



**FCC PART 15C
TEST REPORT
No. I17N00558-BLE**

For

Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd

Smart Watch

Model Name: Smart Watch

With

Hardware Version: V2

Software Version: GROVCN00X1000DPX1706083

FCC ID: R38YL301A

Issued Date: 2017-07-05

Test Laboratory:

FCC 2.948 Listed: No.342690

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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REPORT HISTORY

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1. Test Laboratory

1.1. Testing Location

Location: CTTL(South Branch)
Address: TCL International E city, No. 1001, Zhongshanyuan Road, Nanshan
District, Shenzhen, Guangdong, China 518000

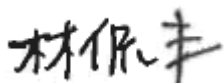
1.2. Testing Environment

Normal Temperature: 15-35°C
Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2017-05-08
Testing End Date: 2017-05-24

1.4. Signature



Lin Kanfeng
(Prepared this test report)



Tang Weisheng
(Reviewed this test report)



Zhang Bojun
(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd
Address: Coolpad Information Harbor, High-tech Industrial Park (North),
Nanshan District, Shenzhen, P.R.C
City: Shenzhen
Postal Code: /
Country: China
Telephone: 13410415799
Fax: /

2.2. Manufacturer Information

Company Name: Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd
Address: Coolpad Information Harbor, High-tech Industrial Park (North),
Nanshan District, Shenzhen, P.R.C
City: Shenzhen
Postal Code: /
Country: China
Telephone: 13410415799
Fax: /



3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Smart Watch
Model Name	coolpad 301A
Market Name	Grover
Frequency Band	2402MHz~2480MHz
Type of Modulation	GFSK
Number of Channels	40
FCC ID	R38YL301A

3.2. Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version	Receive Date
EUT1	/	V2	GROVCN00X1000DPX1706083	2017-05-08

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE

AE ID*	Description	SN
AE1	Charger	/

AE1

Model	CYSK05-050100
Manufacturer	JIANGSU CHENYANG ELECTRON CO.,LTD

*AE ID: is used to identify the test sample in the lab internally.



4. Reference Documents

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902–928MHz, 2400–2483.5 MHz, and 5725–5850 MHz	Nov,2015
ANSI C63.10	American National Standard for Testing Unlicensed Wireless Devices	Jun,2013

5. Test Results

5.1. Summary of Test Results

No	Test cases	Sub-clause of Part15C	Verdict
0.	Antenna Requirement	15.203	P
1.	Maximum Peak Output Power	15.247 (b)	P
2.	Peak Power Spectral Density	15.247 (e)	P
3.	Occupied 6dB Bandwidth	15.247 (a)	P
4.	Band Edges Compliance	15.247 (d)	P
5.	Transmitter Spurious Emission - Conducted	15.247 (d)	P
6.	Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	P
7.	AC Powerline Conducted Emission	15.107, 15.207	P

See **ANNEX A** and **ANNEX B** for details.

5.2. Statements

CTTL has evaluated the test cases requested by the applicant/manufacturer as listed in section 5.1 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2.

5.3. Terms used in the result table

Terms used in Verdict column

P	Pass
NA	Not Available
F	Fail

Abbreviations

AC	Alternating Current
AFH	Adaptive Frequency Hopping
BW	Band Width
E.I.R.P.	equivalent isotropic radiated power
ISM	Industrial, Scientific and Medical
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
Tx	Transmitter

5.4. Laboratory Environment

Semi-anechoic chamber did not exceed following limits along the EMC testing

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ±4dB, 3m/10m distance, from 30 to 1000 MHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Shielded room did not exceed following limits along the EMC testing

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω

Fully-anechoic chamber did not exceed following limits along the EMC testing

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Voltage Standing Wave Ratio (VSWR)	≤6dB, from 1 to 18 GHz, 3m distance

6. Test Facilities Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Vector Signal Analyzer	FSV40	100903	Rohde & Schwarz	2018-01-18	1 year

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	LISN	ESH2-Z5	100196	R&S	2018-01-05	1 year
2	Test Receiver	ESCI	100701	R&S	2017-08-09	1 year
3	Loop Antenna	HLA6120	35779	TESEQ	2019-05-02	3 years
4	BiLog Antenna	VULB9163	9163 329	Schwarzbeck	2020-02-17	3 years
5	Horn Antenna	3117	00066585	ETS-Lindgren	2019-03-05	3 years
6	Test Receiver	ESR7	101675	R&S	2017-07-21	1 year
7	Spectrum Analyzer	FSP 40	100378	R&S	2017-12-15	1 year
8	Chamber	FACT5-2.0	4166	ETS-Lindgren	2018-05-13	3 years

Anechoic chamber

Fully anechoic chamber by ETS-Lindgren



ANNEX A: MEASUREMENT RESULTS FOR RECEIVER

A.0 Antenna requirement

Measurement Limit:

Standard	Requirement
FCC CRF Part 15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Conclusion: The Directional gains of antenna used for transmitting is -4dBi.

The RF transmitter uses an integrate antenna without connector.



A.1 Maximum Average Output Power

Measurement Limit:

Standard	Limit (dBm)
FCC CRF Part 15.247(b)(1)	< 30

Measurement Results:

Mode	Channel	Maximum Peak Output Power (dBm)	Conclusion	
GFSK	0	Fig.1	-3.62	P
	19	Fig.2	-1.80	P
	39	Fig.3	-2.57	P

See ANNEX B for test graphs.

Conclusion: Pass

A.2 Peak Power Spectral Density

Measurement Limit:

Standard	Limit
FCC CRF Part 15.247(d)	< 8 dBm/3 kHz

Measurement Results:

Mode	Channel	Peak Power Spectral Density (dBm)	Conclusion	
GFSK	0	Fig.4	-18.71	P
	19	Fig.5	-16.45	P
	39	Fig.6	-19.11	P

See ANNEX B for test graphs.

Conclusion: PASS

A.3 Occupied 6dB Bandwidth

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	≥ 500

Measurement Result:

Mode	Channel	Test Results (kHz)		conclusion
GFSK	0	Fig.7	665.0	P
	19	Fig.8	679.5	P
	39	Fig.9	667.0	P

See ANNEX B for test graphs.

Conclusion: PASS

A.4 Band Edges Compliance

Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

Measurement Result:

Mode	Channel	Test Results	Conclusion
GFSK	0	Fig.10	P
	39	Fig.11	P

See ANNEX B for test graphs.

Conclusion: Pass

A.5 Transmitter Spurious Emission

A.5.1 Transmitter Spurious Emission - Conducted

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

Measurement Results:

MODE	Channel	Frequency Range	Test Results	Conclusion
GFSK	0	2.402 GHz	Fig.12	P
		30 MHz-1 GHz	Fig.13	P
		1GHz-3GHz	Fig.14	P
		3GHz-10GHz	Fig.15	P
		10GHz-26GHz	Fig.16	P
	19	2.440 GHz	Fig.17	P
		30 MHz-1 GHz	Fig.18	P
		1GHz-3GHz	Fig.19	P
		3GHz-10GHz	Fig.20	P
		10GHz-26GHz	Fig.21	P
	39	2.480 GHz	Fig.22	P
		30 MHz-1 GHz	Fig.23	P
		1GHz-3GHz	Fig.24	P
		3GHz-10GHz	Fig.25	P
		10GHz-26GHz	Fig.26	P

See ANNEX B for test graphs.

Conclusion: Pass

A.5.2 Transmitter Spurious Emission - Radiated

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(μ V/m)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Condition:

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz/300kHz	5
1000-4000	1MHz/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

Note: According to the performance evaluation, the radiated emission margin of EUT is over 20dB in the band from 9kHz to 30MHz. Therefore, the measurement starts from 30MHz to tenth harmonic.

The measurement results include the horizontal polarization and vertical polarization measurements.

Measurement Results:

GFSK	0	1 GHz ~18 GHz	Fig.27	P
	19	9 kHz ~30 MHz	Fig.28	P
		30 MHz ~1 GHz	Fig.29	P
		1 GHz ~18 GHz	Fig.30	P
		18 GHz~ 26.5 GHz	Fig.31	P
	39	1 GHz ~18 GHz	Fig.32	P
	Power(CH0)	2.38 GHz ~ 2.45 GHz	Fig.33	P
	Power(CH39)	2.45 GHz ~ 2.5 GHz	Fig.34	P

GFSK CH0 (1-18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
13923.00000	57.79	74.00	16.21	H	20.4
14693.00000	58.91	74.00	15.09	H	21.6
15114.00000	60.63	74.00	13.37	V	22.7
15652.00000	63.44	74.00	10.56	V	23.7
16873.00000	63.21	74.00	10.79	H	25.7
17709.00000	63.36	74.00	10.64	H	27.6

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
13909.00000	46.55	54.00	7.45	H	21.1
14595.00000	46.99	54.00	7.01	H	21.5
15575.50000	49.04	54.00	4.96	H	23.8
15918.50000	50.68	54.00	3.32	V	24.6
16593.50000	51.71	54.00	2.29	H	26.3
17707.50000	51.80	54.00	2.20	V	27.6

GFSK CH19 (1-18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
13914.50000	57.93	74.00	16.07	V	20.8
14596.50000	58.55	74.00	15.45	V	21.6
15562.50000	60.43	74.00	13.57	V	23.3
15860.50000	62.65	74.00	11.35	H	24.3
16578.50000	63.75	74.00	10.25	V	26.4
17702.50000	63.42	74.00	10.58	V	27.5

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
13906.50000	46.39	54.00	7.61	V	20.9
14595.00000	46.82	54.00	7.18	V	21.5
15575.50000	48.83	54.00	5.17	V	23.8
15933.00000	50.48	54.00	3.52	V	24.8
16590.00000	51.55	54.00	2.45	H	26.3
17709.50000	51.50	54.00	2.50	V	27.7

GFSK CH39 (1-18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
13413.00000	56.90	74.00	17.10	V	20.2
14842.50000	58.45	74.00	15.55	V	22.0
15575.50000	60.75	74.00	13.25	V	23.8
16263.00000	62.57	74.00	11.43	H	25.1
16590.50000	64.04	74.00	9.96	V	26.3
17708.00000	64.29	74.00	9.71	V	27.6

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
13909.00000	46.54	54.00	7.46	H	21.1
14688.00000	46.81	54.00	7.19	H	21.6
15576.00000	48.99	54.00	5.01	V	23.8
15966.50000	50.38	54.00	3.62	H	25.5
16619.00000	51.45	54.00	2.55	V	26.2
17704.00000	51.71	54.00	2.29	V	27.5

See ANNEX B for test graphs.

Conclusion: Pass

Note: A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument. The measurement results are obtained as described below: $Result = P_{Mea} + A_{Rpl} = P_{Mea} + Cable Loss + Antenna Factor$

A.6 AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.35	P
0.5 to 5	56		
5 to 30	60		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.35	P
0.5 to 5	46		
5 to 30	50		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Idle	
0.15 to 0.5	66 to 56	Fig.36	P
0.5 to 5	56		
5 to 30	60		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Idle	
0.15 to 0.5	56 to 46	Fig.36	P
0.5 to 5	46		
5 to 30	50		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Test Condition:

Voltage (V)	Frequency (Hz)
240	60

Measurement Result and limit:

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.37	P
0.5 to 5	56		
5 to 30	60		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.37	P
0.5 to 5	46		
5 to 30	50		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Idle	
0.15 to 0.5	66 to 56	Fig.38	P
0.5 to 5	56		
5 to 30	60		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Idle	
0.15 to 0.5	56 to 46	Fig.38	P
0.5 to 5	46		
5 to 30	50		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Note: The measurement results include the L1 and N measurements.

