FCC Test Report

Report No: FCS202312281W01

Issued for

Applicant:	Xtuga E-COMMERCE CORP.
Address:	949 Constance Ln Unit E Sycamore IL 60178
Product Name:	Wireless monitoring system
Brand Name:	XTUGA
Model Name:	RW2090 2 waist bags 550.1~599.85（CYS）
Series Model:	RW2090 4 waist bags 550.1~599.85（CYS） RW2090 5 waist bags 550.1~599.85（CYS） RW2090 6 waist bags 550.1~599.85（CYS） RW2090 8 waist bags 550.1~599.85（CYS） RW2090 10 waist bags 550.1~599.85（CYS）
FCC ID:	2BDIS-RW2090

Issued By: Flux Compliance Service Laboratory
Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com

TEST RESULT CERTIFICATION

Applicant's Name..... :	Xtuga E-COMMERCE CORP.
Address..... :	949 Constance Ln Unit E Sycamore IL 60178
Manufacture's Name..... :	Enping Dekas Electroacoustic Equipment Co., Ltd
Address..... :	Card 1, 4F, Changchun Industrial Park, No. C10, Municipal Foreign-invested Industrial Zone, Enping

Product Description

Product Name..... :	Wireless monitoring system
Brand Name .....:	XTUGA
Model Name..... :	RW2090 2 waist bags 550.1~599.85（CYS）
Series Model.....:	RW2090 4 waist bags 550.1~599.85（CYS） RW2090 5 waist bags 550.1~599.85（CYS） RW2090 6 waist bags 550.1~599.85（CYS） RW2090 8 waist bags 550.1~599.85（CYS） RW2090 10 waist bags 550.1~599.85（CYS）
Test Standards.....:	FCC Rules and Regulations Part 15 Subpart C section 15.236
Test Procedure.....:	ANSI C63.10:2013

This device described above has been tested FCS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test.....:

Date (s) of performance of tests. :	Dec 25, 2023 ~ Jan 16, 2024
Date of Issue.....:	Jan 16, 2024
Test Result..... :	Pass

Tested by : Scott Shen

(Scott Shen)

Reviewed by : Duke Qian

(Duke Qian)

Approved by : Jack Wang

(Jack Wang)

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Revision History

Rev.	Issue Date	Effect Page	Contents
00	Jan 16, 2024	All	Initial Issue

1. SUMMARY OF TEST RESULTS

FCC Part 15 Subpart C section 15.236			
Standard Section	Test Item	Judgment	Remark
FCC Part 15.236(d)	Maximum Radiated Power	PASS	--
FCC Part 15.236(f)(2)	Occupied Bandwidth	PASS	--
FCC Part 15.236(g)	Necessary bandwidth	PASS	--
FCC Part 15.236(f)(3)	Frequency stability	PASS	--
FCC Part 15.236(g)	Emission within the band and outside this band	PASS	--
FCC Part 207(a)	Conducted Emission	PASS	--

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

(2) All tests are according to ANSI C63.10:2013

1.1 TEST FACTORY

Company Name:	Flux Compliance Service Laboratory
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
FCC Test Firm Registration Number: 514908 Designation number: CN0127 A2LA accreditation number：5545.01	

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ±U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	±0.71dB
2	Unwanted Emissions, conducted	±2.98 dB
3	Conducted Emission (9KHz-150KHz)	±4.13 dB
4	Conducted Emission (150KHz-30MHz)	±4.74 dB
5	All emissions,radiated(<1G) 30MHz-1000MHz	±3.1 dB
6	All emissions,radiated(<1G) 30MHz-1000MHz	±3.2 dB
7	All emissions,radiated (1GHz -18GHz)	±3.66 dB
8	All emissions,radiated (18GHz -40GHz)	±4.31 dB
9	Occupied bandwidth	4(%)

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Wireless monitoring system
Brand Name	XTUGA
Model Name	RW2090 2 waist bags 550.1~599.85（CYS）
Series Model	RW2090 4 waist bags 550.1~599.85（CYS） RW2090 5 waist bags 550.1~599.85（CYS） RW2090 6 waist bags 550.1~599.85（CYS） RW2090 8 waist bags 550.1~599.85（CYS） RW2090 10 waist bags 550.1~599.85（CYS）
Model Difference	The electrical circuit design, layout, components used and internal wiring for above models are identical, only different in model name and appearance color
Channel List	Please refer to the Note 2.
Operation frequency	550.10MHz-599.85MHz
Modulation Type	FM
Antenna Type	External Antenna
Antenna Gain (dBi)	-2.09
Power Supply	Input:100-240V AC 50/60Hz Output:DC 12V
Battery	N/A
Hardware version number	V1.0
Software version number	V1.0
Connecting I/O Port(s)	Please refer to the User's Manual

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2. **Channel List**

Channel			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	550.10	12	577.65
02	552.65	13	580.15
03	555.15	14	582.65
04	557.65	15	585.15
05	560.15	16	587.65
06	562.65	17	590.15
07	565.15	18	592.65
08	567.65	19	595.15
09	570.15	20	597.65
10	572.65	21	599.85
11	575.15		

Ant.	Atnenna Brand	Antenna Model Name	Antenna Type	Connector	Gain (dBi)	EIRP(dBm)	NOTE
1	N/A	N/A	External Antenna	N/A	-2.09	1.03	Antenna
2	N/A	N/A	External Antenna	N/A	-2.09	1.29	Antenna

2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Test software:FCC tools

The test softeware was used to control EUT work in continuous TX mode, and select test channel, Wireless mode as below table, the following operating modes were applied for the related test items. All test modes were tested, only the result of the worst case was recorded in the report.

Tested mode, channel , information		
Mode	Channel	Frequency (MHz)
Channel	CH 01	550.10
	CH 11	575.15
	CH 21	599.85

2.3 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
1	Adapter	N/A	005126V-240050-Y	005126V-24050-18108	This adapter is for testing only in report.

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
(3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.4 EQUIPMENTS LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESRP 3	FCS-E001	2023.08.29	2024.08.28
Signal Analyzer	R&S	FSV40-N	FCS-E012	2023.08.29	2024.08.28
Active loop Antenna	ZHINAN	ZN30900C	FCS-E013	2023.08.29	2024.08.28
Bilog Antenna	SCHWARZBECK	VULB 9168	FCS-E002	2023.08.29	2024.08.28
Horn Antenna	SCHWARZBECK	BBHA 9120D	FCS-E003	2023.08.29	2024.08.28
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	FCS-E018	2023.08.29	2024.08.28
Pre-Amplifier(0.1M-3G Hz)	EMCI	EM330N	FCS-E004	2023.08.29	2024.08.28
Pre-Amplifier (1G-18GHz)	N/A	TSAMP-0518SE	FCS-E014	2023.08.29	2024.08.28
Pre-Amplifier (18G-40GHz)	TERA-MW	TRLA-0400	FCS-E019	2023.08.29	2024.08.28
Temperature & Humidity	HTC-1	victor	FCS-E005	2023.08.29	2024.08.28
Signal generator	Agilent	E4421B	FCS-E025	2023.08.29	2024.08.28

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	FCS-E020	2023.08.29	2024.08.28
LISN	R&S	ENV216	FCS-E007	2023.08.29	2024.08.28
LISN	ETS	3810/2NM	FCS-E009	2023.08.29	2024.08.28
Temperature & Humidity	HTC-1	victor	FCS-E008	2023.08.29	2024.08.28

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
Spectrum Analyzer	Keysight	N9020A	FCS-E015	2023.08.29	2024.08.28
Spectrum Analyzer	Agilent	E4447A	MY50180039	2023.08.29	2024.08.28
Spectrum Analyzer	R&S	FSV-40	101499	2023.08.29	2024.08.28
Audio Analyzer	R&S	UPL	FCS-E39	2023.08.29	2024.08.28

3 MAXIMUM RADIATED POWER

3.1 LIMIT

Refer to FCC 15.236(d)
In the bands allocated and assigned for broadcast television and in the 600 MHz service band: 50 mW EIRP

3.2 TEST PROCEDURE

A. Connect each EUT's antenna output to power sensor by RF cable and attenuator

3.3 TEST SETUP

3.4 TEST RESULTS

ANT 1

Test mode	Channel	Frequency (MHz)	Cable Loss(dB)	Peak Output Power (dBm)	Atnenna Gain (dBi)	EIRP(dBm)	Limit(dBm)	Verdict
Channel B	CH 01	550.10	0.5	3.01	-2.09	0.92	16.99	PASS
	CH 11	575.15	0.5	3.06	-2.09	0.97		
	CH 21	599.85	0.5	3.12	-2.09	1.03		

