FCC REPORT

Applicant:	Unitone Communication System Inc.
Address of Applicant:	220 East 23rd Street, Suite 411, New York, NY 10010

Equipment Under Test (EUT)

Product Name:	280 Villa Panel
Model No.:	280SD-C5
FCC ID:	2ATPM-UNI-OACP
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.225
Date of sample receipt:	26 Jul., 2021
Date of Test:	27 Jul., to 11 Aug., 2021
Date of report issue:	27 Aug., 2021
Test Result:	PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

2 Version

Version No.	Date	Description
00	*17 Aug., 2021*	*Original*
01	*25 Aug., 2021*	*Update page 12,13,18*
02	*27 Aug., 2021*	*Update page 12,13,17*

Tested by: Janet Wei ***Date:*** *27 Aug., 2021*

Test Engineer

Reviewed by: Winner Zhang ***Date:*** *27 Aug., 2021*

Project Engineer

3 Contents

Page

4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
Field strength of the fundamental signal	15.225 (a)	Pass
Spurious emissions	15.225(d)& 15.209	Pass
20dB Bandwidth	15.215(c)	Pass
Frequency tolerance	15.225 (e)	Pass
Conducted Emission	15.207	Pass

Remark:

1. *Pass: The EUT complies with the essential requirements in the standard.*
2. *The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).*

Test Method:	*ANSI C63.4-2014* *ANSI C63.10-2013*

5 General Information

5.1 Client Information

Applicant:	Unitone Communication System Inc.
Address:	220 East 23rd Street, Suite 411, New York, NY 10010
Manufacturer/ Factory:	Dnake (Xiamen) Intelligent Technology Co., Ltd
Address:	NorthGate, No.1, HaijingRoad, HaicangDistrict, Xiamen, 361026, Fujian, China

5.2 General Description of E.U.T.

Product Name:	280 Villa Panel
Model No.:	280SD-C5
Operation Frequency:	13.56MHz
Channel numbers:	1
Modulation type:	ASK
Antenna Type:	PCB Antenna
Power supply:	DC 48V/POE 48V
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

5.3 Test mode

Transmitting mode:	Keep the EUT in transmitting mode with modulation		
Pre-Test Mode:			
JYT has verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:			
Axis	X	Y	Z
Field Strength(dBuV/m)	54.63	55.06	54.77
Final Test Mode:			
According to ANSI C63.4 standards, the test results are both the “worst case” and “worst setup”: Y axis (see the test setup photo).			

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
MERCURY	Adapter	M535122-2X1	N/A	DoC

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)

5.6 Additions to, deviations, or exclusions from the method

No

5.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://www.ccis-cb.com

5.9 Test Instrumentslist

Radiated Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal.Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
3m SAC	SAEMC	9m*6m*6m	966	01-19-2021	01-18-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-03-2021	03-02-2022
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-18-2021	06-17-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-18-2021	06-17-2022
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2020	11-17-2021
Loop Antenna	SCHWARZBECK	FMZB 1519 B	00044	03-03-2021	03-02-2022
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-03-2021	03-02-2022
Pre-amplifier	CD	PAP-1G18	11804	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2020	11-17-2021
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-03-2021	03-02-2022
Signal Generator	R&S	SMR20	1008100050	03-03-2021	03-02-2022
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-03-2021	03-02-2022
Cable	MICRO-COAX	MFR64639	K10742-5	03-03-2021	03-02-2022
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-03-2021	03-02-2022

Conducted Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	01-19-2021	01-18-2024
EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-03-2021	03-02-2022
LISN	CHASE	MN2050D	CCIS0074	03-03-2021	03-02-2022
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2021	07-20-2022
Coaxial Cable	CCIS	N/A	CCIS0086	03-03-2021	03-02-2022
EMI Test Software	AUDIX	E3	Version: 6.110919b		