See ANNEX B for test graphs.

Conclusion: Pass

ANNEX B: TEST FIGURE LIST

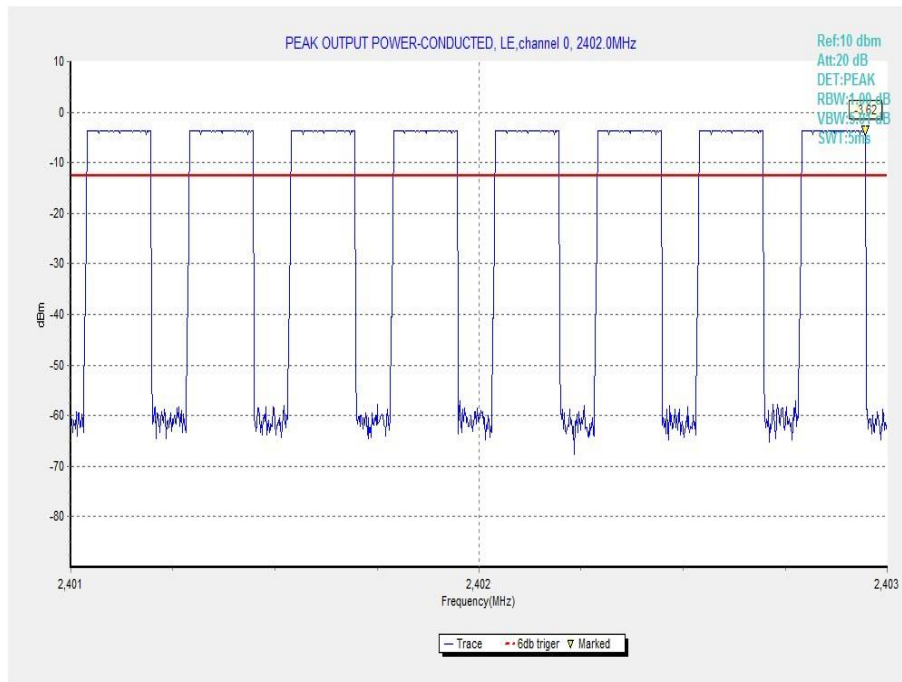


Fig.1 Maximum Peak Output Power(GFSK, Ch 0)

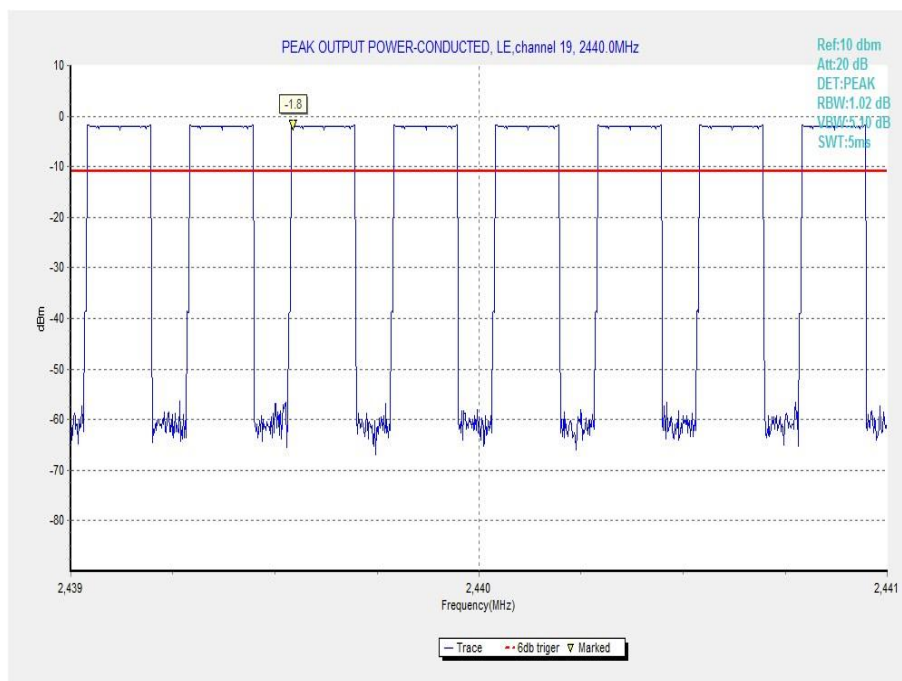


Fig.2 Maximum Peak Output Power(GFSK, Ch 19)

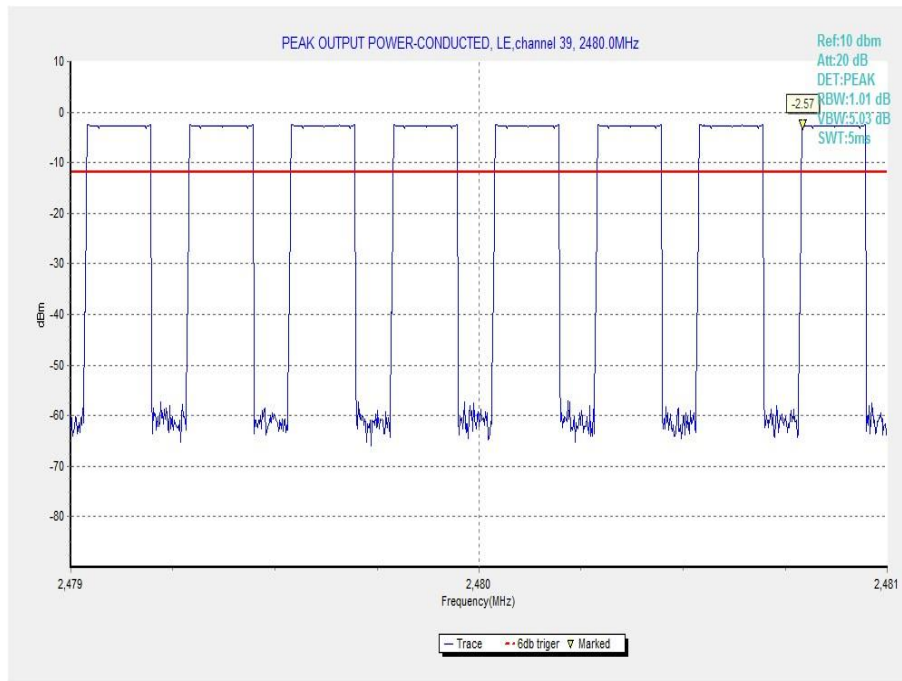


Fig.3 Maximum Peak Output Power(GFSK, Ch 39)

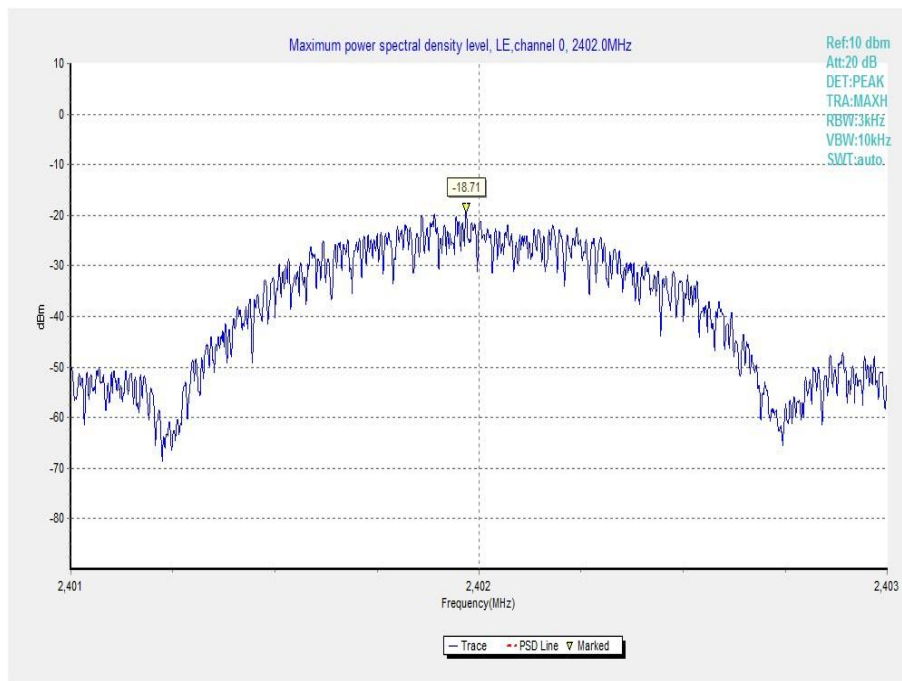


Fig.4 Power Spectral Density (Ch 0)

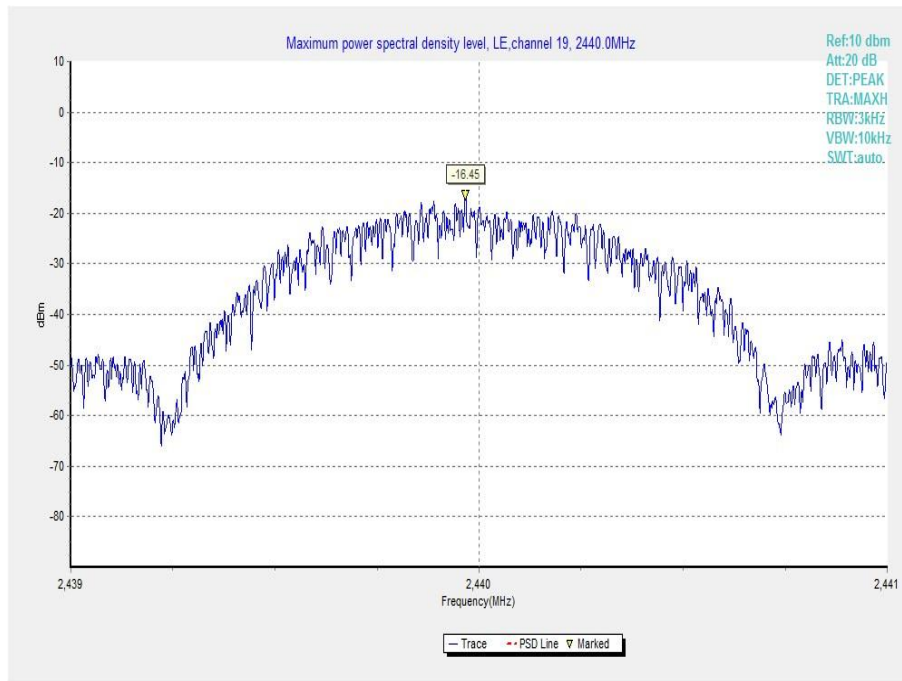


Fig.5 Power Spectral Density (Ch 19)

