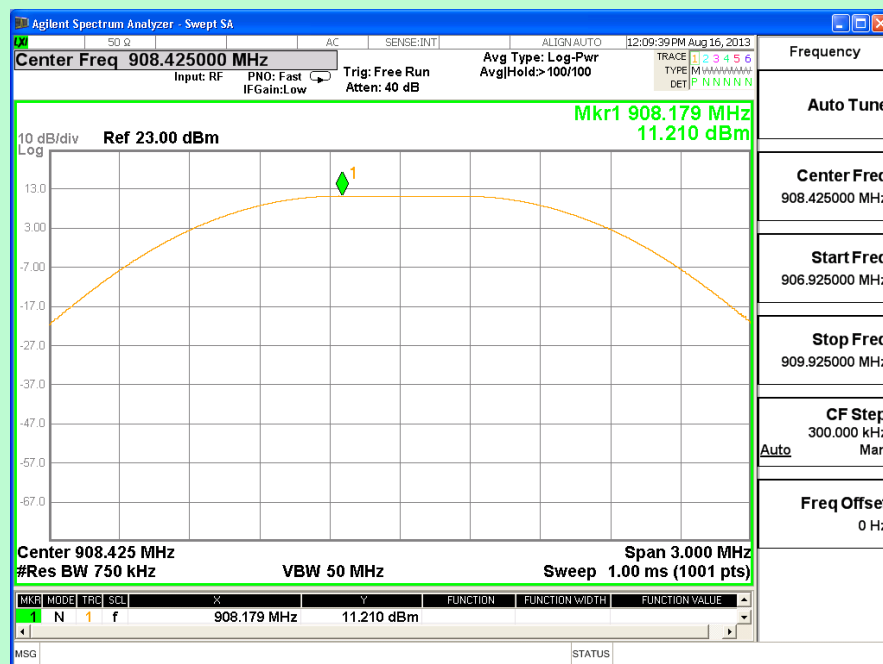
EUT Nomenclature	Wireless Display Driver	Test Request No.	EMC-1259-2
Model No.	W-DIS-D	Serial No.	05313
Test Start Date	16-Aug-2013	Temperature (°C)	23.1
Test End Date	20-Aug-2013	Humidity RH (%)	55.1
Tested By	Loganathan Joghee	Pressure (mbar)	NR
Input Voltage / Freq	24 Vdc		
Operating Mode	Refer Page 5 for Operating Mode Table		
Test configuration	Refer Page 5 for Test Configuration Table		
Deviation from Std	NA		
Applicable standard	FCC Part 15.247		
Test Method	KDB 558074		
Comment			
TEST DETAILS			
Method	☒ Conducted , ☐ Radiated	DTS - Bandwidth	☒ RBW ≥ DTS ☐ RBW ≤ DTS
TEST PARAMETERS			
Antenna Height	NA	Turntable Rotation	NA
Equipment Class	NA	Measurement Distance	NA

TEST EQUIPMENT					
Y/N	Equipment	Make	Model	Serial Number	Cal Due Date
Y	Spectrum Analyzer	Agilent	N9010A	MY48031005	28-Nov-2014
Y	RF Cable	Huber- Suhner	SF104/2X11PC3542/500	NA	NA

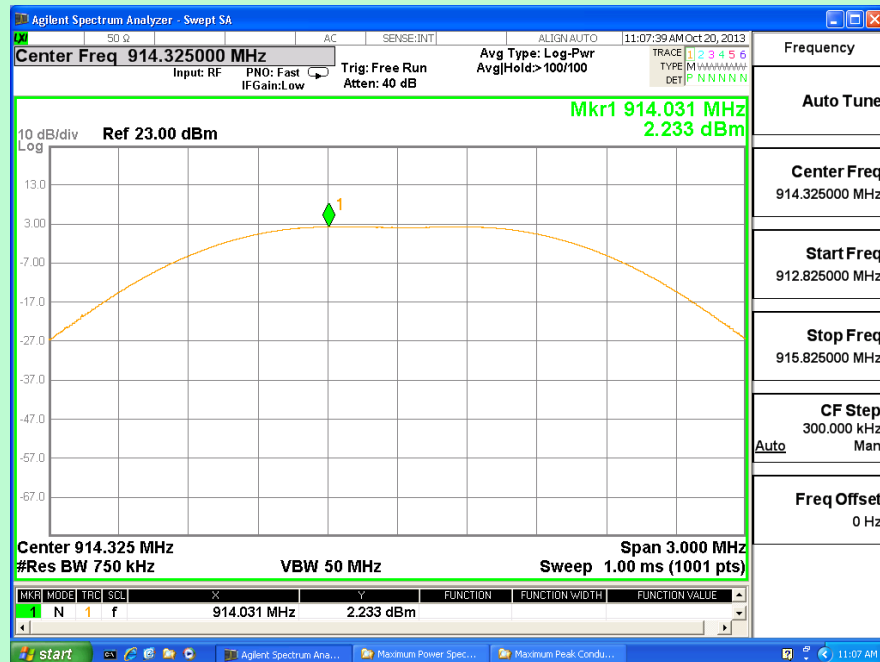
TEST GRAPHS



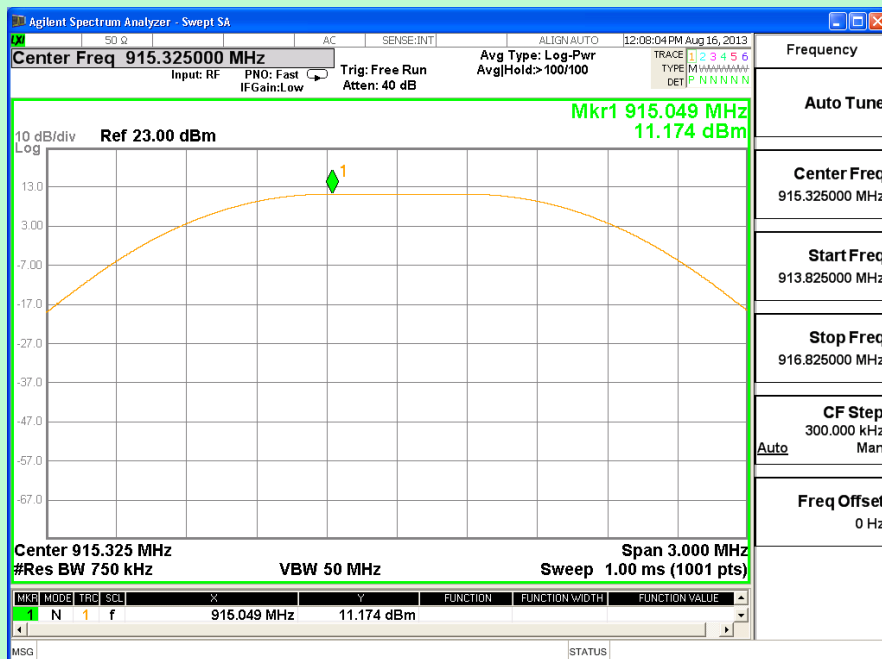
Channel 1 (902.875 MHz)



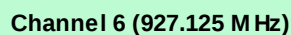
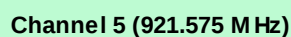
Channel 2 (908.425 MHz)



Channel 3 (914.325 MHz)



Channel 4 (915.325 MHz)



TEST RESULT						
Channel No.	Frequency	Measured Level	Cable Loss	Transmitter Output Power Level	Limit	Result
#	MHz	dBm	dB	dBm	dBm	
1	902.875	11.236	0.5	11.736	≤30	PASS
2	908.425	11.210	0.5	11.710	≤30	PASS
3	914.325	2.233	0.5	2.733	≤30	PASS
4	915.325	11.174	0.5	11.674	≤30	PASS
5	921.575	11.126	0.5	11.626	≤30	PASS
6	927.125	2.148	0.5	2.648	≤30	PASS

TEST SETUP PHOTOGRAPHS
Refer Annexure-1 Conducted RF Test Setup

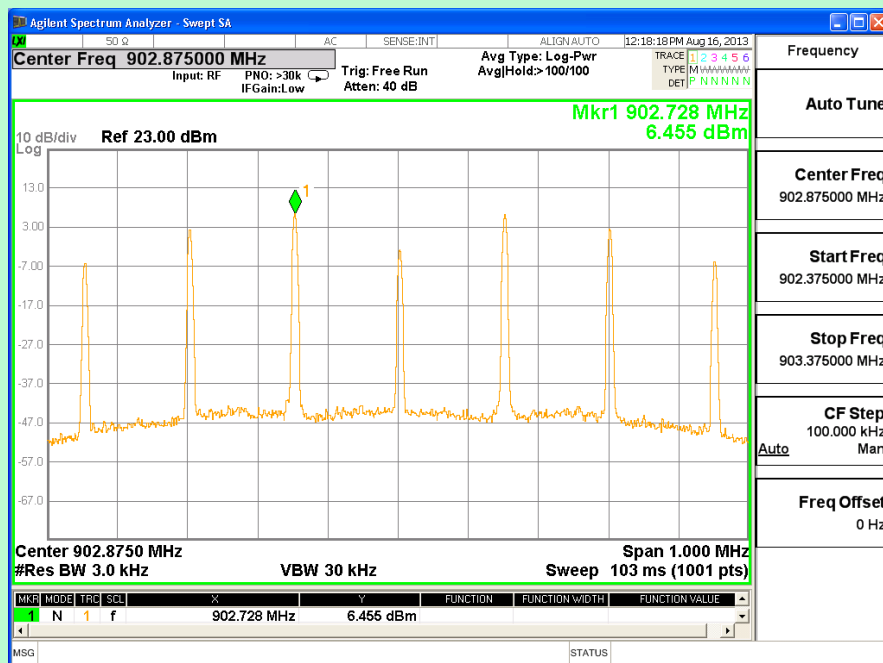
3.3 MAXIMUM POWER SPECTRAL DENSITY

EUT Nomenclature	Wireless Display Driver	Test Request No.	EMC-1259-2			
Model No.	W-DIS-D	Serial No.	05313			
Test Start Date	16-Aug-2013	Temperature (°C)	23.1			
Test End Date	20-Oct-2013	Humidity RH (%)	55.2			
Tested By	Loganathan Joghee	Pressure (mbar)	NR			
Input Voltage / Freq	24 Vdc					
Operating Mode	Refer Page 5 for Operating Mode Table					
Test configuration	Refer Page 5 for Test Configuration Table					
Deviation from Std	NA					
Applicable standard	FCC Part 15.247					
Test Method	KDB 558074					
Comment						
TEST DETAILS						
Method	☒ Conducted ☐ Radiated					
TEST PARAMETERS						
Antenna Height	NA	Turntable Rotation	NA			
Equipment Class	NA	Measurement Distance	NA			

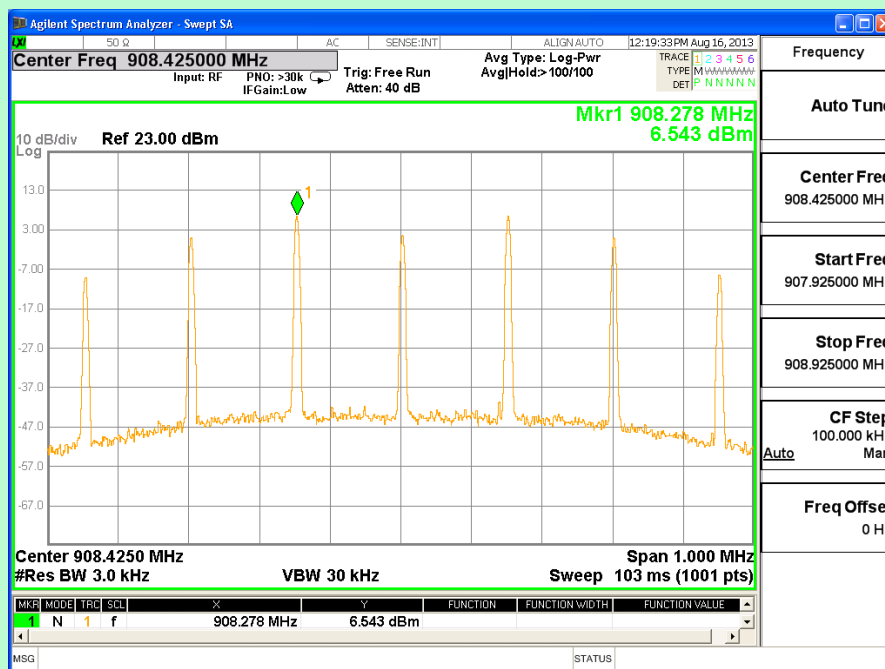
TEST EQUIPMENT

Y/N	Equipment	Make	Model	Serial Number	Cal Due Date
Y	Spectrum Analyzer	Agilent	N9010A	MY48031005	28-Nov-2014
Y	RF Cable	Huber- Suhner	SF104/2X11PC3542/500	NA	NA