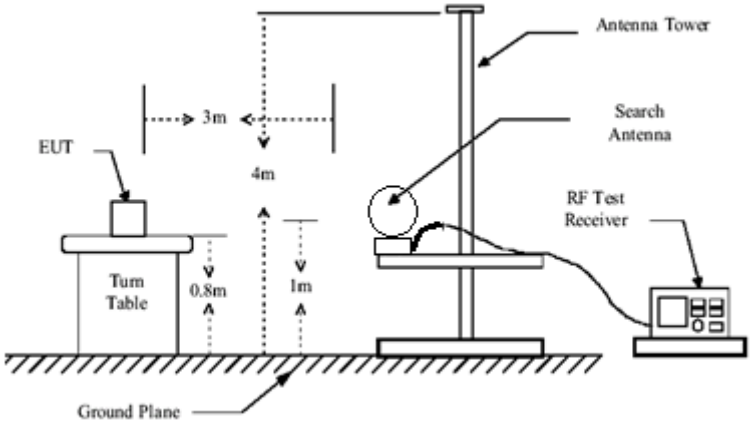
6 Test results and Measurement Data

6.1 Antenna requirement

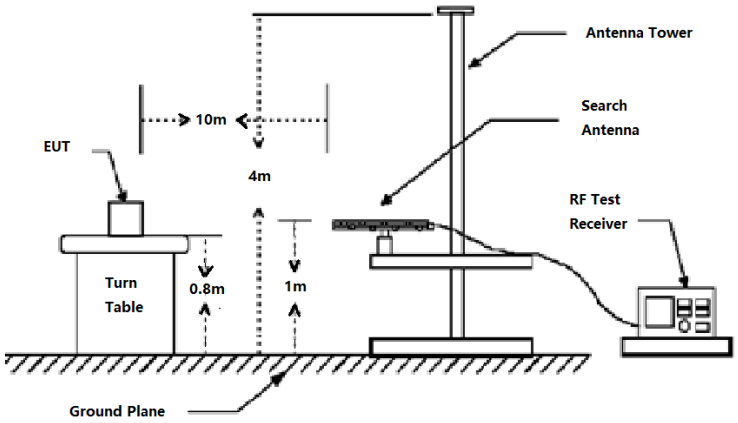
Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, 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.	
E.U.T Antenna:	
The EUT make use of a PCB antenna.	

6.2 Radiated Emission

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.225(a) and 15.209</td></tr>
<tr><td>TestFrequencyRange:</td><td>9 kHz to 1000MHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m(Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>9kHz-150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>600Hz</td><td>Quasi-peak Value</td></tr>
<tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>30kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td>Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:
(Field strength of the fundamental signal)</td><td>
<table>
<tr><td>Frequency</td><td>Limit (uV/m @30m)</td><td>Limit (dBuV/m @3m)</td></tr>
<tr><td>13.553MHz-13.567MHz</td><td>15848</td><td>124.0</td></tr>
<tr><td>13.410MHz-13.553MHz & 13.567MHz-13.710MHz</td><td>334</td><td>90.5</td></tr>
<tr><td>13.110MHz-13.410MHz & 13.710MHz-14.010MHz</td><td>106</td><td>80.5</td></tr>
</table>
Remark:
Per FCC part 15.31, when performing measurements at a distance which is closer than specified, the field strength results shall be extrapolated to the specified distance by using the square of an inverse linear distance extrapolation factor (i.e., 40 dB/decade) in conjunction with the slant-range distance defined in §15.3(hh) of this part.
</td></tr>
<tr><td>Limit:
(Spurious Emissions)</td><td>
<table>
<tr><td>Frequency (MHz)</td><td>Limit (uV/m @3m)</td><td>Distance (m)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr>
<tr><td>1.705-30</td><td>30</td><td>30</td></tr>
<tr><td>Frequency</td><td>Limit (dBuV/m @10m)</td><td>Remark</td></tr>
<tr><td>30-88</td><td>30.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88-216</td><td>33.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216-960</td><td>36.0</td><td>Quasi-peak Value</td></tr>
<tr><td>Above 1GHz</td><td>44.0</td><td>Quasi-peak Value</td></tr>
</table>
</td></tr>
<tr><td>Test Procedure:</td><td>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter/10 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters/10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and SpecifiedBandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limitspecified, then testing could be stopped and the peak values of the EUT wouldbe reported. Otherwise the emissions that did not have 10dB margin would bere-tested one by one using peak, quasi-peak or average method as specified andthen reported in a data sheet.</td></tr>
<tr><td>Test setup:</td><td>9kHz-30MHz</td></tr>
</table>



