11. MAXIMUM PEAK OUTPUT POWER

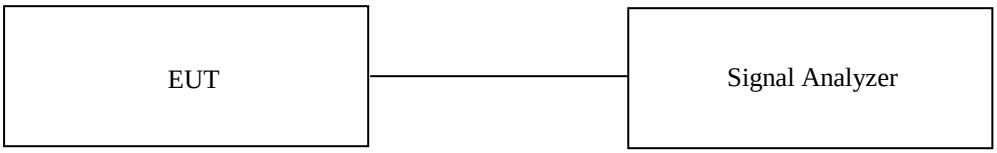
11.1 Operating environment

Temperature : 23.0 ℃

Relative humidity : 54.3 % R.H

11.2 Test set-up

The maximum peak output power was measured with the spectrum analyzer connected to the antenna output of the EUT. The EUT was operating in transmit mode at the appropriate center frequency.



11.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	FSV30	Rohde & Schwarz	Signal Analyzer	101372	Apr. 29, 2015 (1Y)

All test equipment used is calibrated on a regular basis.

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EMC Testing Div : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

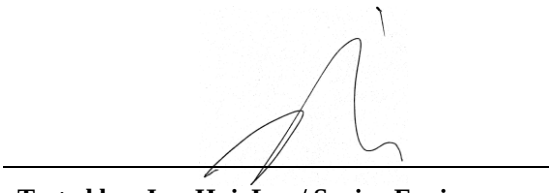
11.4 Test data for 1 Mbps

-. Test Date : September 30, 2015

-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 402	3.84	21.00	17.16
MIDDLE	2 441	6.91	21.00	14.09
HIGH	2 480	7.57	21.00	13.43

Remark. Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)



Tested by: Jun-Hui, Lee / Senior Engineer

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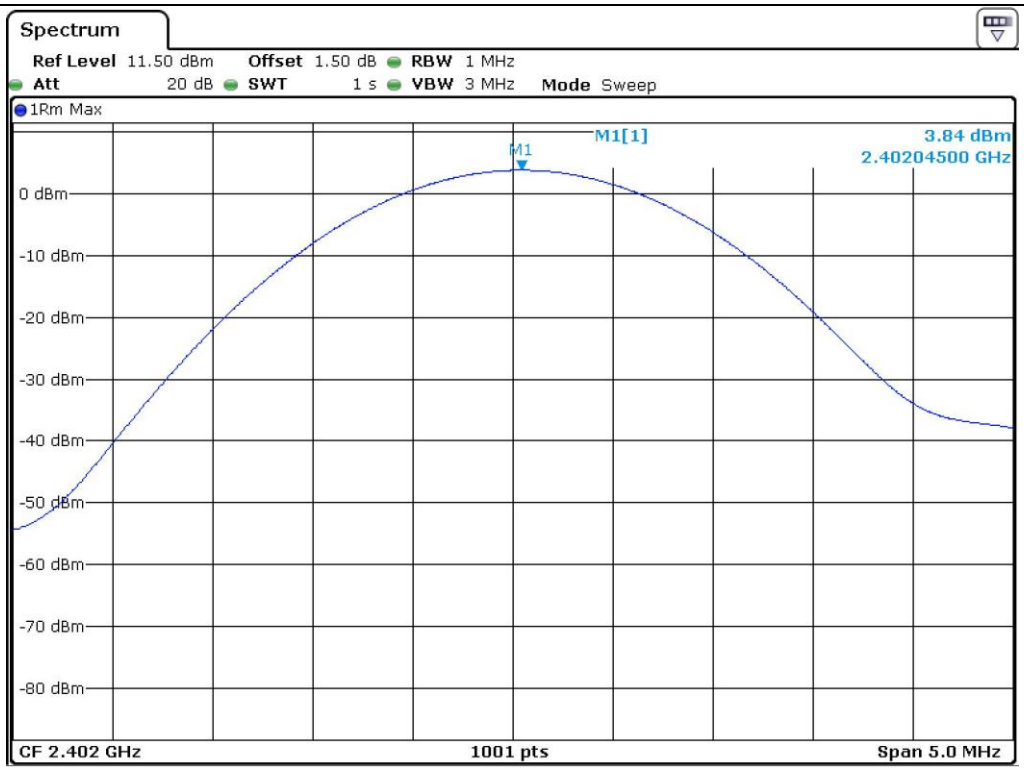

Low Channel

Middle Channel

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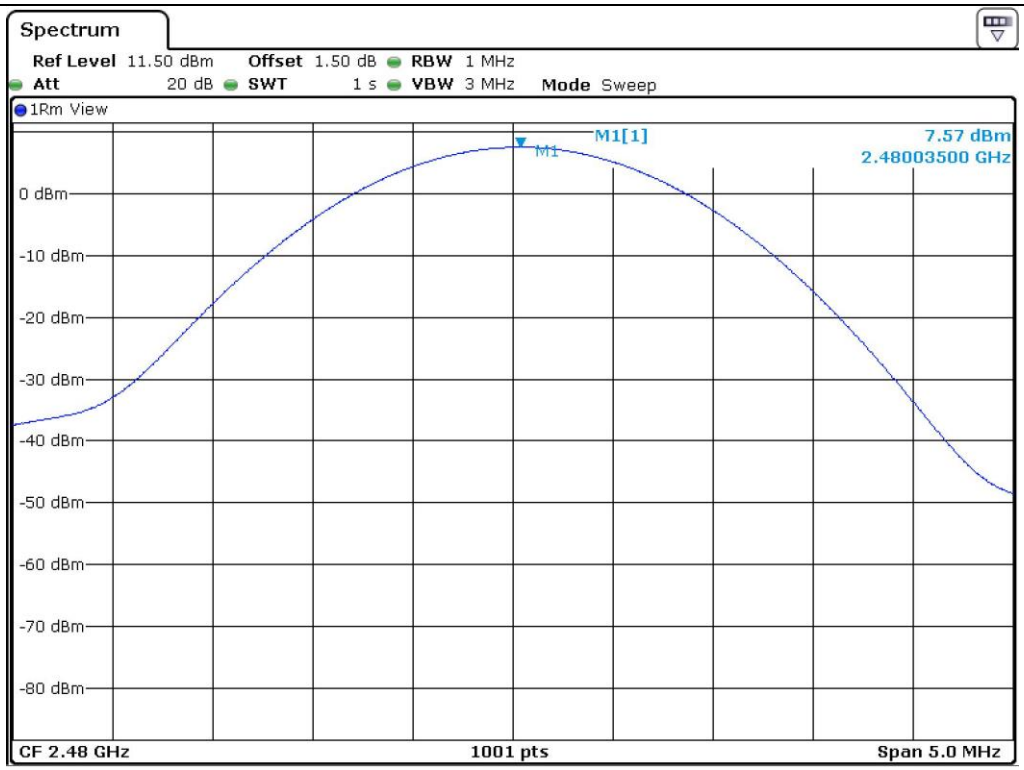

High Channel

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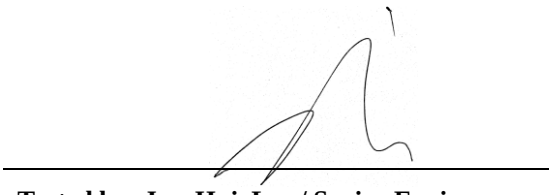
11.5 Test data for 2 Mbps

-. Test Date : September 30, 2015

-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 402	0.96	21.00	20.04
MIDDLE	2 441	3.61	21.00	17.39
HIGH	2 480	4.07	21.00	16.93

Remark. Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)



Tested by: Jun-Hui, Lee / Senior Engineer

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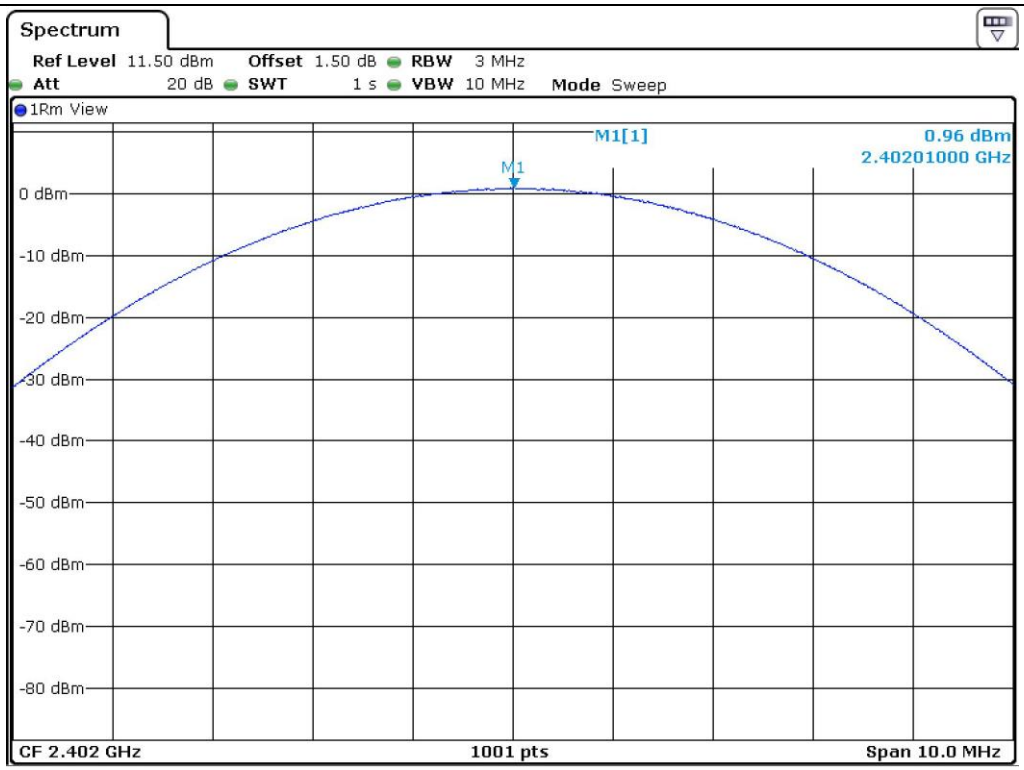
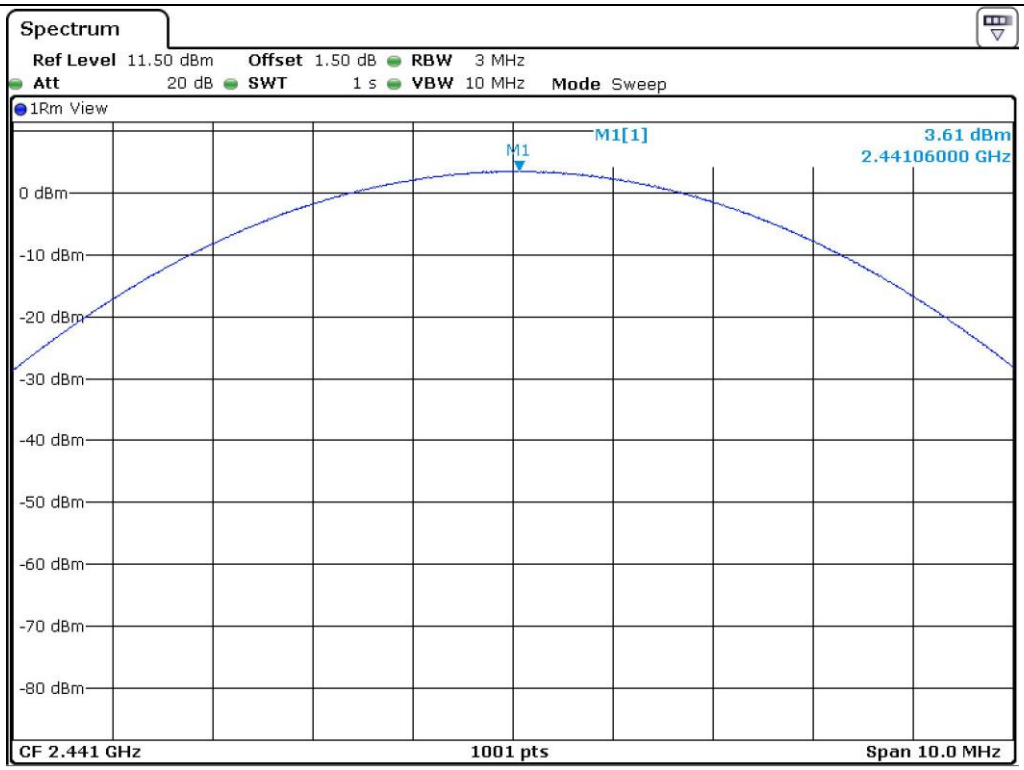


Low Channel



Middle Channel

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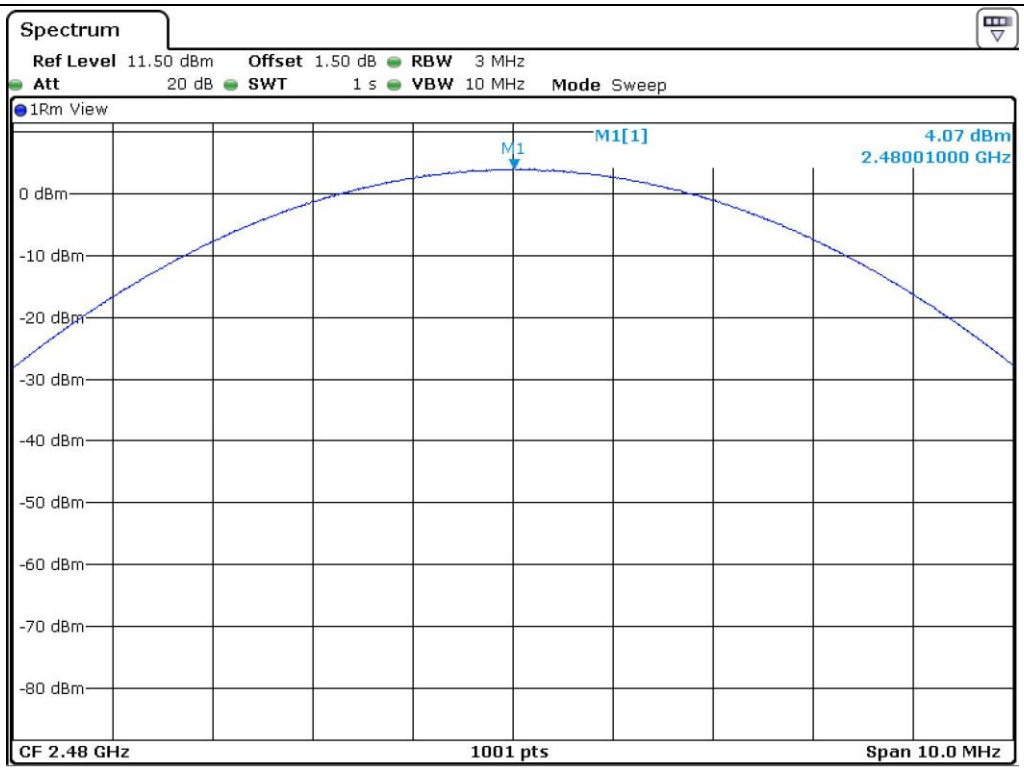

High Channel

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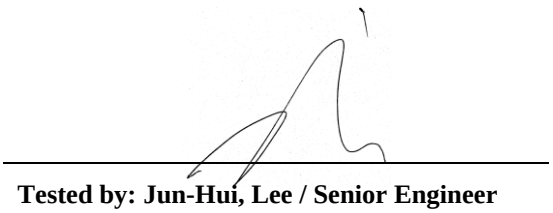
11.6 Test data for 3 Mbps

-. Test Date : September 30, 2015

-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 402	1.04	21.00	19.96
MIDDLE	2 441	3.71	21.00	17.29
HIGH	2 480	4.16	21.00	16.84

Remark. Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)