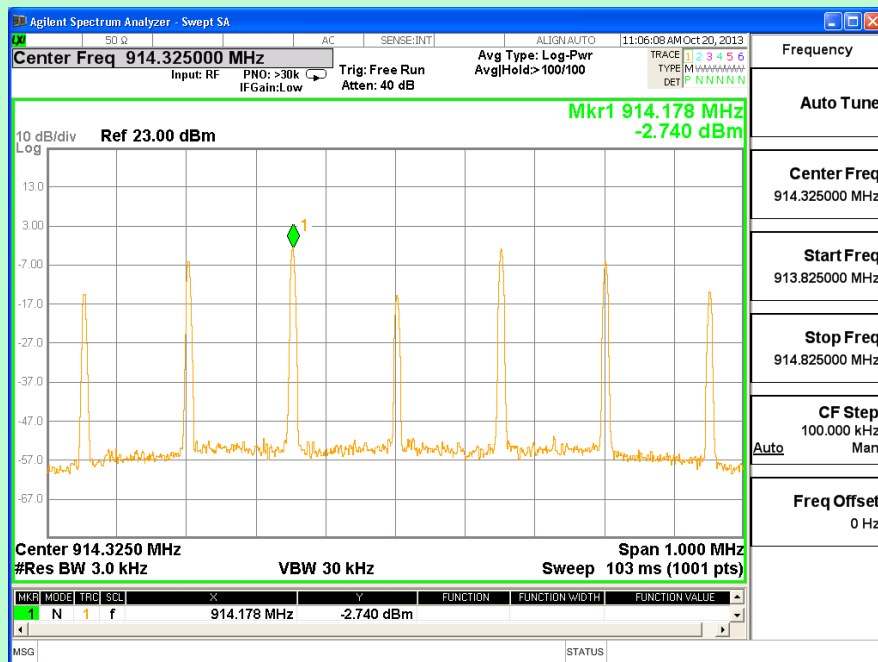
TEST GRAPHS



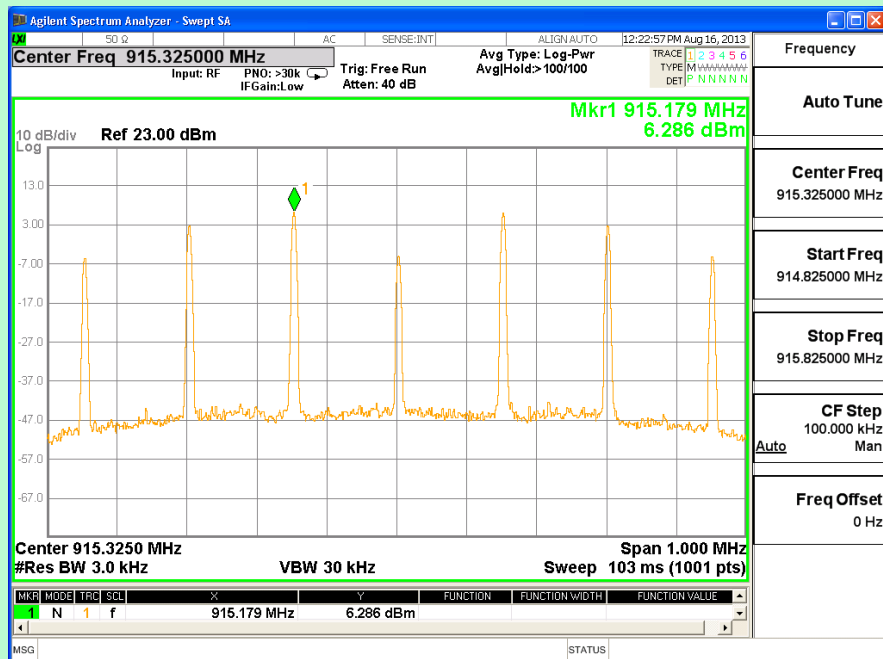
Channel 1 (902.875 MHz)



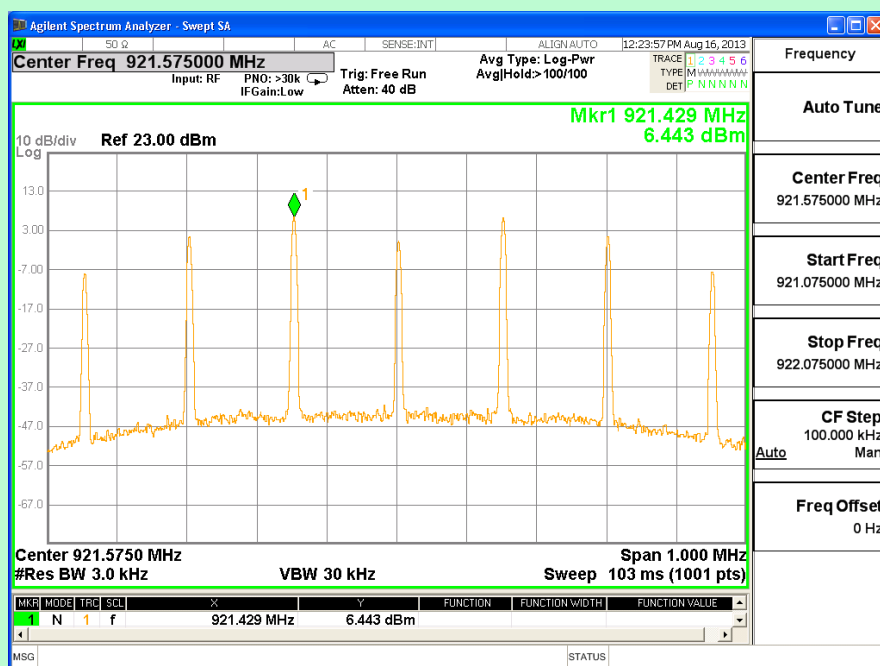
Channel 2 (908.425 MHz)



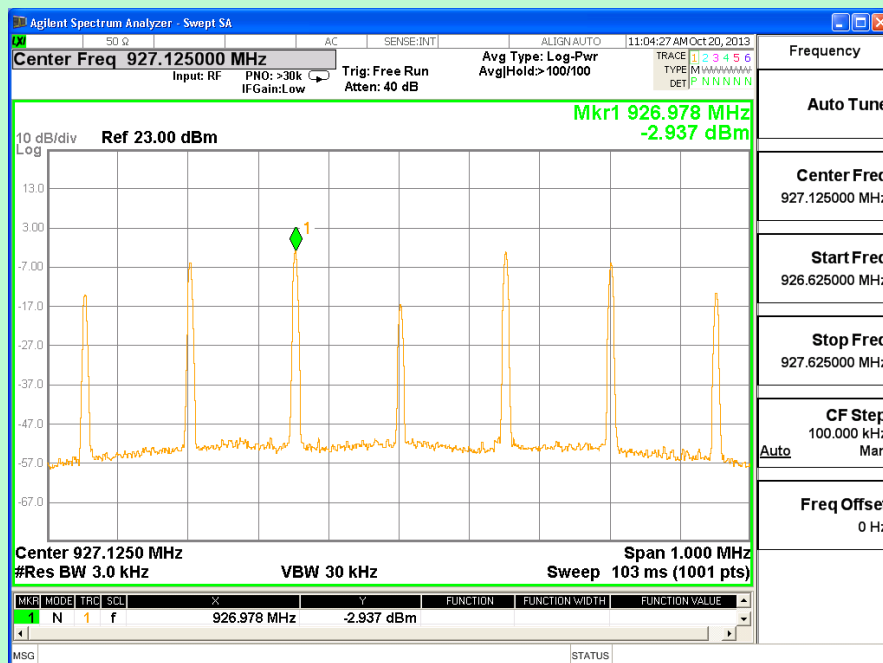
Channel 3 (914.325 MHz)



Channel 4 (915.325 MHz)



Channel 5 (921.575 MHz)



Channel 6 (927.125 MHz)

TEST RESULT				
Channel	Freq	Measured Level	Limit	Result
#	MHz	dBm/ 3KHz	dBm/ 3KHz	
1	902.875	6.455	<8	PA SS
2	908.425	6.543	<8	PA SS
3	914.325	-2.740	<8	PA SS
4	915.325	6.286	<8	PA SS
5	921.575	6.443	<8	PA SS
6	927.125	-2.937	<8	PA SS

TEST SETUP PHOTOGRAPHS

Refer Annexure-1

Conducted RF Test Setup

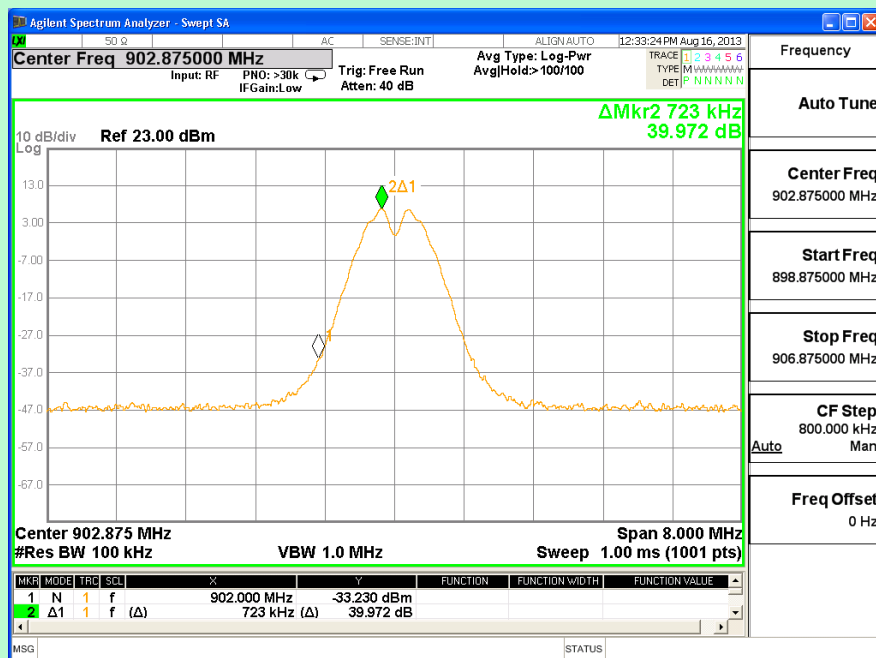
3.4 BAND-EDGE MEASUREMENTS

EUT Nomenclature	Wireless Display Driver	Test Request No.	EMC-1259-2
Model No.	W-DIS-D	Serial No.	05313
Test Start Date	16-Aug-2013	Temperature (°C)	23.1
Test End Date	20-Oct-2013	Humidity RH (%)	55.1
Tested By	Loganathan Joghee	Pressure (mbar)	NR
Input Voltage / Freq	24 Vdc		
Operating Mode	Refer Page 5 for Operating Mode Table		
Test configuration	Refer Page 5 for Test Configuration Table		
Deviation from Std	NA		
Applicable standard	FCC Part 15.247		
Test Method	KDB 558074		
Comment			
TEST DETAILS			
Method	☒ Conducted ☐ Radiated		
TEST PARAMETERS			
Antenna Height	NA	Turntable Rotation	NA
Equipment Class	NA	Measurement Distance	NA

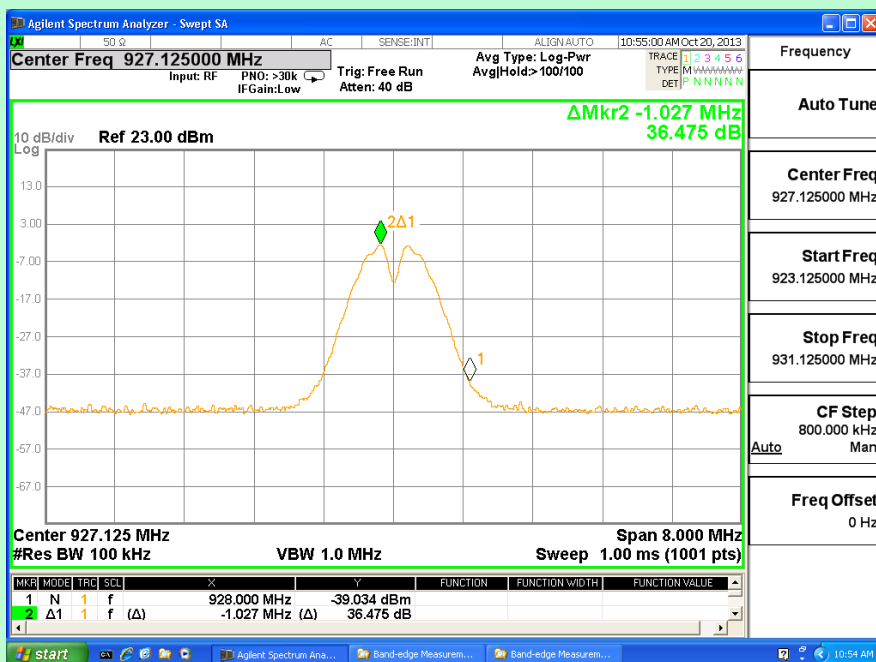
TEST EQUIPMENT

Y/N	Equipment	Make	Model	Serial Number	Cal Due Date
Y	Spectrum Analyzer	Agilent	N9010A	MY48031005	28-Nov-2014
Y	RF Cable	Huber- Suhner	SF104/2X11PC3542/500	NA	NA

TEST GRAPHS



Channel 1 (902.875 MHz)



Channel 6 (927.125 MHz)

TEST RESULT				
Channel	Frequency	Measured Level	Limit	Results
#	MHz	dB	dBc	
1	902.875	39.972	>20	PASS
2	927.125	36.475	>20	PASS