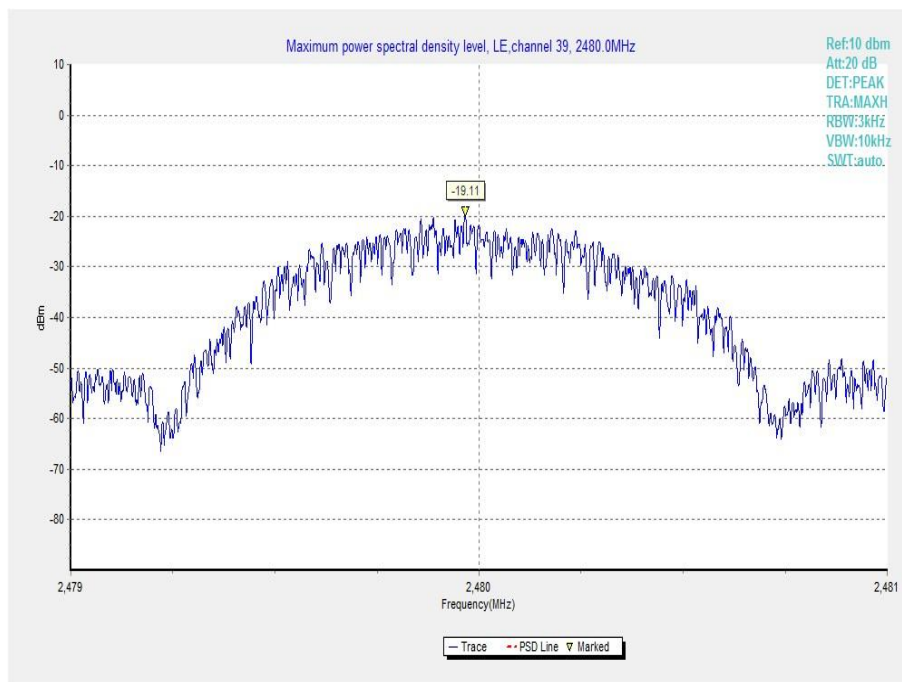


Fig.6 Power Spectral Density (Ch 39)

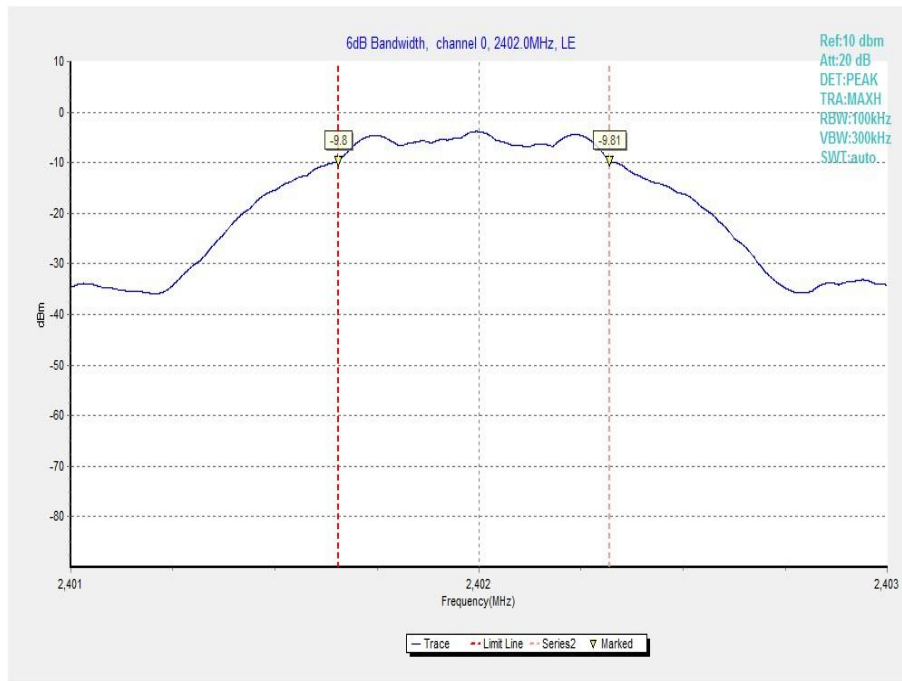


Fig.7 Occupied 6dB Bandwidth (Ch 0)

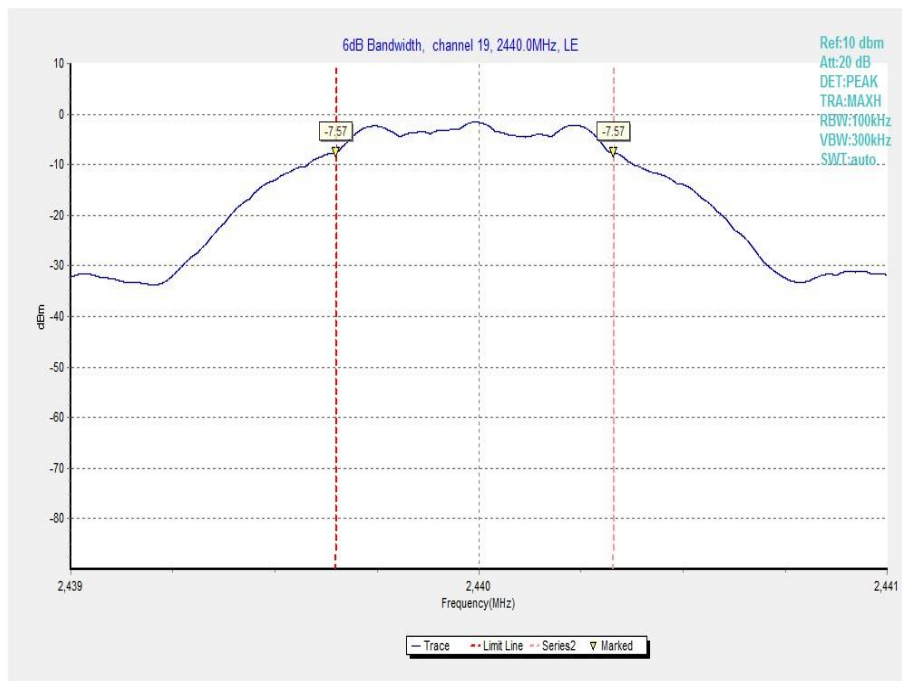


Fig.8 Occupied 6dB Bandwidth (Ch 19)



Fig.9 Occupied 6dB Bandwidth (Ch 39)

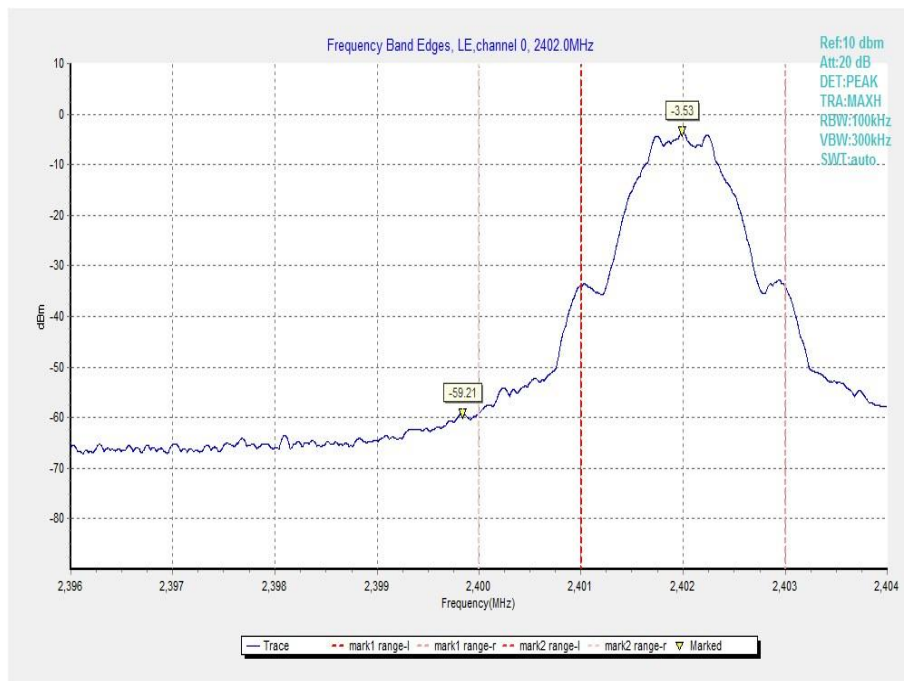


Fig.10 Band Edges (Ch 0)

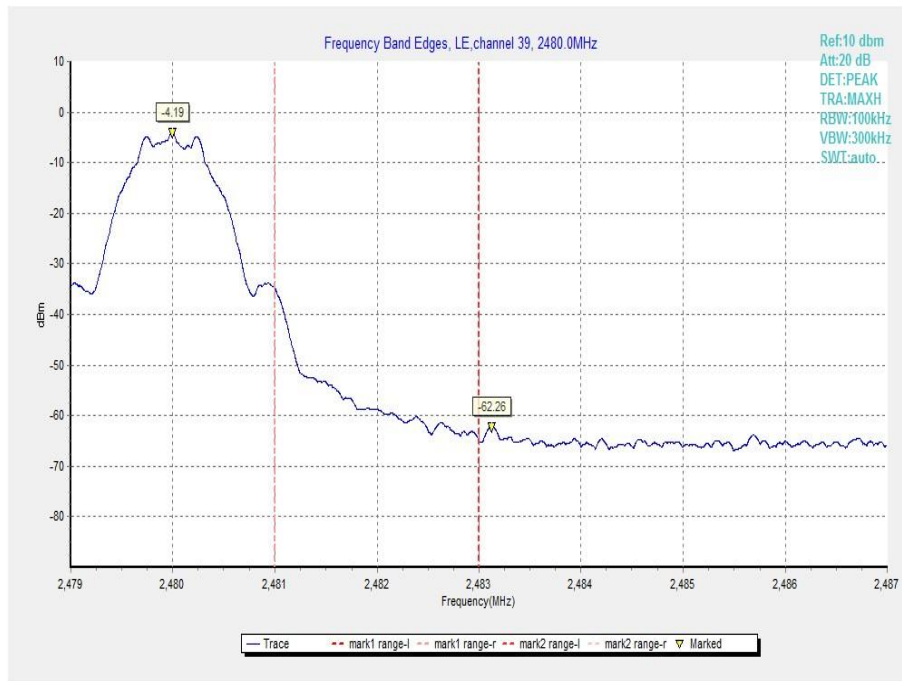


Fig.11 Band Edges (Ch 39)