Tested by: Jun-Hui, Lee / Senior Engineer

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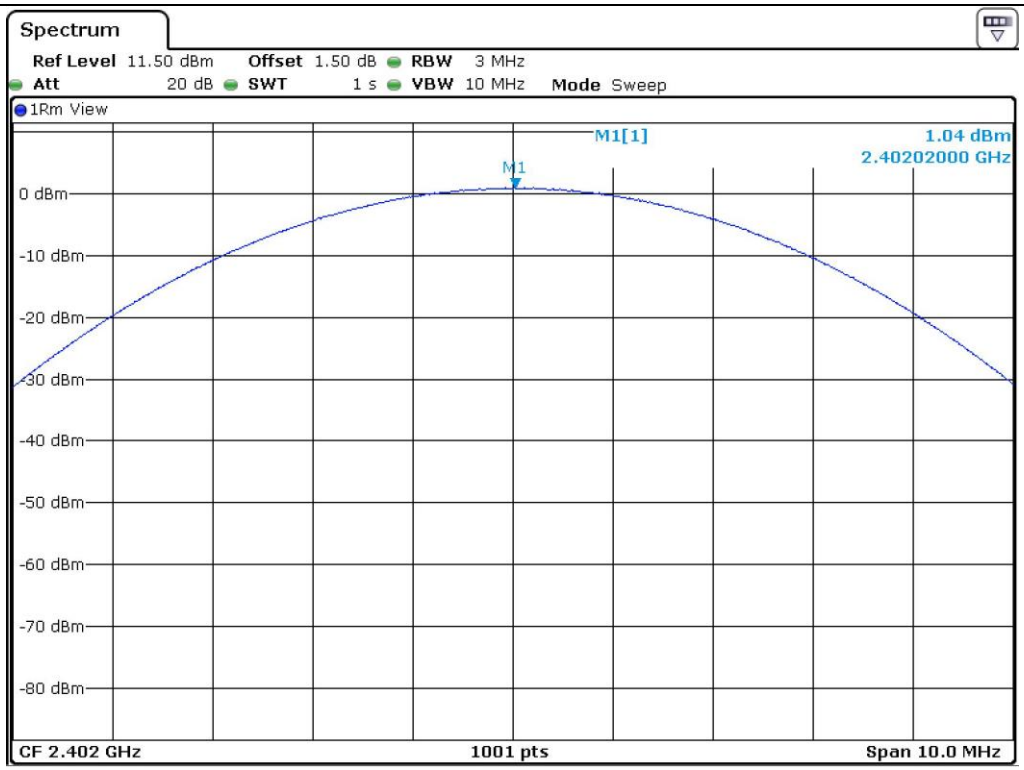
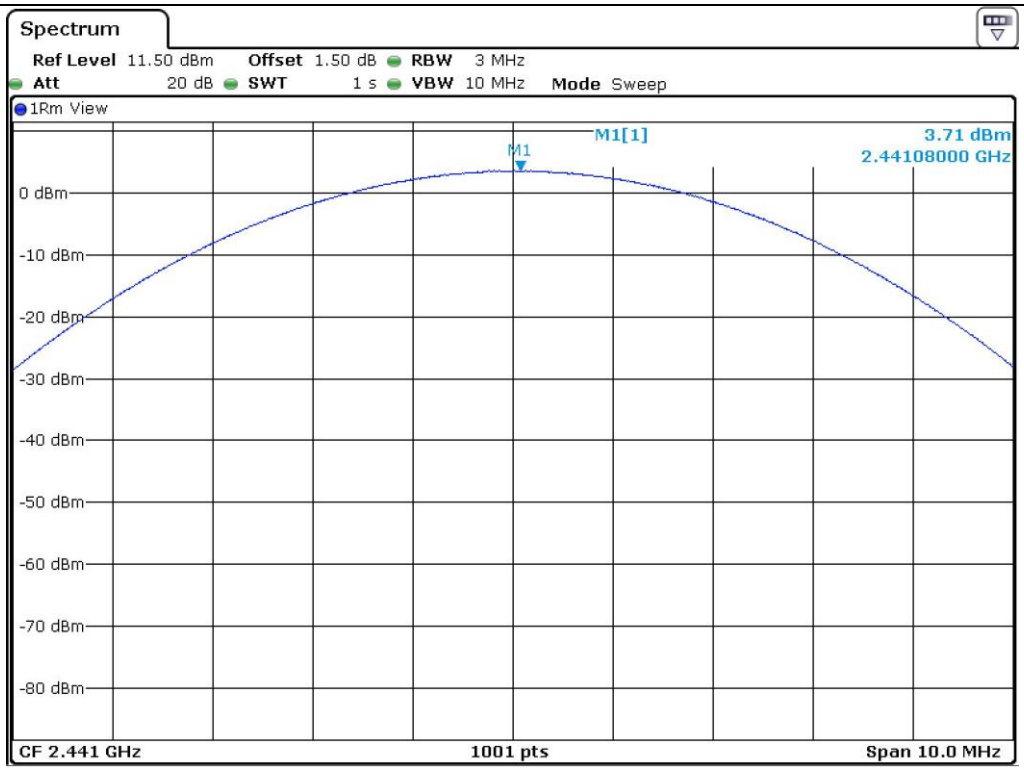


Low Channel



Middle Channel

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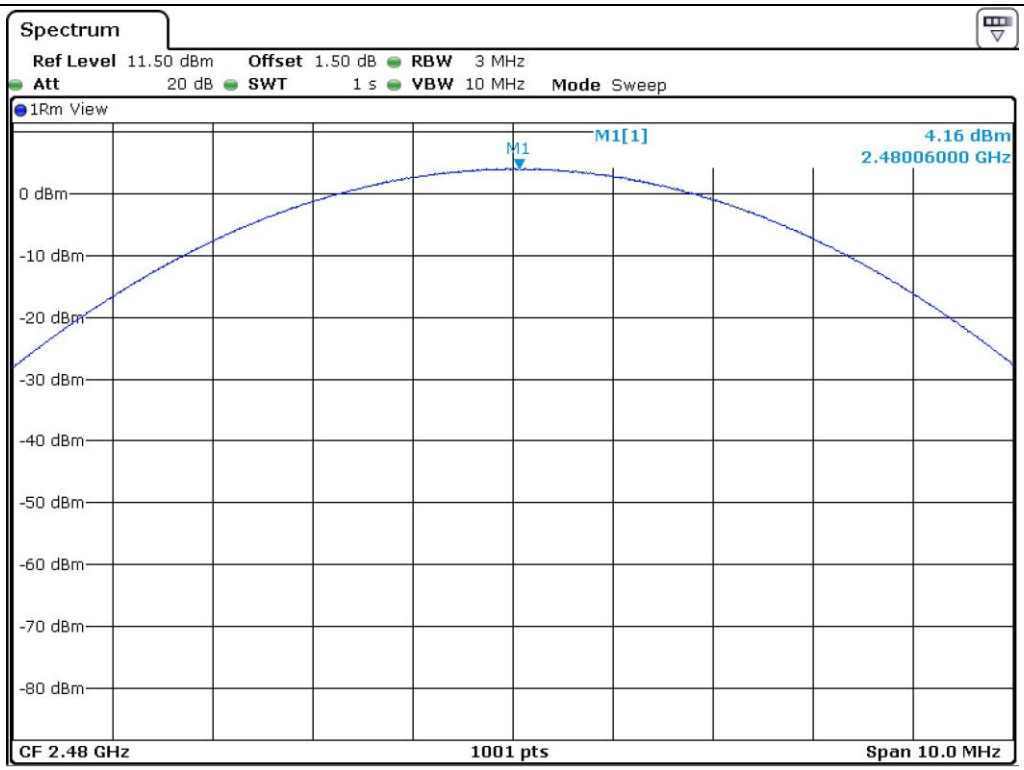

High Channel

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12. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

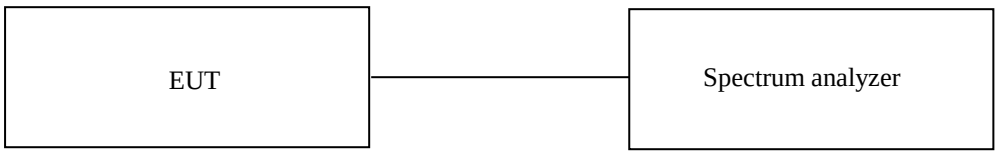
12.1 Operating environment

Temperature : 21.4 ℃

Relative humidity : 45.1 % R.H

12.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution and video bandwidth is set to 100 kHz, and peak detection was used.



12.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m, open-field test site. The EUT was placed on a non-conductive turntable approximately 0.8 m above the ground plane.

The frequency spectrum from 30 kHz to 26.5 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 ms in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

12.4 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
☐ -	ESCI	Rohde & Schwarz	EMI Test Receiver	101012	Nov. 03, 2014 (1Y)
■ -	ESU	Rohde & Schwarz	EMI Test Receiver	100261	Apr. 29, 2015 (1Y)
☐ -	8564E	HP	Spectrum Analyzer	3650A00756	Apr. 28, 2015 (1Y)
☐ -	FSP	Rohde & Schwarz	Spectrum Analyzer	100017	Oct. 08, 2014 (1Y)
■ -	310N	Sonoma Instrument	AMPLIFIER	312544	Apr. 29, 2015 (1Y)
■ -	FSV30	Rohde & Schwarz	Signal Analyzer	101372	Apr. 29, 2015 (1Y)
■ -	SCU-18	Rohde & Schwarz	PRE-AMPLIFIER	102209	Jun. 04, 2015 (1Y)
■ -	MA240	HD GmbH	Antenna Master	N/A	N/A
■ -	HD100	HD GmbH	Position Controller	N/A	N/A
■ -	DS420S	HD GmbH	Turn Table	N/A	N/A
■ -	HFH2-Z2	Rohde & Schwarz	Loop Antenna	879 285/26	Dec. 09, 2014 (2Y)
■ -	VULB9163	Schwarzbeck	TRILOG Broadband Antenna	9163-255	May 02, 2014 (2Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	BBHA9120D295	Aug. 31, 2015 (2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	N/A
■ -	83051A	Agilent	Microwave System Preamplifer	3950M00201	Apr. 30, 2015 (1Y)

All test equipment used is calibrated on a regular basis.

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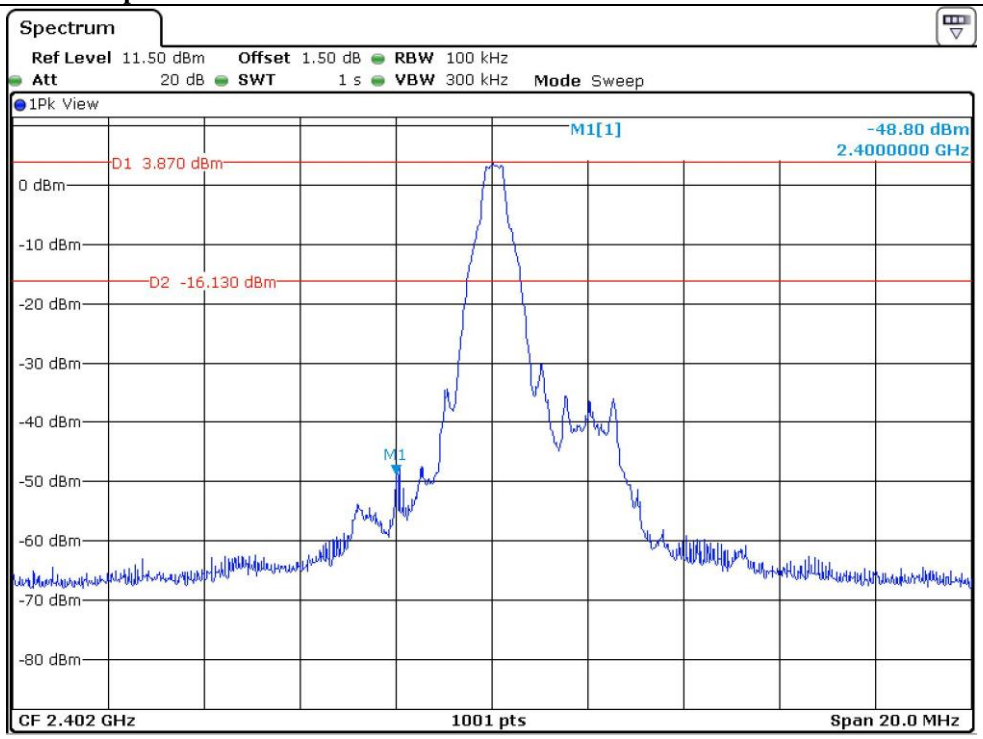
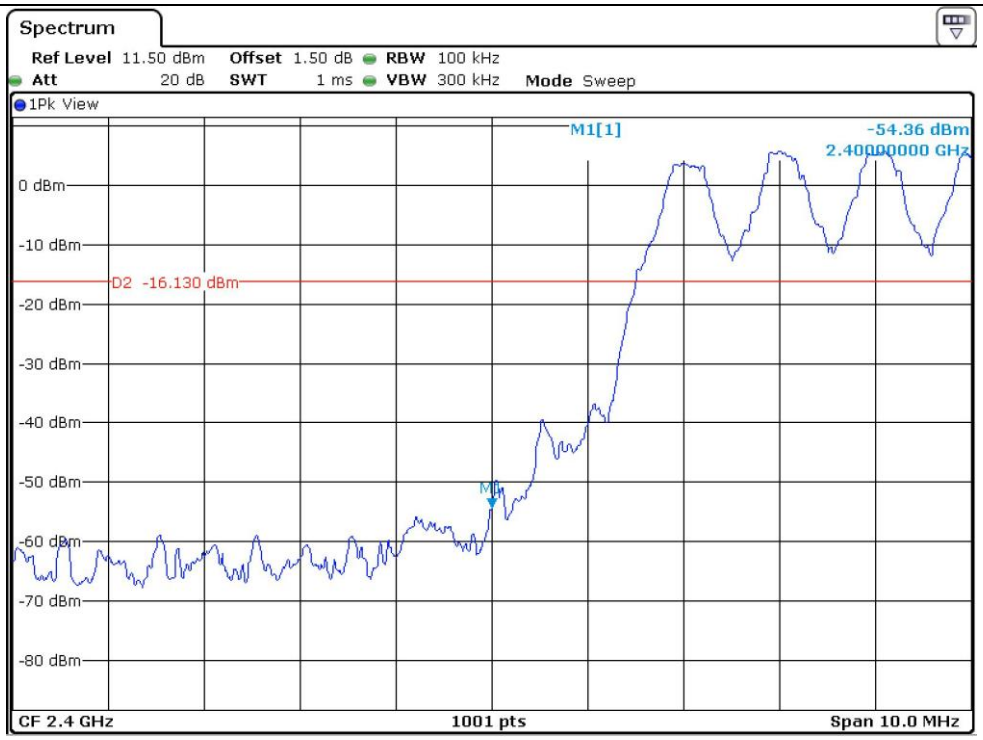
12.5 Test data for conducted emission

12.5.1 Test data for 1 Mbps



Low Channel



Low Channel

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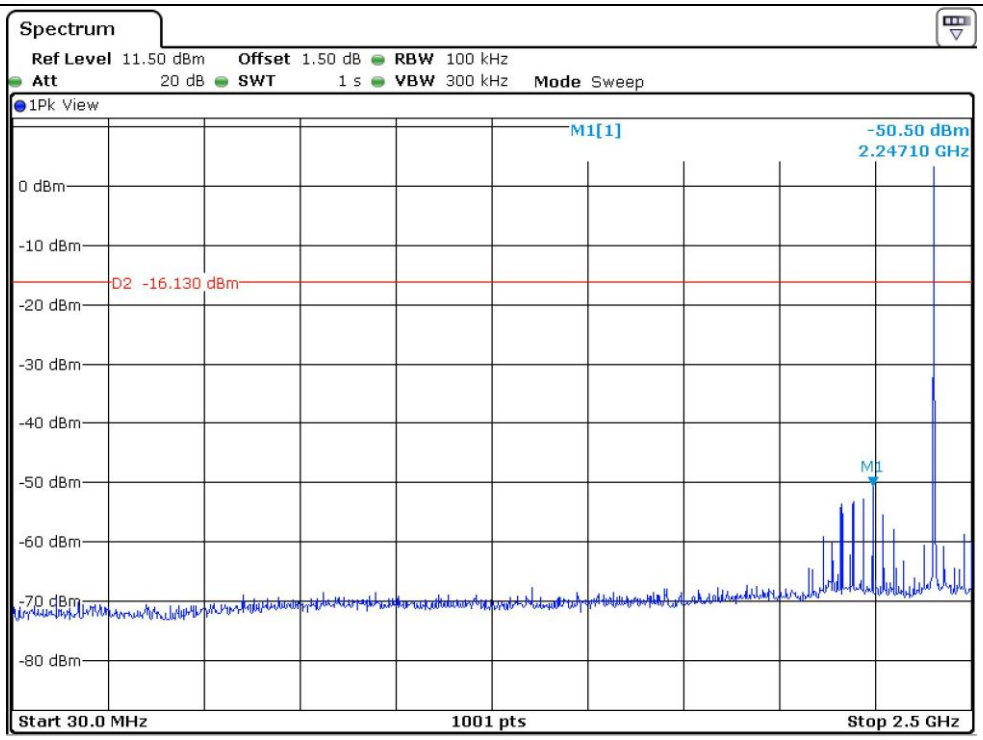
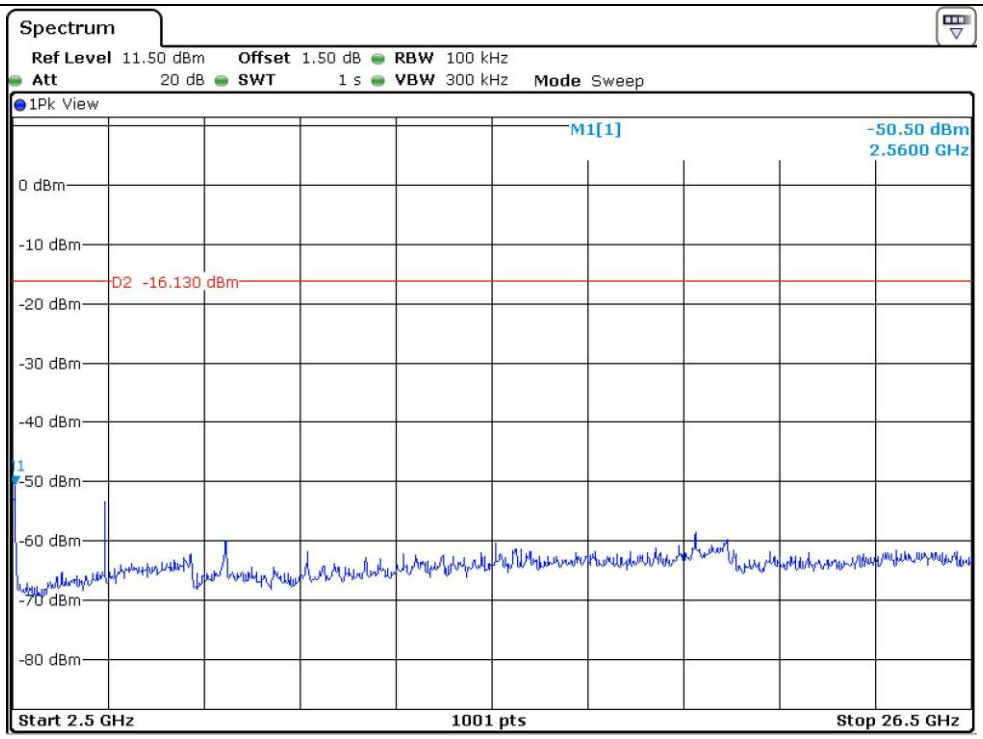