TEST SETUP PHOTOGRAPHS				
Refer Annexure-1				
Conducted RF Test Setup				

3.5 SPURIOUS RADIATED EMISSIONS

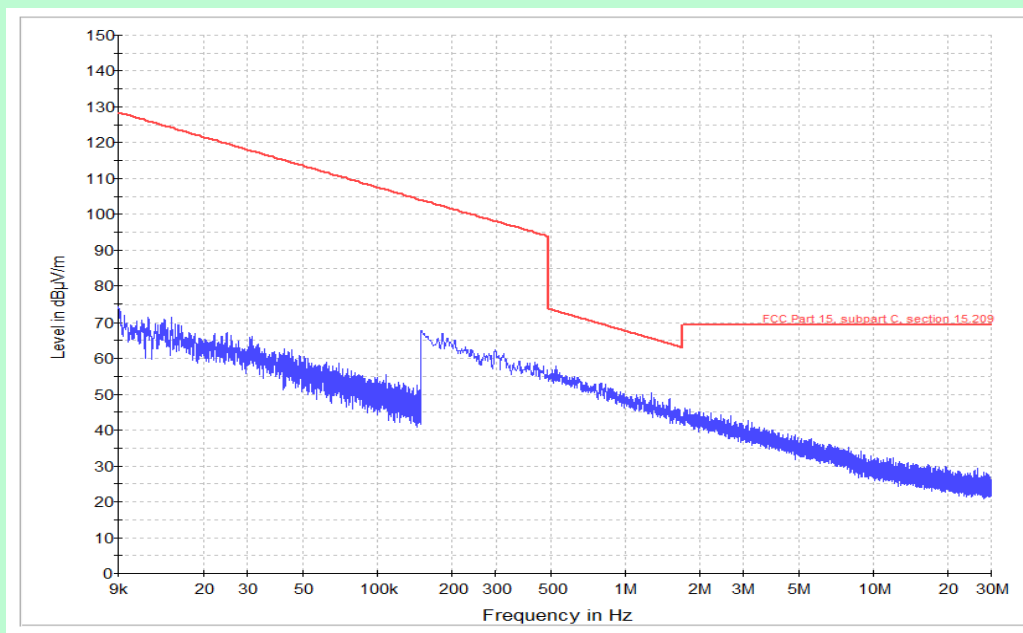
EUT Nomenclature	Wireless Display Driver	Test Request No	EMC-1259-2
Model No	W-DIS-D	Serial No	05313
Test Start Date	11-Sep-2013	Temperature (°C)	23.1
Test End Date	16-Dec-2013	Humidity RH (%)	57.2
Tested By	Gulshan Kumar	Pressure (mbar)	NR
Input Voltage / Freq	24 Vdc		
Operating Mode	Refer Page 5 for Operating Mode Table		
Test configuration	Refer Page 5 for Test Configuration Table		
Deviation from Std	NA		
Comment			
TEST FREQUENCY RANGE			
Start Frequency	9KHz	Stop Frequency	10GHz
MAXIMUM OPERATING FREQUENCY			
902 MHz to 928 MHz			
TEST PARAMETERS			
Antenna Height	1m to 4m	Turntable Rotation	0° to 360°
Applicable standard	FCC Part 15.247 & 15.209	Test Method	KDB 558074
Equipment Class	NA	Measurement Distance	3m

TEST EQUIPMENT

Y/N	Equipment	Make	Model	Serial Number	Cal Due Date
Y	EMI Test Receiver	R&S	ESU26	100229	04-Feb-2014
Y	3m Semi Anechoic Chamber	ETS Lindgren	DKE 6X7 DBL.DR	1625	31-Dec-2013
Y	Double Ridge Guide Horn Antenna	ETS Lindgren	3117	00064055	07-Nov-2013
Y	Bilog Antenna	ETS Lindgren	HLP3003C	130525	30-Nov-2013
Y	Loop Antenna	ETS Lindgren	6507	000103694	12-Mar-2014
Y	RF cable (9KHz to 1GHz)	COLEMAN	RG214	RE-1A	09-May-2014
Y	RF cable (9KHz to 1GHz)	COLEMAN	RG214	RE-1B	09-May-2014
Y	RF cable (1GHz to 18GHz)	AH Systems	SAC-18G-06	RE-2A	09-May-2014
Y	RF cable (1GHz to 18GHz)	AH Systems	SAC-18G-06	RE-2B	09-May-2014
Y	Signal Conditioning unit	R&S	SCU-18	10178	13-June-2014
Y	High Pass Filter	Wainwright	WHKX1.5/15G-12ST	1	09-May-2014
Y	EMC32 Software	R&S	8.30.0	820-OT101248	NA

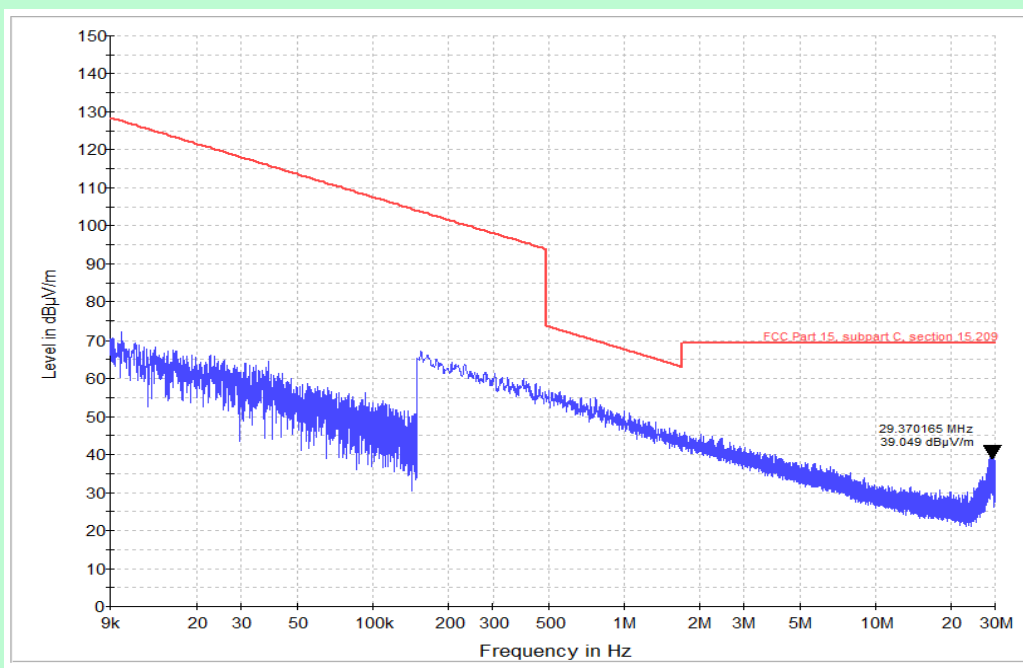
Note: Switch ON/OFF the Internal Preamplifier based on carrier level and or noise floor without overloading the receiver

TEST GRAPHS – 9 KHz to 30 MHz



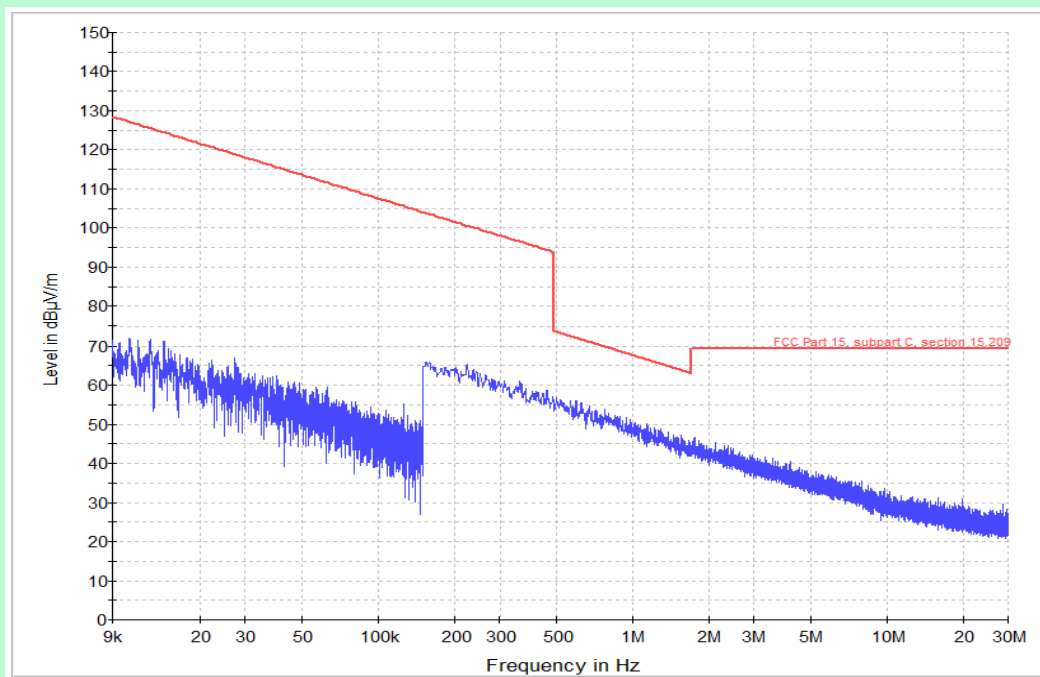
Channel 1 (902.875 MHz)

Note : Peak Graph - Parallel



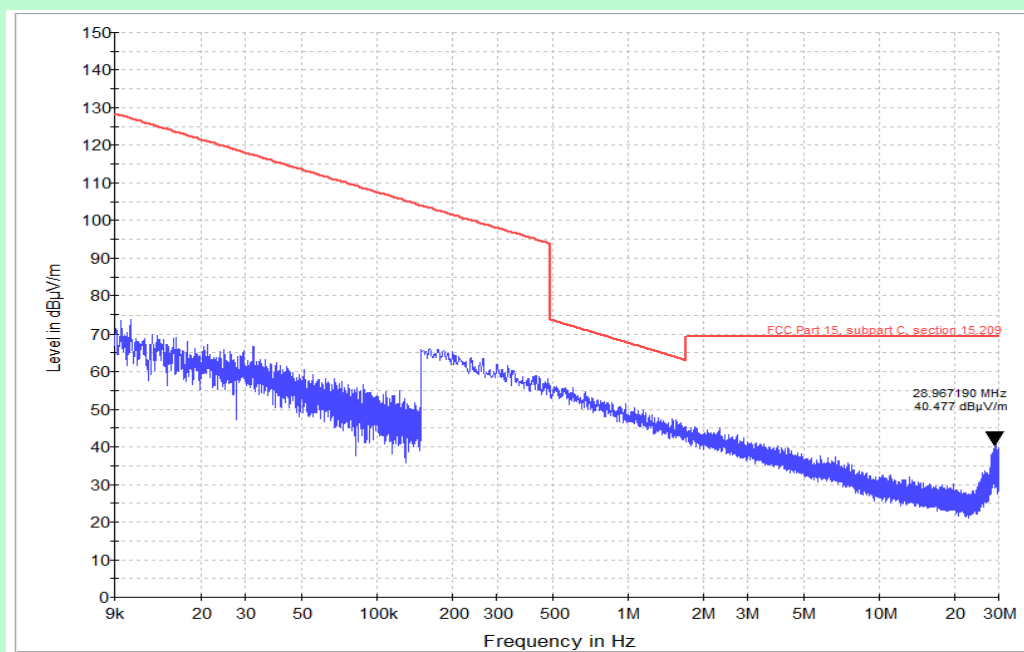
Channel 1 (902.875 MHz)

Note : Peak Graph - Perpendicular



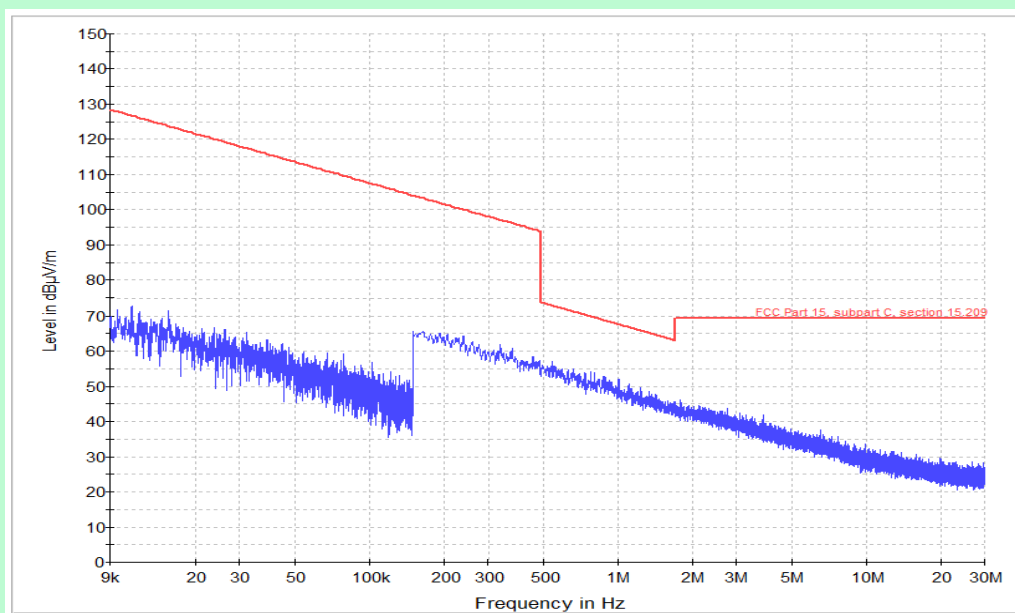
Channel 2 (908.425 MHz)

Note : Peak Graph - Parallel



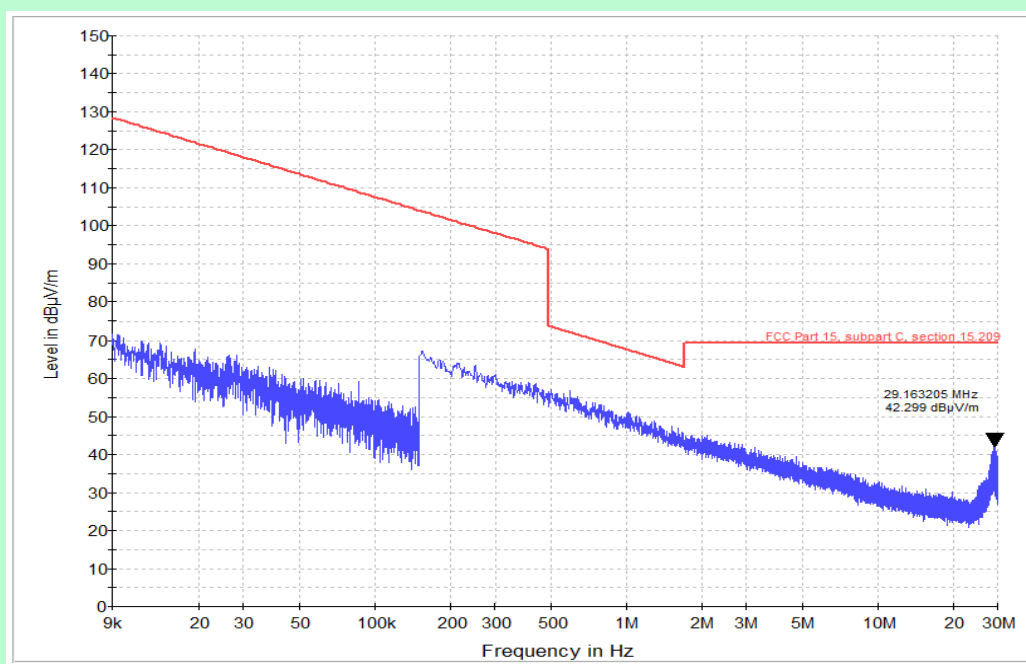
Channel 2 (908.425 MHz)