30MHz-1GHz

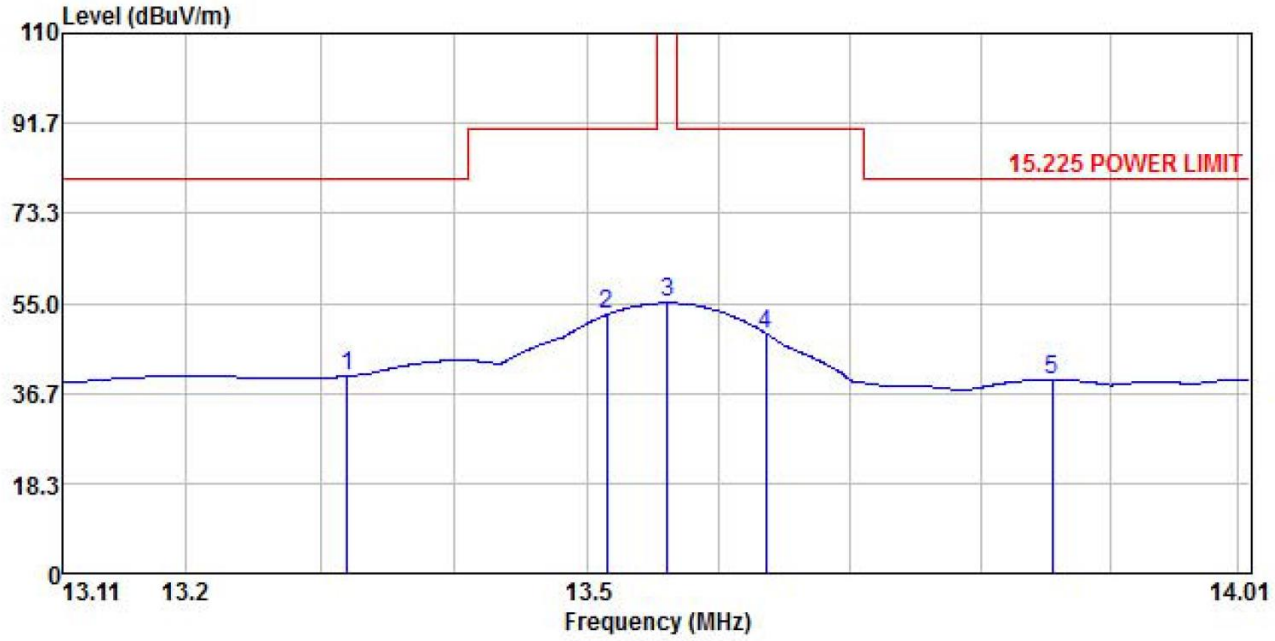


Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data:

Field Strength of fundamental signal:

Product Name:	280 Villa Panel	**Product Model:**	280SD-C5
Test By:	Janet	**Test mode:**	NFC Tx mode
Test Voltage:	POE 48V	**Environment:**	Temp: 24℃ Huni: 57%



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	13.320	20.17	19.63	0.40	0.00	40.20	80.50	-40.30	
2	13.515	32.71	19.59	0.41	0.00	52.71	90.50	-37.79	
3	13.561	35.06	19.59	0.41	0.00	55.06	124.00	-68.94	
4	13.636	28.86	19.57	0.42	0.00	48.85	90.50	-41.65	
5	13.856	19.51	19.52	0.43	0.00	39.46	80.50	-41.04	