ANT 2

Test mode	Channel	Frequency (MHz)	Cable Loss(dB)	Peak Output Power (dBm)	Atnenna Gain (dBi)	EIRP(dBm)	Limit(dBm)	Verdict
Channel B	CH 01	550.10	0.5	3.26	-2.09	1.17	16.99	PASS
	CH 11	575.15	0.5	3.38	-2.09	1.29		
	CH 21	599.85	0.5	3.25	-2.09	1.16		

4. OCCUPIED BANDWIDTH

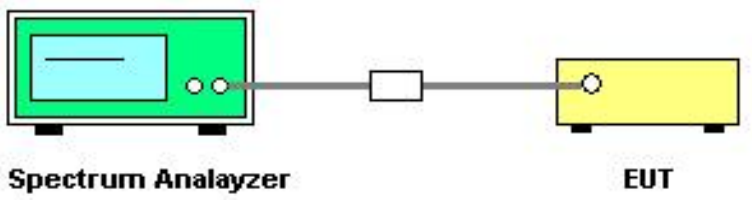
4.1 LIMIT

One or more adjacent 25KHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz. The operating bandwidth shall not exceed 200 kHz

4.2 TEST PROCEDURE

Parameter	Setting
Detector	Peak/AV
Sweep time	Auto
Resolution bandwidth	1 % to 5 % of the occupied bandwidth
VBW	3KHz
RBW	30KHz
Span:	2 x emission bandwidth
Trace mode:	Max. hold
Analyzer function:	99% power occupied bandwidth function
EUT:	Modulated signal with max(FM,2.5kHz tone). frequency deviation

4.3 TEST SETUP



4.4 TEST RESULTS

ANT 1

Test mode	Channel	Frequency (MHz)	20dB Bandwidth (KHz)	Limt(KHz)	Verdict
Channel B	CH 01	550.10	101.1	200KHz	PASS
	CH 11	575.15	100.4		
	CH 21	599.85	100.8		

ANT 2

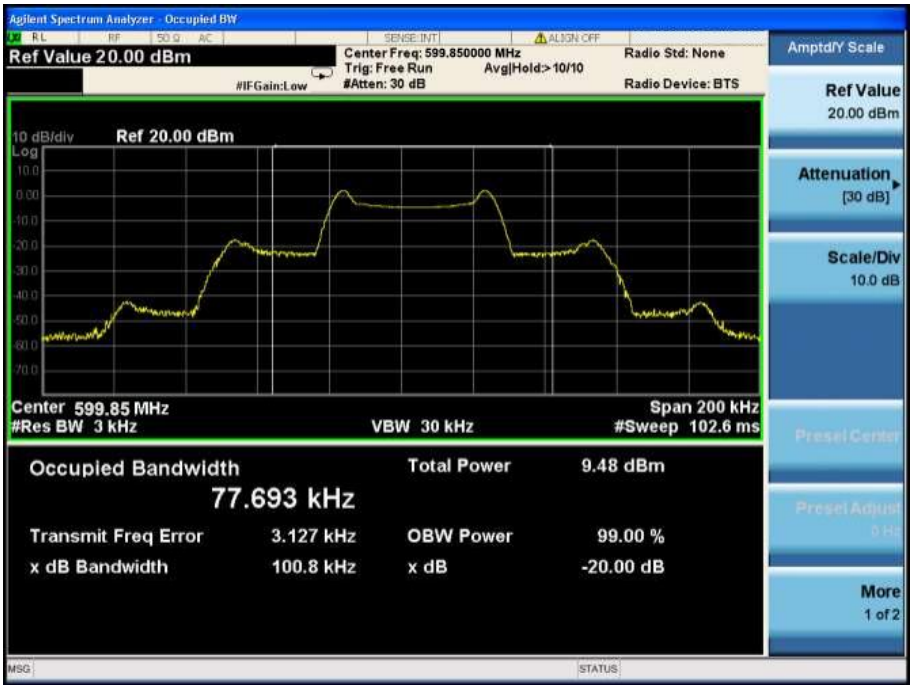
Test mode	Channel	Frequency (MHz)	20dB Bandwidth (KHz)	Limt(KHz)	Verdict
Channel B	CH 01	550.10	103.6	200KHz	PASS
	CH 11	575.15	113.3		
	CH 21	599.85	103.6		

ANT 1

Low

Middle

High



ANT 2

Low

Middle

Agilent Spectrum Analyzer - Occupied BW
Ref Value 20.00 dBm
Center Freq: 575.150000 MHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
10 dB/div
Ref 20.00 dBm
Center 575.15 MHz
#Res BW 3 kHz
#VBW 30 kHz
Span 200 kHz
#Sweep 102.6 ms
Occupied Bandwidth
77.696 kHz
Total Power 10.9 dBm
Transmit Freq Error 633 Hz
OBW Power 99.00 %
x dB Bandwidth 113.3 kHz
x dB -20.00 dB
Amptd/Y Scale
Ref Value 20.00 dBm
Attenuation [30 dB]
Scale/Div 10.0 dB
More 1 of 2

High

Agilent Spectrum Analyzer - Occupied BW
Ref Value 20.00 dBm
Center Freq:599.850000 MHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
10 dB/div
Ref 20.00 dBm
Center 599.85 MHz
#Res BW 3 kHz
#VBW 30 kHz
Span 200 kHz
#Sweep 102.6 ms
Occupied Bandwidth
74.916 kHz
Total Power 9.36 dBm
Transmit Freq Error 613 Hz
OBW Power 99.00 %
x dB Bandwidth 103.6 kHz
x dB -20.00 dB
Amptd/Y Scale
Ref Value 20.00 dBm
Attenuation [30 dB]
Scale/Div 10.0 dB
More 1 of 2

5. NECESSARY BANDWITH

5.1 LIMIT

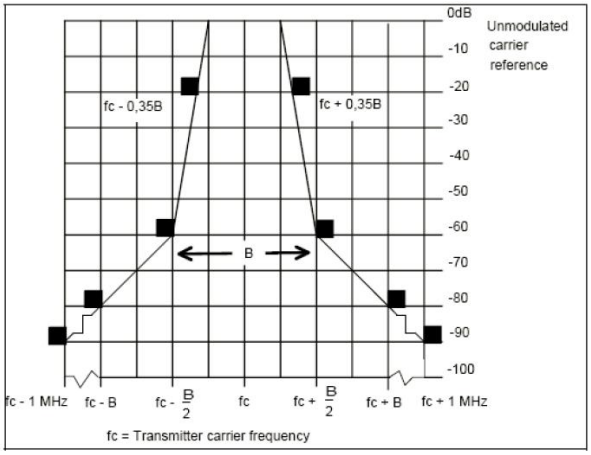
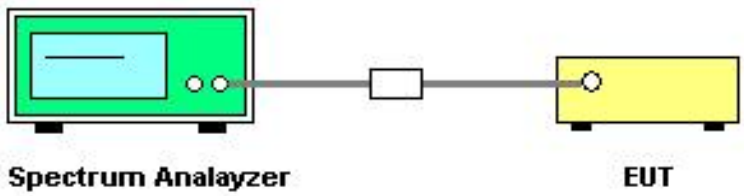


Figure 1: Spectrum mask for analogue systems in all bands

5.2 TEST PROCEDURE

EN300422-1 V1.4.2 Clause 8.3.