Low Channel



Low Channel

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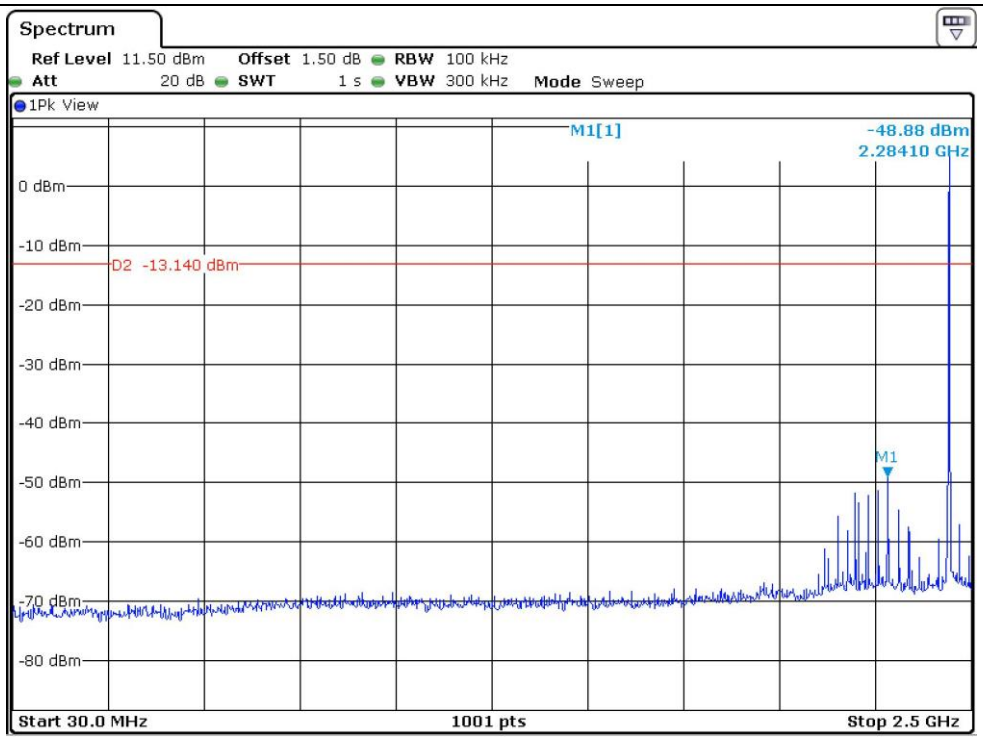
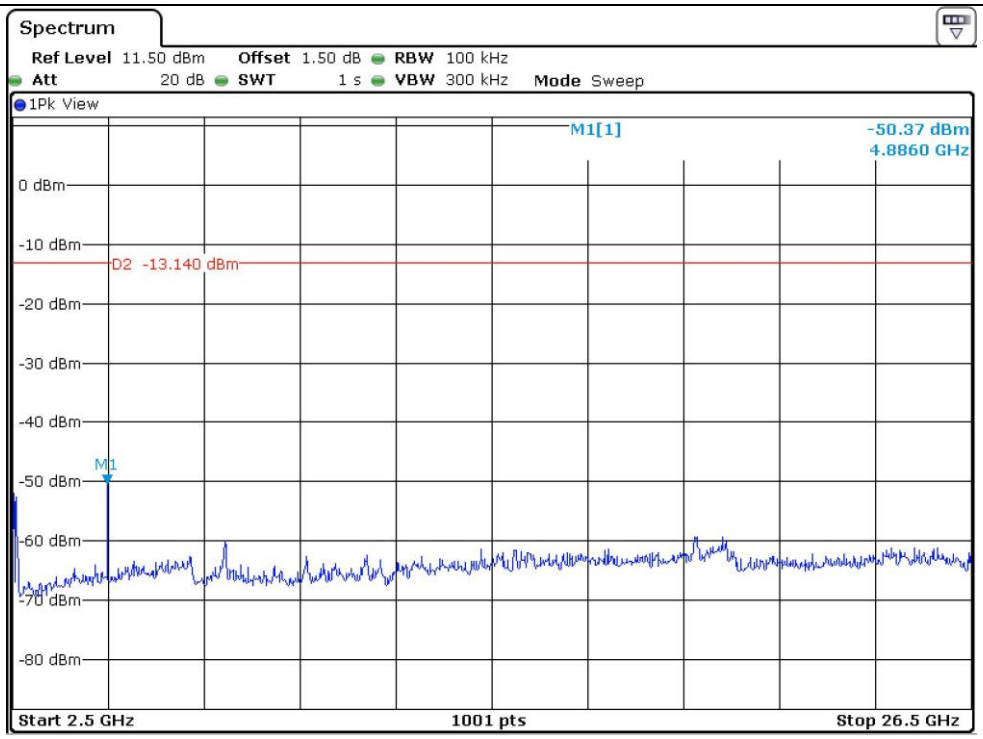


Middle Channel



Middle Channel

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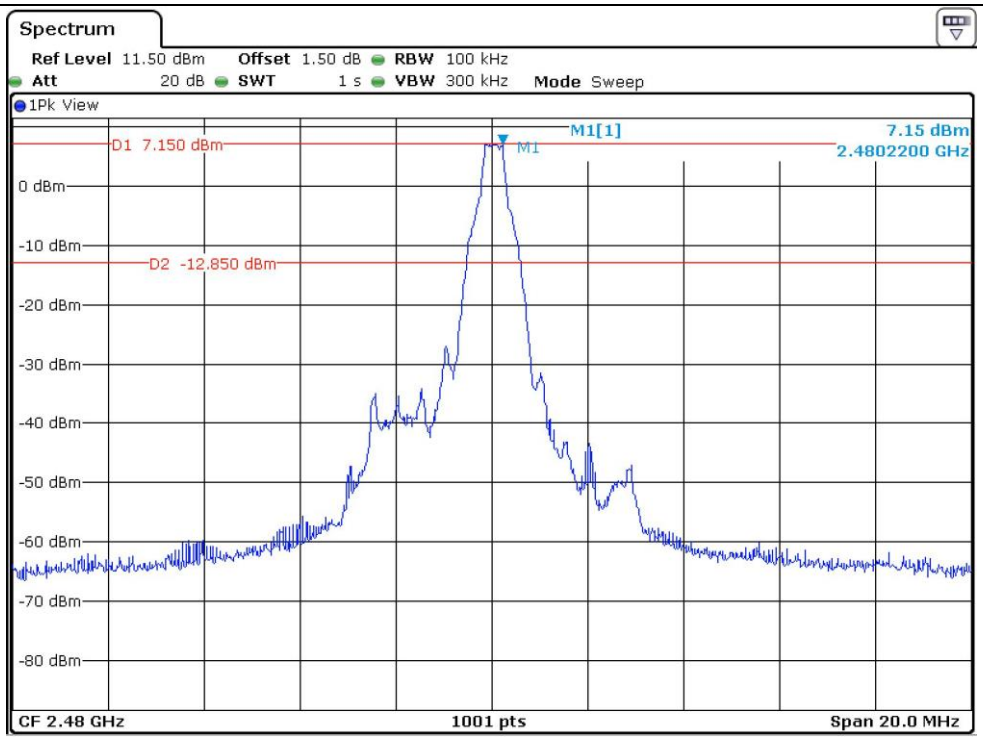
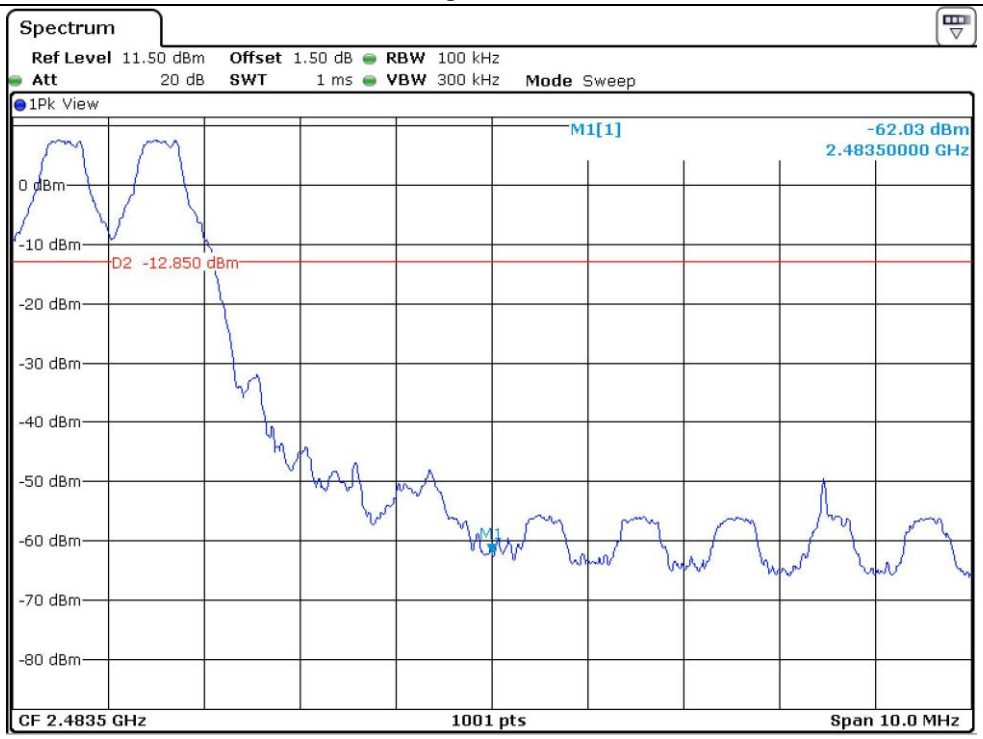


High Channel



High Channel

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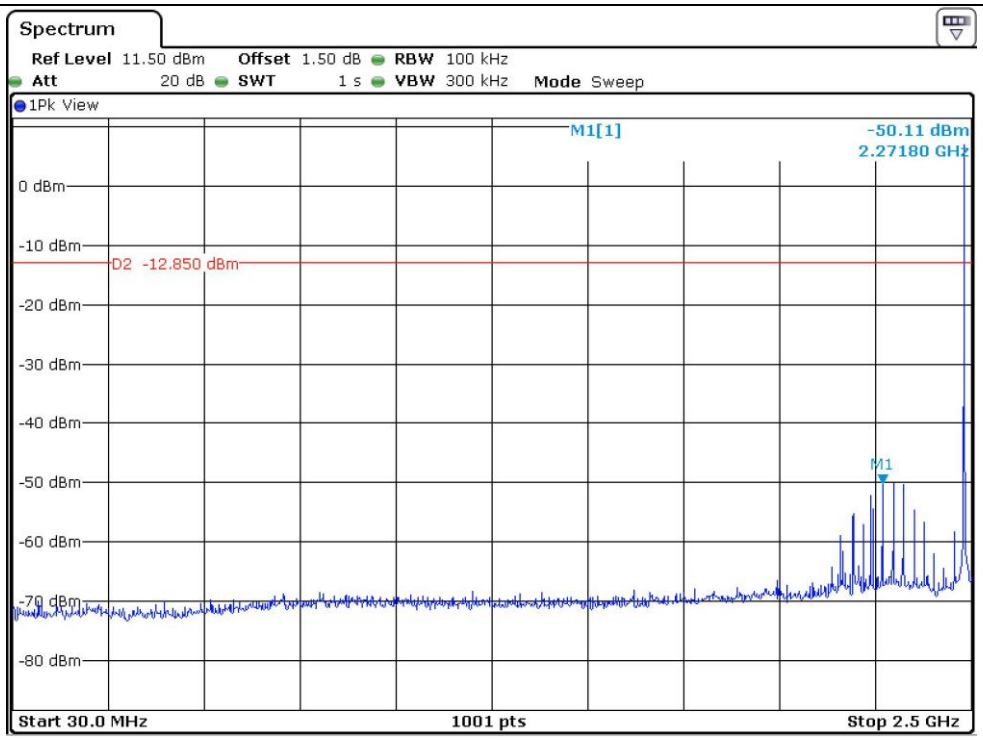
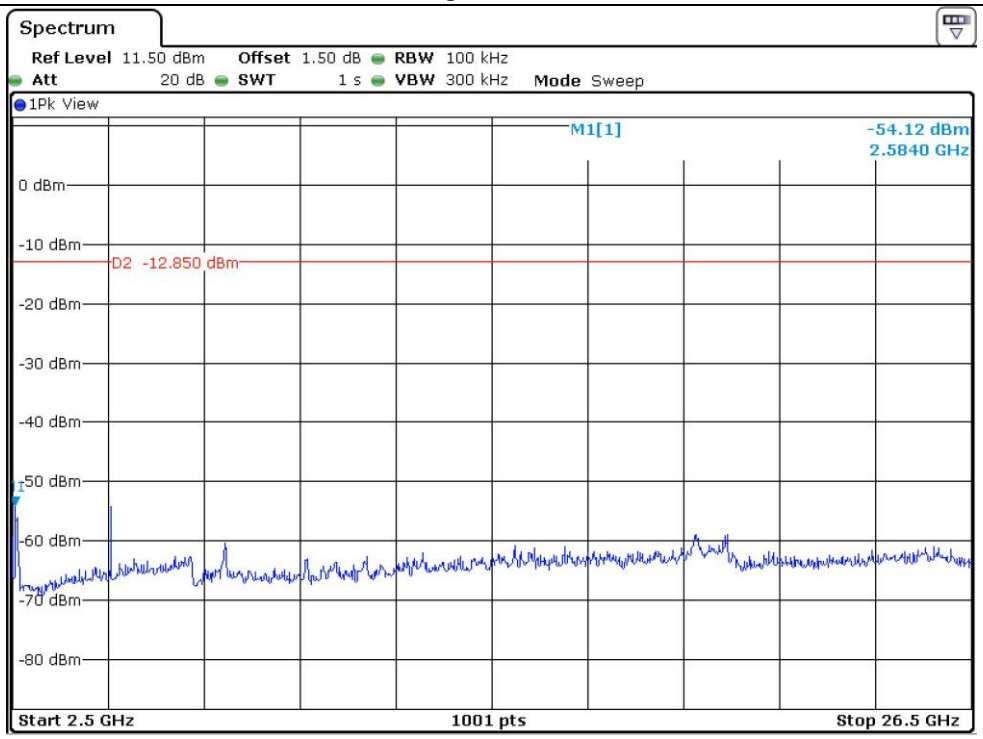


High Channel



High Channel

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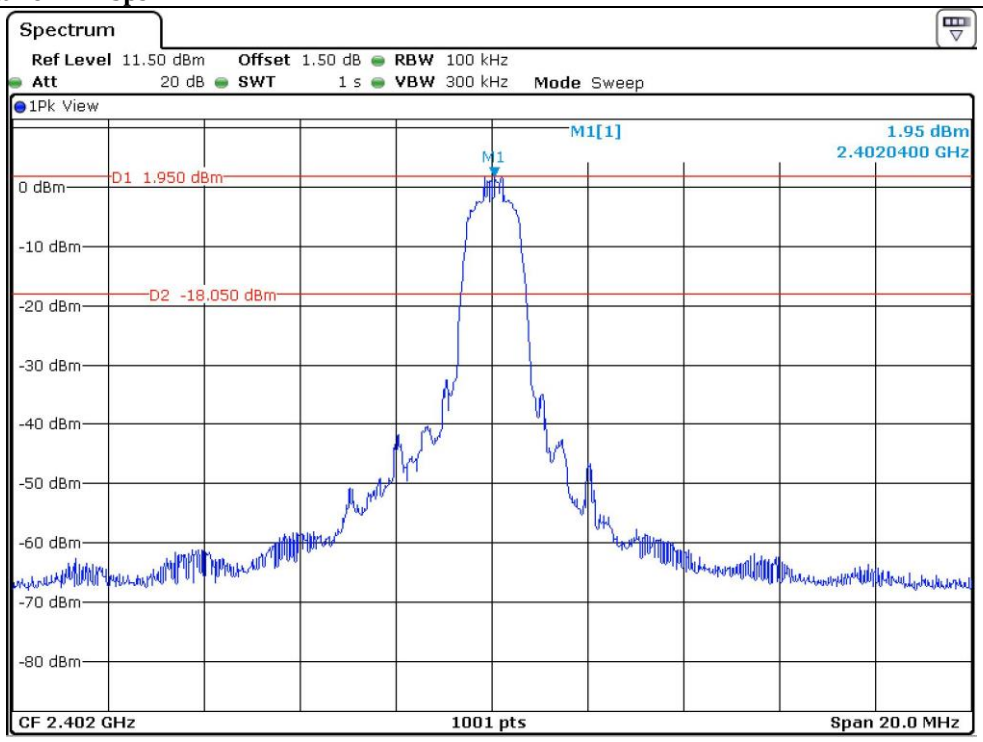
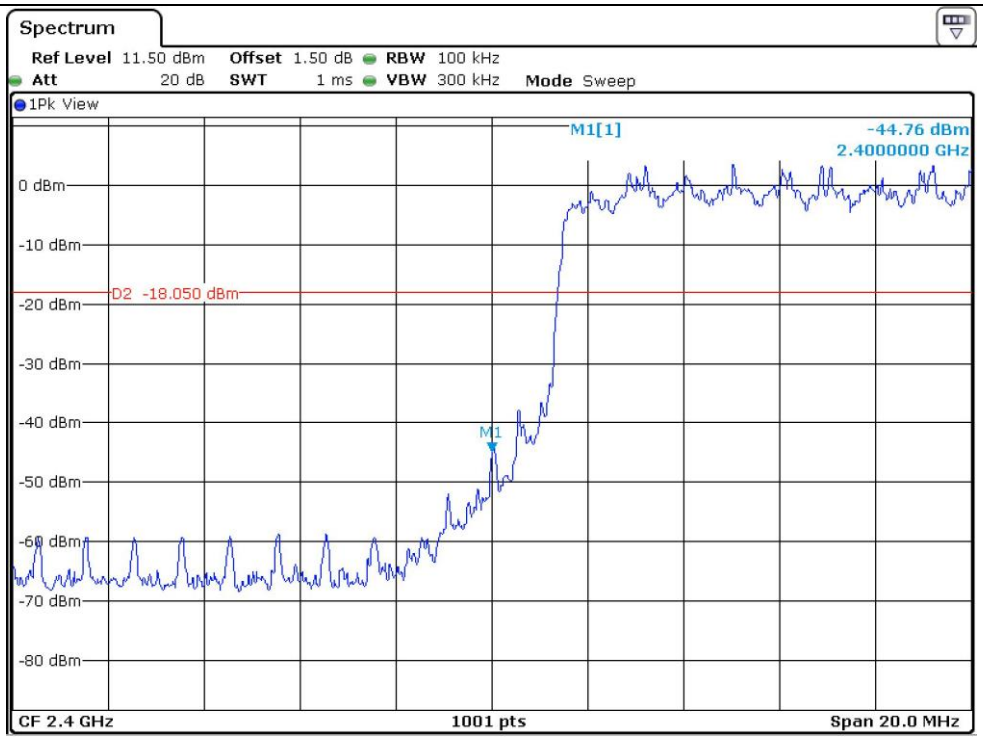
12.5.2 Test data for 2 Mbps