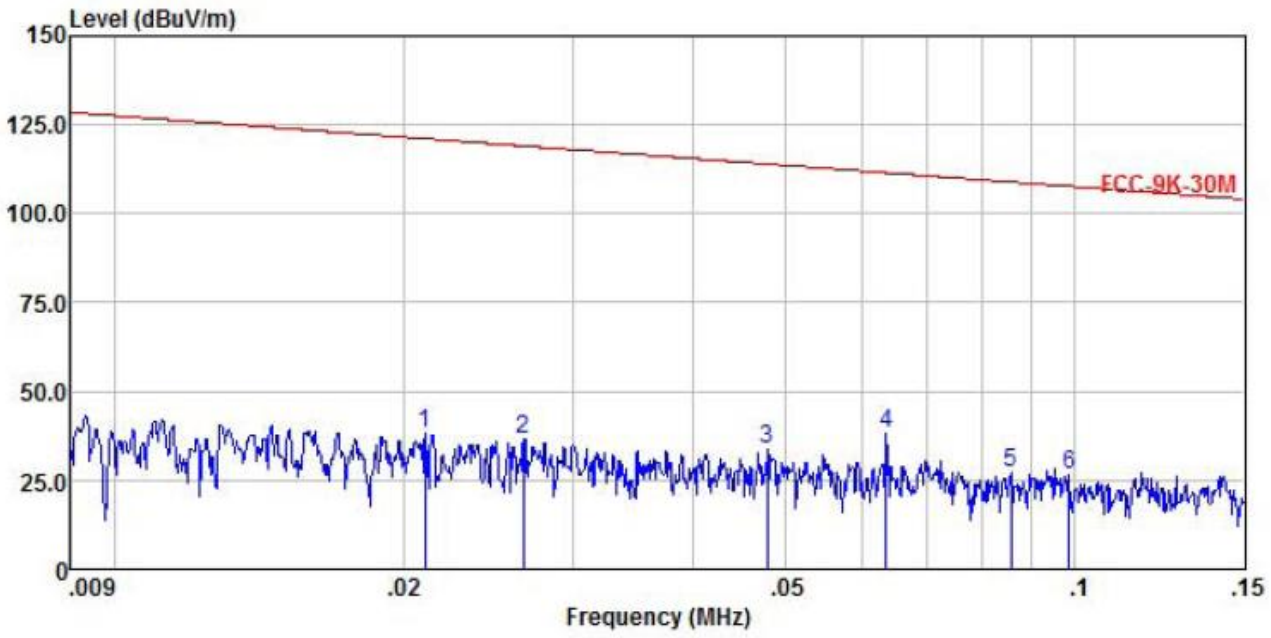
Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Spurious Emissions:

Test frequency range: 9 kHz- 30 MHz

Product Name:	280 Villa Panel	**Product Model:**	280SD-C5
Test By:	Janet	**Test mode:**	NCF Tx mode
Test Frequency:	9 kHz ~ 150 kHz	**Polarization:**	Vertical
Test Voltage:	POE 48V	**Environment:**	Temp: 24℃ Huni: 57%