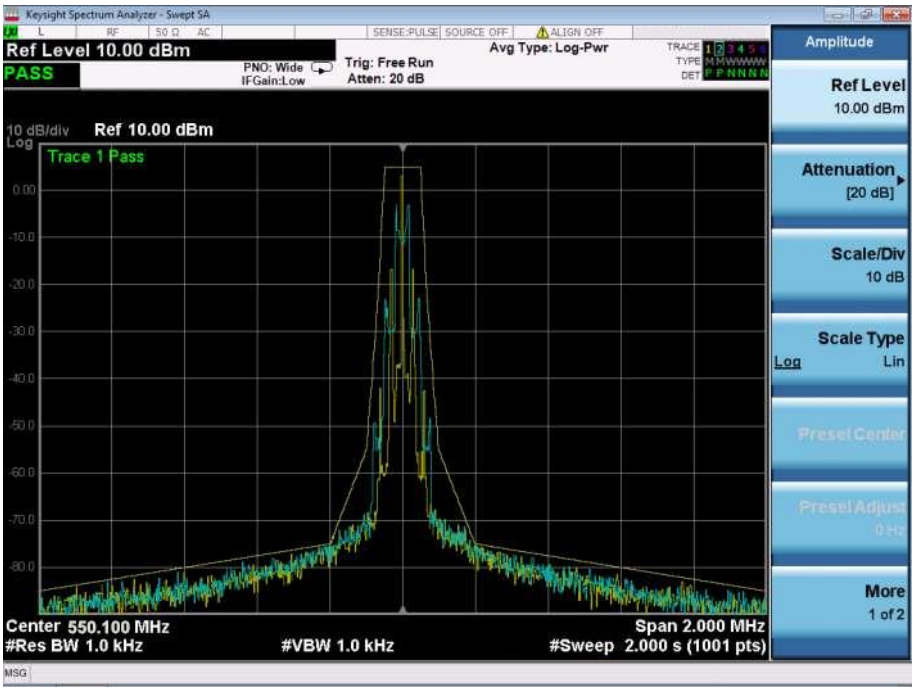
5.3 TEST SETUP



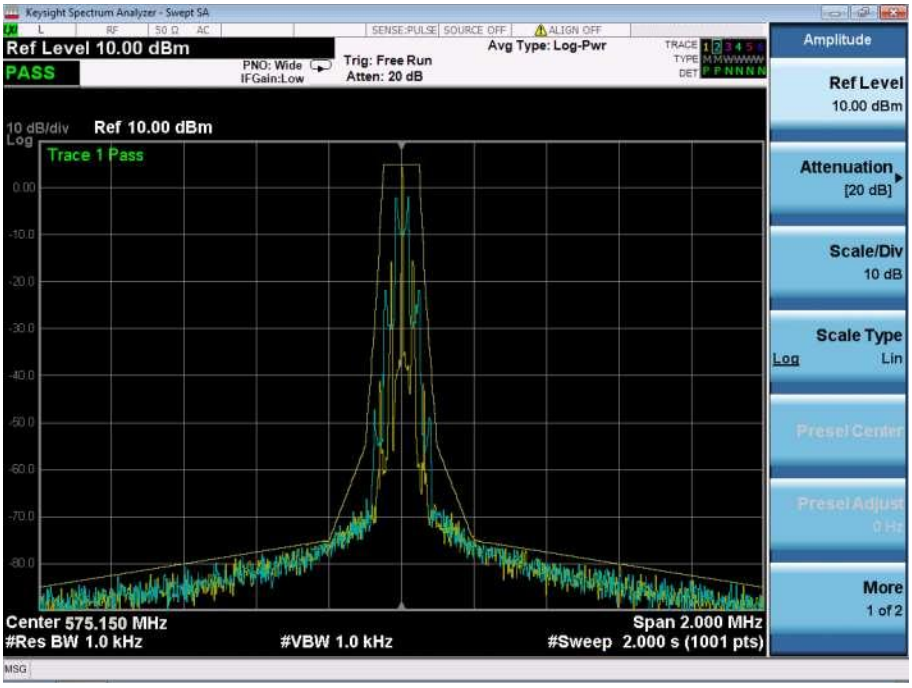
5.4 TEST RESULT

ANT 1

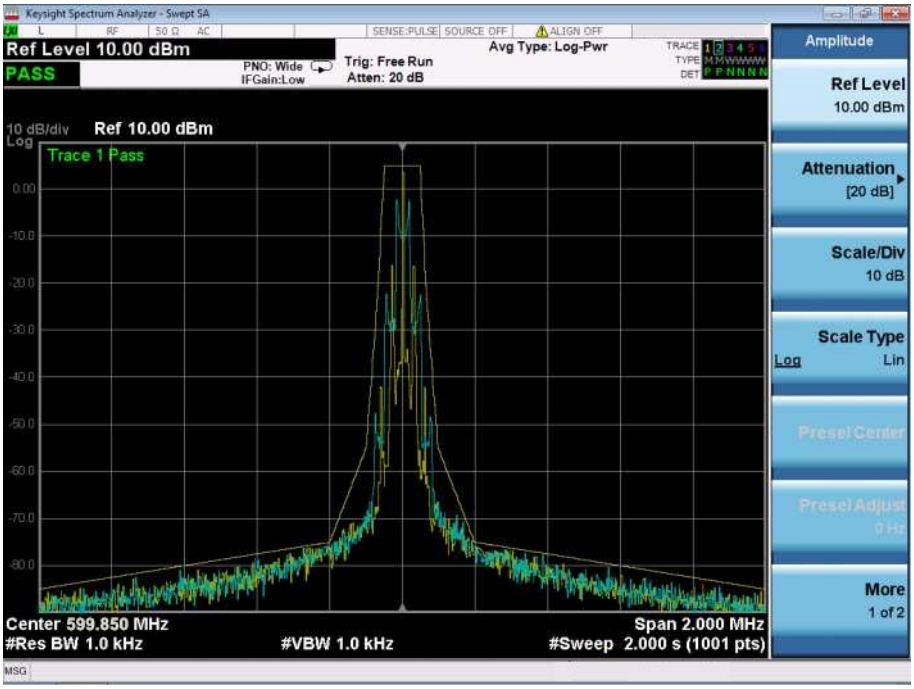
Low



Middle

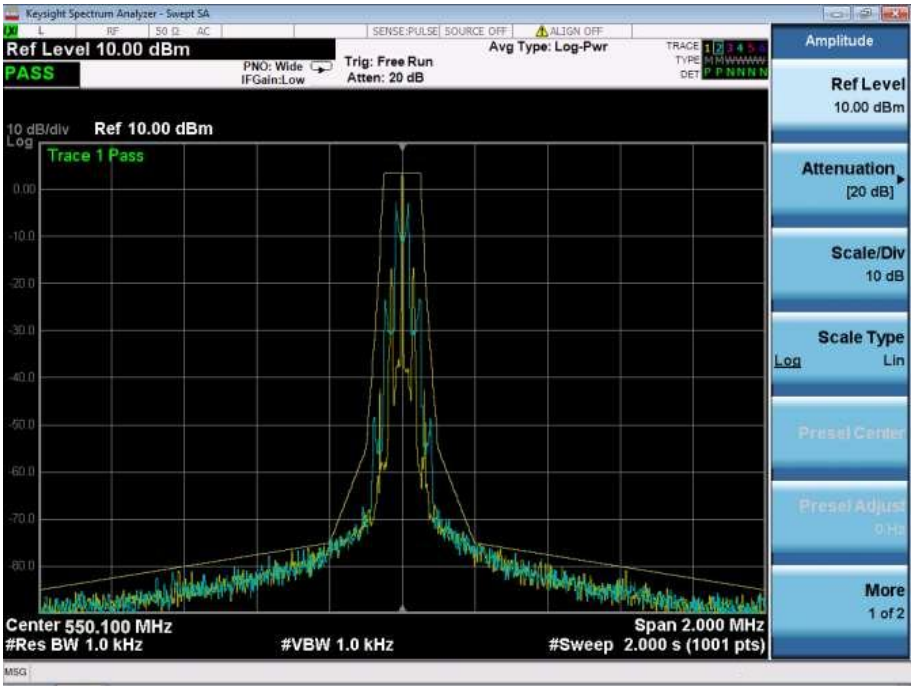


High

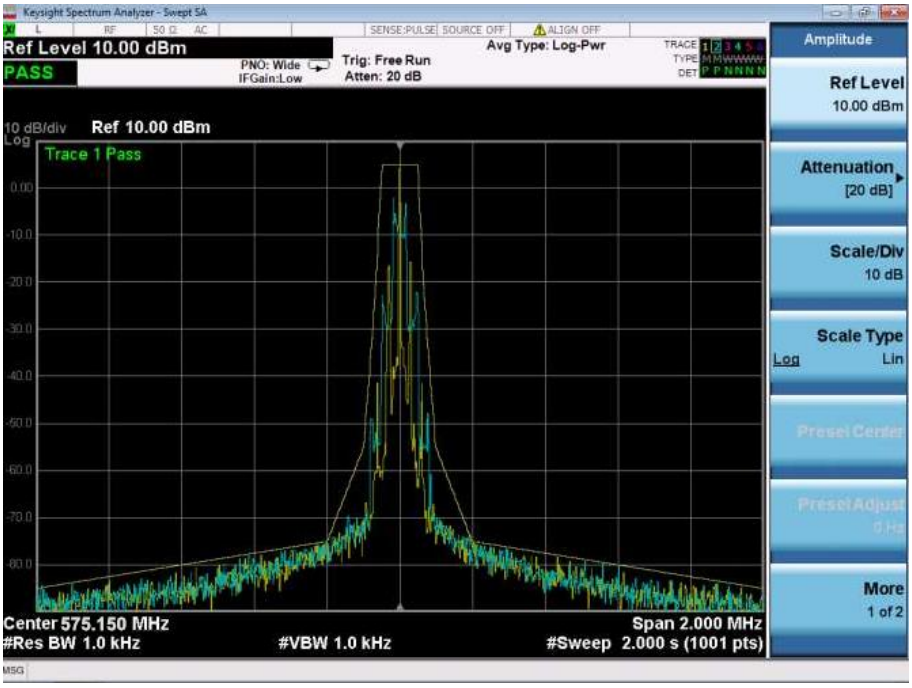


ANT 2

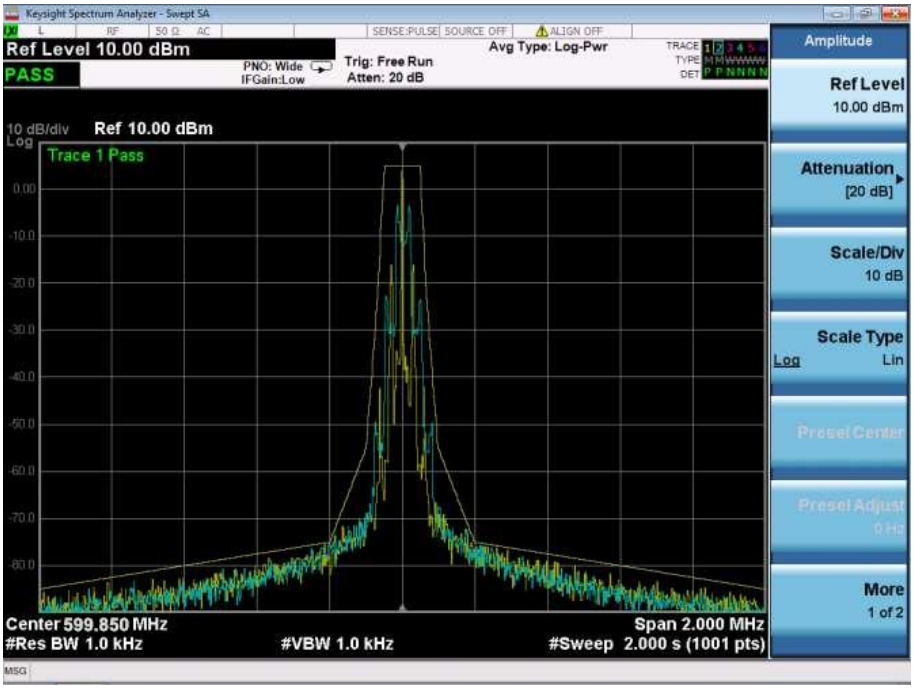
Low



Middle


Keysight Spectrum Analyzer - Swept SA
Ref Level 10.00 dBm
PASS
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
10 dB/div Ref 10.00 dBm
Log
Trace 1 Pass
Center 575.150 MHz
#Res BW 1.0 kHz
#VBW 1.0 kHz
Span 2.000 MHz
#Sweep 2.000 s (1001 pts)
Amplitude
Ref Level
10.00 dBm
Attenuation
[20 dB]
Scale/Div
10 dB
Scale Type
Log Lin
More
1 of 2

High


Keysight Spectrum Analyzer - Swept SA
Ref Level 10.00 dBm
PASS
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
10 dB/div Ref 10.00 dBm
Log
Trace 1 Pass
Center 599.850 MHz
#Res BW 1.0 kHz
#VBW 1.0 kHz
Span 2.000 MHz
#Sweep 2.000 s (1001 pts)