Low Channel



Low Channel

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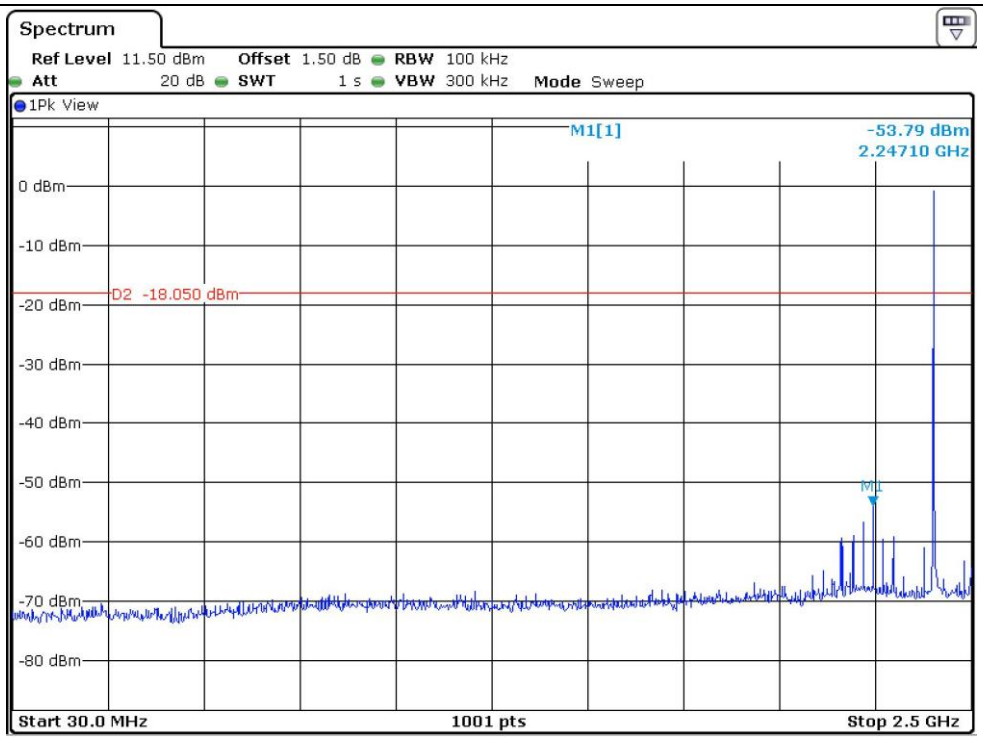
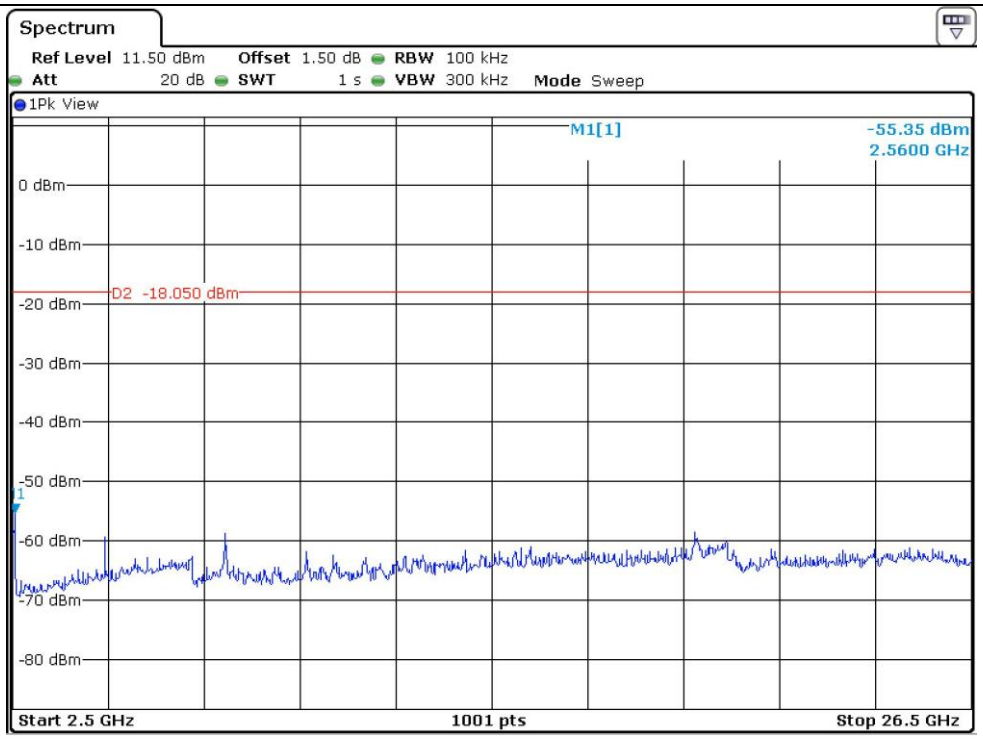


Low Channel



Low Channel

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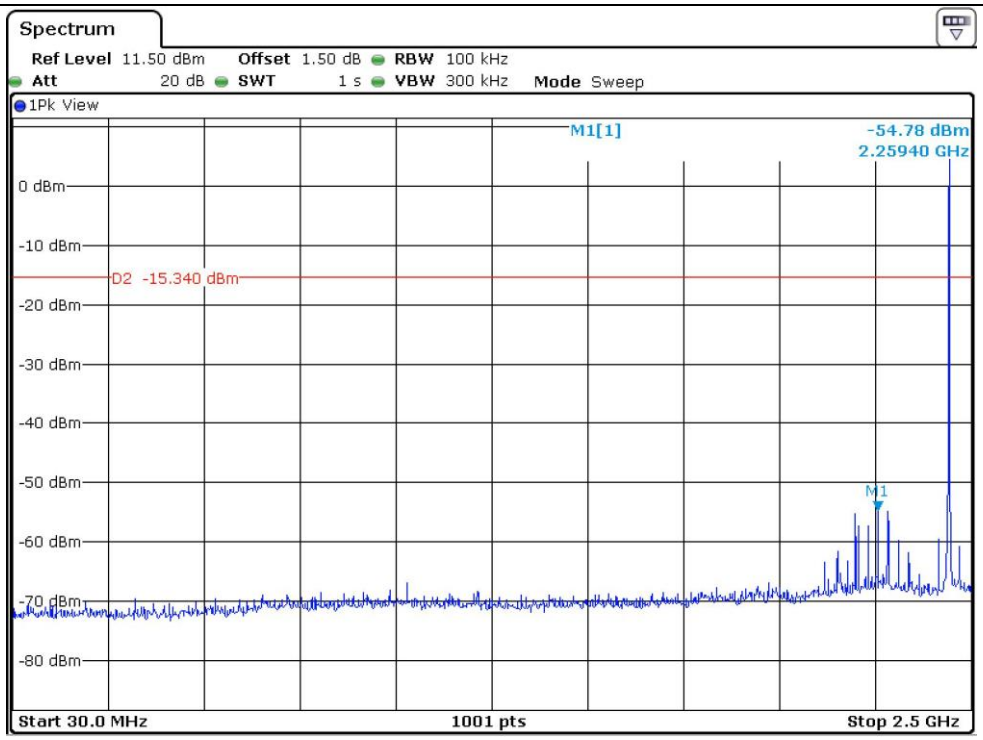
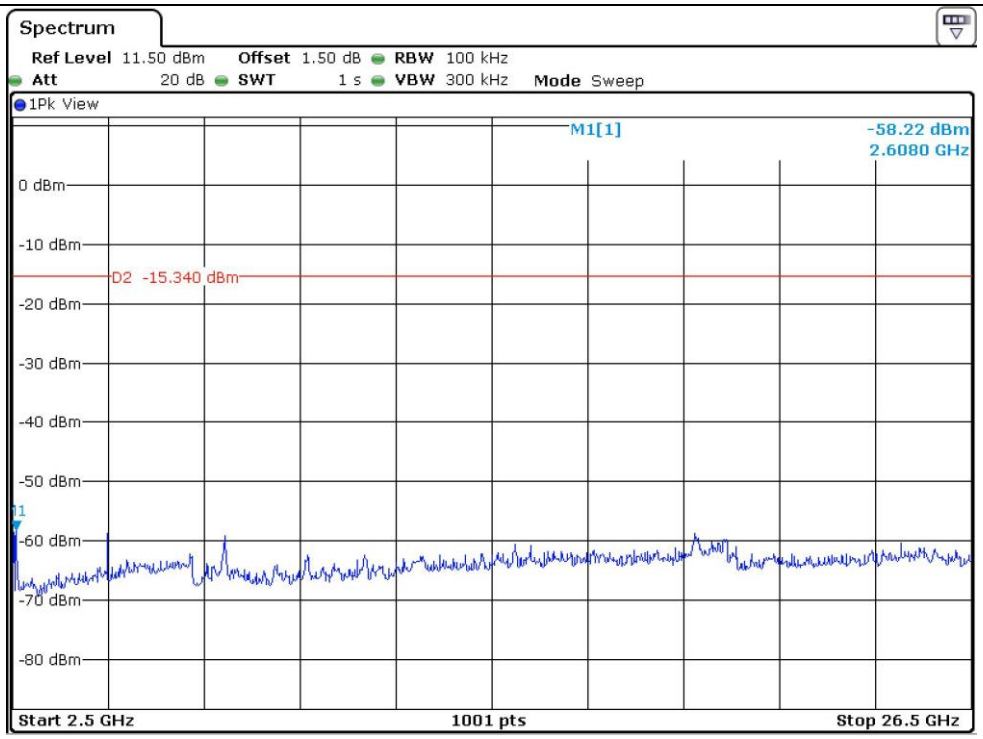


Middle Channel



Middle Channel

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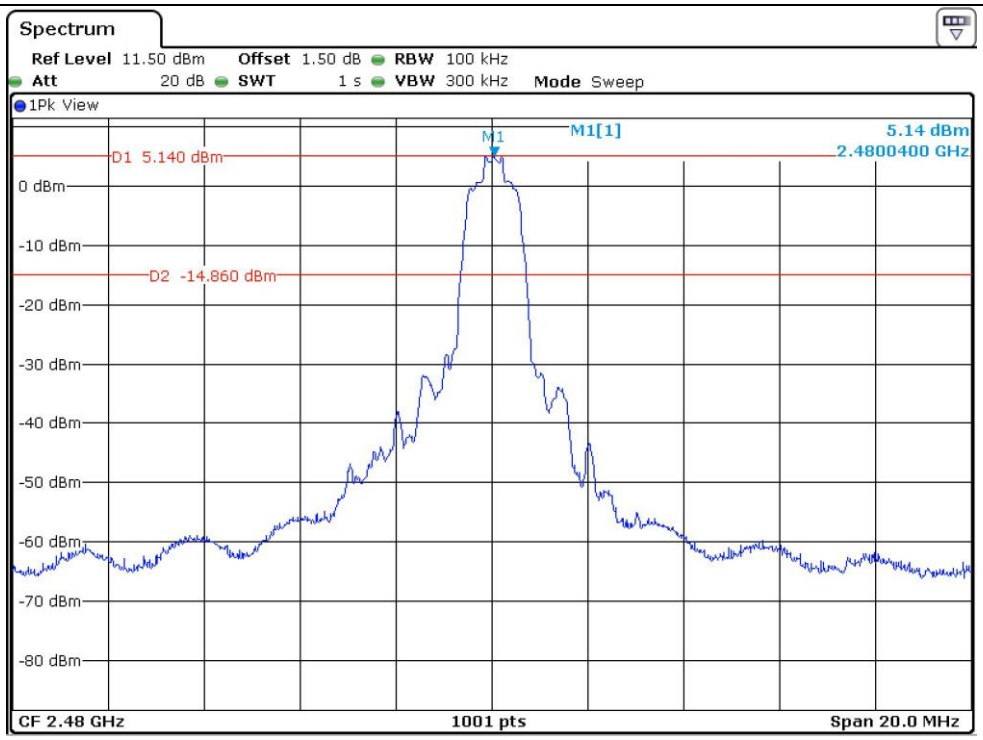
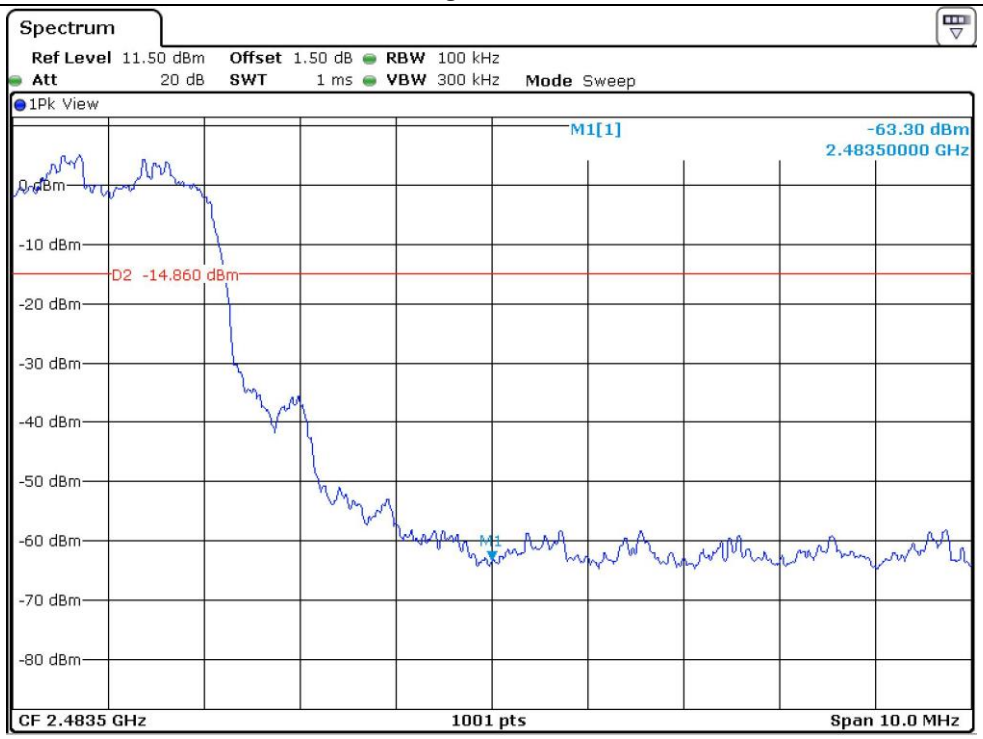