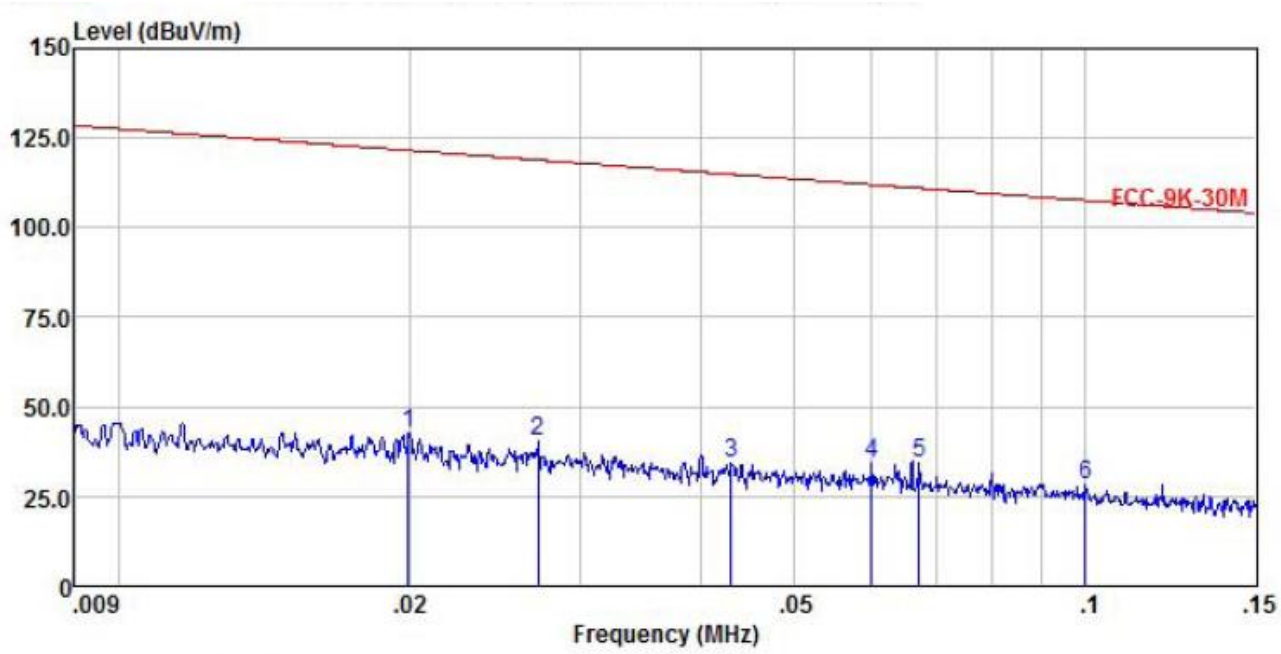


	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.021	17.81	20.30	0.01	0.00	38.12	121.12	-83.00	
2	0.027	16.49	20.23	0.01	0.00	36.73	119.07	-82.34	
3	0.048	12.95	20.57	0.02	0.00	33.54	114.01	-80.47	
4	0.064	17.83	20.53	0.02	0.00	38.38	111.52	-73.14	
5	0.086	6.49	20.66	0.02	0.00	27.17	108.93	-81.76	
6	0.099	6.23	20.52	0.02	0.00	26.77	107.72	-80.95	

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Product Name:	280 Villa Panel	Product Model:	280SD-C5
Test By:	Janet	Test mode:	NCF Tx mode
Test Frequency:	9 kHz ~ 150 kHz	Polarization:	Horizontal
Test Voltage:	POE 48V	Environment:	Temp: 24℃ Huni: 57%

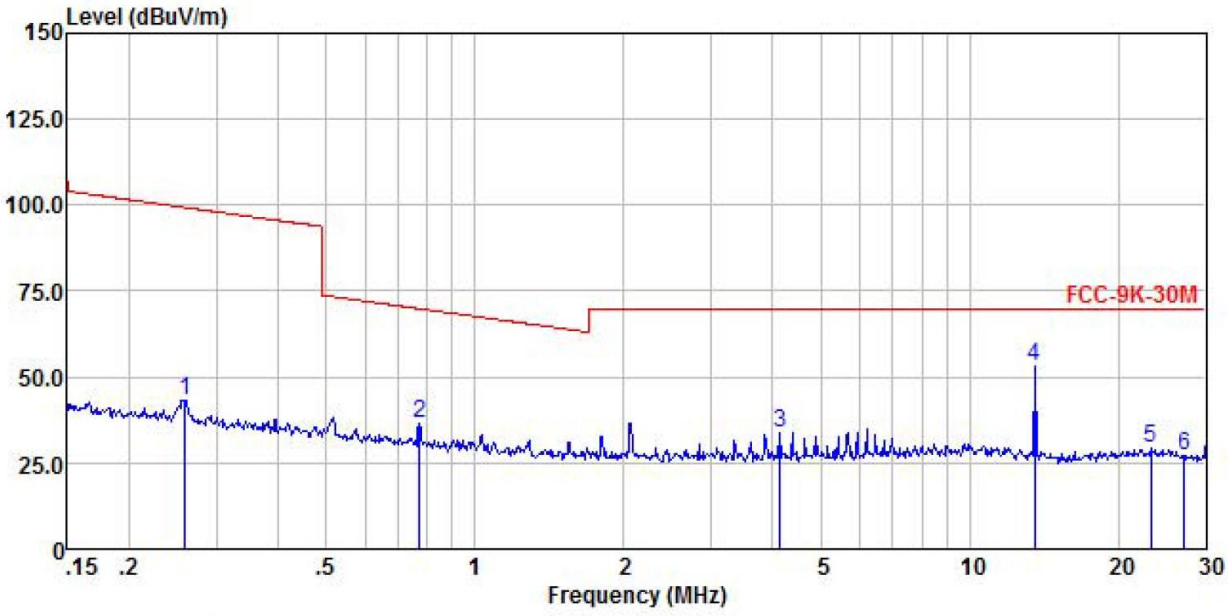


	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.020	22.43	20.31	0.01	0.00	42.75	121.58	-78.83	
2	0.027	20.15	20.23	0.01	0.00	40.39	118.92	-78.53	
3	0.043	13.72	20.49	0.02	0.00	34.23	114.91	-80.68	
4	0.060	13.51	20.55	0.02	0.00	34.08	112.01	-77.93	
5	0.067	13.57	20.51	0.02	0.00	34.10	111.03	-76.93	
6	0.100	7.93	20.49	0.02	0.00	28.44	107.60	-79.16	