Amplitude
Ref Level
10.00 dBm
Attenuation
[20 dB]
Scale/Div
10 dB
Scale Type
Log Lin
More
1 of 2

6. TRANSMITTER UNWANTED EMISSIONS

6.1 LIMIT

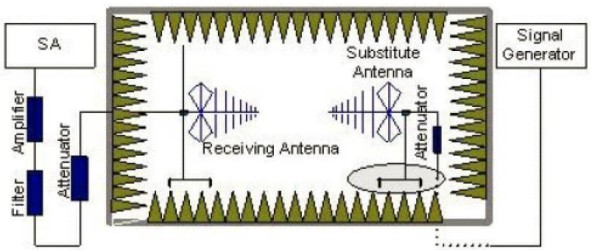
Spurious emissions are emissions outside the frequency range(s) of the equipment. The power of the spurious emissions shall not exceed the limits of table as below:

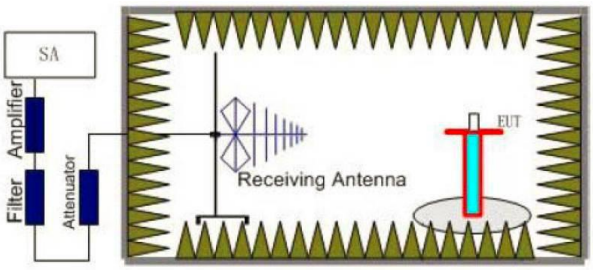
State	Frequency		
	47MHz to 74MHz, 87.5MHz to 137MHz 174MHz to 230MHz, 470MHz to 862MHz	Other Frequencies below 1000MHz	Frequencies above 1000MHz
Operation	4nW	250nW	1uW
Standby	2nW	2nW	20nW

5.2 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer through an attenuator. Set spectrum analyzer start 30MHz to 6000MHz with 100 KHz RBW and 300 KHz VBW
2 Please refer to ETSI EN 300 422-1 V1.4.2 (2011-08) clause 6.1 for the test conditions.
3 Please refer to ETSI EN 300 422-1 V1.4.2 (2011-08) clause 8.4.2 for the measurement method.