Note : Peak Graph - Perpendicular



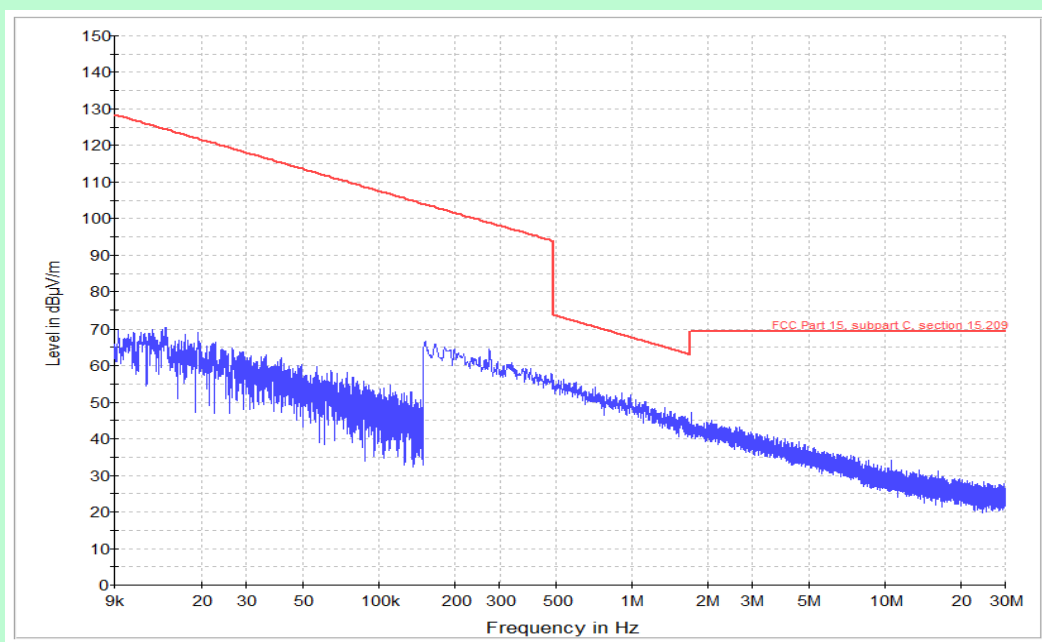
Channel 3 (914.325 MHz)

Note : Peak Graph - Parallel



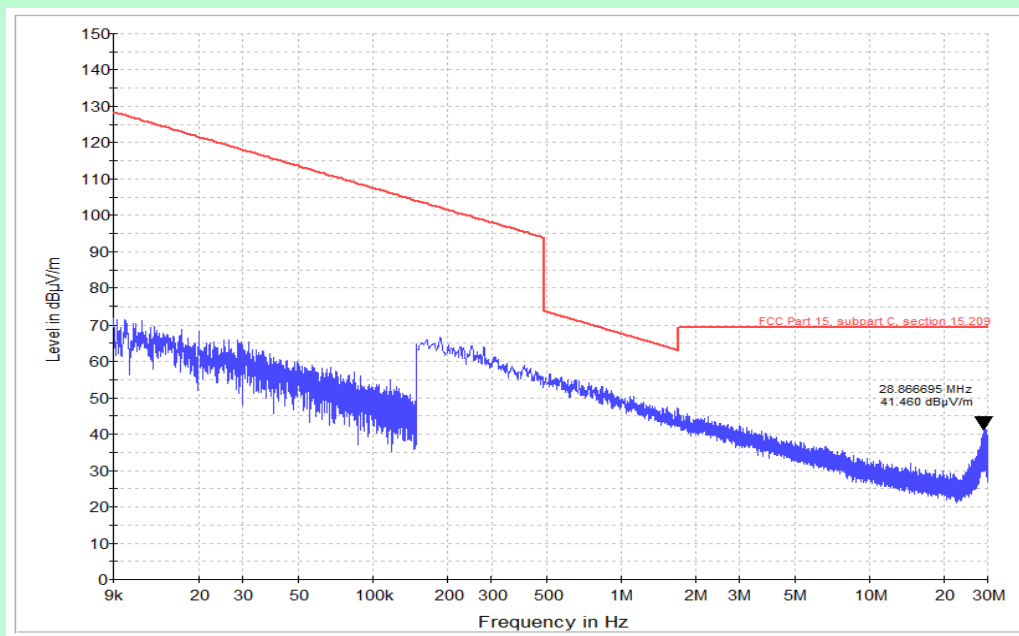
Channel 3 (914.325 MHz)

Note : Peak Graph - Perpendicular



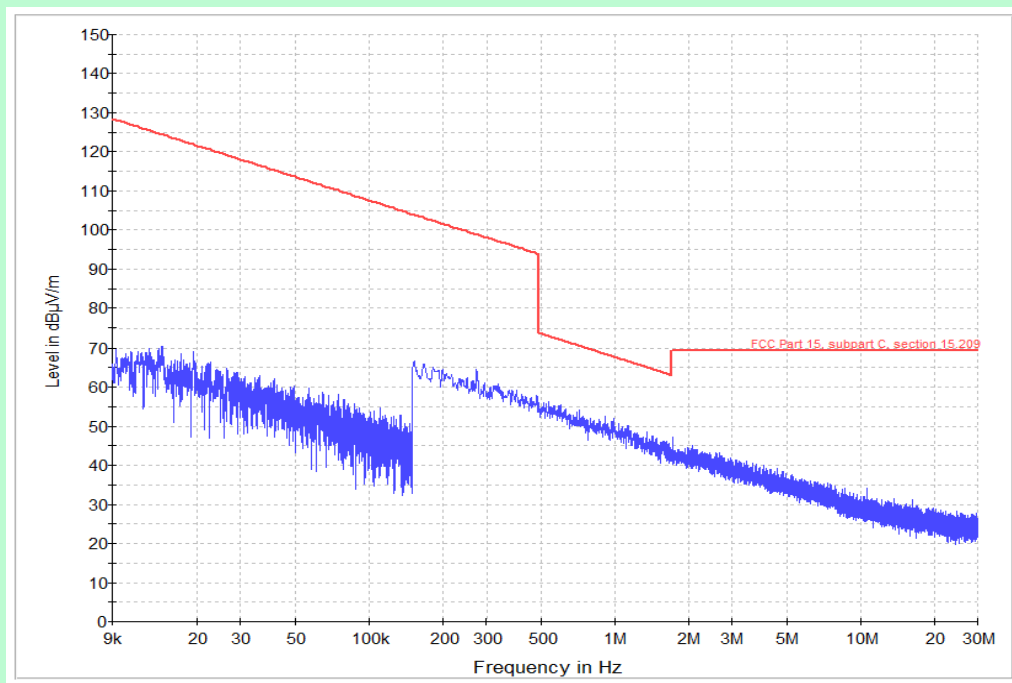
Channel 4 (915.325 MHz)

Note : Peak Graph - Parallel

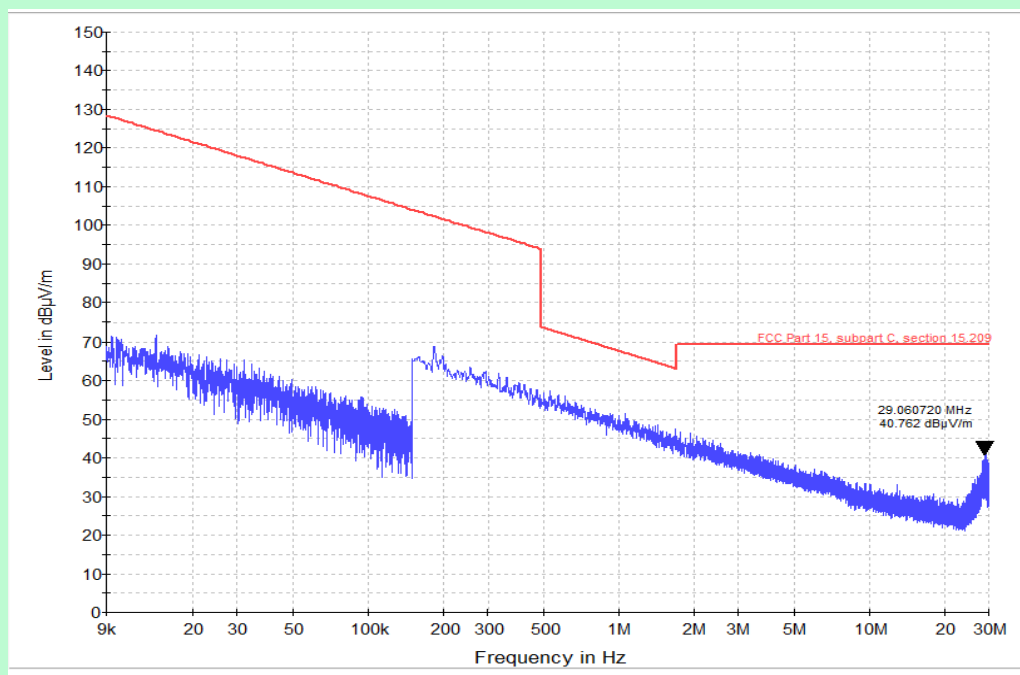


Channel 4 (915.325 MHz)

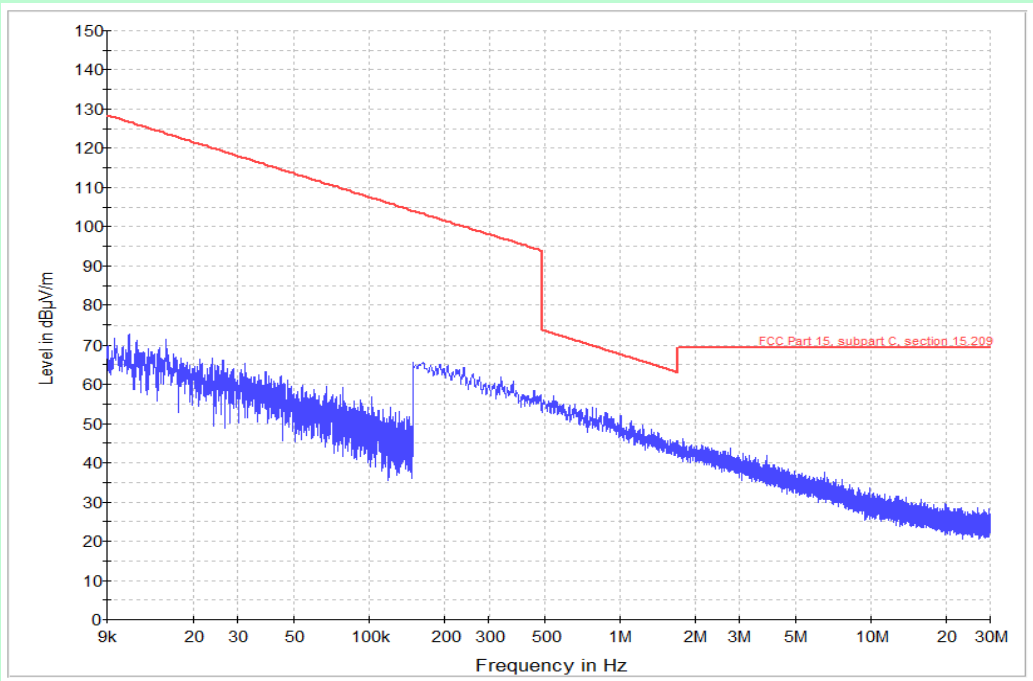
Note : Peak Graph - Perpendicular

**Channel 5 (921.575 MHz)**

Note : Peak Graph - Parallel

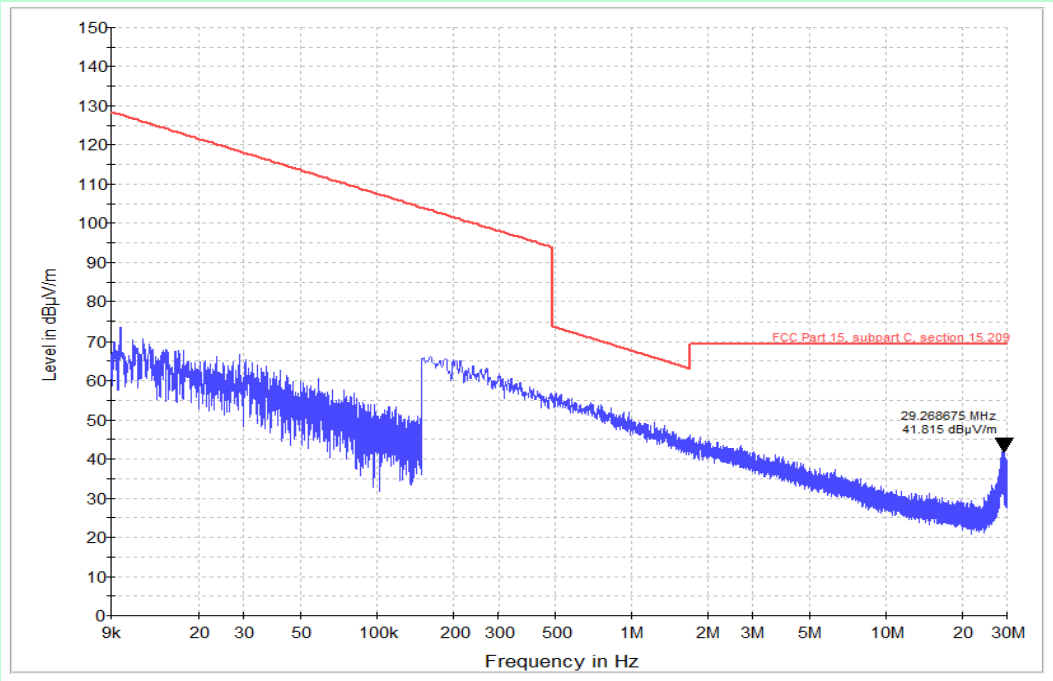
**Channel 5 (921.575 MHz)**

Note : Peak Graph - Perpendicular



Channel 6 (927.125 MHz)