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Product Name:	280 Villa Panel	Product Model:	280SD-C5
Test By:	Janet	Test mode:	NCF Tx mode
Test Frequency:	150 kHz ~ 30 MHz	Polarization:	Vertical
Test Voltage:	POE 48V	Environment:	Temp: 24℃ Huni: 57%

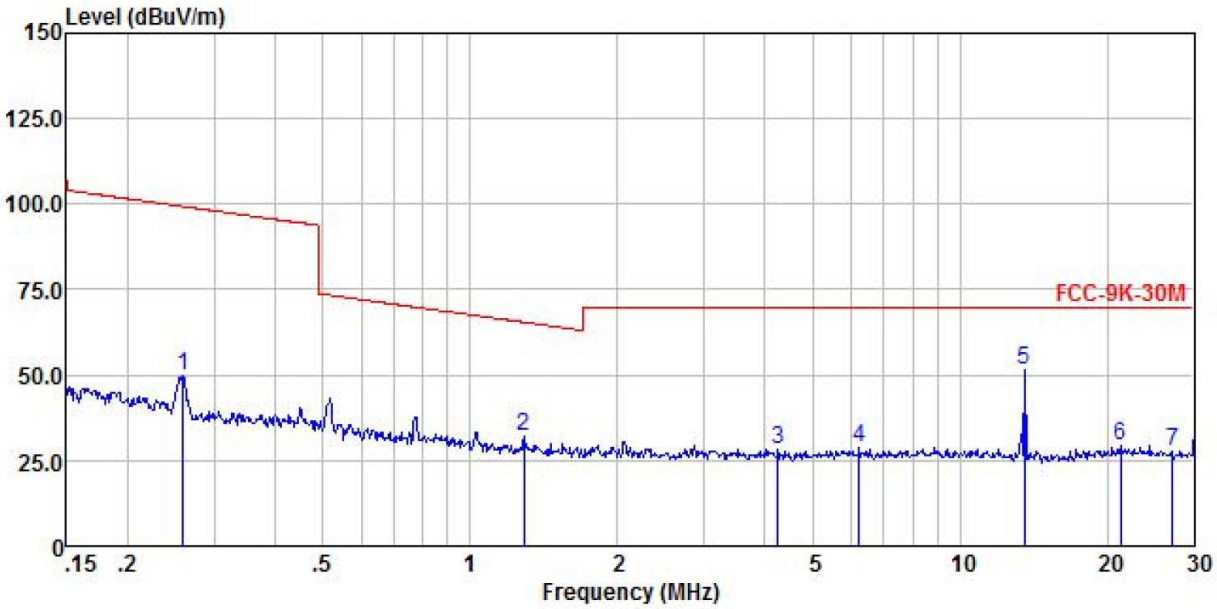


	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.259	22.71	20.47	0.05	0.00	43.23	99.35	-56.12	
2	0.771	15.90	20.61	0.09	0.00	36.60	69.87	-33.27	
3	4.136	13.56	20.21	0.27	0.00	34.04	69.50	-35.46	
4	13.551	33.10	19.59	0.41	0.00	53.10	69.50	-16.40	
5	23.263	9.10	19.78	0.57	0.00	29.45	69.50	-40.05	
6	27.127	7.09	19.57	0.61	0.00	27.27	69.50	-42.23	

Remark:

2. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Product Name:	280 Villa Panel	Product Model:	280SD-C5
Test By:	Janet	Test mode:	NFC Tx mode
Test Frequency:	150 kHz ~ 30 MHz	Polarization:	Horizontal
Test Voltage:	POE 48V	Environment:	Temp: 24℃ Huni: 57%