5.3 TEST SETUP

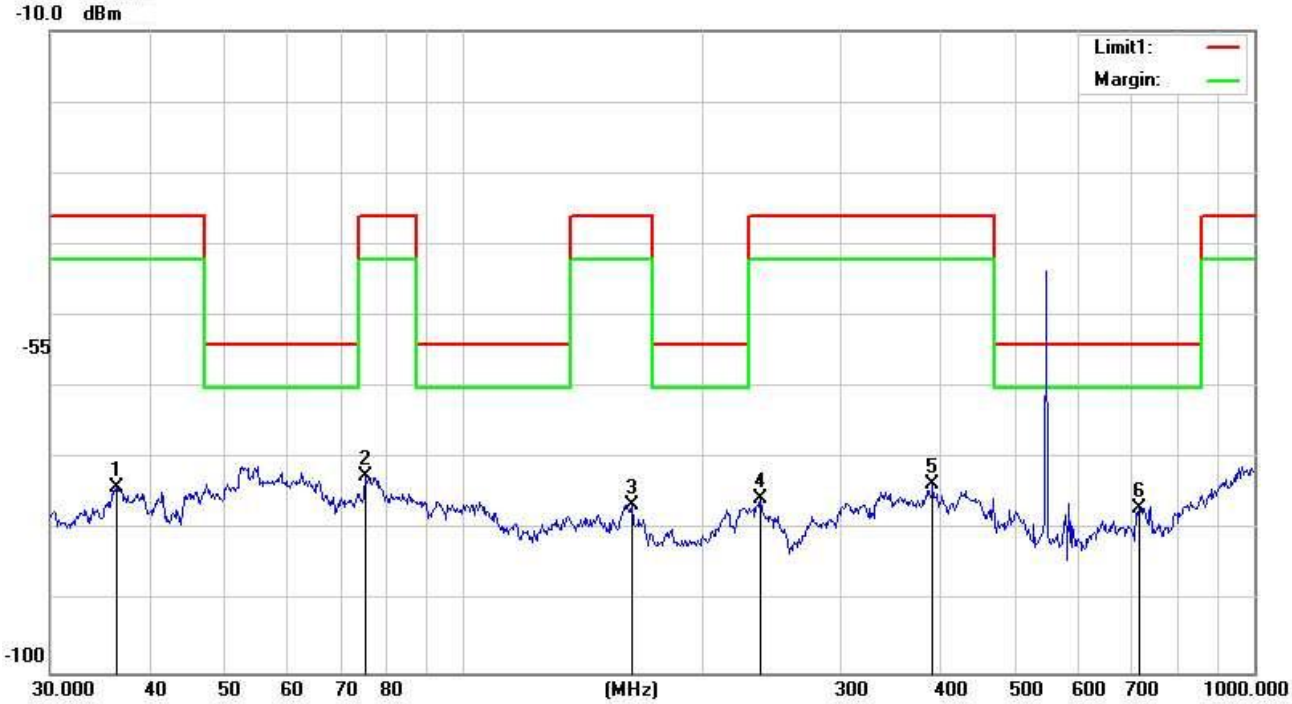




6.4 TEST RESULTS

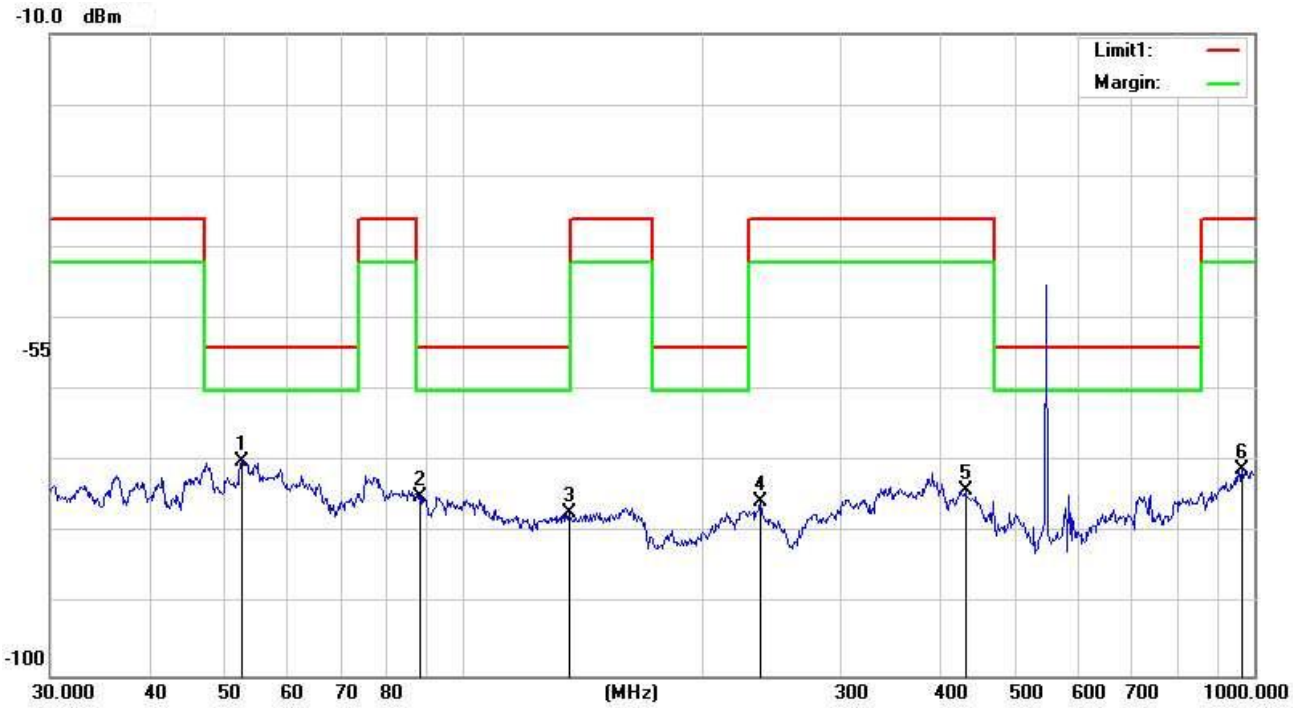
CHNNEL–LOW CH–30MHZ-1000MHZ

Vertical



No.	Frequency (MHz)	Reading (dBm)	Correction (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	36.3813	-57.51	-16.50	-74.01	-36.00	-38.01	peak
2	75.1821	-51.07	-21.38	-72.45	-36.00	-36.45	peak
3	163.1818	-57.77	-18.68	-76.45	-36.00	-40.45	peak
4	237.4760	-60.28	-15.34	-75.62	-36.00	-39.62	peak
5	392.0951	-60.74	-12.84	-73.58	-36.00	-37.58	peak
6	716.6820	-70.99	-5.93	-76.92	-54.00	-22.92	peak

Horizontal



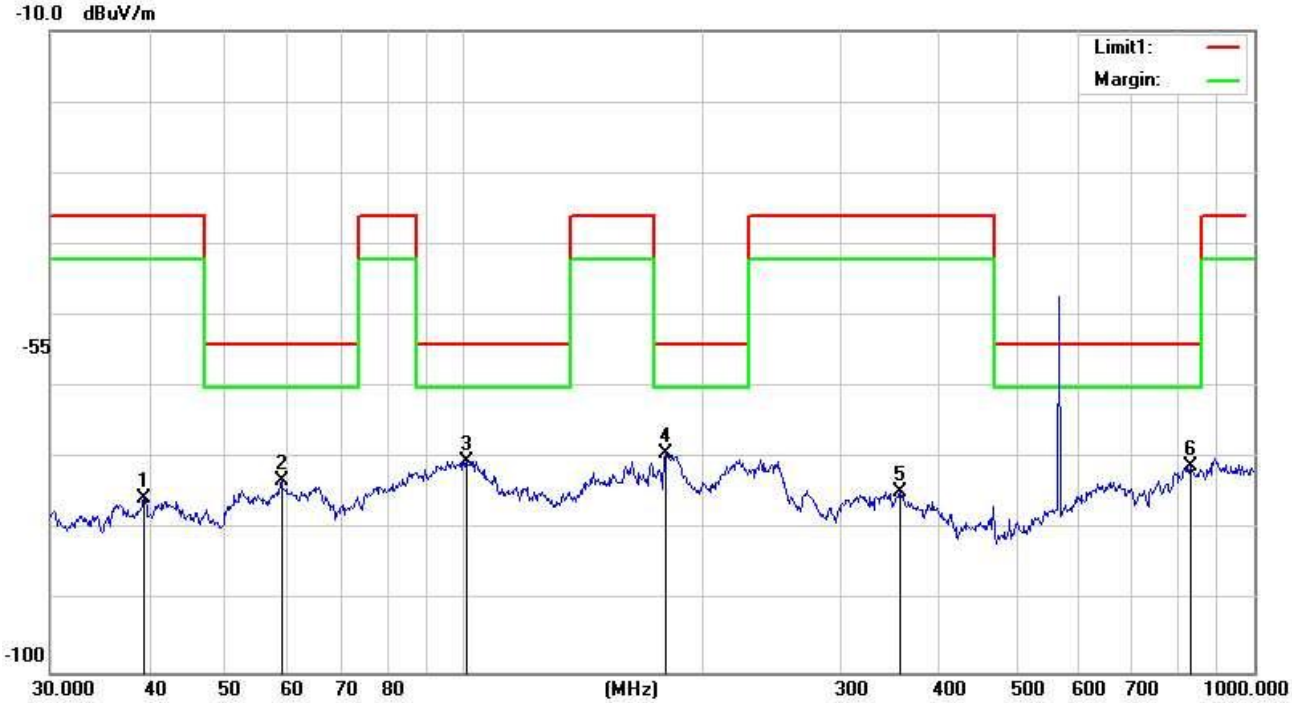
No.	Frequency (MHz)	Reading (dBm)	Correction (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.3913	-53.47	-16.54	-70.01	-54.00	-16.01	peak
2	88.0327	-54.34	-20.60	-74.94	-54.00	-20.94	peak
3	135.9822	-56.26	-20.95	-77.21	-54.00	-23.21	peak
4	237.4760	-60.28	-15.34	-75.62	-36.00	-39.62	peak
5	431.0316	-62.24	-11.69	-73.93	-36.00	-37.93	peak
6	965.5421	-68.79	-2.32	-71.11	-36.00	-35.11	peak

Note :