Note : Peak Graph - Parallel

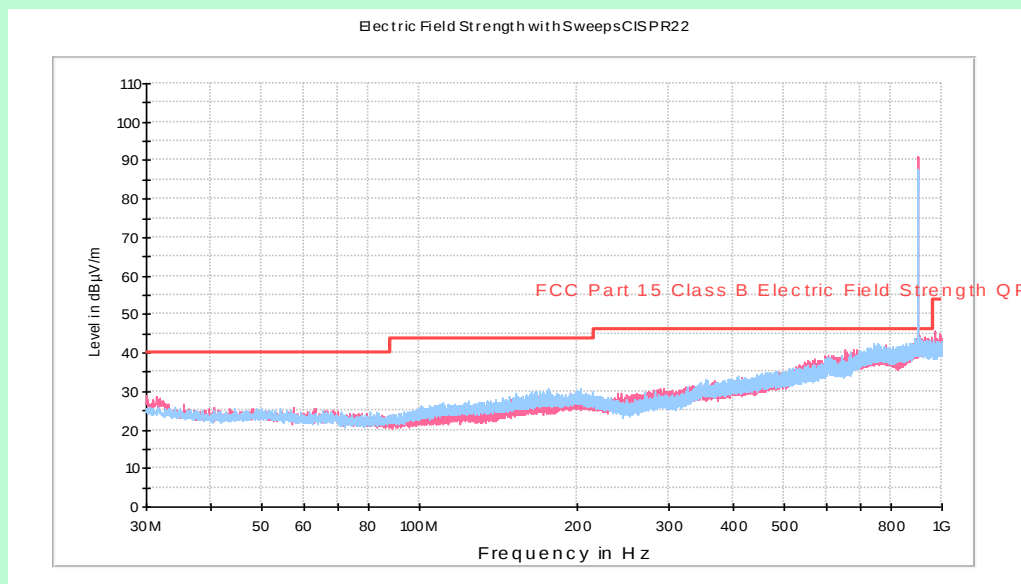


Channel 6 (927.125 MHz)

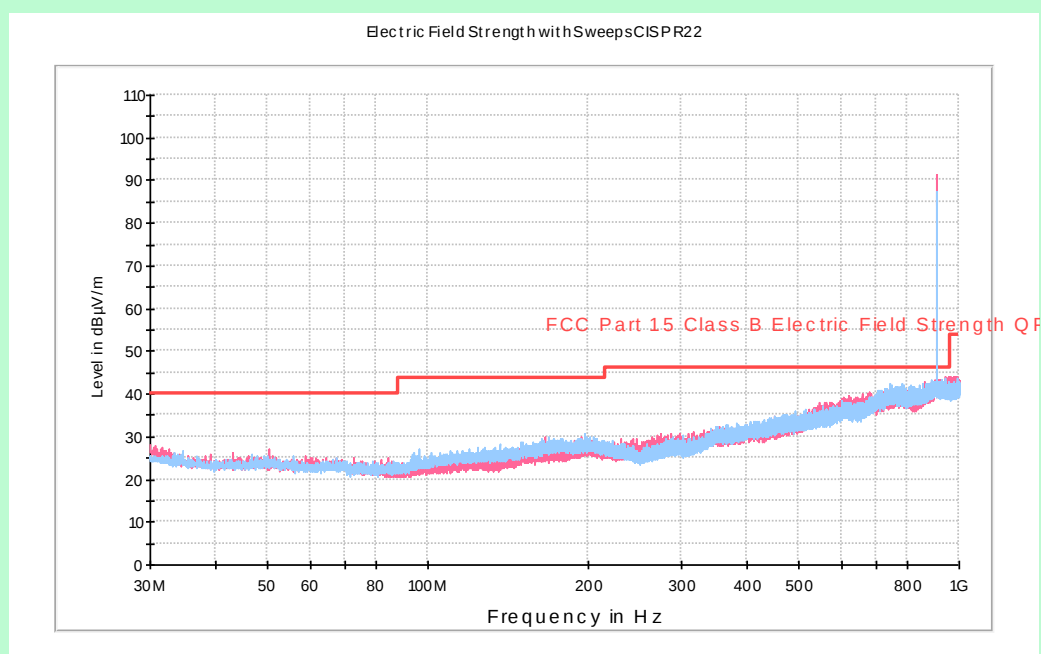
Note : Peak Graph - Perpendicular

TEST RESULT – 9 KHz to 30 MHz									
Channel	Channel Frequency	Measured Spurious	Quasi Peak	Height	Ant Pol	Azimuth	Margin	Limit @ 3m Distance	Results
#	MHz	MHz	dBμV/m	cm	Parallel / Perpendicular	deg	dB	dBμV/m	
NO EMISSIONS FOUND									PASS
Note : Measured Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)									

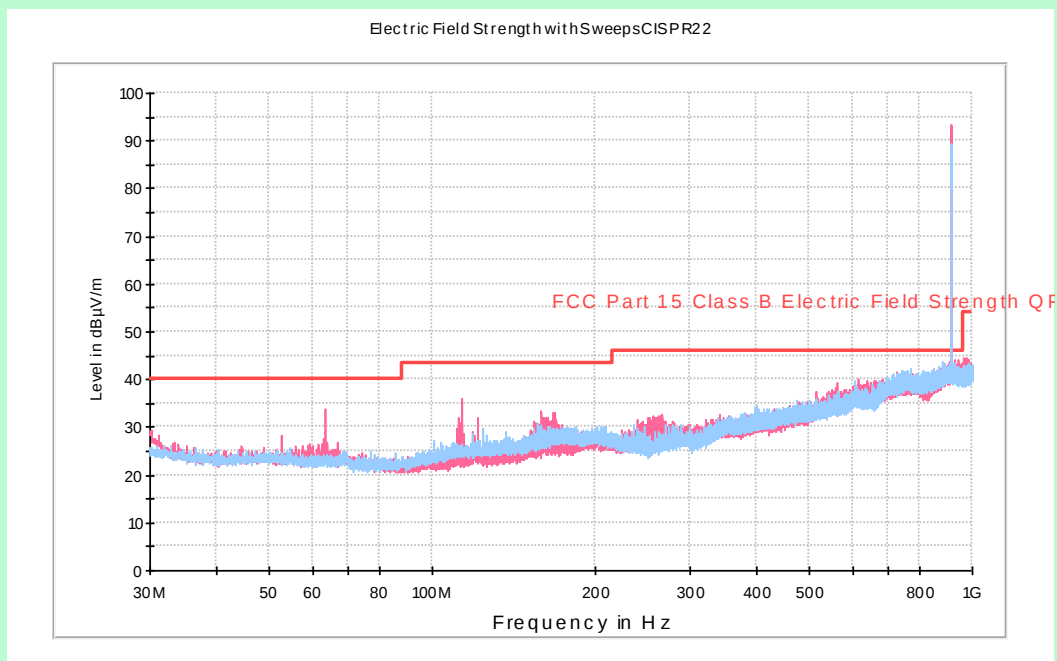
TEST GRAPHS – 30 MHz to 1 GHz

**Channel 1 (902.875 MHz)**

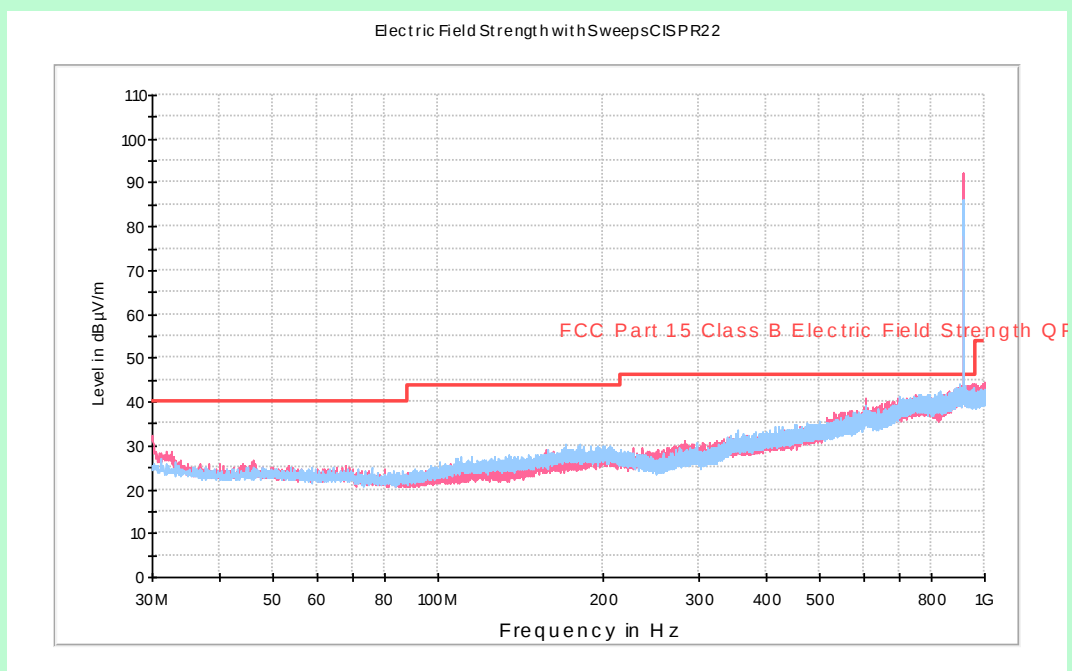
Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)

**Channel 2 (908.425 MHz)**

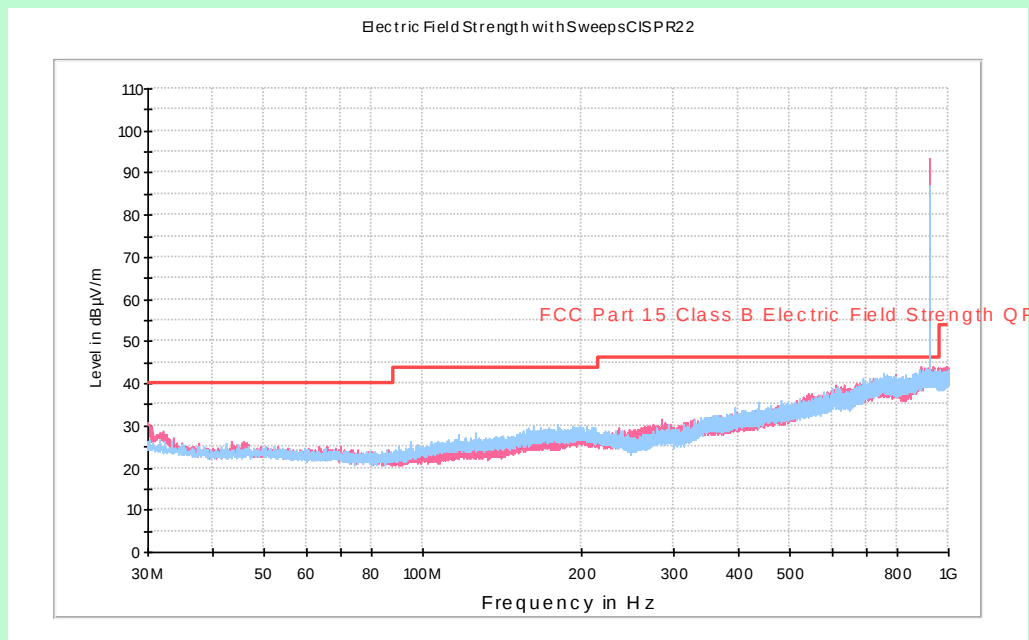
Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)

**Channel 3 (914.325 MHz)**

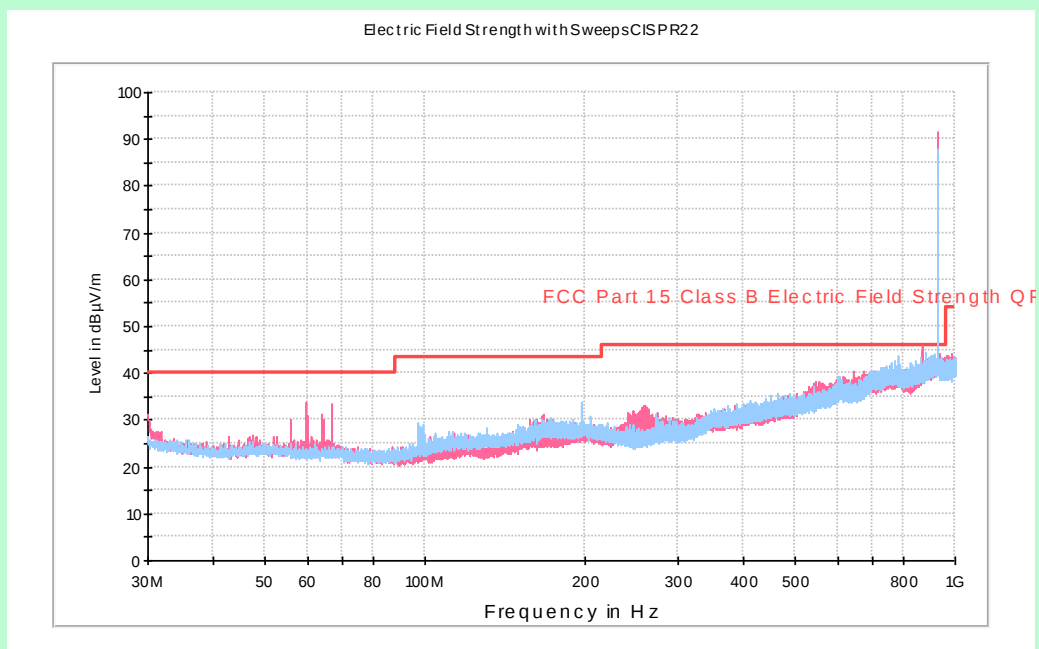
Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)