High Channel



High Channel

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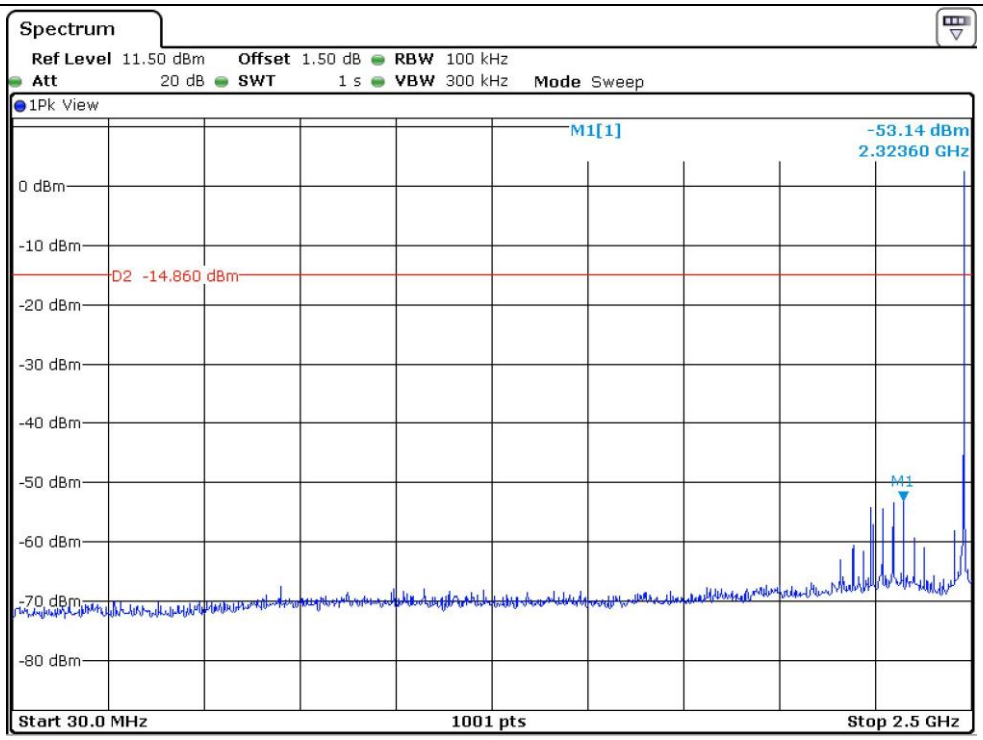
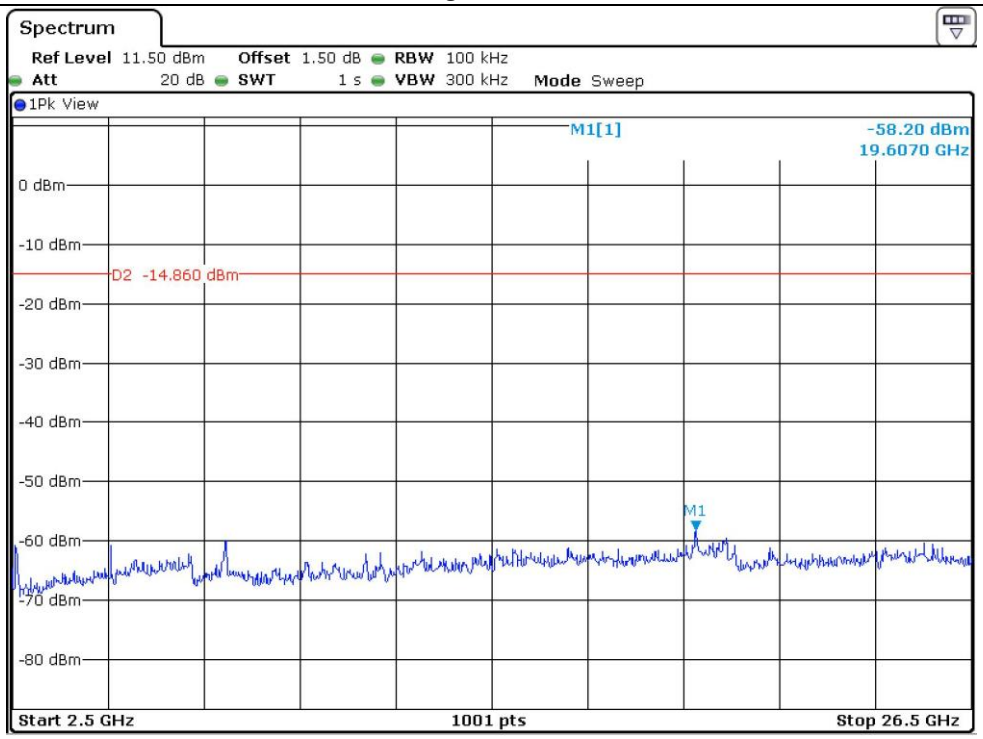


High Channel



High Channel

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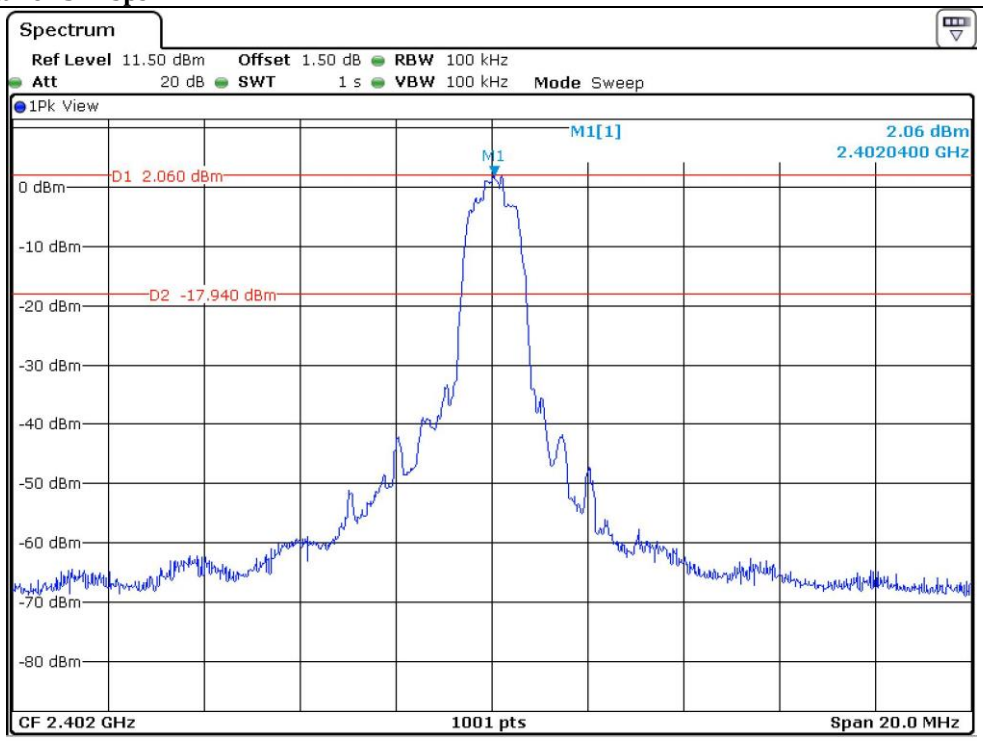
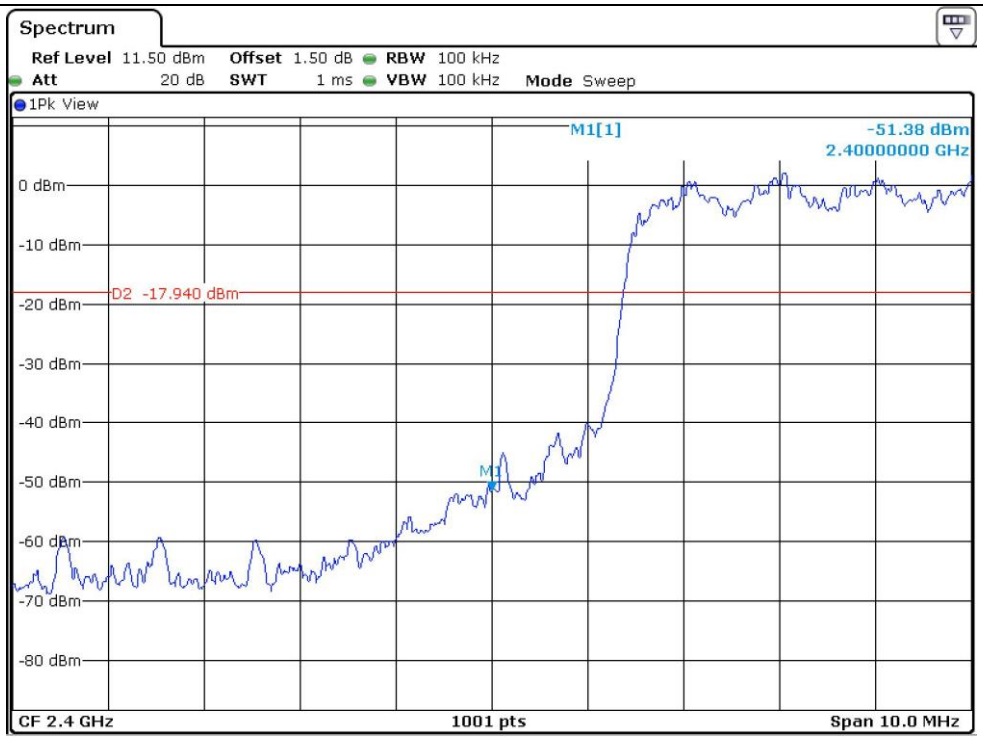
12.5.3 Test data for 3 Mbps



Low Channel



Low Channel

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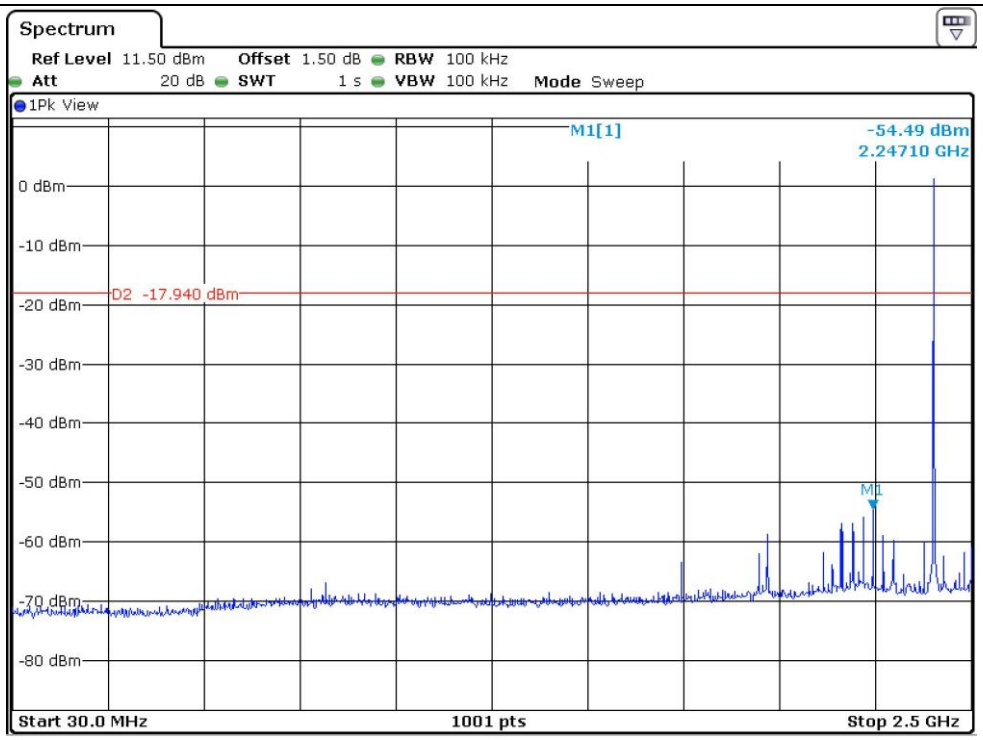
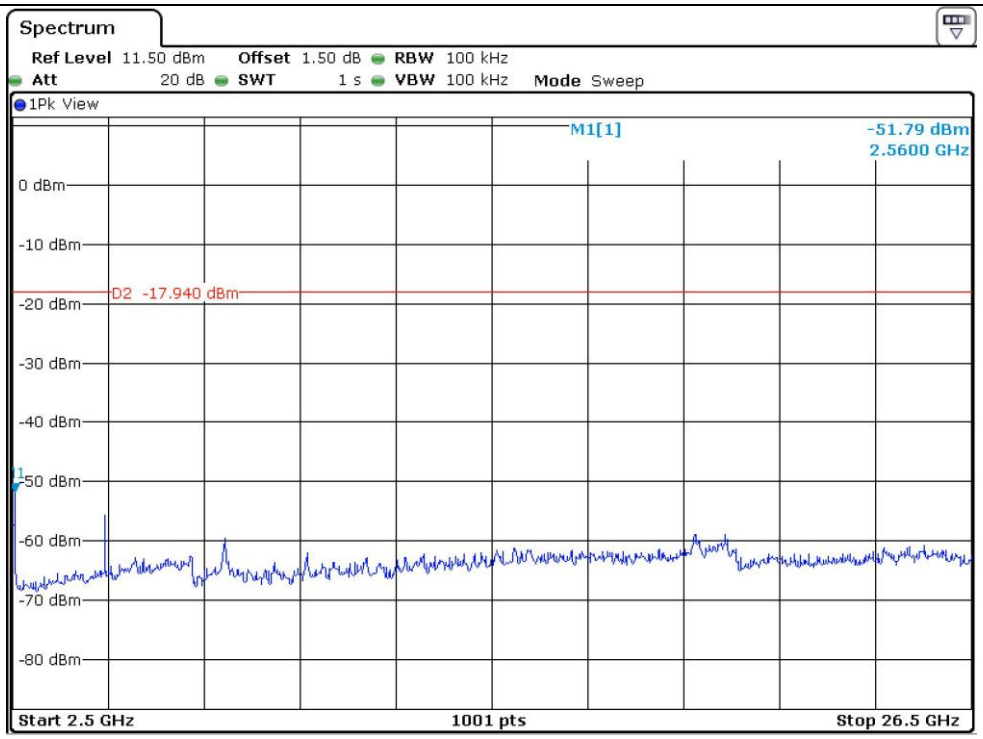


Low Channel



Low Channel

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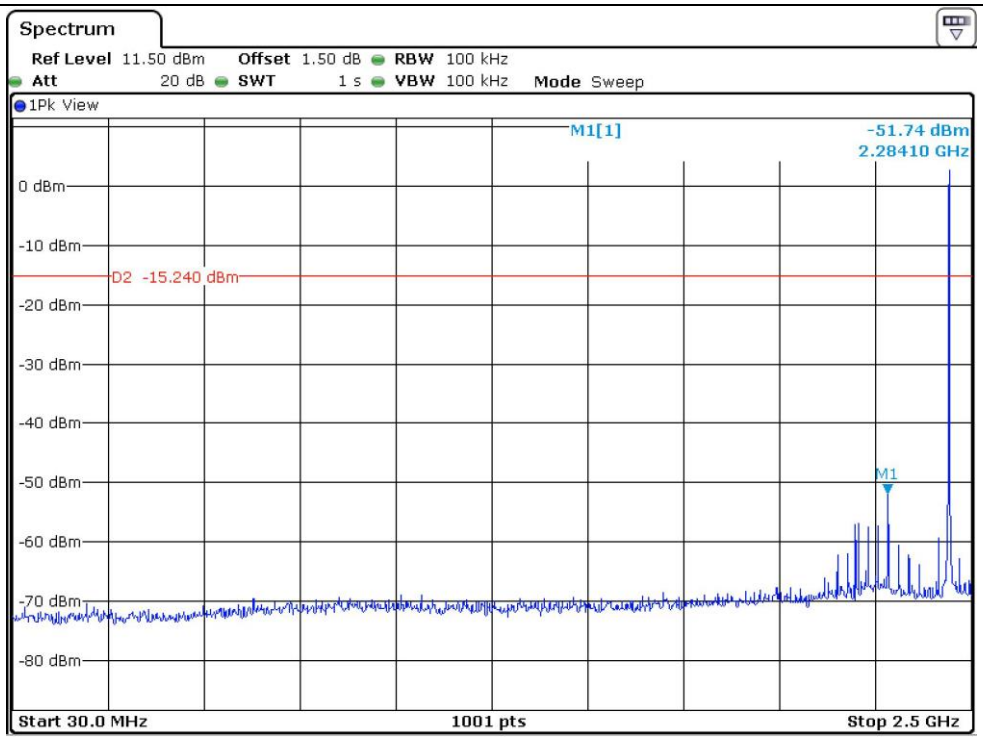
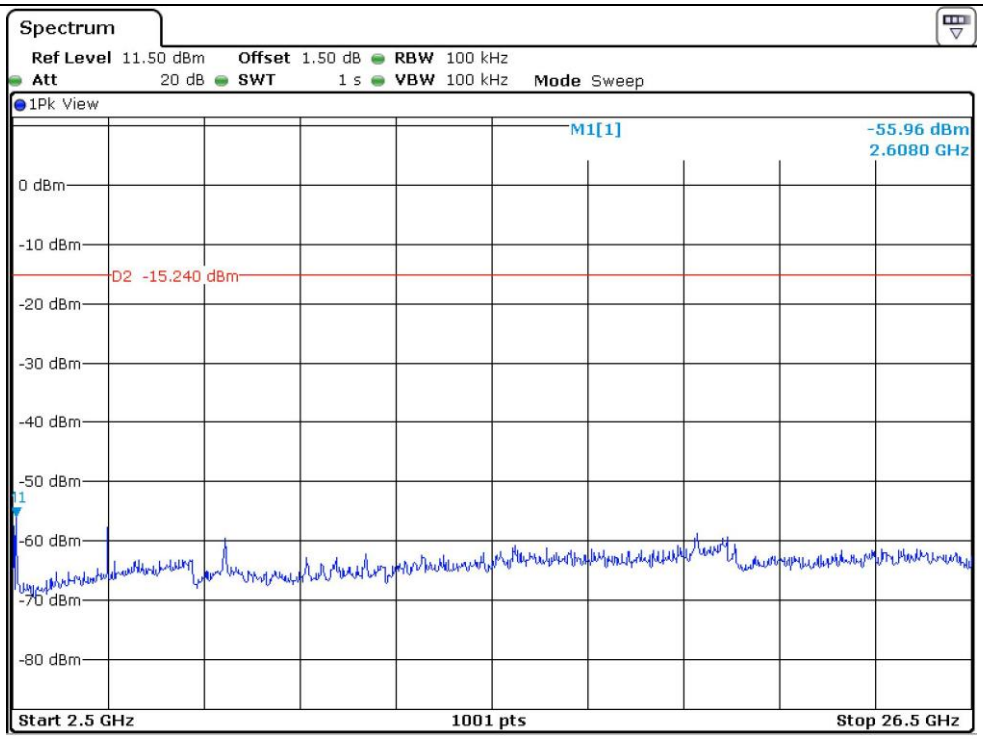