1. Result = Reading + Corrected Factor Note :

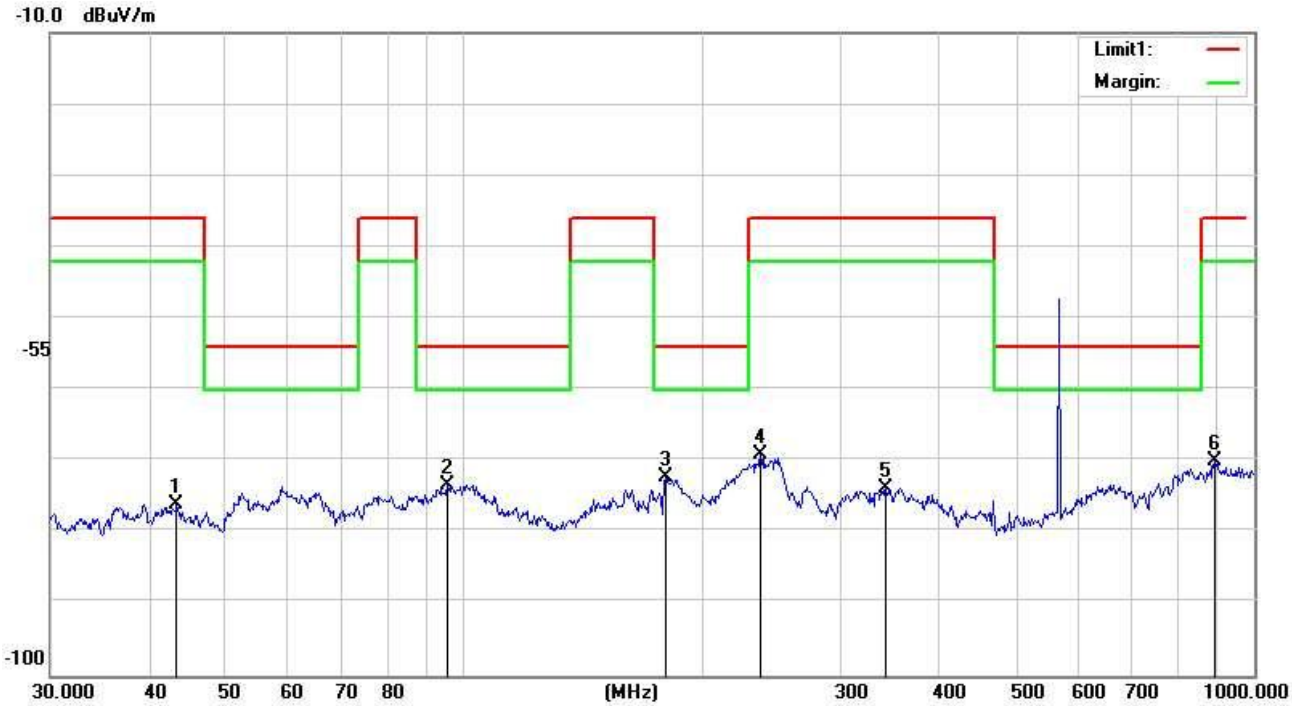
CHNNEL–MIDDLE CH–30MHZ-1000MHZ

Vertical



No.	Frequency (MHz)	Reading (dBm)	Correction (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	39.4371	-58.45	-17.09	-75.54	-36.00	-39.54	peak
2	58.8185	-56.18	-16.91	-73.09	-54.00	-19.09	peak
3	100.9340	-52.63	-17.78	-70.41	-54.00	-16.41	peak
4	180.0165	-49.76	-19.44	-69.20	-54.00	-15.20	peak
5	356.6757	-62.14	-12.64	-74.78	-36.00	-38.78	peak
6	830.4002	-66.88	-4.26	-71.14	-54.00	-17.14	peak

Horizontal



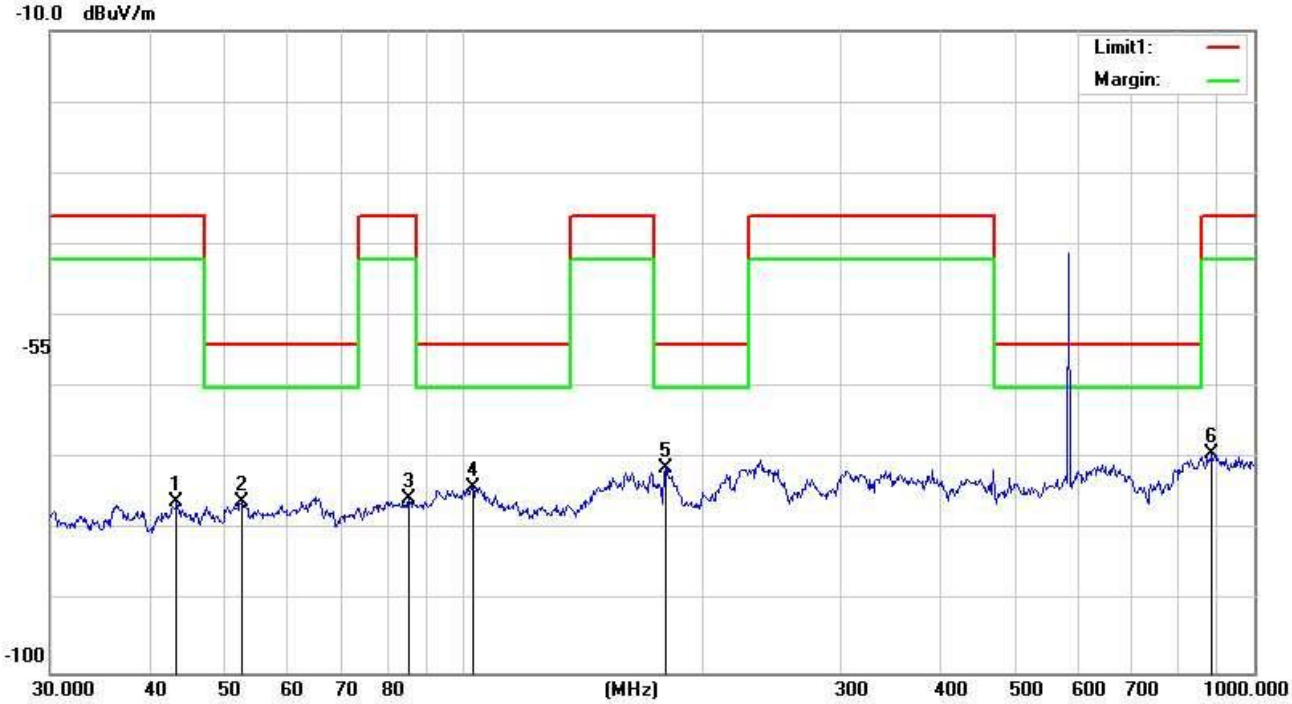
No.	Frequency (MHz)	Reading (dBm)	Correction (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	43.3534	-59.20	-16.92	-76.12	-36.00	-40.12	peak
2	95.4270	-54.32	-19.09	-73.41	-54.00	-19.41	peak
3	180.0165	-52.76	-19.44	-72.20	-54.00	-18.20	peak
4	237.4760	-53.78	-15.34	-69. 12	-36.00	-33.12	peak
5	341.9786	-60.92	-12.78	-73.70	-36.00	-37.70	peak
6	890.7278	-66.47	-3.43	-69.90	-36.00	-33.90	peak

Note :

1. Result = Reading + Corrected Factor Note :

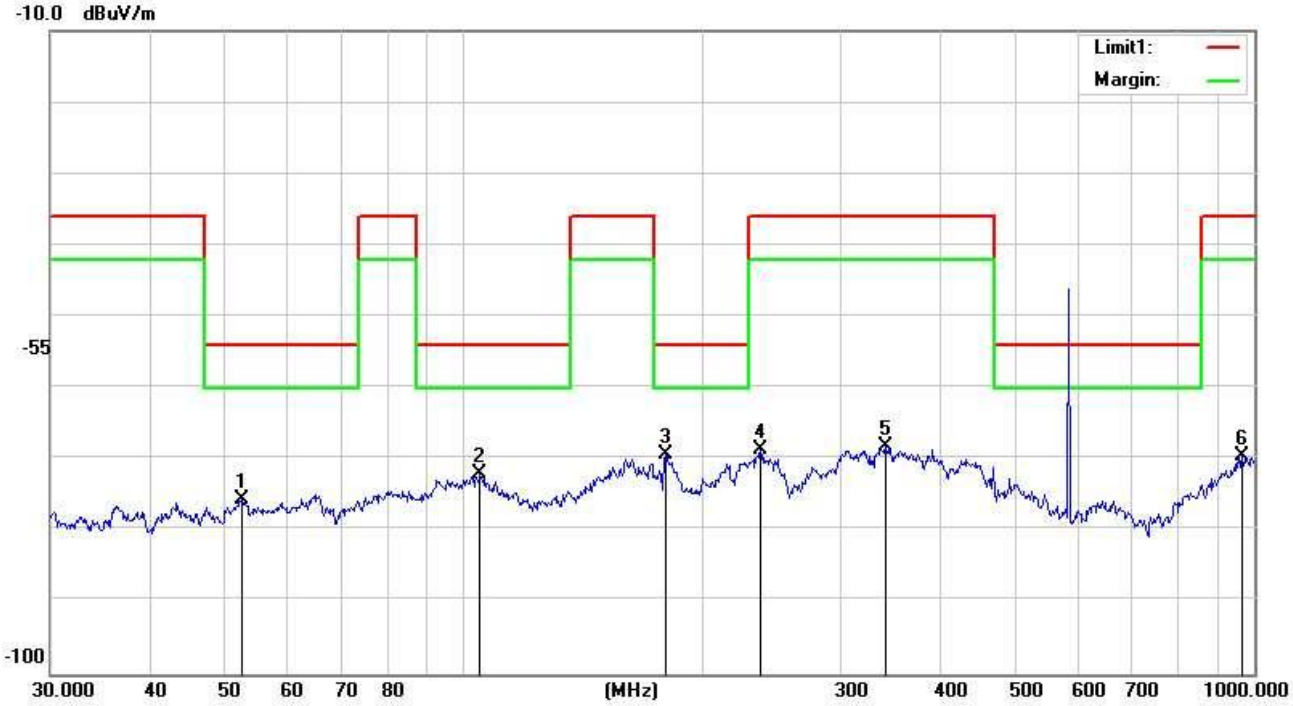
CHNNEL –HIGH CH–30MHZ-1000MHZ

Vertical



No.	Frequency (MHz)	Reading (dBm)	Correction (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	43.1356	-59.20	-16.92	-76.12	-36.00	-40.12	peak
2	52.3912	-59.47	-16.54	-76.01	-54.00	-22.01	peak
3	85.2980	-54.53	-20.98	-75.51	-36.00	-39.51	peak
4	102.7192	-56.34	-17.58	-73.92	-54.00	-19.92	peak
5	180.0165	-51.76	-19.44	-71.20	-54.00	-17.20	peak
6	884.5027	-65.70	-3.49	-69.19	-36.00	-33.19	peak