**Channel 4 (915.325 MHz)**

Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)

**Channel 5 (921.575 MHz)**

Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)

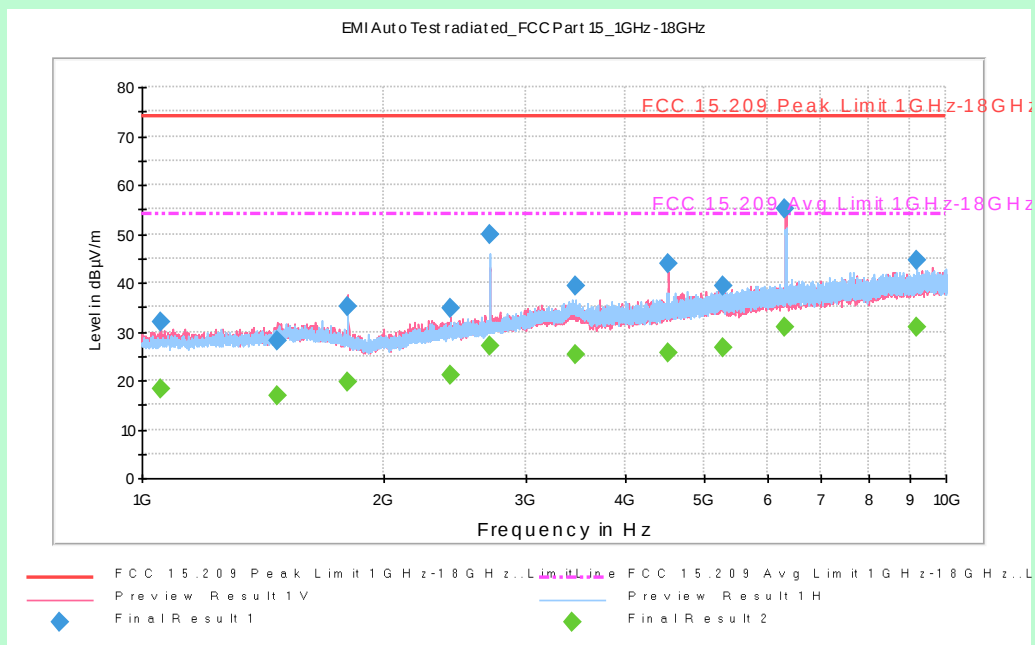
**Channel 6 (927.125 MHz)**

Note : Peak Graph Vertical (Red), Peak Graph Horizontal (Blue)

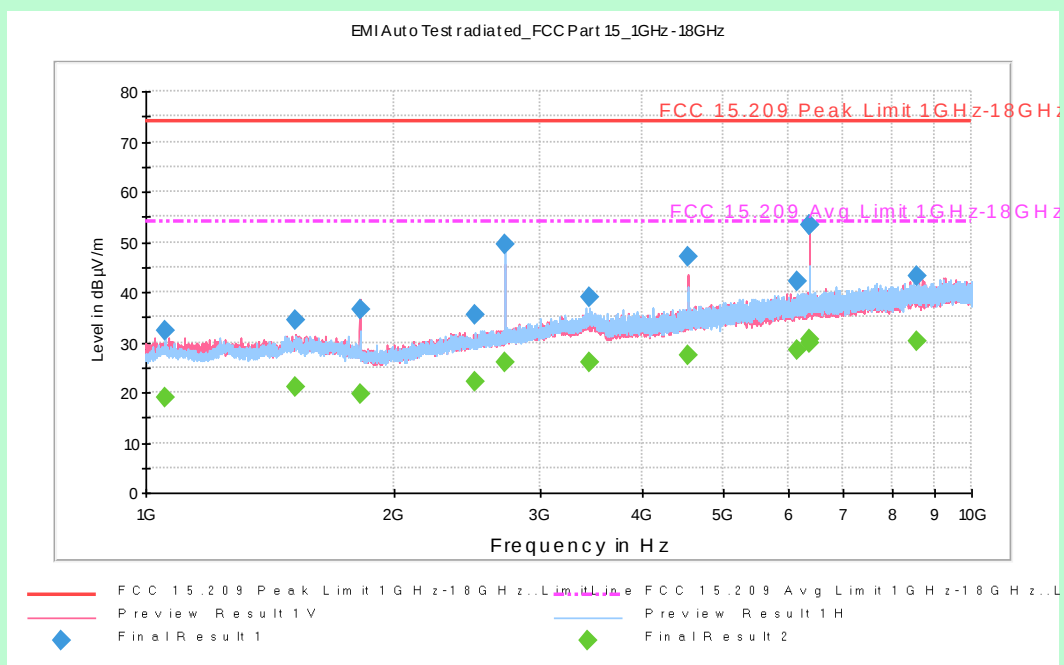
TEST RESULT – 30 MHz to 1 GHz								
Channel	Measured Spurious	Quasi Peak	Height	Ant Pol	Azimuth	Margin	Limit @ 3m Distance	Results
#	MHz	dBμV/m	cm	H / V	deg	dB	dBμV/m	
1	30.1	23.3	100.0	V	120.0	16.7	40.0	PA SS
1	56.3	18.2	300.0	V	240.0	21.8	40.0	PA SS
1	64.2	18.2	200.0	V	30.0	21.8	40.0	PA SS
1	88.8	17.8	100.0	H	60.0	25.7	43.5	PA SS
1	170.5	23.2	300.0	H	60.0	20.3	43.5	PA SS
1	204.4	23.7	200.0	H	210.0	19.8	43.5	PA SS
1	344.3	25.8	200.0	H	30.0	20.2	46.0	PA SS
1	679.4	33.2	300.0	H	240.0	12.8	46.0	PA SS
1	679.4	33.2	300.0	H	240.0	12.8	46.0	PA SS
1	902.7	102.6	100.0	V	180.0	-44.6	46.0	Intended Frequency
2	30.1	22.2	100.0	V	150.0	17.8	40.0	PA SS
2	50.8	18.9	100.0	V	210.0	21.1	40.0	PA SS
2	71.7	17.8	400.0	V	180.0	22.2	40.0	PA SS
2	86.6	17.8	400.0	H	240.0	22.2	40.0	PA SS
2	166.0	22.5	100.0	V	300.0	21.0	43.5	PA SS
2	197.3	23.7	300.0	H	180.0	19.8	43.5	PA SS
2	341.0	25.3	200.0	V	150.0	20.7	46.0	PA SS
2	491.8	28.4	200.0	V	150.0	17.6	46.0	PA SS
2	702.8	34.6	400.0	H	0.0	11.4	46.0	PA SS
2	908.3	102.2	100.0	V	180.0	-44.2	46.0	Intended Frequency
3	30.2	24.3	100.0	V	180.0	15.7	40.0	PA SS
3	51.8	19.2	200.0	V	300.0	20.8	40.0	PA SS
3	64.3	18.4	200.0	V	300.0	21.6	40.0	PA SS
3	114.2	20.4	300.0	H	270.0	23.1	43.5	PA SS
3	121.4	22.5	300.0	H	270.0	21.0	43.5	PA SS
3	159.6	27.1	100.0	V	0.0	16.4	43.5	PA SS
3	162.4	25.7	200.0	H	120.0	17.8	43.5	PA SS
3	166.7	28.7	100.0	V	0.0	14.8	43.5	PA SS
3	169.5	27.2	100.0	V	30.0	16.3	43.5	PA SS
3	173.7	25.6	100.0	V	0.0	17.9	43.5	PA SS
3	267.9	26.4	100.0	V	0.0	19.6	46.0	PA SS
3	475.5	28.6	390.0	H	120.0	17.4	46.0	PA SS
3	696.1	34.3	300.0	H	90.0	11.7	46.0	PA SS
3	914.2	91.7	100.0	V	240.0	-45.7	46.0	INTENDED FREQUENCY
NOTE: Measured Field Strength –dBuV/m (9 KHz to 1GHz) = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)								

TEST RESULT – 30 MHz to 1 GHz								
Channel	Measured Spurious	Quasi Peak	Height	Ant Pol	Azimuth	Margin	Limit @ 3m Distance	Results
#	MHz	dBµV/m	cm	H / V	deg	dB	dBµV/m	
4	30.0	24.8	100.0	V	30.0	15.2	40.0	PA SS
4	45.7	20.2	200.0	V	150.0	19.8	40.0	PA SS
4	67.5	18.3	100.0	V	270.0	21.7	40.0	PA SS
4	85.8	17.2	100.0	V	60.0	22.8	40.0	PA SS
4	171.0	24.0	100.0	V	330.0	19.5	43.5	PA SS
4	180.6	23.3	400.0	H	0.0	20.2	43.5	PA SS
4	343.7	25.7	200.0	H	240.0	20.3	46.0	PA SS
4	475.7	28.7	300.0	H	240.0	17.3	46.0	PA SS
4	699.5	34.6	300.0	H	210.0	11.4	46.0	PA SS
4	915.2	103.1	100.0	V	120.0	-45.1	46.0	Intended Frequency
5	30.0	26.7	100.0	V	180.0	13.3	40.0	PA SS
5	43.2	19.7	100.0	V	90.0	20.3	40.0	PA SS
5	70.6	17.6	400.0	H	330.0	22.4	40.0	PA SS
5	116.4	20.3	100.0	H	120.0	23.2	43.5	PA SS
5	162.4	25.6	100.0	V	300.0	17.9	43.5	PA SS
5	181.6	23.5	200.0	H	30.0	20.0	43.5	PA SS
5	347.5	25.4	100.0	V	120.0	20.6	46.0	PA SS
5	480.5	28.8	200.0	H	180.0	17.2	46.0	PA SS
5	686.2	33.8	200.0	V	330.0	12.2	46.0	PA SS
5	921.4	103.9	100.0	V	120.0	-45.9	46.0	Intended Frequency
6	30.3	23.4	100.0	V	210.0	16.6	40.0	PA SS
6	58.9	21.6	100.0	V	300.0	18.4	40.0	PA SS
6	59.9	18.1	200.0	V	60.0	21.9	40.0	PA SS
6	63.9	20.5	300.0	V	270.0	19.5	40.0	PA SS
6	66.6	22.6	100.0	V	240.0	17.4	40.0	PA SS
6	96.4	18.9	200.0	H	240.0	24.6	43.5	PA SS
6	168.2	25.8	100.0	V	330.0	17.7	43.5	PA SS
6	198.2	24.0	100.0	H	90.0	19.5	43.5	PA SS
6	259.7	28.8	100.0	V	180.0	17.2	46.0	PA SS
6	489.2	28.8	100.0	H	300.0	17.2	46.0	PA SS
6	697.0	33.8	100.0	V	210.0	12.2	46.0	PA SS
6	783.4	35.3	300.0	H	210.0	10.7	46.0	PA SS
6	866.7	35.8	300.0	V	90.0	10.2	46.0	PA SS
6	927.0	89.7	100.0	V	240.0	-43.7	46.0	INTENDED FREQUENCY
NOTE: Measured Field Strength –dBuV/m (9 KHz to 1GHz) = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)								