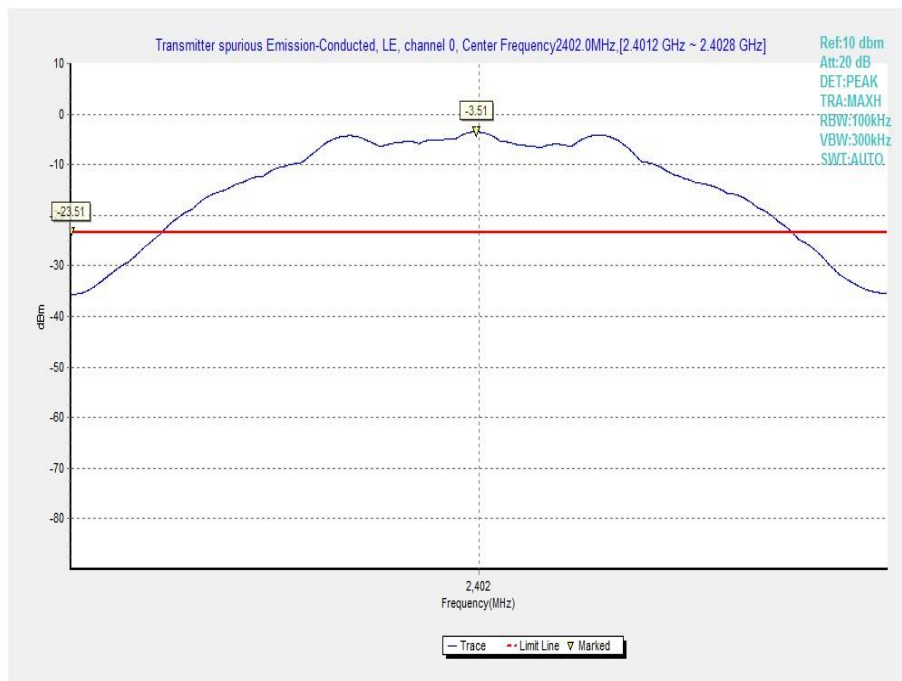


Fig.12 Conducted Spurious Emission (Ch0, Center Frequency)

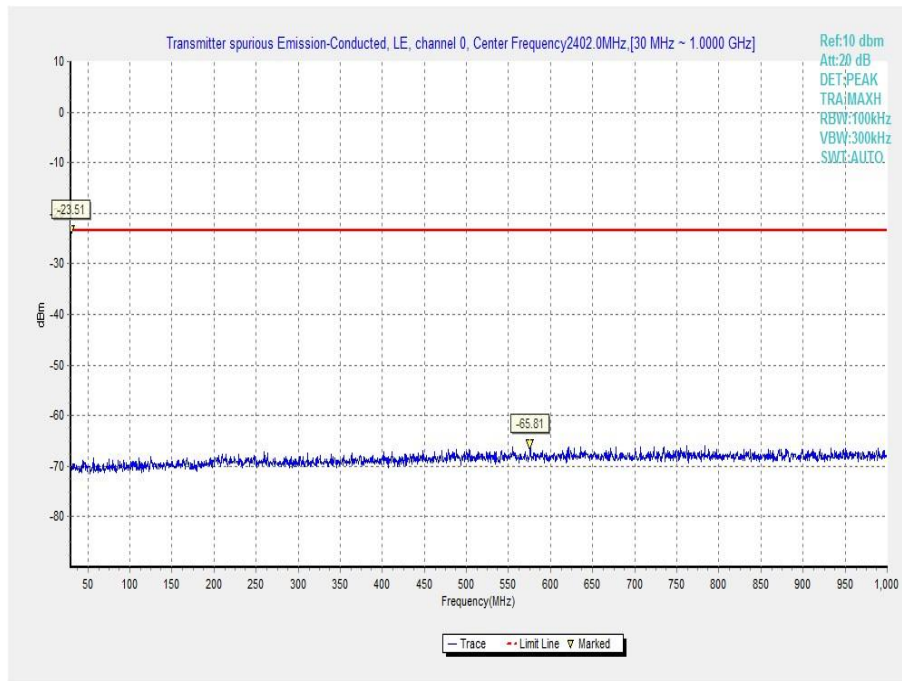


Fig.13 Conducted Spurious Emission (Ch0, 30 MHz-1 GHz)

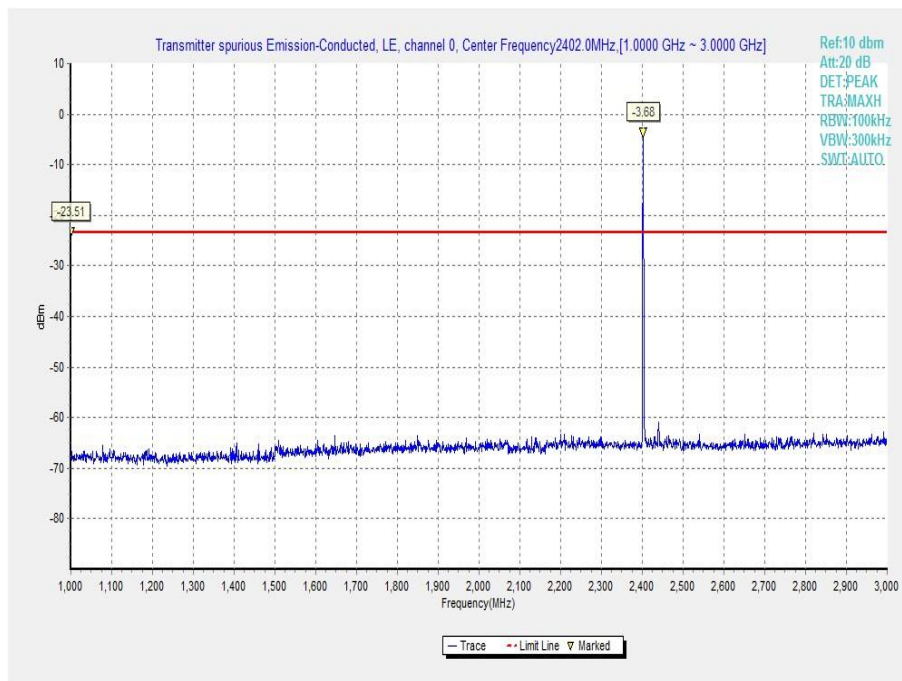


Fig.14 Conducted Spurious Emission (Ch0, 1 GHz-3 GHz)

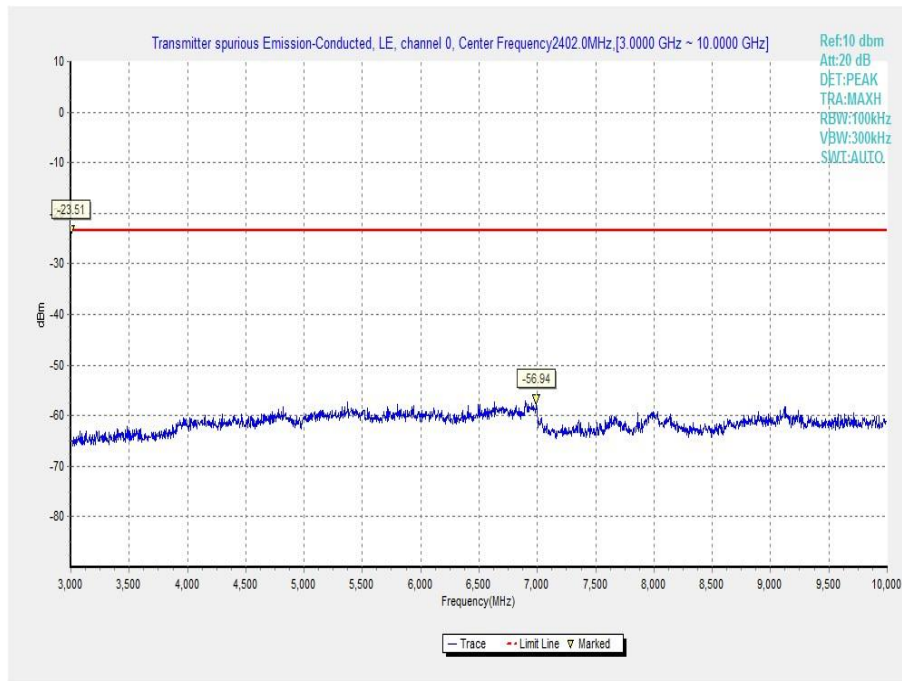


Fig.15 Conducted Spurious Emission (Ch0, 3 GHz-10 GHz)

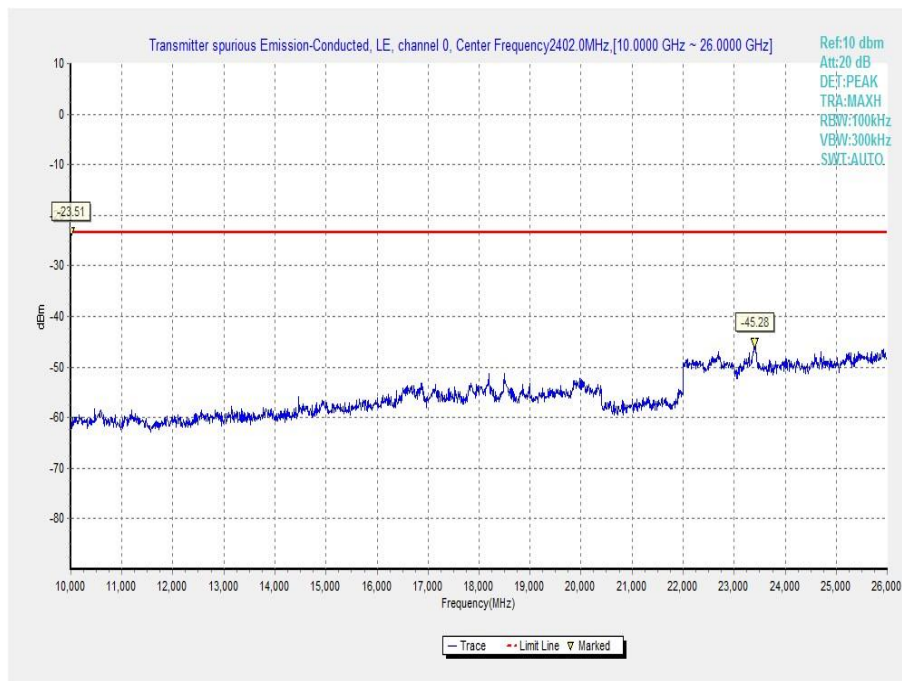


Fig.16 Conducted Spurious Emission (Ch0, 10 GHz-26 GHz)

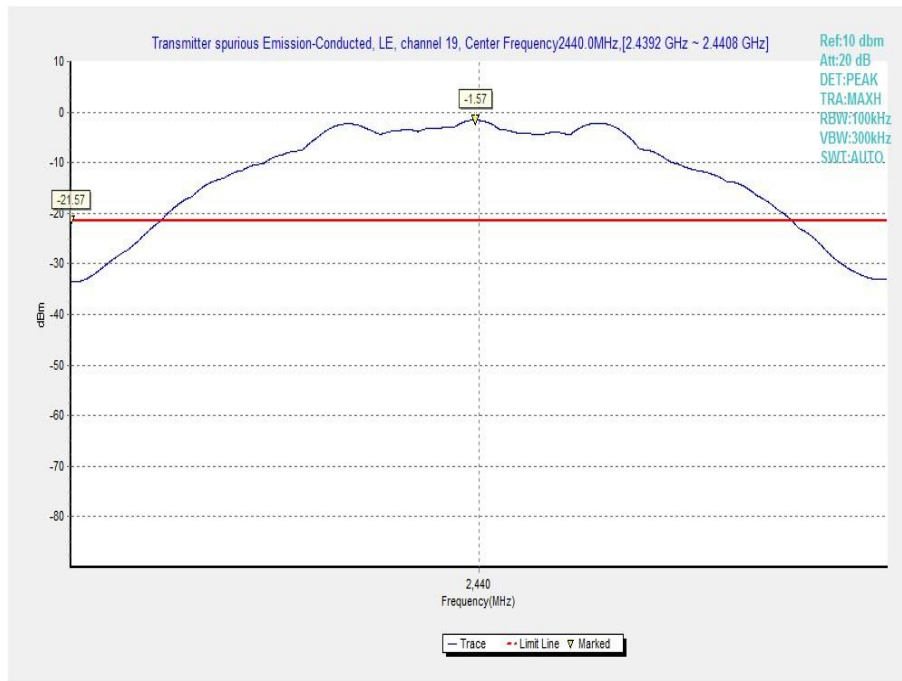


Fig.17 Conducted Spurious Emission (Ch19, Center Frequency)