Horizontal



No.	Frequency (MHz)	Reading (dBm)	Correction (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.3912	-58.97	-16.54	-75.51	-54.00	-21.51	peak
2	104.9033	-54.60	-17.34	-71.94	-54.00	-17.94	peak
3	180.0165	-49.76	-19.44	-69.20	-54.00	-15.20	peak
4	237.4760	-53.28	-15.34	-68.62	-36.00	-32.62	peak
5	341.9786	-55.42	-12.78	-68.20	-36.00	-32.20	peak
6	965.5421	-67.29	-2.32	-69.61	-36.00	-33.61	peak

Note :

1. Result = Reading + Corrected Factor Note :

CHANNEL 1GHZ-6GHZ

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Remark
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V	
Channel Low -550.10MHz							
1100.20	-53.33	8.68	-44.65	-30	-14.65	H	AVG
1650.30	-52.05	11.25	-40.80	-30	-10.80	H	AVG
1100.20	-50.16	8.68	-41.48	-30	-11.48	V	AVG
1650.30	-49.38	11.25	-38.13	-30	-8.13	V	AVG
Channel Middle -575.15MHz							
1150.30	-50.48	8.02	-42.46	-30	-12.46	H	AVG
1725.45	-51.29	11.69	-39.60	-30	-9.60	H	AVG
1150.30	-49.36	8.02	-41.34	-30	-11.34	V	AVG
1725.45	-49.24	11.69	-37.55	-30	-7.55	V	AVG
Channel High -599.85MHz							
1199.70	-53.48	9.05	-44.43	-30	-14.43	H	AVG
1799.55	-52.14	10.37	-41.77	-30	-11.77	H	AVG
1199.70	-53.07	9.05	-44.02	-30	-14.02	V	AVG
1799.55	-51.27	10.37	-40.90	-30	-10.90	V	AVG

Note: The test modes were carried out for all operation modes.Worst data was obtained in ANT 1 +ANT2mode

7.CONDUCTED EMISSION MEASUREMENT

7.1 LIMIT

Operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

FREQUENCY (MHz)	Conducted Emissionlimit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

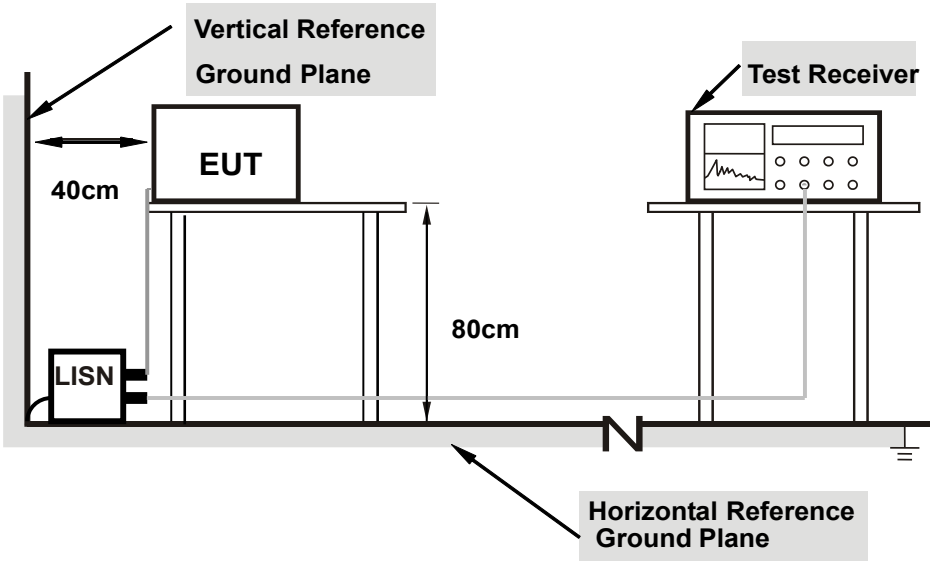
7.2 TEST PROCEDURE

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

7.3 TEST SETUP



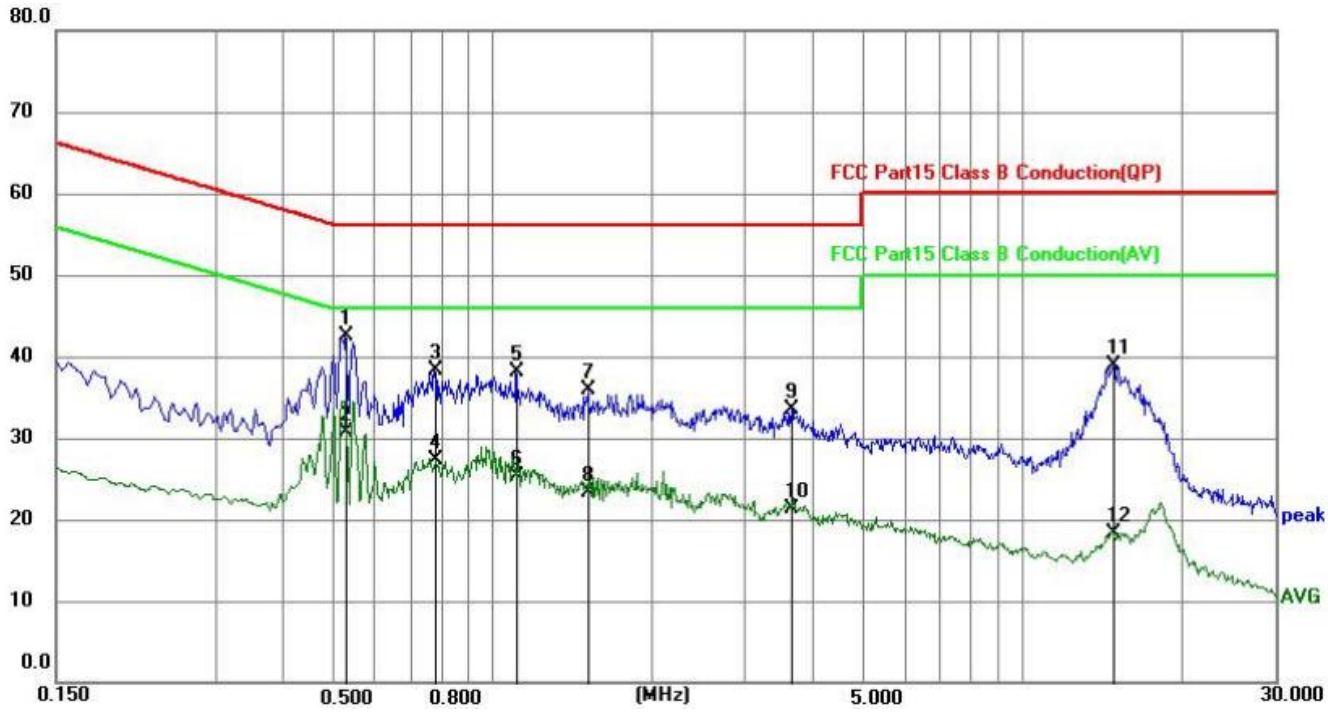
Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