Middle Channel



Middle Channel

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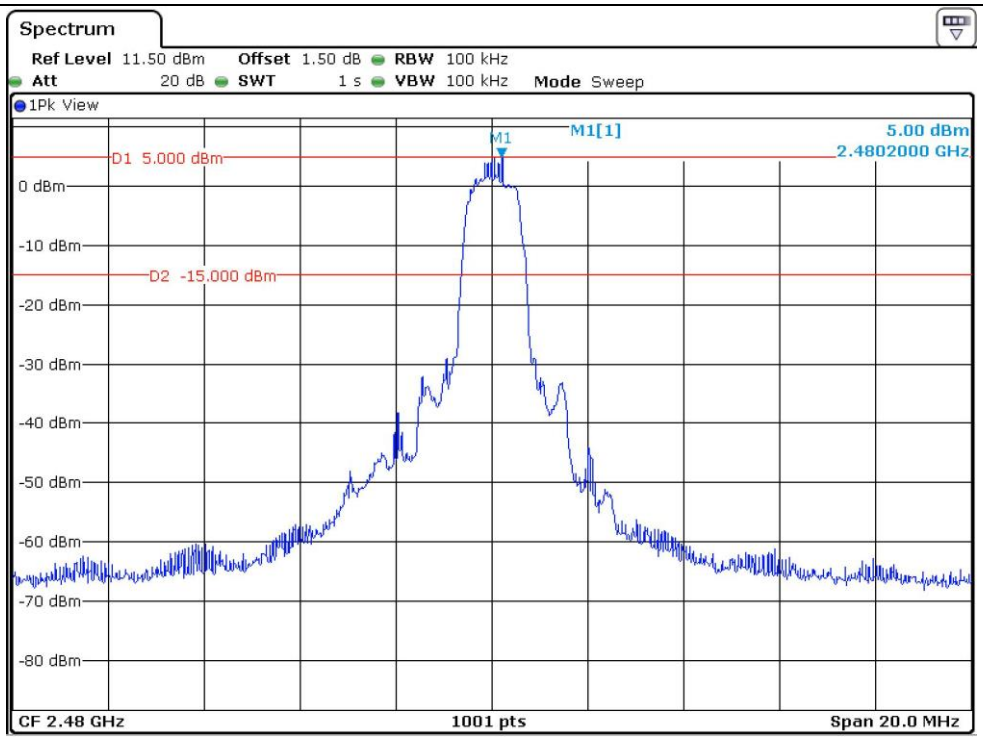
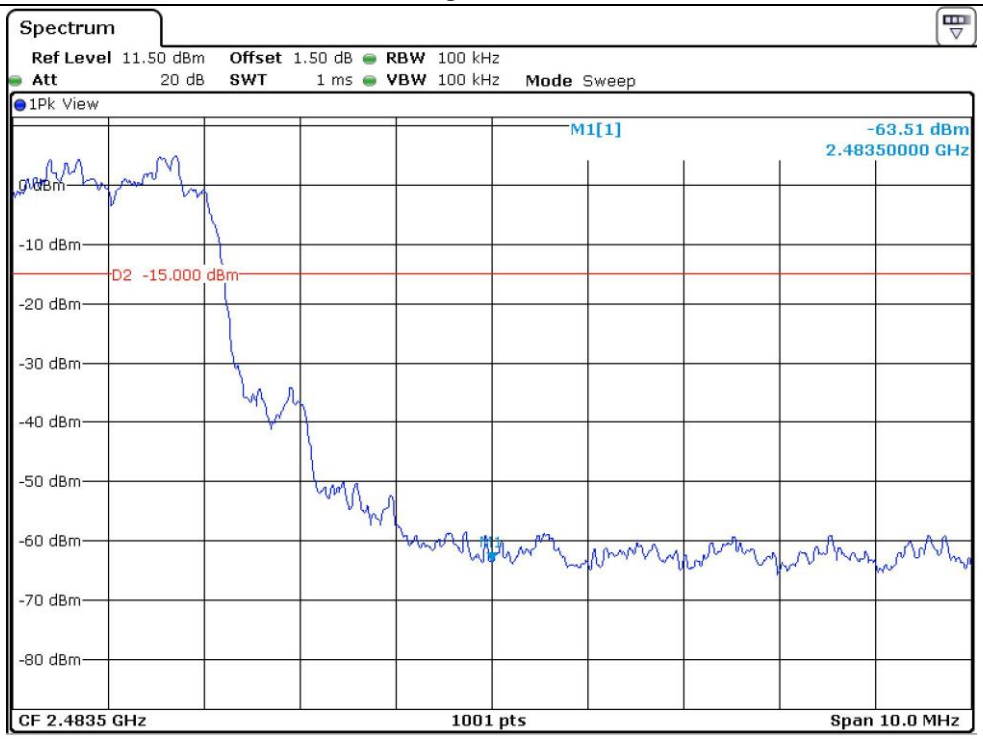


High Channel



High Channel

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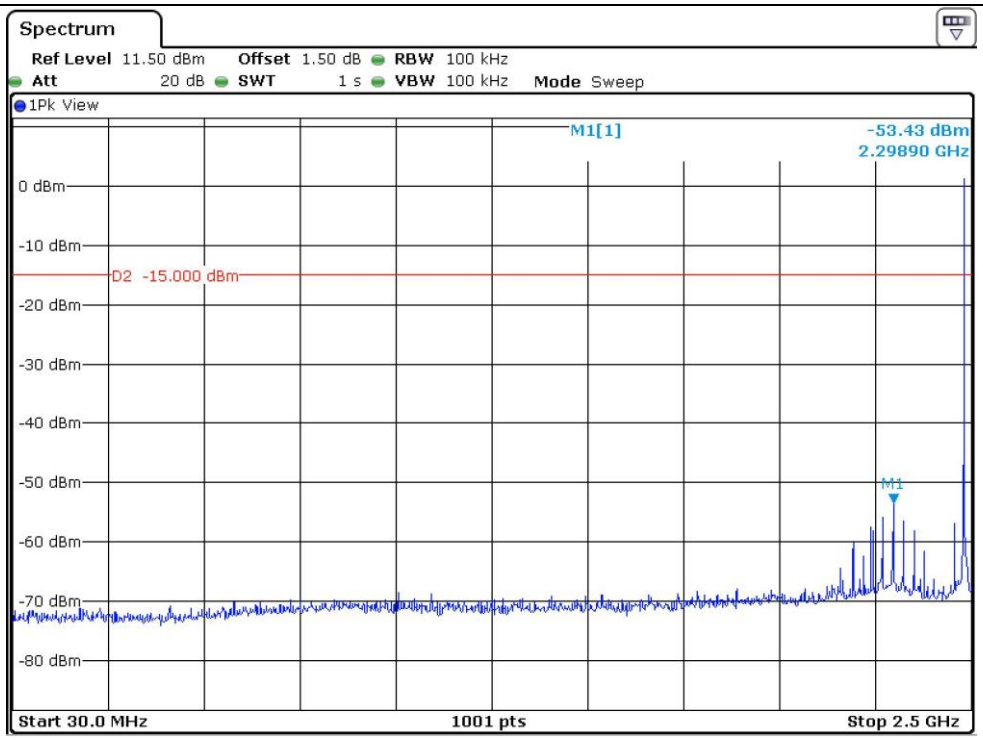
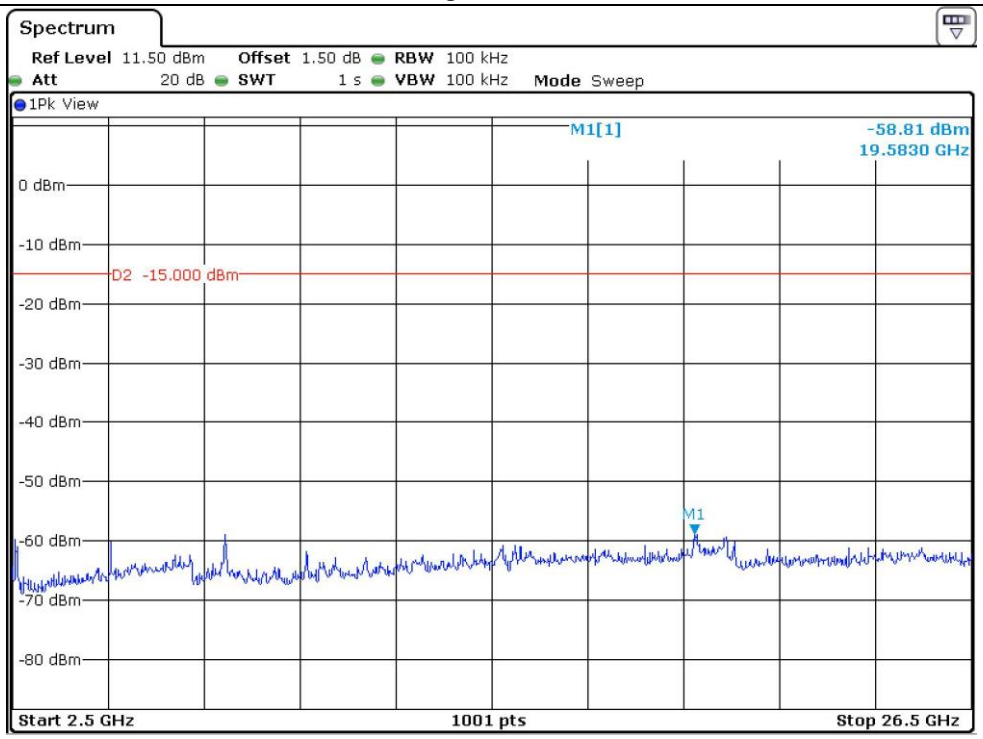


High Channel



High Channel

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12.6 Test data for Charging & Transmitting Mode radiated emission

12.6.1 Radiated Emission which fall in the Restricted Band

12.6.1.1 Test data for 1 Mbps

-. Test Date : September 24, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Operating Condition : Highest Output Power Transmitting Mode(Low Channel and High Channel)

-. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
2 341.94	36.71	Peak	H	27.10	7.50	43.00	28.31	74.00	45.69
	21.17	Average	H				12.77	54.00	41.23
2 343.60	35.93	Peak	V				27.53	74.00	46.47
	21.11	Average	V				12.71	54.00	41.29
Test Data for High Channel									
2 483.51	43.17	Peak	H	27.10	7.50	43.00	34.77	74.00	39.23
	23.16	Average	H				14.76	54.00	39.24
2 483.51	40.18	Peak	V				31.78	74.00	42.22
	22.00	Average	V				13.60	54.00	40.40

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.1.2 Test data for 2 Mbps

-. Test Date : September 24, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Operating Condition : Highest Output Power Transmitting Mode(Low Channel and High Channel)

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Test Data for Low Channel									
2 342.84	36.51	Peak	H	27.10	7.50	43.00	28.11	74.00	45.89
	21.24	Average	H				12.84	54.00	41.16
2 313.80	36.35	Peak	V				27.95	74.00	46.05
	21.15	Average	V				12.75	54.00	41.25
Test Data for High Channel									
2 483.59	43.38	Peak	H	27.10	7.50	43.00	34.98	74.00	39.02
	22.75	Average	H				14.35	54.00	39.65
2 483.56	40.74	Peak	V				32.34	74.00	41.66
	21.65	Average	V				13.25	54.00	40.75

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical

Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.1.3 Test data for 3 Mbps

-. Test Date : September 24, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

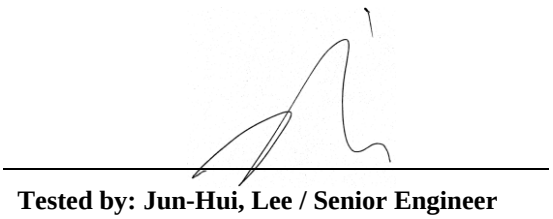
-. Operating Condition : Highest Output Power Transmitting Mode(Low Channel and High Channel)

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Test Data for Low Channel									
2 375.30	36.68	Peak	H	27.10	7.50	43.00	28.28	74.00	45.72
	21.48	Average	H				13.08	54.00	40.92
2 343.29	36.20	Peak	V				27.80	74.00	46.20
	21.34	Average	V				12.94	54.00	41.06
Test Data for High Channel									
2 483.74	43.86	Peak	H	27.10	7.50	43.00	35.46	74.00	38.54
	22.57	Average	H				14.17	54.00	39.83
2 483.74	40.52	Peak	V				32.12	74.00	41.88
	21.69	Average	V				13.29	54.00	40.71

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical



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12.6.2 Spurious & Harmonic Radiated Emission above 1 GHz

12.6.2.1 Test data for 1 Mbps

-. Test Date : September 24, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

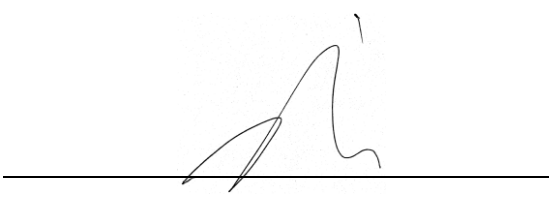
-. Operating Condition : Highest Output Power Transmitting Mode

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Test Data for Low Channel									
4 804.00	38.15	Peak	H	30.60	11.10	42.50	37.35	74.00	36.65
	30.54	Average	H				29.74	54.00	24.26
	37.15	Peak	V				36.35	74.00	37.65
	29.19	Average	V				28.39	54.00	25.61
Test Data for Middle Channel									
4 882.00	40.32	Peak	H	30.70	11.20	42.50	39.72	74.00	34.28
	30.18	Average	H				29.58	54.00	24.42
	39.81	Peak	V				39.21	74.00	34.79
	29.38	Average	V				28.78	54.00	25.22
Test Data for High Channel									
4 960.00	41.65	Peak	H	30.80	11.30	42.50	41.25	74.00	32.75
	30.05	Average	H				29.65	54.00	24.35
	39.62	Peak	V				39.22	74.00	34.78
	29.78	Average	V				29.38	54.00	24.62

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical, “*” Frequency fall in restricted band



Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.2.2 Test data for 2 Mbps

-. Test Date : September 24, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Operating Condition : Highest Output Power Transmitting Mode

-. Result : PASSED

Frequency (GHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 804.00	39.11	Peak	H	30.60	11.10	42.50	38.31	74.00	35.69
	29.54	Average	H				28.74	54.00	25.26
	40.78	Peak	V				39.98	74.00	34.02
	27.83	Average	V				27.03	54.00	26.97
Test Data for Middle Channel									
4 882.00	39.48	Peak	H	30.70	11.20	42.50	38.88	74.00	35.12
	30.60	Average	H				30.00	54.00	24.00
	39.67	Peak	V				39.07	74.00	34.93
	28.54	Average	V				27.94	54.00	26.06
Test Data for High Channel									
4 960.00	39.62	Peak	H	30.80	11.30	42.50	39.22	74.00	34.78
	29.35	Average	H				28.95	54.00	25.05
	40.54	Peak	V				40.14	74.00	33.86
	28.84	Average	V				28.44	54.00	25.56

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical, “*” Frequency fall in restricted band

Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.2.3 Test data for 3 Mbps

-. Test Date : September 24, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Operating Condition : Highest Output Power Transmitting Mode

-. Result : PASSED

Frequency (GHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 804.00	41.38	Peak	H	30.60	11.10	42.50	40.58	74.00	33.42
	28.87	Average	H				28.07	54.00	25.93
	40.98	Peak	V				40.18	74.00	33.82
	29.12	Average	V				28.32	54.00	25.68
Test Data for Middle Channel									
4 882.00	40.44	Peak	H	30.70	11.20	42.50	39.84	74.00	34.16
	28.54	Average	H				27.94	54.00	26.06
	39.54	Peak	V				38.94	74.00	35.06
	29.41	Average	V				28.81	54.00	25.19
Test Data for High Channel									
4 960.00	40.35	Peak	H	30.80	11.30	42.50	39.95	74.00	34.05
	29.72	Average	H				29.32	54.00	24.68
	39.46	Peak	V				39.06	74.00	34.94
	28.99	Average	V				28.59	54.00	25.41

Tabulated test data for Restricted Band

Remark: “H”: Horizontal, “V”: Vertical, “*” Frequency fall in restricted band

Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.3 Spurious Radiated Emission