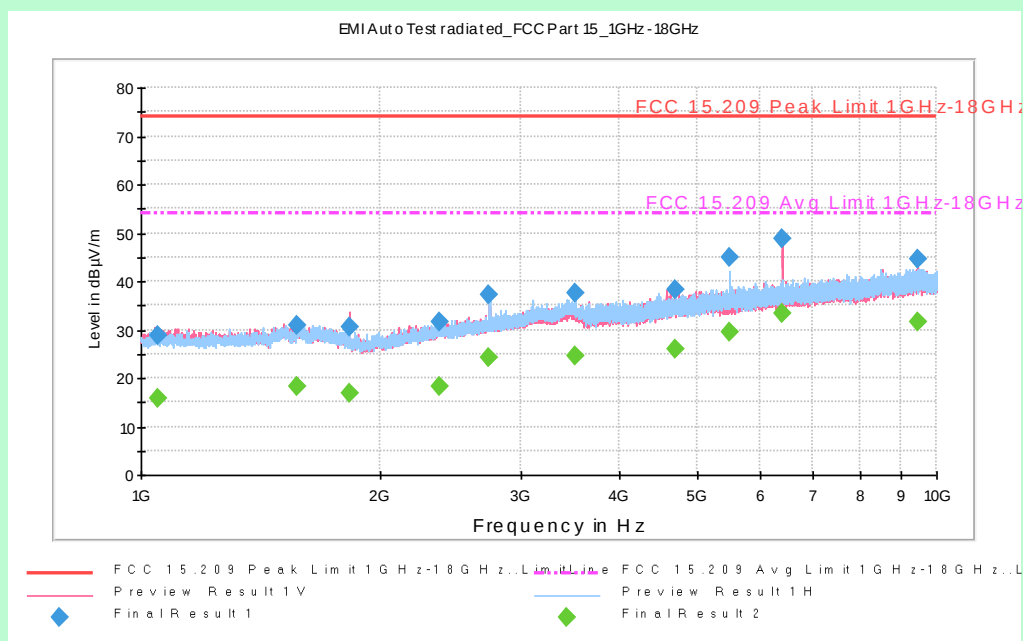
TEST GRAPHS – 1 GHz to 10 GHz



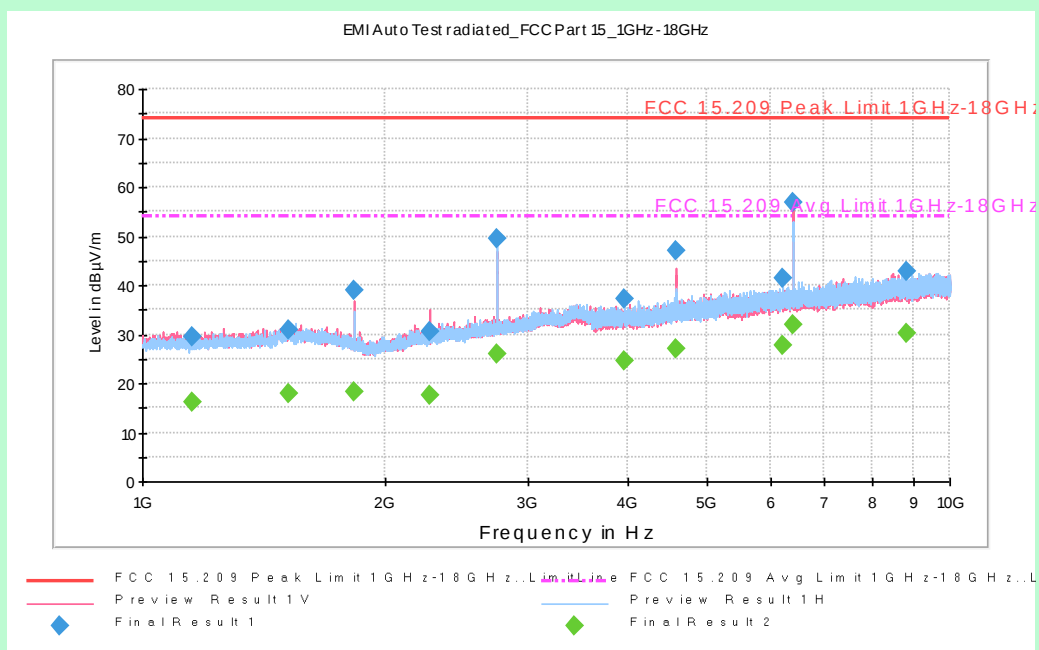
Channel 1 (902.875 MHz)



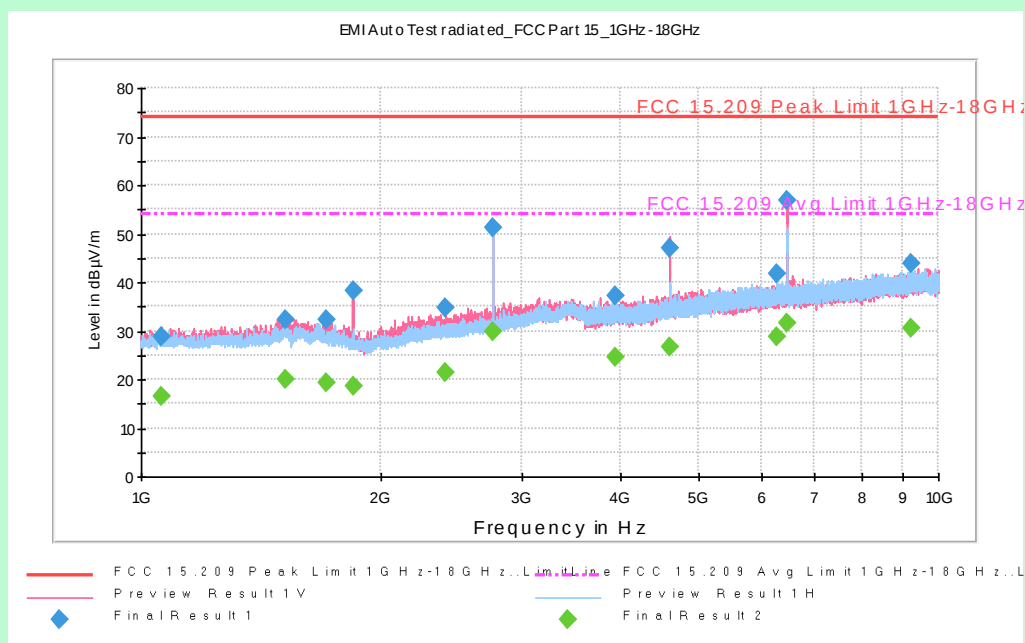
Channel 2 (908.425 MHz)



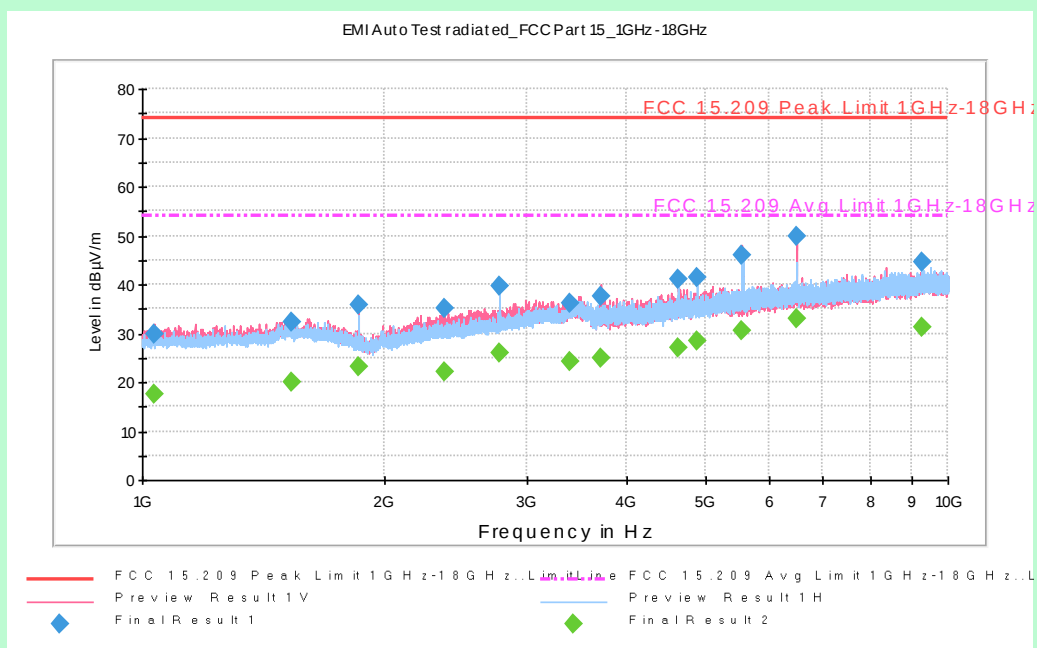
Channel 3 (914.325 MHz)



Channel 4 (915.325 MHz)



Channel 5 (921.575 MHz)



Channel 6 (927.125 MHz)

TEST RESULT – 1 GHz to 10 GHz				RESTRICTED BAND – PEAK			
Channel	Frequency	MaxPeak	Height	Ant Pol	Azimuth	Margin	Limit
#	(MHz)	(dBμV/m)	(cm)	H / V	(deg)	(dB)	(dBμV/m)
1	1053.6	31.8	400.0	V	198.0	42.2	74.0
1	1470.3	28.2	400.0	V	22.0	45.8	74.0
1	2422.0	34.6	400.0	H	22.0	39.4	74.0
1	2709.6	49.8	300.0	H	22.0	24.2	74.0
1	3460.6	39.2	400.0	H	22.0	34.8	74.0
1	4514.5	43.8	200.0	V	0.0	30.2	74.0
1	5289.4	39.2	400.0	V	22.0	34.8	74.0
1	6318.1	55.0	100.0	V	0.0	19.0	74.0
1	9200.4	44.4	400.0	H	22.0	29.6	74.0
2	1056.7	32.2	400.0	V	22.0	41.8	74.0
2	1517.5	34.2	400.0	V	22.0	39.8	74.0
2	2503.5	35.3	400.0	V	66.0	38.7	74.0
2	2726.2	49.6	400.0	V	198.0	24.4	74.0
2	3438.1	39.1	400.0	H	220.0	34.9	74.0
2	4541.1	47.0	300.0	V	176.0	27.0	74.0
2	6140.8	42.0	400.0	H	176.0	32.0	74.0
2	6356.8	53.5	200.0	V	198.0	20.5	74.0
2	6360.9	53.4	200.0	V	198.0	20.6	74.0
2	8574.0	43.3	100.0	H	308.0	30.7	74.0
3	1051.8	28.8	200.0	H	0.0	45.2	74.0
3	1573.8	30.8	100.0	V	176.0	43.2	74.0
3	2373.9	31.7	100.0	V	176.0	42.3	74.0
3	2742.0	37.1	400.0	V	22.0	36.9	74.0
3	3508.3	37.6	400.0	V	22.0	36.4	74.0
3	4685.5	38.4	400.0	H	0.0	35.6	74.0
3	5484.3	44.9	200.0	H	308.0	29.1	74.0
3	6402.3	48.6	100.0	V	22.0	25.4	74.0
3	9490.6	44.6	400.0	H	88.0	29.4	74.0

Note :
Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss - Pre amplifier Gain (dB)

TEST RESULT – 1 GHz to 10 GHz				RESTRICTED BAND – PEAK			
Channel	Frequency	MaxPeak	Height	Ant Pol	Azimuth	Margin	Limit
#	(MHz)	(dBμV/m)	(cm)	H / V	(deg)	(dB)	(dBμV/m)
4	1154.8	29.3	400.0	V	66.0	44.7	74.0
4	1517.1	30.8	400.0	V	66.0	43.2	74.0
4	2270.4	30.5	400.0	V	66.0	43.5	74.0
4	2745.6	49.5	200.0	H	0.0	30.1	74.0
4	3954.3	37.1	400.0	V	22.0	36.9	74.0
4	4575.3	46.9	100.0	V	0.0	27.1	74.0
4	6216.4	41.3	400.0	V	66.0	32.7	74.0
4	6405.4	56.7	100.0	V	0.0	17.3	74.0
4	8854.3	43.0	200.0	V	66.0	31.0	74.0
5	1063.0	28.7	400.0	V	22.0	45.3	74.0
5	1520.7	32.2	400.0	V	22.0	41.8	74.0
5	1709.2	32.2	400.0	V	22.0	41.8	74.0
5	2413.0	34.7	400.0	V	22.0	39.3	74.0
5	2764.0	51.2	400.0	V	22.0	25.1	74.0
5	3928.6	37.2	300.0	H	176.0	36.8	74.0
5	4609.5	46.9	100.0	V	0.0	27.1	74.0
5	6265.5	41.8	400.0	V	22.0	32.2	74.0
5	6453.1	56.8	100.0	V	22.0	17.2	74.0
5	9241.8	43.8	400.0	H	22.0	30.2	74.0
6	1033.8	29.9	400.0	V	22.0	44.1	74.0
6	1530.6	32.2	400.0	V	22.0	41.8	74.0
6	2376.6	34.9	400.0	V	22.0	39.1	74.0
6	2782.0	39.7	300.0	H	352.0	34.3	74.0
6	3392.2	36.1	400.0	H	22.0	37.9	74.0
6	3709.0	37.6	400.0	V	0.0	36.4	74.0
6	4634.7	41.0	100.0	V	22.0	33.0	74.0
6	4886.7	41.3	400.0	V	22.0	32.7	74.0
6	5561.2	46.0	100.0	V	22.0	28.0	74.0
6	6492.3	49.8	200.0	V	0.0	24.2	74.0
6	9273.7	44.6	200.0	H	88.0	29.4	74.0
Note : Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss - Pre amplifier Gain (dB)							

TEST RESULT – 1 GHz to 10 GHz				RESTRICTED BAND – AVERAGE			
Channel	Frequency	Average	Height	Polarization	Azimuth	Margin	Limit
#	(MHz)	(dBμV/m)	(cm)	H / V	(deg)	(dB)	(dBμV/m)
1	1053.6	18.4	400.0	V	198.0	35.6	54.0
1	1470.3	17.0	400.0	V	22.0	37.0	54.0
1	1806.0	19.5	400.0	H	22.0	34.5	54.0
1	2422.0	21.2	400.0	H	22.0	32.8	54.0
1	2709.6	27.0	300.0	H	22.0	27.0	54.0
1	3460.6	25.2	400.0	H	22.0	28.8	54.0
1	4514.5	25.5	200.0	V	0.0	28.5	54.0
1	5289.4	26.8	400.0	V	22.0	27.2	54.0
1	6318.1	31.0	100.0	V	0.0	23.0	54.0
1	9200.4	30.9	400.0	H	22.0	23.1	54.0
2	1056.7	19.0	400.0	V	22.0	35.0	54.0
2	1517.5	21.2	400.0	V	22.0	32.8	54.0
2	1815.9	19.7	400.0	V	330.0	34.3	54.0
2	2503.5	22.1	400.0	V	66.0	31.9	54.0
2	2726.2	26.0	400.0	V	198.0	28.0	54.0
2	3438.1	26.0	400.0	H	220.0	28.0	54.0
2	4541.1	27.4	300.0	V	176.0	26.6	54.0
2	6140.8	28.3	400.0	H	176.0	25.7	54.0
2	6356.8	29.7	200.0	V	198.0	24.3	54.0
2	6360.9	30.4	200.0	V	198.0	23.6	54.0
2	8574.0	30.1	100.0	H	308.0	23.9	54.0
3	1051.8	15.9	200.0	H	0.0	38.1	54.0
3	1573.8	18.1	100.0	V	176.0	35.9	54.0
3	1828.9	16.7	100.0	V	176.0	37.3	54.0
3	2373.9	18.2	100.0	V	176.0	35.8	54.0
3	2742.0	24.2	400.0	V	22.0	29.8	54.0
3	3508.3	24.7	400.0	V	22.0	29.3	54.0
3	4685.5	25.9	400.0	H	0.0	28.1	54.0
3	5484.3	29.6	200.0	H	308.0	24.4	54.0
3	6402.3	33.2	100.0	V	22.0	20.8	54.0
3	9490.6	31.6	400.0	H	88.0	22.4	54.0