7.4 TEST RESULTS

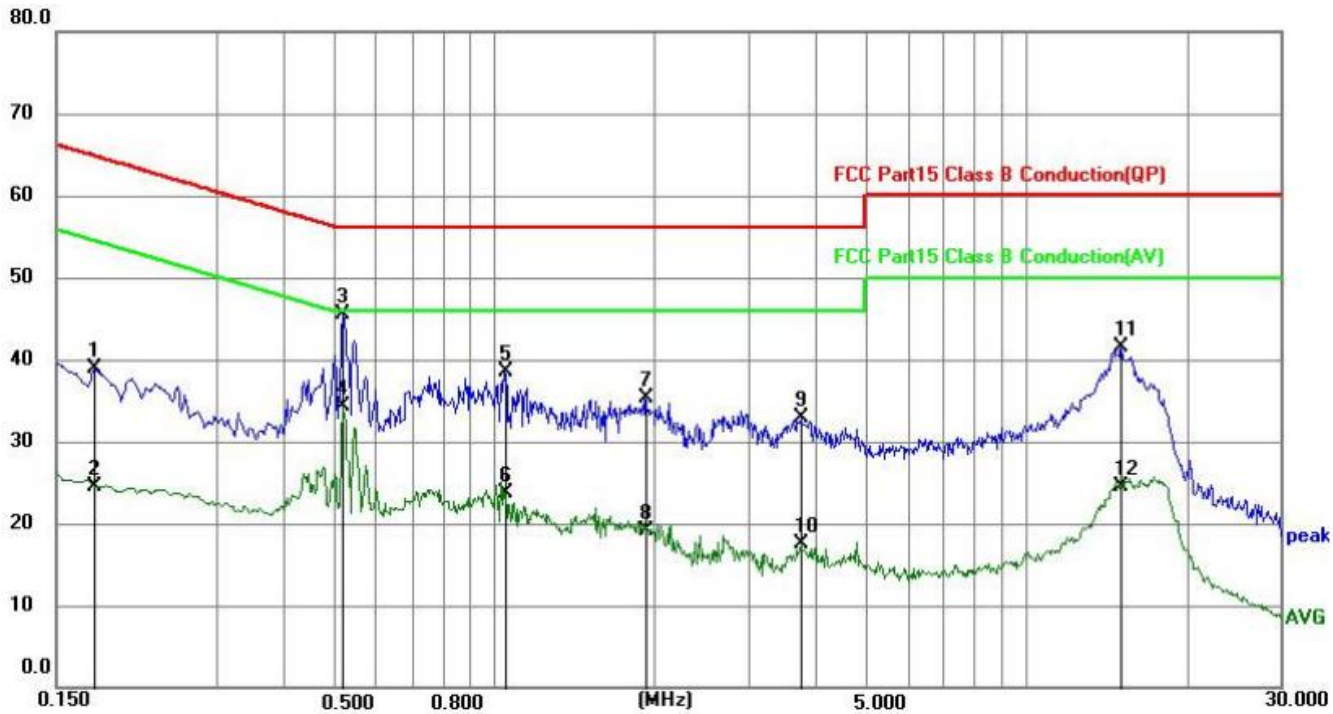
Temperature:	25℃	Relative Humidity:	50%
Test Mode:	GFSK	Test Voltage:	DC 12V By adapter
Phase:	L	Result:	Pass

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.5280	32.56	9.87	42.43	56.00	13.57	QP
2	0.5280	20.86	9.87	30.73	46.00	15.27	AVG
3	0.7755	28.47	9.89	38.36	56.00	17.64	QP
4	0.7755	17.33	9.89	27.22	46.00	18.78	AVG
5	1.1085	28.17	9.92	38.09	56.00	17.91	QP
6	1.1085	15.35	9.92	25.27	46.00	20.73	AVG
7	1.5135	25.93	9.93	35.86	56.00	20.14	QP
8	1.5135	13.30	9.93	23.23	46.00	22.77	AVG
9	3.6735	23.52	9.95	33.47	56.00	22.53	QP
10	3.6735	11.45	9.95	21.40	46.00	24.60	AVG
11	14.8290	28.73	10.12	38.85	60.00	21.15	QP
12	14.8290	8.14	10.12	18.26	50.00	31.74	AVG



Temperature:	25℃	Relative Humidity:	50%
Test Mode:	GFSK	Test Voltage:	DC 12V By adapter
Phase:	N	Result:	Pass

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1770	29.09	9.78	38.87	64.63	25.76	QP
2	0.1770	14.67	9.78	24.45	54.63	30.18	AVG
3	0.5190	35.65	9.87	45.52	56.00	10.48	QP
4	0.5190	24.48	9.87	34.35	46.00	11.65	AVG
5	1.0455	28.59	9.92	38.51	56.00	17.49	QP
6	1.0455	13.71	9.92	23.63	46.00	22.37	AVG
7	1.9185	25.34	9.93	35.27	56.00	20.73	QP
8	1.9185	9.17	9.93	19.10	46.00	26.90	AVG
9	3.7725	22.86	9.98	32.84	56.00	23.16	QP
10	3.7725	7.58	9.98	17.56	46.00	28.44	AVG
11	15.1260	31.30	10.20	41.50	60.00	18.50	QP
12	15.1260	14.28	10.20	24.48	50.00	25.52	AVG



Remark:All readings are Quasi-Peak and Average values.

8. FREQUENCY STABILITY

8.1 LIMIT

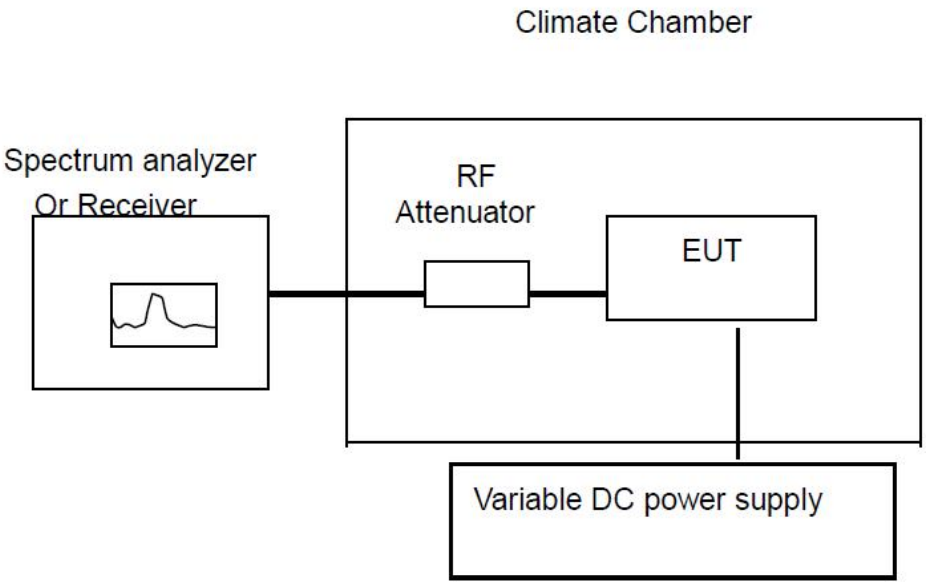
The frequency tolerance of the carrier signal shall be maintained within ±0.005% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C

8.2 TEST PROCEDURE

a. The EUT was connected to an external DC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber. The DC leads and the RF output cable, exited the chamber through an opening made for that purpose.
After the temperature stabilized the frequency output was recorded form the counter. An external variable DC power supply was connected to the battery terminals of the equipment under test.

b. For hand carried, battery powered equipment primary supply voltage was reduced to the battery operating end point as specified by the manufacturer. The output frequency was recorded for each battery voltage.

8.3 TEST SETUP



8.4 TEST RESULTS

(1) Frequency stability versus input voltage (Supply Nominal voltage is DC 12V)

(2) Frequency stability versus input voltage (Supply battery operating end point which shall be specified by the manufacturer DC 10.2V)

Refernce Frequency: 550.10MHz			
Power supply	Environment Temperature(℃)	Frequency Error (Hz)	Frequency Error (ppm)
DC 10.2V	20	3324	6.04
DC 12.0V	20	3344	6.08
DC 13.8V	20	3335	6.06

Refernce Frequency: 550.10MHz				
Frequency Deviation measured with time Elapse(30 minutes)				
Environment Temperature(℃)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Results
50	3333	6.06	50	Pass
40	3315	6.03		
30	3326	6.05		
20	3339	6.07		
10	3324	6.04		
0	3318	6.03		
-10	3305	6.01		
-20	3324	6.04		

Refernce Frequency: 575.15MHz			
Power supply	Environment Temperature(℃)	Frequency Error (Hz)	Frequency Error (ppm)
DC 10.2V	20	3387	5.89
DC 12.0V	20	3391	5.90
DC 13.8V	20	3388	5.89

Refernce Frequency: 575.15MHz				
Frequency Deviation measured with time Elapse(30 minutes)				
Environment Temperature(℃)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Results
50	3381	5.88	50	Pass
40	3383	5.88		
30	3376	5.87		
20	3379	5.87		
10	3381	5.88		
0	3380	5.88		
-10	3371	5.86		
-20	3369	5.86		

Refernce Frequency: 599.85MHz			
Power supply	Environment Temperature(℃)	Frequency Error (Hz)	Frequency Error (ppm)
DC 10.2V	20	3122	5.20
DC 12.0V	20	3127	5.21
DC 13.8V	20	3124	5.21

Refernce Frequency: 599.85MHz				
Frequency Deviation measured with time Elapse(30 minutes)				
Environment Temperature(℃)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Results
50	3112	5.19	50	Pass
40	3116	5.19		
30	3118	5.20		
20	3109	5.18		
10	3123	5.21		
0	3105	5.18		
-10	3119	5.20		
-20	3117	5.20		

※※※※※END OF THE REPORT※※※※※