12.6.3.1 Test Data for 1 Mbps

12.6.3.1.1 Test Data for 30 MHz ~ 1 000 MHz

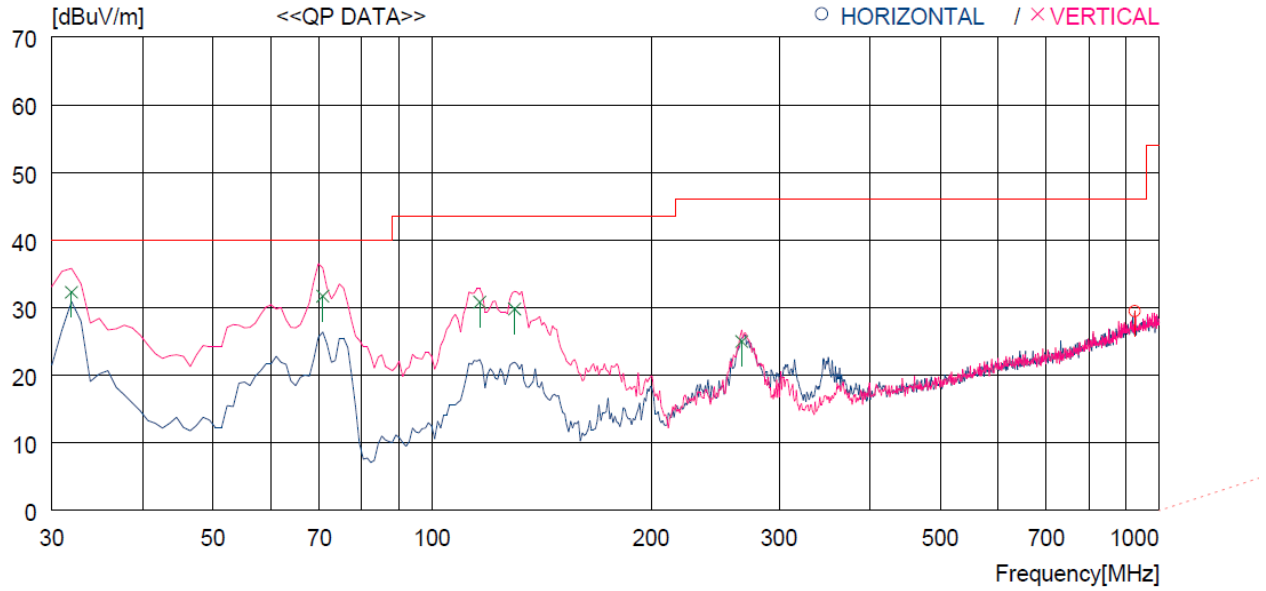
Humidity Level : (22 ~ 23) % R.H. Temperature: (49 ~ 50) ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Mobile Payment Terminal Date: September 25, 2015

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	925.298	30.4	22.4	9.3	32.6	29.5	46.0	16.5	100	359
----- Vertical ------										
2	31.940	51.7	11.7	1.7	32.8	32.3	40.0	7.7	100	0
3	70.740	52.8	9.6	2.4	33.1	31.7	40.0	8.3	100	0
4	116.330	50.3	10.6	3.1	33.2	30.8	43.5	12.7	100	0
5	129.910	50.4	9.2	3.3	33.1	29.8	43.5	13.7	100	0
6	266.680	40.3	12.8	4.7	32.8	25.0	46.0	21.0	100	0

Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.3.1.2 Test Data for Below 30 MHz

-. Test Date : September 25, 2015

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

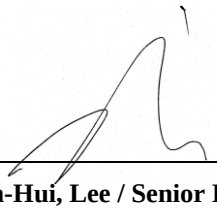
-. Frequency range : 9 kHz ~ 30 MHz

-. Measurement distance : 3 m

-. Operating Condition : Highest Output Power Transmitting Mode

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Amp Gain	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
It was not observed any emissions from the EUT.								



Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.3.2 Test Data for 2 Mbps

12.6.3.2.1 Test Data for 30 MHz ~ 1 000 MHz

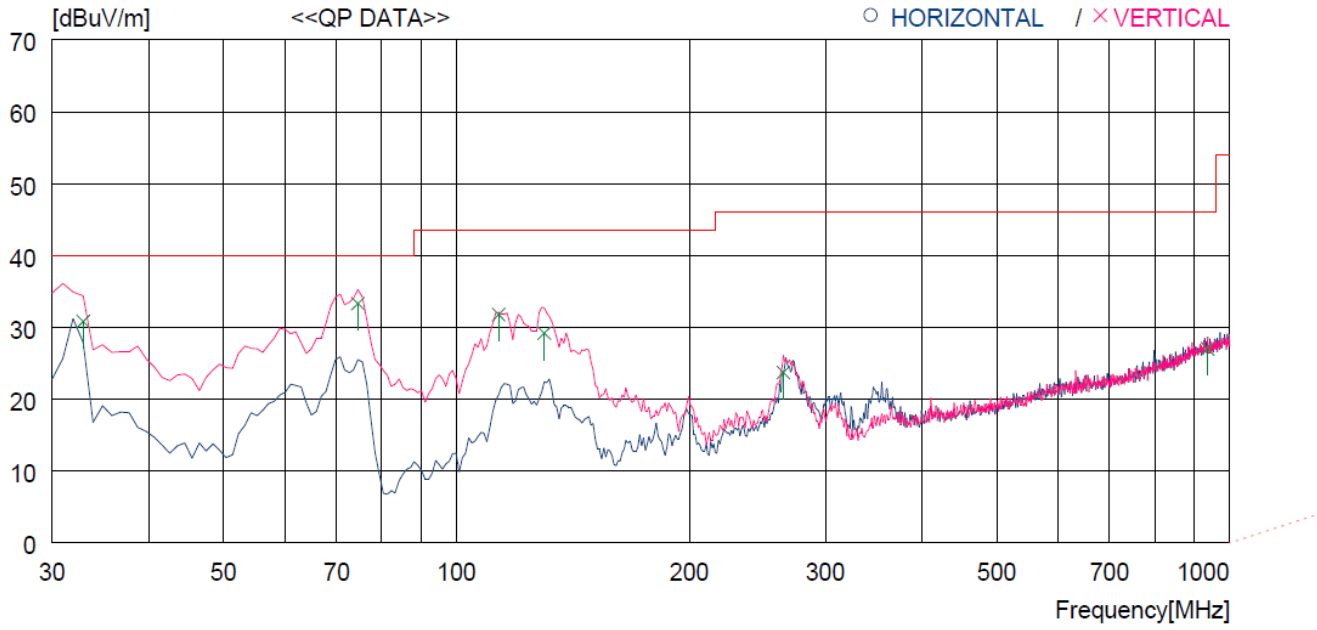
Humidity Level : (22 ~ 23) % R.H. Temperature: (49 ~ 50) ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Mobile Payment Terminal Date: September 25, 2015

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Vertical ------										
1	32.910	50.1	11.8	1.7	32.8	30.8	40.0	9.2	100	0
2	74.620	55.3	8.7	2.5	33.2	33.3	40.0	6.7	100	0
3	113.420	51.2	10.8	3.1	33.3	31.8	43.5	11.7	100	144
4	129.910	49.8	9.2	3.3	33.1	29.2	43.5	14.3	100	0
5	264.740	39.1	12.8	4.7	32.9	23.7	46.0	22.3	100	0
6	936.938	27.6	22.4	9.4	32.4	27.0	46.0	19.0	400	257

Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.3.2.2 Test Data for Below 30 MHz

-. Test Date : September 25, 2015

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

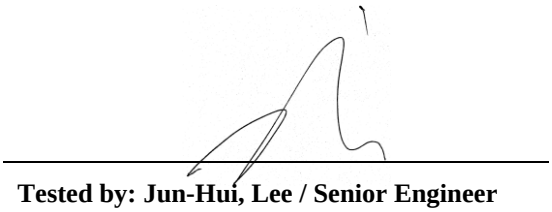
-. Frequency range : 9 kHz ~ 30 MHz

-. Measurement distance : 3 m

-. Operating Condition : Highest Output Power Transmitting Mode

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Amp Gain	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
It was not observed any emissions from the EUT.								



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12.6.3.3 Test Data for 3 Mbps

12.6.3.3.1 Test Data for 30 MHz ~ 1 000 MHz

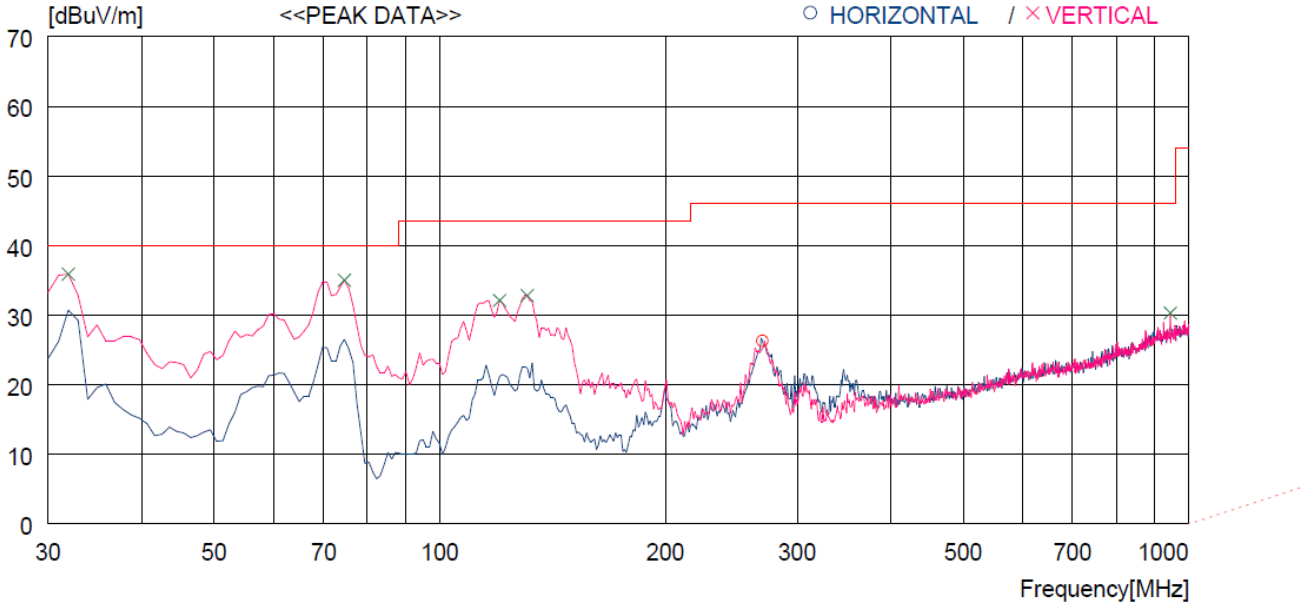
Humidity Level : (22 ~ 23) % R.H. Temperature: (49 ~ 50) ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Mobile Payment Terminal Date: September 25, 2015

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	269.590	41.4	12.9	4.8	32.8	26.3	46.0	19.7	100	201
----- Vertical ------										
2	31.940	55.3	11.7	1.7	32.8	35.9	40.0	4.1	100	0
3	74.620	57.0	8.7	2.5	33.2	35.0	40.0	5	100	0
4	120.210	51.9	10.2	3.2	33.2	32.1	43.5	11.4	100	0
5	130.880	53.5	9.1	3.3	33.1	32.8	43.5	10.7	100	74
6	944.698	30.8	22.5	9.4	32.4	30.3	46.0	15.7	100	299

Tested by: Jun-Hui, Lee / Senior Engineer

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12.6.3.3.2 Test Data for Below 30 MHz

-. Test Date : September 25, 2015

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

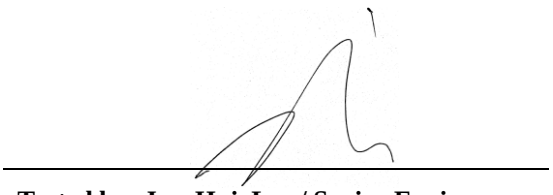
-. Frequency range : 9 kHz ~ 30 MHz

-. Measurement distance : 3 m

-. Operating Condition : Highest Output Power Transmitting Mode

-. Result : PASSED

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Amp Gain	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
It was not observed any emissions from the EUT.								



Tested by: Jun-Hui, Lee / Senior Engineer

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13. CONDUCTED EMISSION TEST

13.1 Operating environment

Temperature : (21 ~ 22) ℃

Relative humidity : (49 ~ 50) % R.H.

13.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μH + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

13.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	ESPI	Rohde & Schwarz	EMI Test Receiver	101278	Nov. 03, 2014 (1Y)
☐ -	ESHS10	Rohde & Schwarz	EMI Test Receiver	834467/007	Apr. 29, 2015 (1Y)
☐	NSLK8128	Schwarzbeck	AMN	8128-216	Apr. 06, 2015 (1Y)
■ -	NSLK8126	Schwarzbeck	AMN	8126-404	Apr. 29, 2015 (1Y)
☐ -	3825/2	EMCO	AMN	9109-1869	Apr. 29, 2015 (1Y)
■ --	3825/2	EMCO	AMN	9109-1867	Apr. 29, 2015 (1Y)

All test equipment used is calibrated on a regular basis.

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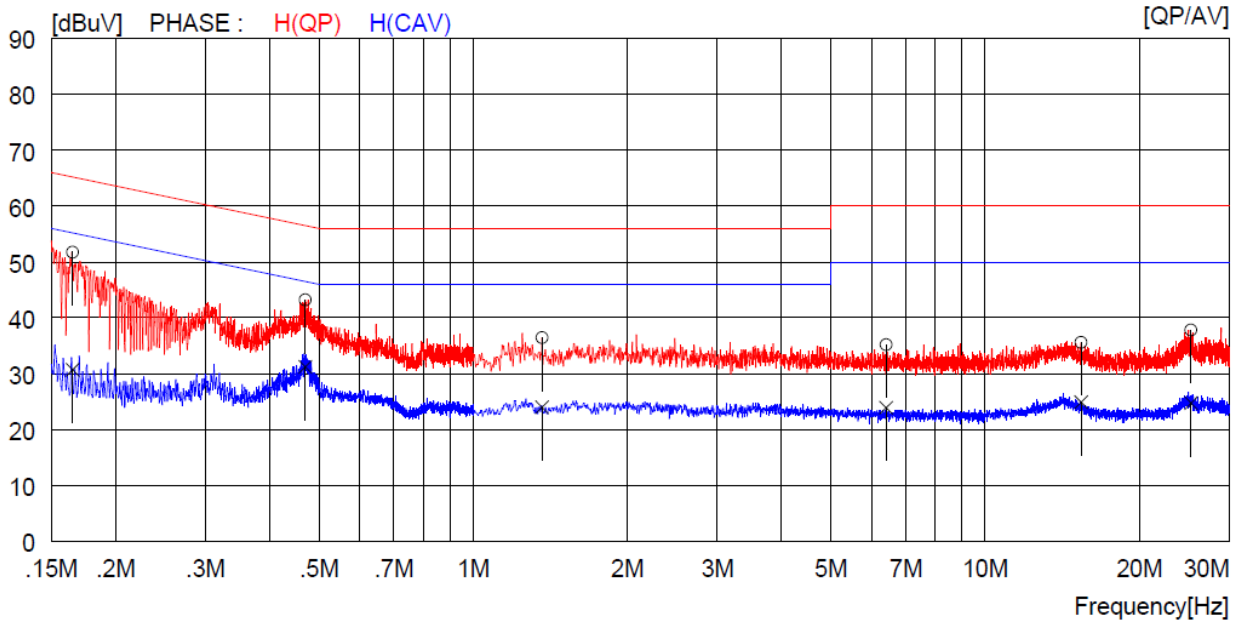
13.4 Test data for Charging & Transmitting Mode_1 Mbps

-. Test Date : September 25, 2015

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16500	31.5	----	20.2	51.7	----	65.2	----	13.5	----	H(QP)
2	0.47000	23.0	----	20.2	43.2	----	56.5	----	13.3	----	H(QP)
3	1.36400	16.2	----	20.2	36.4	----	56.0	----	19.6	----	H(QP)
4	6.41000	14.8	----	20.4	35.2	----	60.0	----	24.8	----	H(QP)
5	15.40000	15.3	----	20.3	35.6	----	60.0	----	24.4	----	H(QP)
6	25.25000	17.4	----	20.4	37.8	----	60.0	----	22.2	----	H(QP)
7	0.16500	----	10.5	20.2	----	30.7	----	55.2	----	24.5	H(CAV)
8	0.47000	----	11.0	20.2	----	31.2	----	46.5	----	15.3	H(CAV)
9	1.36400	----	3.8	20.2	----	24.0	----	46.0	----	22.0	H(CAV)
10	6.41000	----	3.5	20.4	----	23.9	----	50.0	----	26.1	H(CAV)
11	15.40000	----	4.6	20.3	----	24.9	----	50.0	----	25.1	H(CAV)
12	25.25000	----	4.3	20.4	----	24.7	----	50.0	----	25.3	H(CAV)