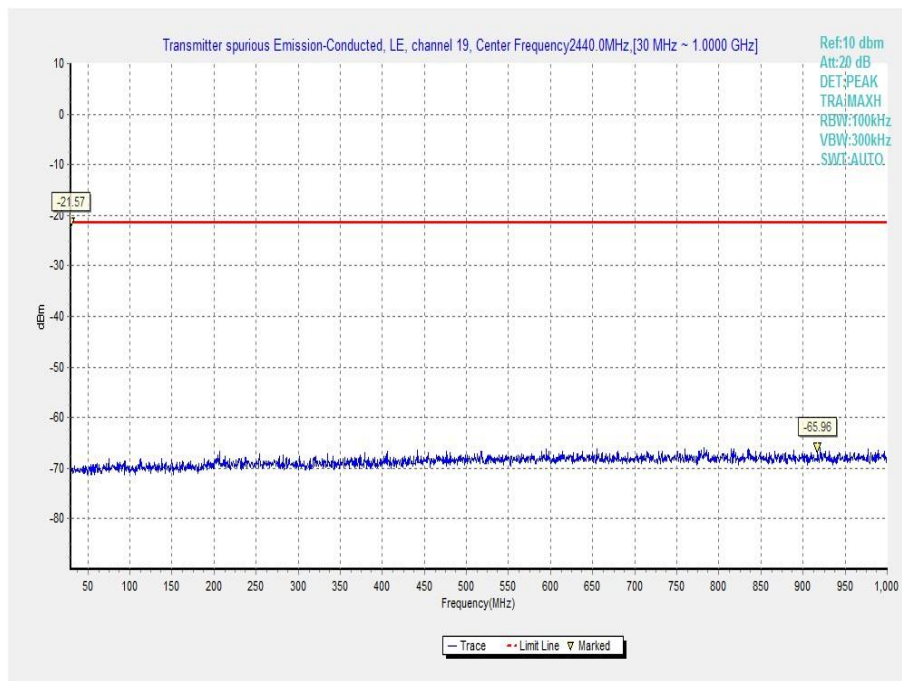


Fig.18 Conducted Spurious Emission (Ch19, 30 MHz-1 GHz)

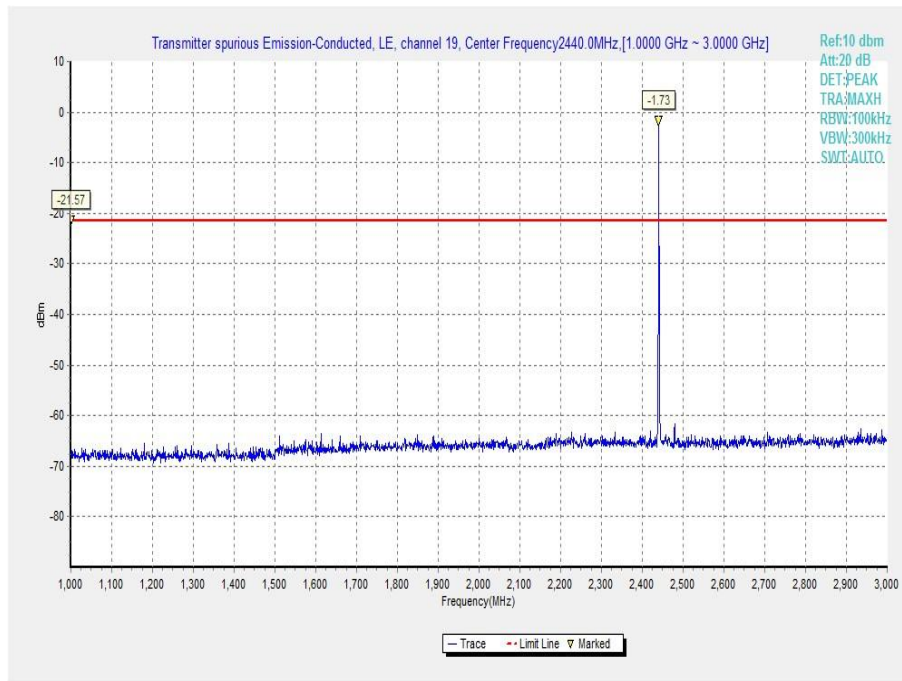


Fig.19 Conducted Spurious Emission (Ch19, 1 GHz-3 GHz)

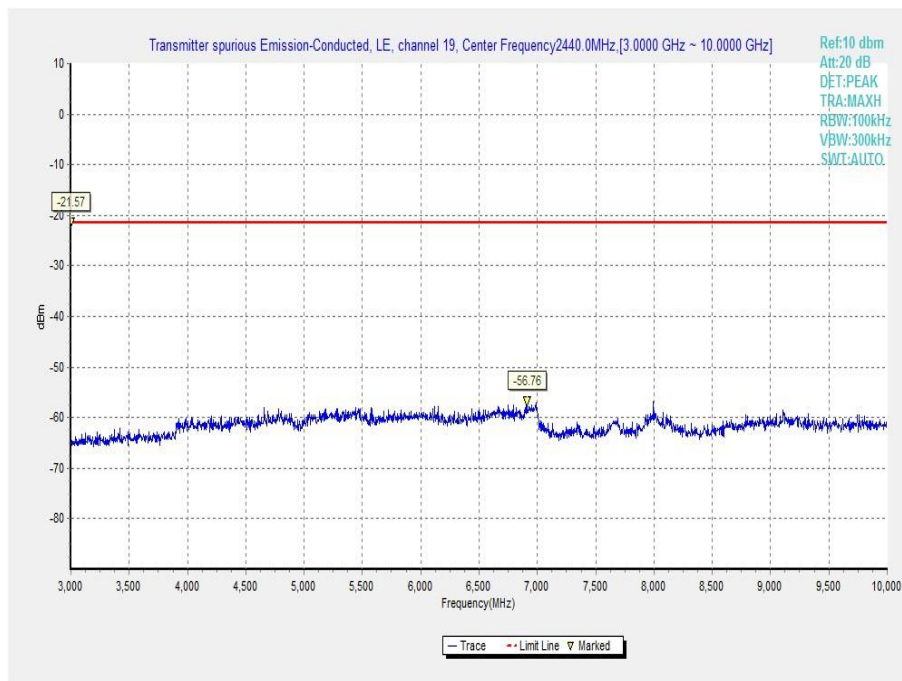


Fig.20 Conducted Spurious Emission (Ch19, 3 GHz-10 GHz)

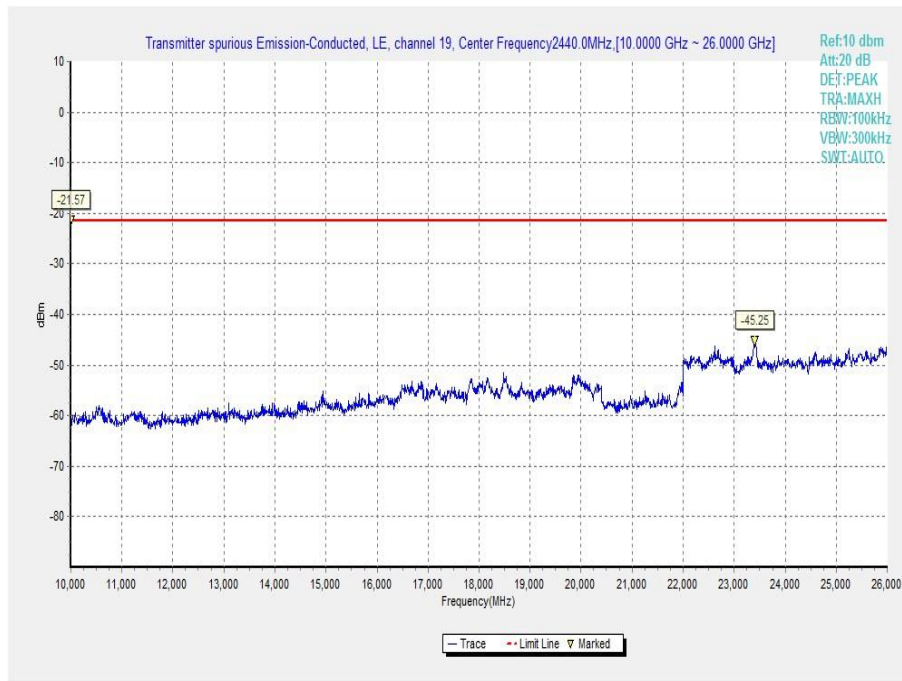


Fig.21 Conducted Spurious Emission (Ch19, 10 GHz-26 GHz)

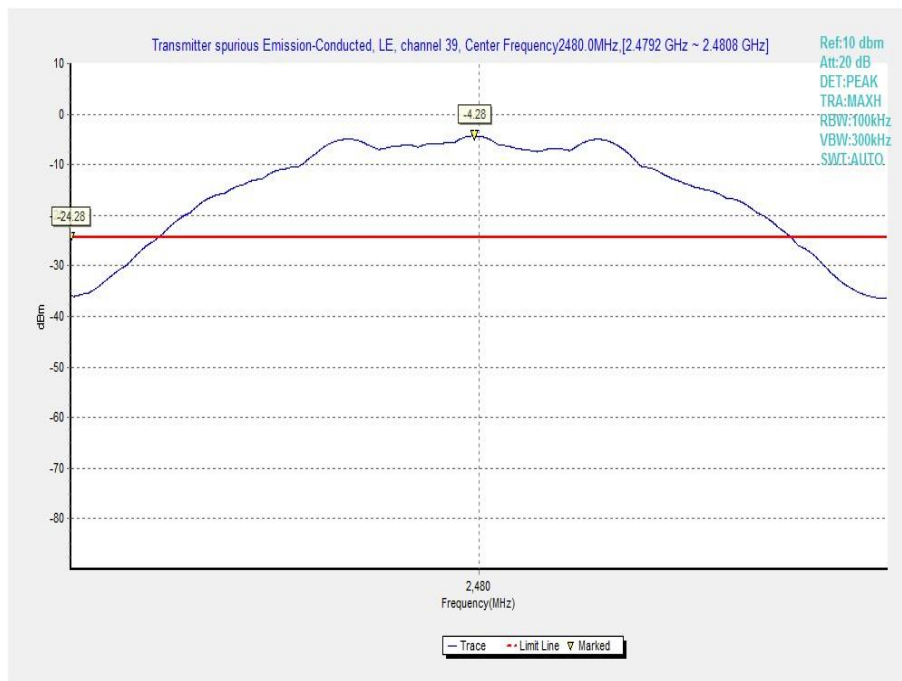


Fig.22 Conducted Spurious Emission (Ch39, Center Frequency)