Note :
Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss - Pre amplifier Gain (dB)

TEST RESULT – 1 GHz to 10 GHz					RESTRICTED BAND – AVERAGE		
Channel	Frequency	Average	Height	Polarization	Azimuth	Margin	Limit
#	(MHz)	(dBμV/m)	(cm)	H / V	(deg)	(dB)	(dBμV/m)
4	1154.8	16.3	400.0	V	66.0	37.7	54.0
4	1517.1	17.8	400.0	V	66.0	36.2	54.0
4	1829.8	18.2	100.0	V	0.0	35.8	54.0
4	2270.4	17.6	400.0	V	66.0	36.4	54.0
4	2745.6	25.9	200.0	H	0.0	31.1	54.0
4	3954.3	24.5	400.0	V	22.0	29.5	54.0
4	4575.3	27.1	100.0	V	0.0	26.9	54.0
4	6216.4	27.9	400.0	V	66.0	26.1	54.0
4	6405.4	32.0	100.0	V	0.0	22.0	54.0
4	8854.3	30.1	200.0	V	66.0	23.9	54.0
5	1063.0	16.5	400.0	V	22.0	37.5	54.0
5	1520.7	20.0	400.0	V	22.0	34.0	54.0
5	1709.2	19.3	400.0	V	22.0	34.7	54.0
5	1843.3	18.4	100.0	V	0.0	35.6	54.0
5	2413.0	21.6	400.0	V	22.0	32.4	54.0
5	2764.0	30.0	400.0	V	22.0	27.2	54.0
5	3928.6	24.5	300.0	H	176.0	29.5	54.0
5	4609.5	26.8	100.0	V	0.0	27.2	54.0
5	6265.5	28.9	400.0	V	22.0	25.1	54.0
5	6453.1	31.6	100.0	V	22.0	22.4	54.0
5	9241.8	30.5	400.0	H	22.0	23.5	54.0
6	1033.8	17.6	400.0	V	22.0	36.4	54.0
6	1530.6	20.1	400.0	V	22.0	33.9	54.0
6	1854.1	23.1	400.0	H	330.0	30.9	54.0
6	2376.6	22.0	400.0	V	22.0	32.0	54.0
6	2782.0	25.9	300.0	H	352.0	28.1	54.0
6	3392.2	24.1	400.0	H	22.0	29.9	54.0
6	3709.0	25.1	400.0	V	0.0	28.9	54.0
6	4634.7	27.0	100.0	V	22.0	27.0	54.0
6	4886.7	28.5	400.0	V	22.0	25.5	54.0
6	5561.2	30.6	100.0	V	22.0	23.4	54.0
6	6492.3	33.0	200.0	V	0.0	21.0	54.0
6	9273.7	31.2	200.0	H	88.0	22.8	54.0
Note : Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss - Pre amplifier Gain (dB)							

Test Result – 1 GHz to 10 GHz							NON RESTRICTED BAND - PEAK		
Channel	Measured Fundamental	Spurious Emission	Measured Harmonic	Height	Ant Pol	Azimuth	Limit [Fundamental – 20dBc]	Margin	Results
#	dBμV/m	MHz	dBμV/m	cm	H / V	(deg)	dBμV/m	dB	
1	102.6	1806.0	35.1	400.0	H	22.0	82.6	47.50	PA SS
2	102.2	1815.9	36.6	400.0	V	330.0	82.2	45.60	PA SS
3	91.7	1828.9	30.6	100.0	V	176.0	71.7	41.10	PA SS
4	103.1	1829.8	38.9	100.0	V	0.0	83.1	44.20	PA SS
5	103.9	1843.3	38.4	100.0	V	0.0	83.9	45.50	PA SS
6	89.7	1854.1	35.9	400.0	H	330.0	69.7	33.80	PA SS

Note :
 Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss - Pre amplifier Gain (dB)

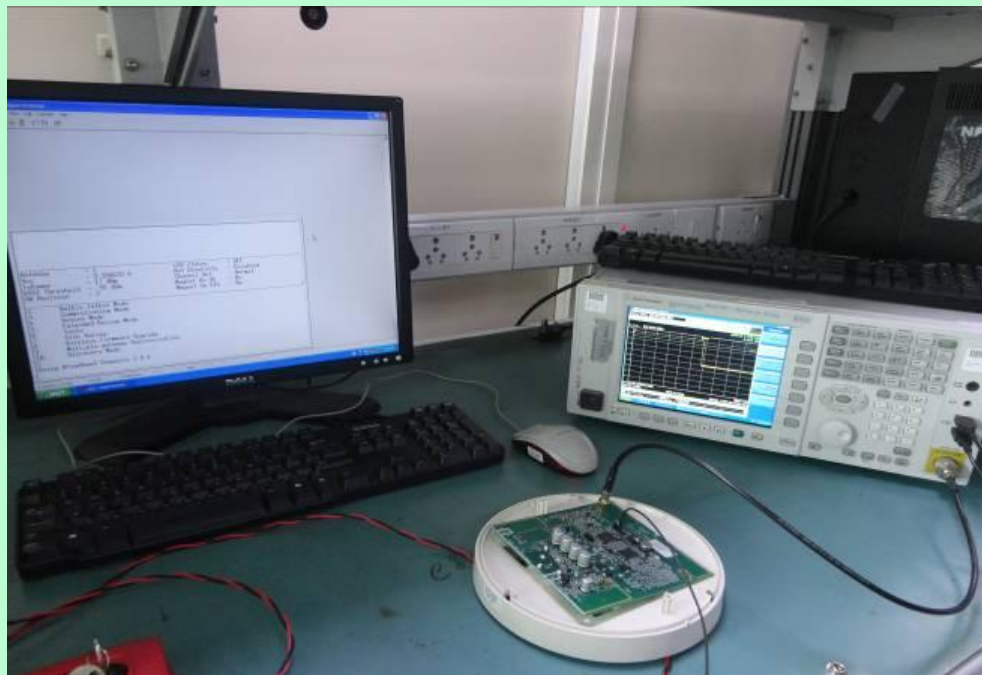
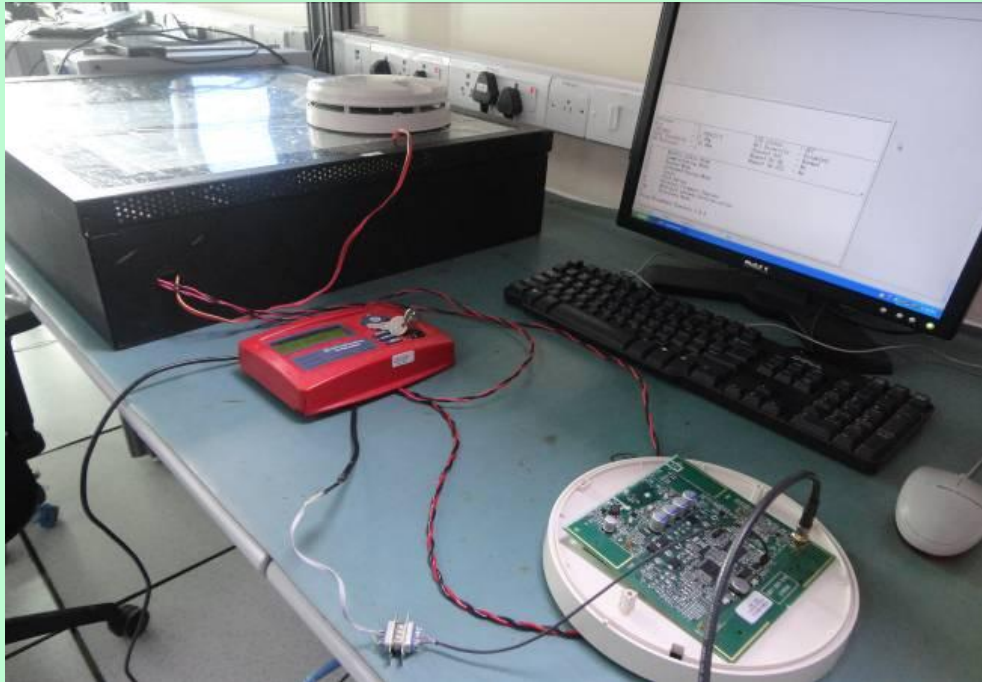
TEST SETUP PHOTOGRAPHS

Refer Annexure-1

Radiated Emission Test Setup

Annexure - 1

CONDUCTED RF TEST SETUP



RADIATED EMISSION TEST SETUP



EUT



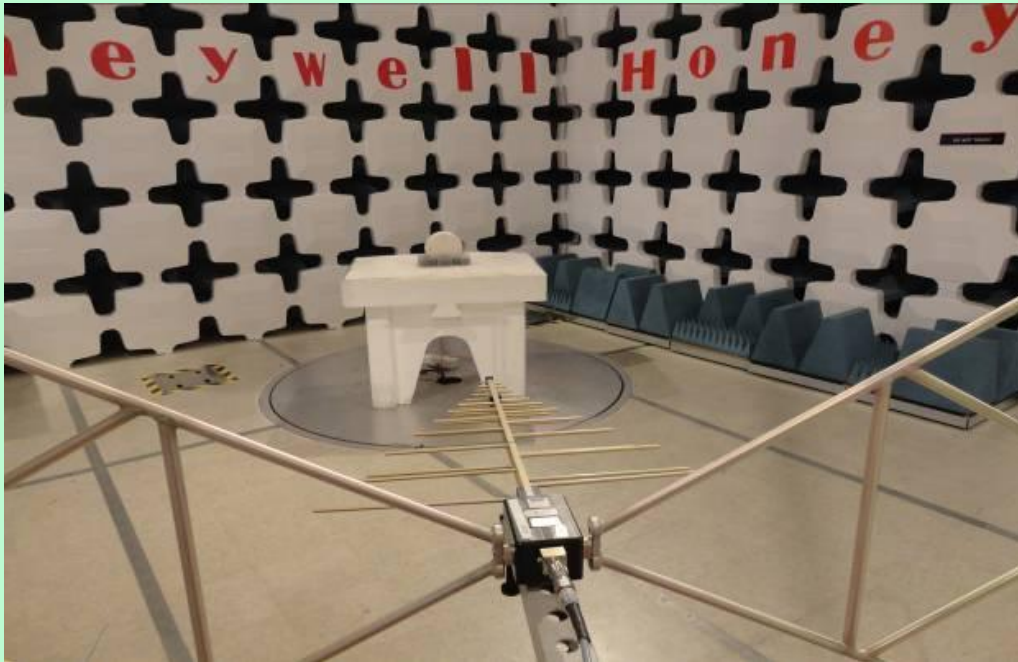
AUXILIARY SETUP



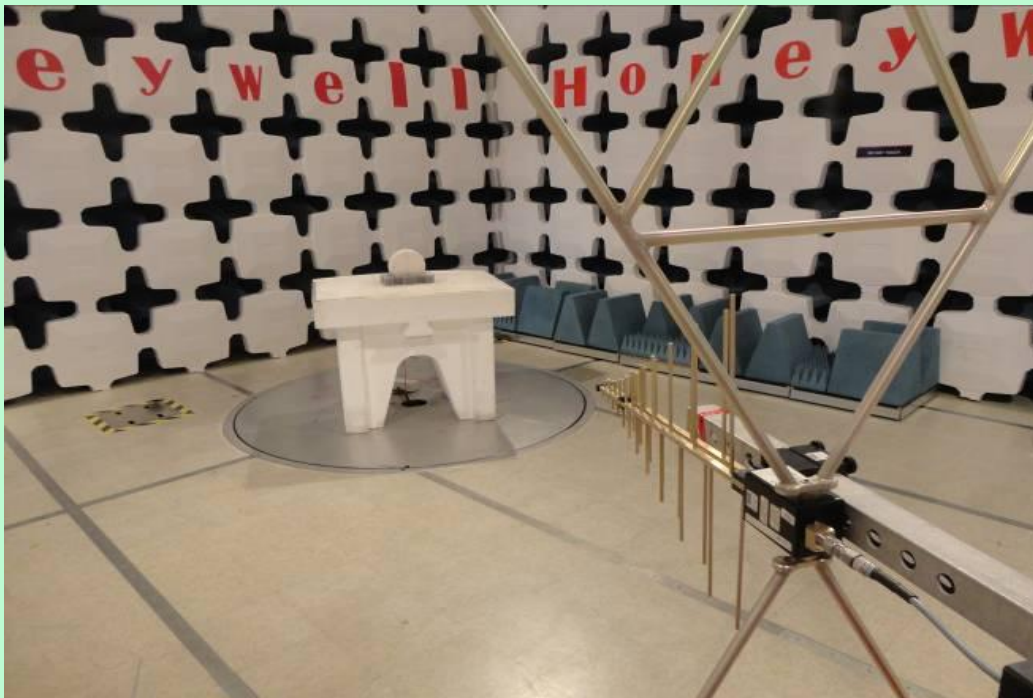
Radiated Emission Setup – 9 KHz to 30 MHz [Parallel]



Radiated Emission Setup – 9 KHz to 30 MHz [Perpendicular]



Radiated Emission Setup – 30 MHz to 1 GHz [Horizontal]



Radiated Emission Setup – 30 MHz to 1 GHz [Vertical]



Radiated Emission Setup – 1 GHz to 10 GHz [Horizontal]



Radiated Emission Setup – 1 GHz to 10 GHz [Vertical]