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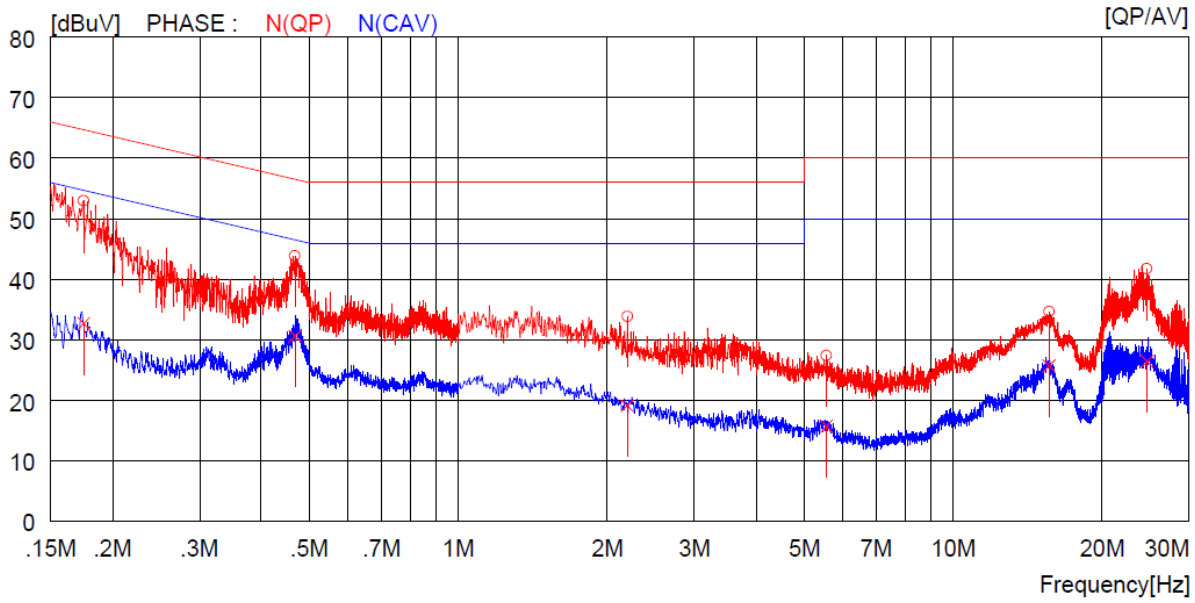
-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.17500	43.0	----	9.9	52.9	----	64.7	----	11.8	----	N(QP)
2	0.46800	33.9	----	10.0	43.9	----	56.5	----	12.6	----	N(QP)
3	2.19600	23.8	----	10.1	33.9	----	56.0	----	22.1	----	N(QP)
4	5.54500	17.2	----	10.2	27.4	----	60.0	----	32.6	----	N(QP)
5	15.64000	24.1	----	10.5	34.6	----	60.0	----	25.4	----	N(QP)
6	24.65000	31.2	----	10.5	41.7	----	60.0	----	18.3	----	N(QP)
7	0.17500	----	22.8	9.9	----	32.7	----	54.7	----	22.0	N(CAV)
8	0.46800	----	20.6	10.0	----	30.6	----	46.5	----	15.9	N(CAV)
9	2.19600	----	9.0	10.1	----	19.1	----	46.0	----	26.9	N(CAV)
10	5.54500	----	5.5	10.2	----	15.7	----	50.0	----	34.3	N(CAV)
11	15.64000	----	15.2	10.5	----	25.7	----	50.0	----	24.3	N(CAV)
12	24.65000	----	15.9	10.5	----	26.4	----	50.0	----	23.6	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee / Senior Engineer

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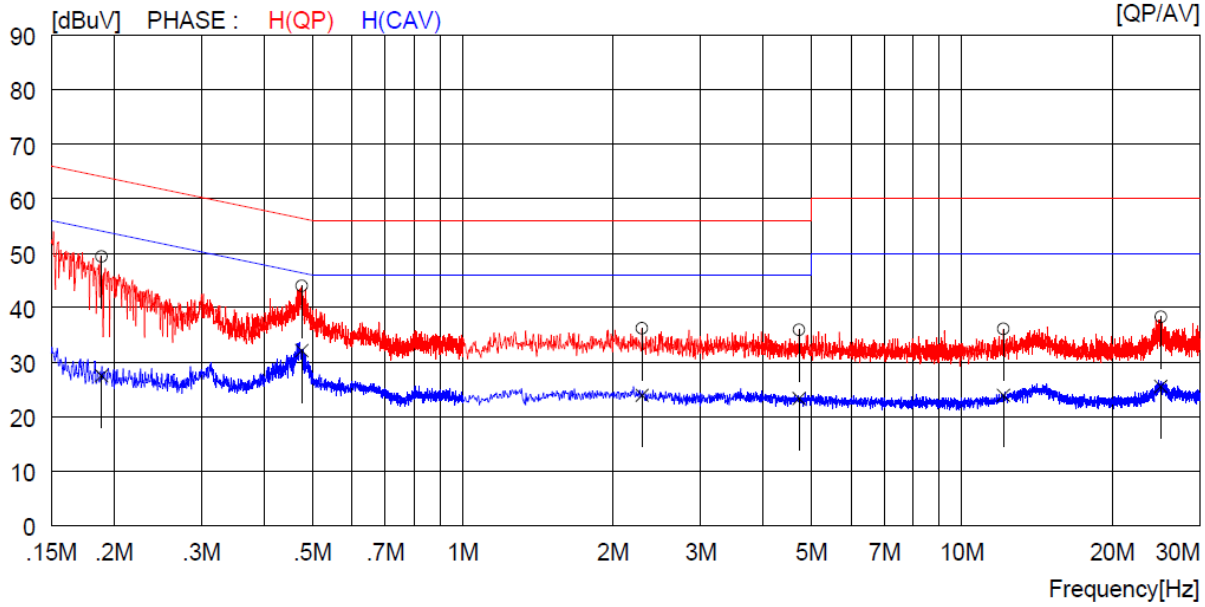
13.5 Test data for Charging & Transmitting Mode_2 Mbps

-. Test Date : September 25, 2015

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.18900	29.2	----	20.2	49.4	----	64.1	----	14.7	----	H(QP)
2	0.47600	23.8	----	20.2	44.0	----	56.4	----	12.4	----	H(QP)
3	2.28800	16.0	----	20.2	36.2	----	56.0	----	19.8	----	H(QP)
4	4.72000	15.6	----	20.3	35.9	----	56.0	----	20.1	----	H(QP)
5	12.12000	15.8	----	20.3	36.1	----	60.0	----	23.9	----	H(QP)
6	25.05000	17.9	----	20.4	38.3	----	60.0	----	21.7	----	H(QP)
7	0.18900	----	7.3	20.2	----	27.5	----	54.1	----	26.6	H(CAV)
8	0.47600	----	11.9	20.2	----	32.1	----	46.4	----	14.3	H(CAV)
9	2.28800	----	3.7	20.2	----	23.9	----	46.0	----	22.1	H(CAV)
10	4.72000	----	3.0	20.3	----	23.3	----	46.0	----	22.7	H(CAV)
11	12.12000	----	3.6	20.3	----	23.9	----	50.0	----	26.1	H(CAV)
12	25.05000	----	5.1	20.4	----	25.5	----	50.0	----	24.5	H(CAV)

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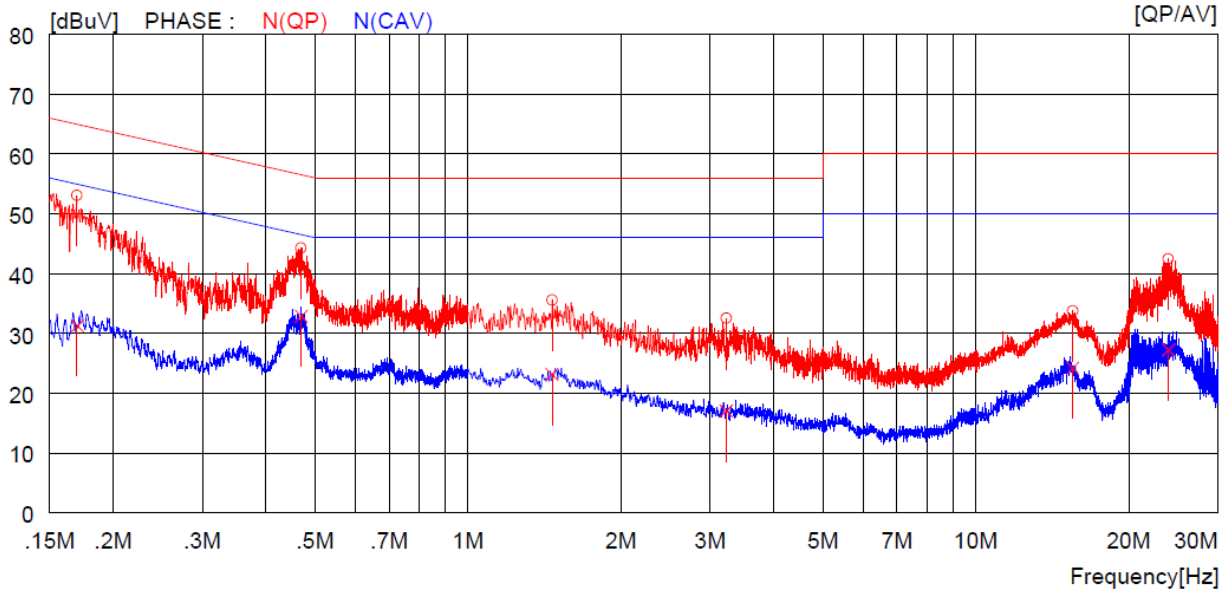
-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.17000	43.2	----	9.9	53.1	----	65.0	----	11.9	----	N(QP)
2	0.46900	34.3	----	10.0	44.3	----	56.5	----	12.2	----	N(QP)
3	1.46400	25.5	----	10.1	35.6	----	56.0	----	20.4	----	N(QP)
4	3.22400	22.4	----	10.1	32.5	----	56.0	----	23.5	----	N(QP)
5	15.52000	23.2	----	10.5	33.7	----	60.0	----	26.3	----	N(QP)
6	23.95000	31.9	----	10.5	42.4	----	60.0	----	17.6	----	N(QP)
7	0.17000	----	21.4	9.9	----	31.3	----	55.0	----	23.7	N(CAV)
8	0.46900	----	22.9	10.0	----	32.9	----	46.5	----	13.6	N(CAV)
9	1.46400	----	13.1	10.1	----	23.2	----	46.0	----	22.8	N(CAV)
10	3.22400	----	6.9	10.1	----	17.0	----	46.0	----	29.0	N(CAV)
11	15.52000	----	13.7	10.5	----	24.2	----	50.0	----	25.8	N(CAV)
12	23.95000	----	16.7	10.5	----	27.2	----	50.0	----	22.8	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee / Senior Engineer

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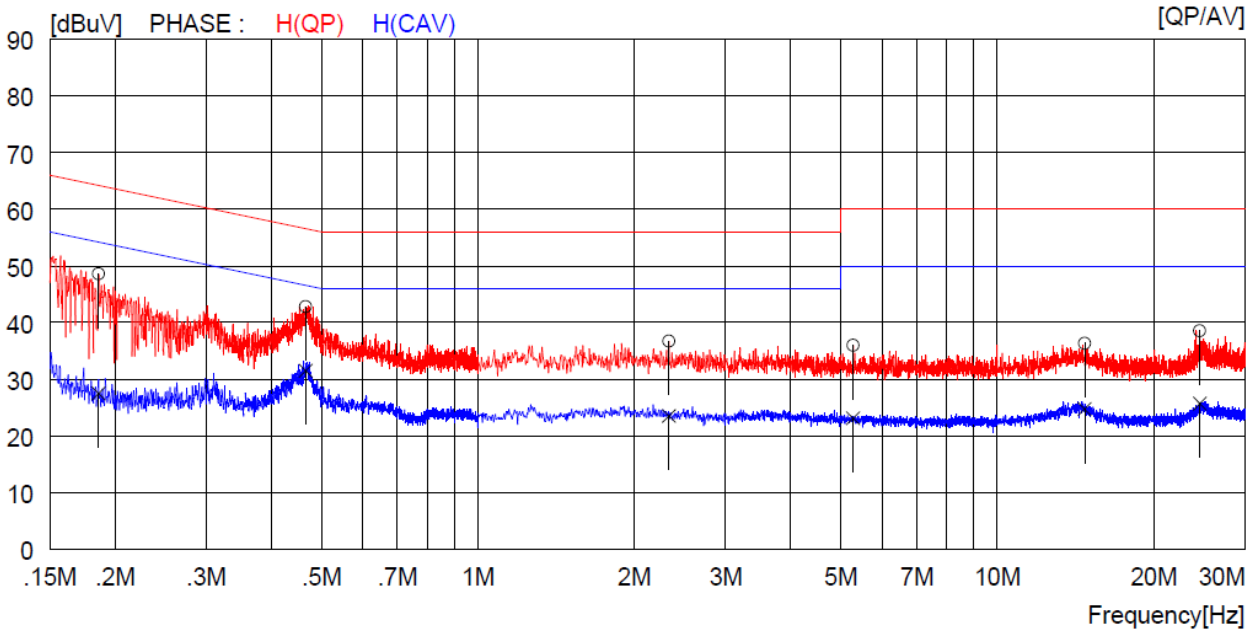
13.6 Test data for Charging & Transmitting Mode_3 Mbps

-. Test Date : September 25, 2015

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.18600	28.4	----	20.2	48.6	----	64.2	----	15.6	----	H(QP)
2	0.46600	22.6	----	20.2	42.8	----	56.6	----	13.8	----	H(QP)
3	2.33200	16.5	----	20.2	36.7	----	56.0	----	19.3	----	H(QP)
4	5.28000	15.6	----	20.4	36.0	----	60.0	----	24.0	----	H(QP)
5	14.73000	16.0	----	20.3	36.3	----	60.0	----	23.7	----	H(QP)
6	24.55000	18.1	----	20.4	38.5	----	60.0	----	21.5	----	H(QP)
7	0.18600	----	7.3	20.2	----	27.5	----	54.2	----	26.7	H(CAV)
8	0.46600	----	11.3	20.2	----	31.5	----	46.6	----	15.1	H(CAV)
9	2.33200	----	3.3	20.2	----	23.5	----	46.0	----	22.5	H(CAV)
10	5.28000	----	2.7	20.4	----	23.1	----	50.0	----	26.9	H(CAV)
11	14.73000	----	4.4	20.3	----	24.7	----	50.0	----	25.3	H(CAV)
12	24.55000	----	5.3	20.4	----	25.7	----	50.0	----	24.3	H(CAV)

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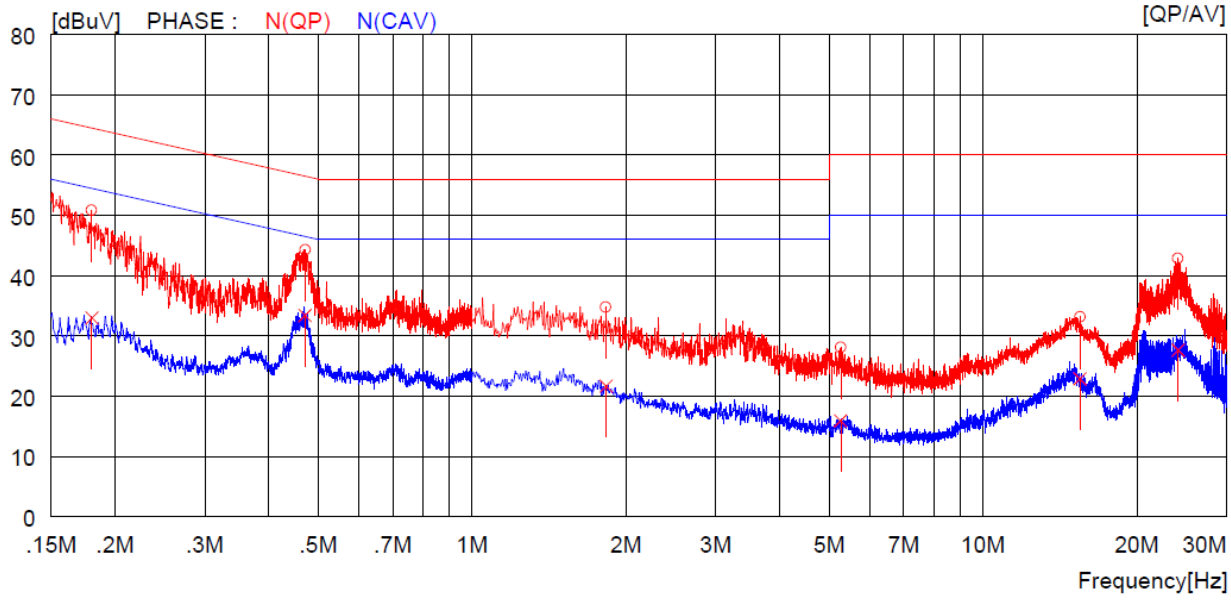
-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.18000	40.9	----	9.9	50.8	----	64.5	----	13.7	----	N(QP)
2	0.47100	34.3	----	10.0	44.3	----	56.5	----	12.2	----	N(QP)
3	1.82800	24.7	----	10.1	34.8	----	56.0	----	21.2	----	N(QP)
4	5.26000	17.9	----	10.2	28.1	----	60.0	----	31.9	----	N(QP)
5	15.49000	22.6	----	10.5	33.1	----	60.0	----	26.9	----	N(QP)
6	24.10000	32.3	----	10.5	42.8	----	60.0	----	17.2	----	N(QP)
7	0.18000	----	23.1	9.9	----	33.0	----	54.5	----	21.5	N(CAV)
8	0.47100	----	23.4	10.0	----	33.4	----	46.5	----	13.1	N(CAV)
9	1.82800	----	11.6	10.1	----	21.7	----	46.0	----	24.3	N(CAV)
10	5.26000	----	5.7	10.2	----	15.9	----	50.0	----	34.1	N(CAV)
11	15.49000	----	12.4	10.5	----	22.9	----	50.0	----	27.1	N(CAV)
12	24.10000	----	17.1	10.5	----	27.6	----	50.0	----	22.4	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

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