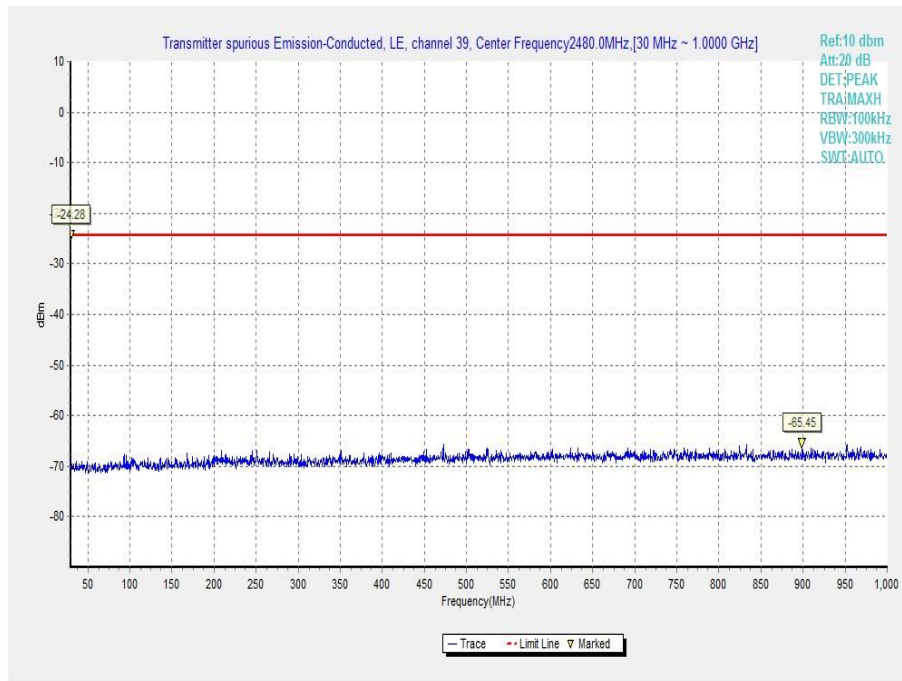


Fig.23 Conducted Spurious Emission (Ch39, 30 MHz-1 GHz)

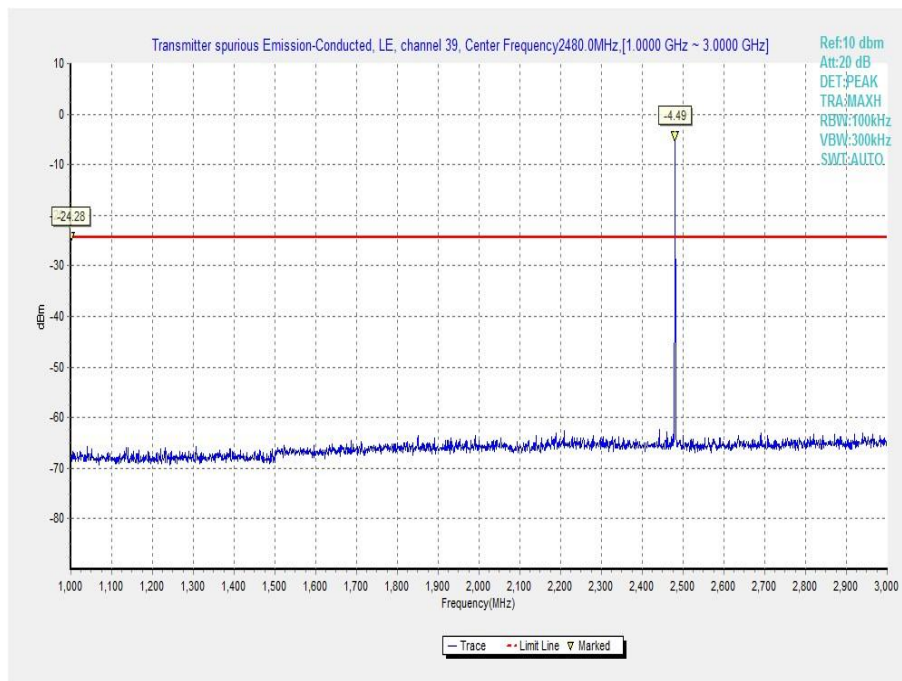


Fig.24 Conducted Spurious Emission (Ch39, 1 GHz-3 GHz)

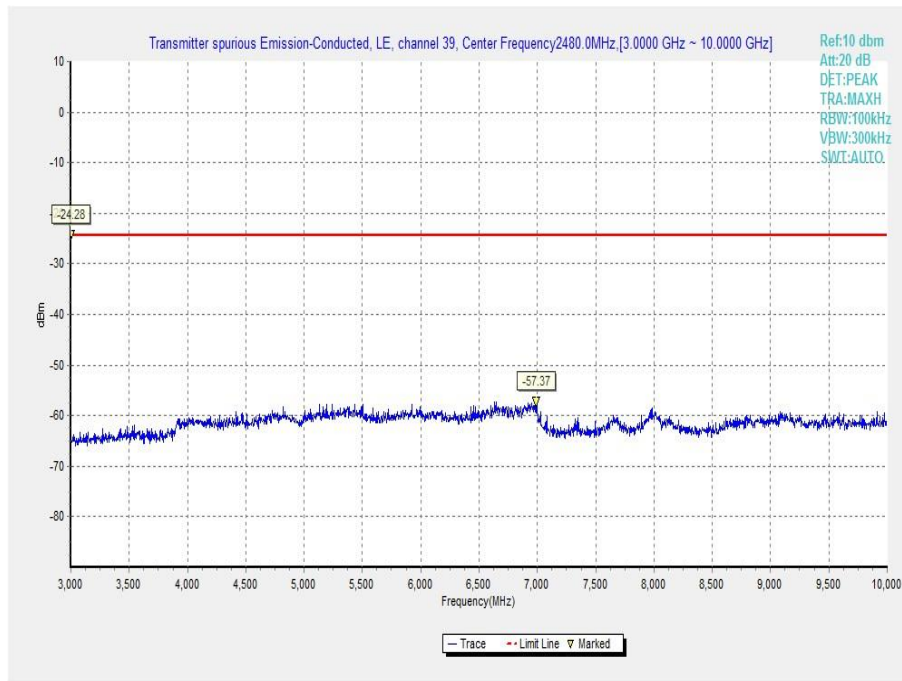


Fig.25 Conducted Spurious Emission (Ch39, 3 GHz-10 GHz)

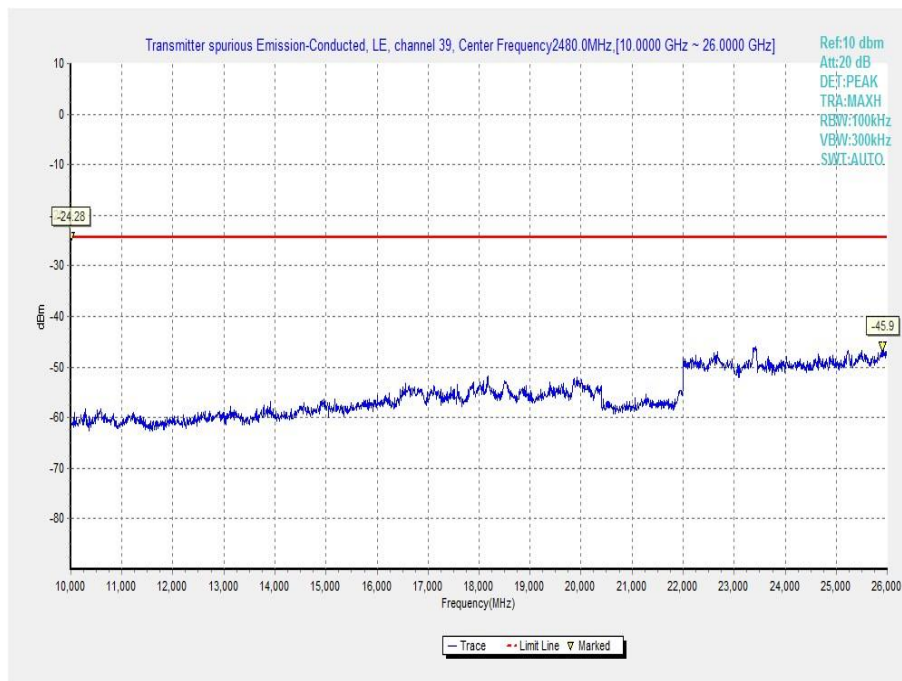


Fig.26 Conducted Spurious Emission (Ch39, 10 GHz-26 GHz)

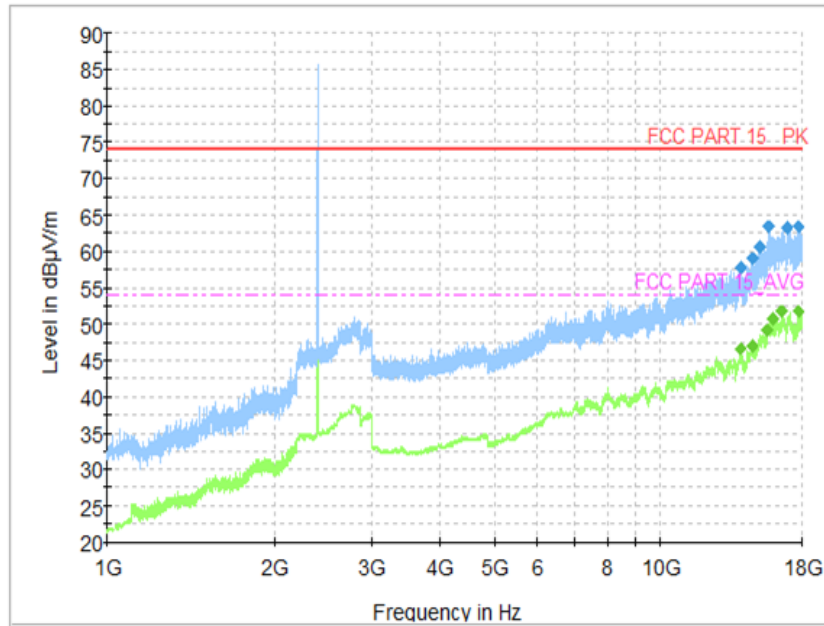


Fig.27 Radiated Spurious Emission (GFSK, Ch0, 1 GHz ~18 GHz)

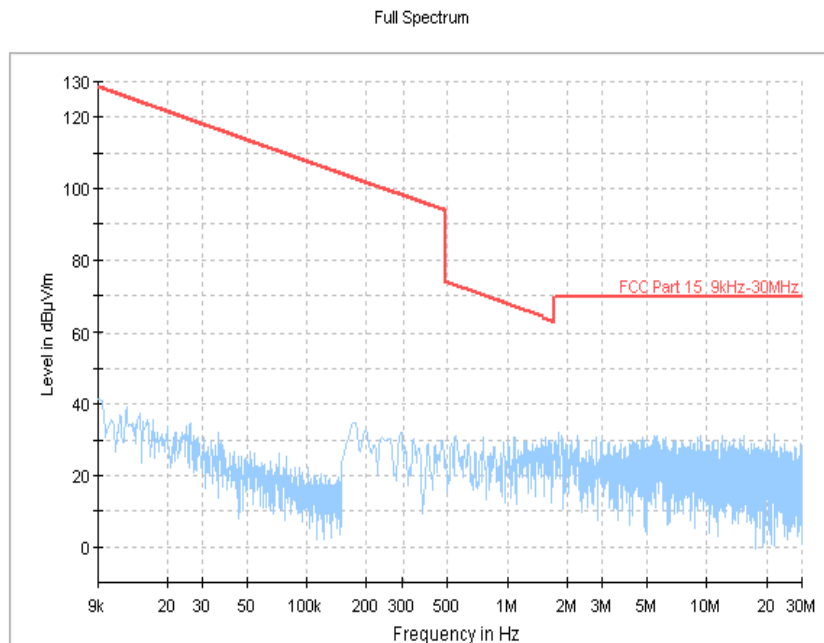


Fig.28 Radiated Spurious Emission (Ch19, 9 kHz-30 MHz)

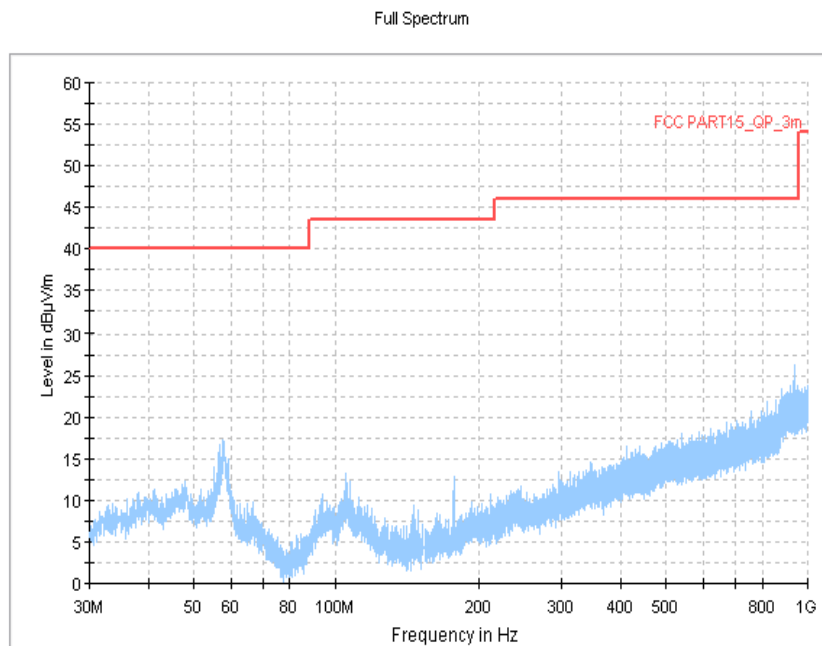


Fig.29 Radiated Spurious Emission (Ch19, 30 MHz-1 GHz)

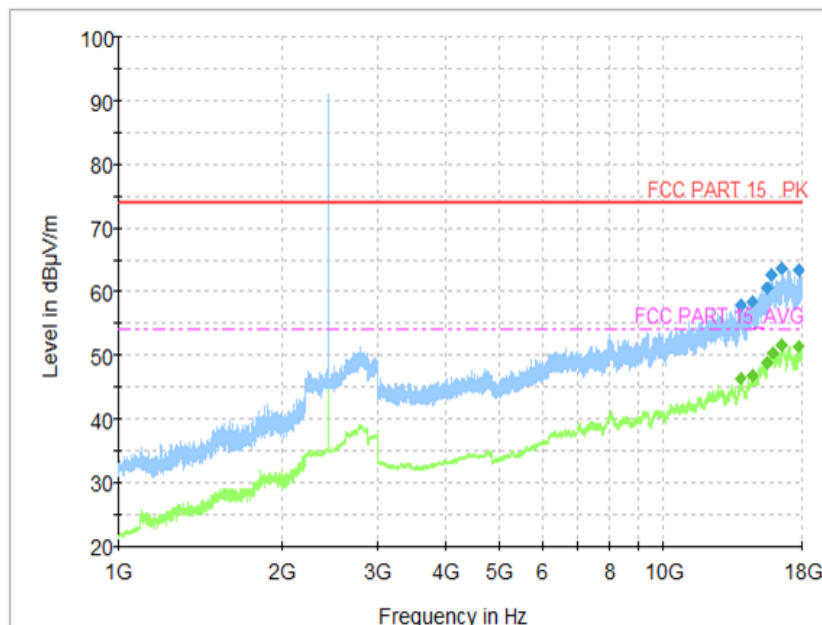


Fig.30 Radiated Spurious Emission (Ch19, 1 GHz- 18 GHz)

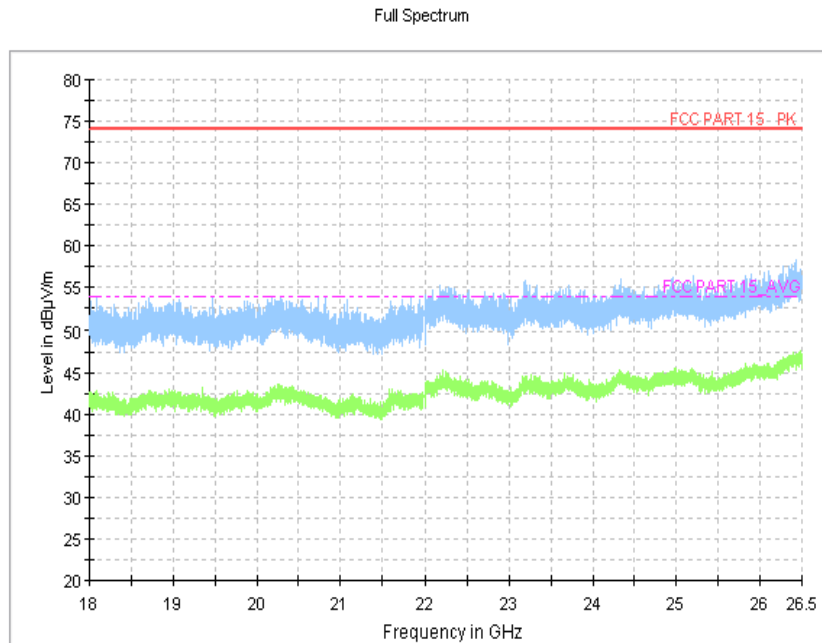


Fig.31 Radiated Spurious Emission (Ch19, 18 GHz-26.5 GHz)

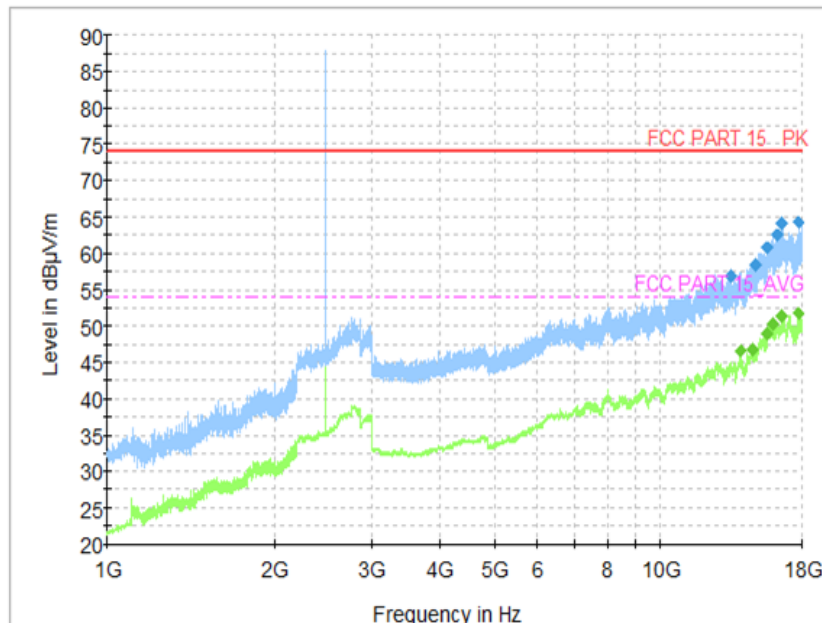


Fig.32 Radiated Spurious Emission (Ch39, 1 GHz-18 GHz)

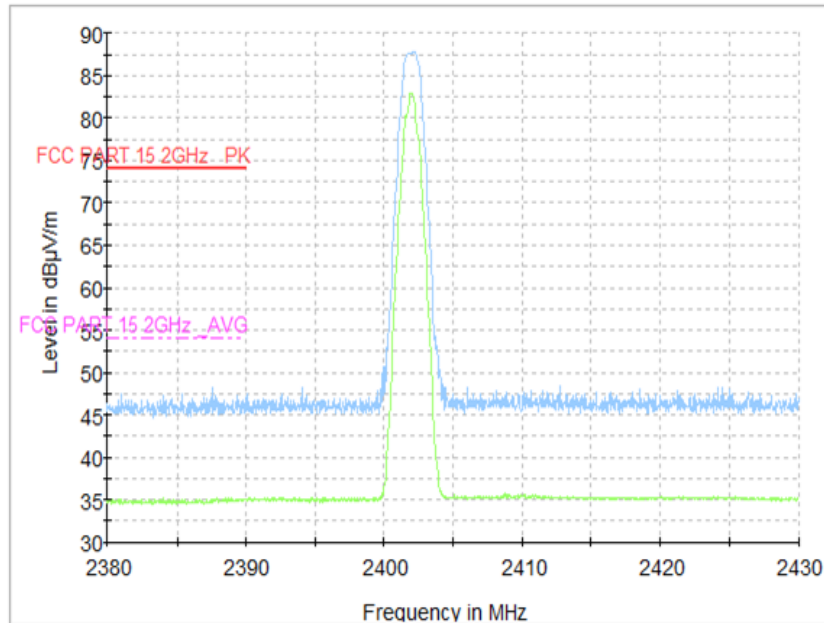


Fig.33 Radiated Emission Power (GFSK, Ch0, 2380GHz~2450GHz)

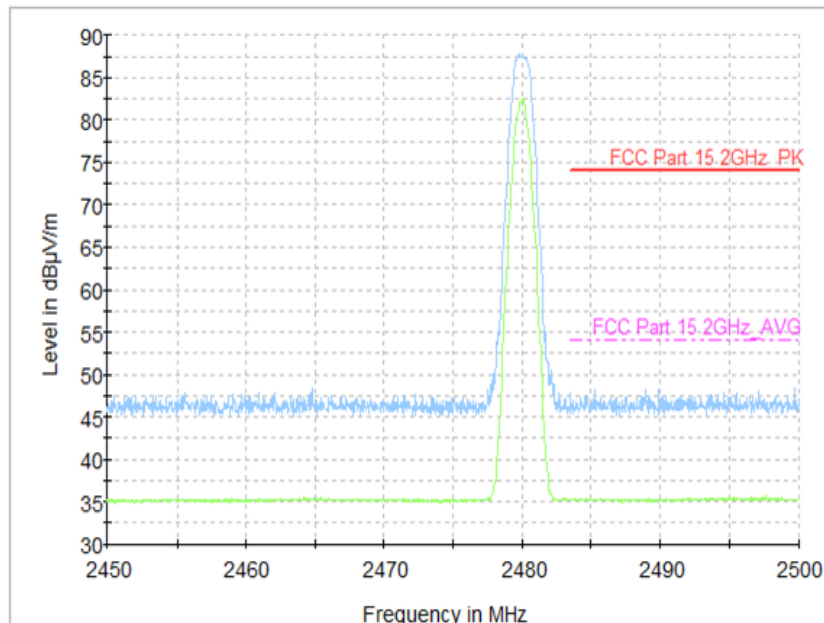


Fig.34 Radiated Emission Power (GFSK, Ch39, 2450GHz~2500GHz)

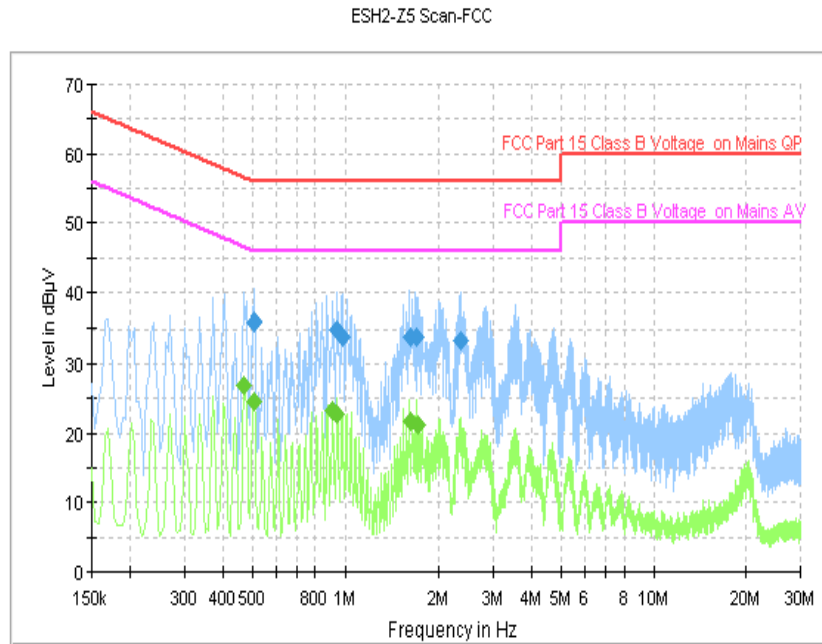


Fig.35 AC Powerline Conducted Emission (Traffic, AE1, 120V)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.506000	36.0	GND	N	9.7	20.0	56.0
0.946000	35.0	GND	N	9.6	21.0	56.0
0.982000	33.9	GND	N	9.6	22.1	56.0
1.618000	33.8	GND	N	9.6	22.2	56.0
1.686000	33.8	GND	N	9.5	22.2	56.0
2.362000	33.4	GND	N	9.6	22.6	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.470000	26.9	GND	N	9.7	19.6	46.5
0.506000	24.6	GND	N	9.7	21.4	46.0
0.910000	23.2	GND	N	9.6	22.8	46.0
0.946000	22.8	GND	N	9.6	23.2	46.0
1.618000	21.6	GND	N	9.6	24.4	46.0
1.718000	21.3	GND	N	9.6	24.7	46.0

ESH2-Z5 Scan-FCC

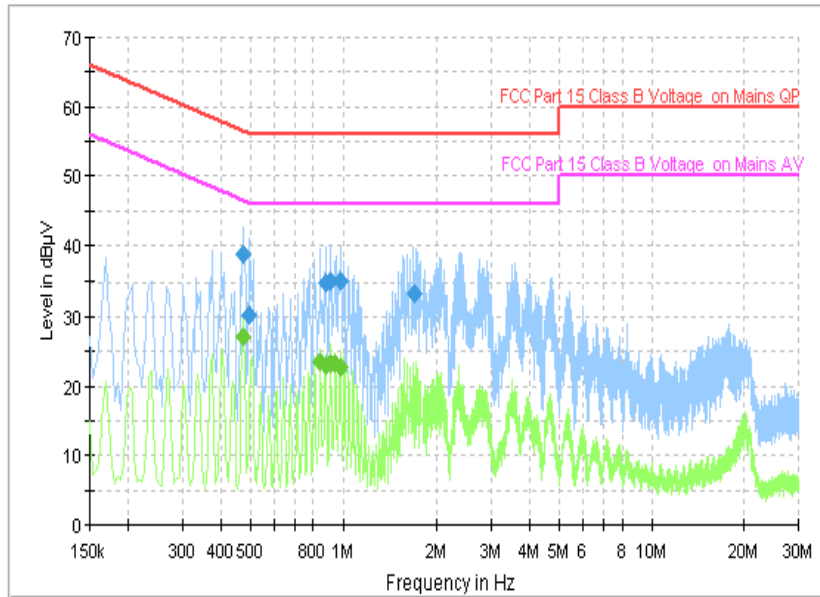


Fig.36 AC Power line Conducted Emission (Idle, AE1, 120V)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.474000	38.8	GND	N	9.7	17.7	56.4
0.494000	30.1	GND	N	9.7	26.0	56.1
0.878000	34.9	GND	N	9.6	21.1	56.0
0.910000	35.1	GND	N	9.6	20.9	56.0
0.978000	35.1	GND	N	9.6	20.9	56.0
1.690000	33.3	GND	N	9.5	22.7	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.474000	27.2	GND	N	9.7	19.2	46.4
0.842000	23.5	GND	N	9.5	22.5	46.0
0.878000	22.9	GND	N	9.6	23.1	46.0
0.910000	23.3	GND	N	9.6	22.7	46.0
0.942000	23.2	GND	N	9.6	22.8	46.0
0.978000	22.8	GND	N	9.6	23.2	46.0

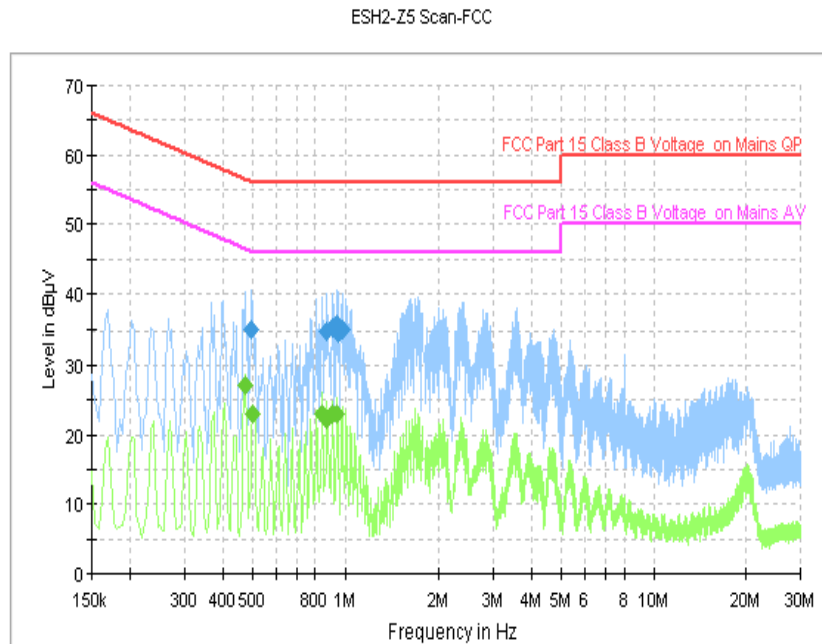


Fig.37 AC Powerline Conducted Emission (Traffic, AE1, 240V)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.498000	35.0	GND	N	9.7	21.0	56.0
0.874000	34.8	GND	N	9.6	21.2	56.0
0.910000	35.3	GND	N	9.6	20.7	56.0
0.942000	35.5	GND	N	9.6	20.5	56.0
0.950000	34.5	GND	N	9.6	21.5	56.0
0.978000	35.0	GND	N	9.6	21.0	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.474000	27.1	GND	N	9.7	19.3	46.4
0.502000	23.1	GND	N	9.7	22.9	46.0
0.842000	23.0	GND	N	9.5	23.0	46.0
0.874000	22.3	GND	N	9.6	23.7	46.0
0.910000	22.9	GND	N	9.6	23.1	46.0
0.942000	22.9	GND	N	9.6	23.1	46.0

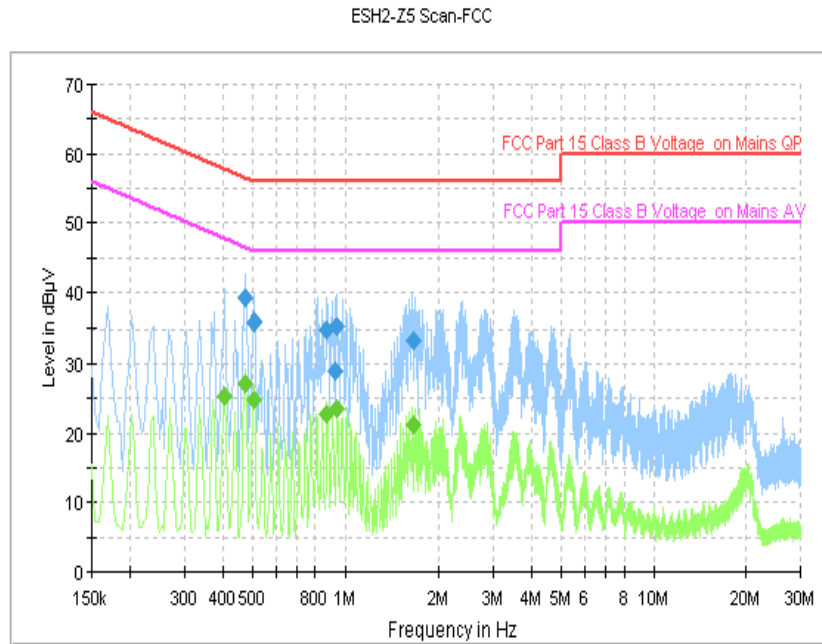


Fig.38 AC Power line Conducted Emission (Idle, AE1, 240V)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.474000	39.2	GND	N	9.7	17.3	56.4
0.506000	35.9	GND	N	9.7	20.1	56.0
0.874000	34.8	GND	N	9.6	21.2	56.0
0.934000	28.9	GND	N	9.6	27.1	56.0
0.942000	35.5	GND	N	9.6	20.5	56.0
1.654000	33.4	GND	N	9.5	22.6	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.406000	25.3	GND	N	9.7	22.4	47.7
0.474000	27.2	GND	N	9.7	19.2	46.4
0.506000	24.8	GND	N	9.7	21.2	46.0
0.874000	22.9	GND	N	9.6	23.1	46.0
0.942000	23.4	GND	N	9.6	22.6	46.0
1.654000	21.1	GND	N	9.5	24.9	46.0



ANNEX C: Persons involved in this testing

Test Name	Tester
Maximum Peak Output Power	Lin Kanfeng, Tang Weisheng
Peak Power Spectral Density	Lin Kanfeng, Tang Weisheng
Occupied 6dB Bandwidth	Lin Kanfeng, Tang Weisheng
Band Edges Compliance	Lin Kanfeng, Tang Weisheng
Transmitter Spurious Emission - Conducted	Lin Kanfeng, Tang Weisheng
Transmitter Spurious Emission - Radiated	Lin Kanfeng, Tang Weisheng
AC Powerline Conducted Emission	Lin Kanfeng, Tang Weisheng

*****END OF REPORT*****