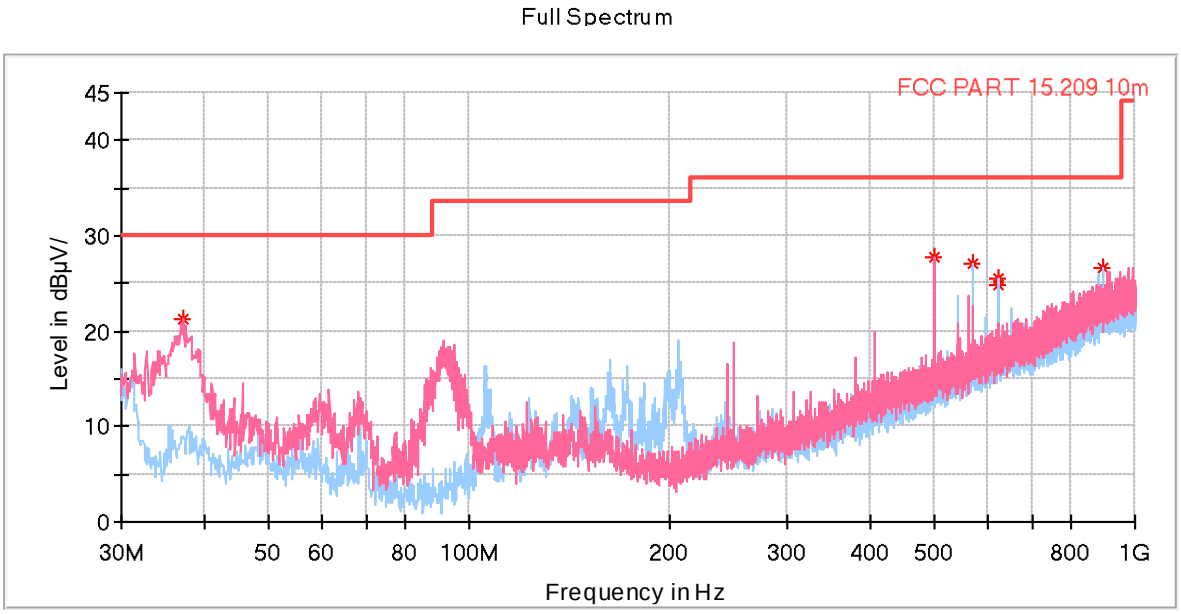
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.259	29.50	20.47	0.05	0.00	50.02	99.35	-49.33	
2	1.289	11.28	20.48	0.17	0.00	31.93	65.42	-33.49	
3	4.247	7.63	20.20	0.28	0.00	28.11	69.50	-41.39	
4	6.219	8.28	20.10	0.33	0.00	28.71	69.50	-40.79	
5	13.551	31.75	19.59	0.41	0.00	51.75	69.50	-17.75	
6	21.260	9.09	19.55	0.53	0.00	29.17	69.50	-40.33	
7	27.127	7.42	19.57	0.61	0.00	27.60	69.50	-41.90	

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Test frequency range: 30MHz-1000MHz

Product Name:	280 Villa Panel	**Product Model:**	280SD-C5
Test By:	Janet	**Test mode:**	NFC Tx mode
Test Frequency:	30 MHz ~ 1 GHz	**Polarization:**	Vertical & Horizontal
Test Voltage:	POE 48V	**Environment:**	Temp: 24℃ Huni: 57%



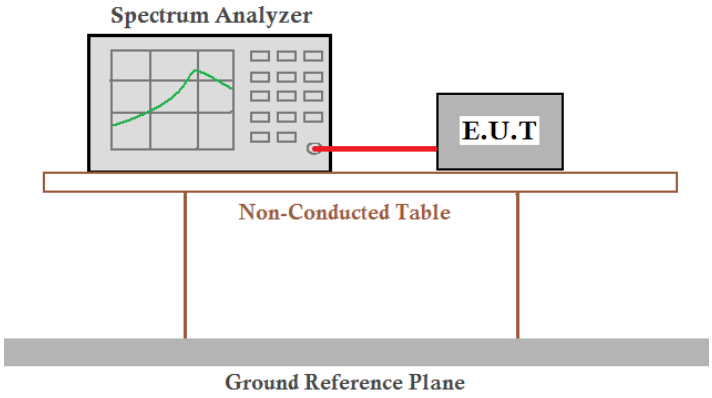
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.178000	21.30	30.00	8.70	100.0	V	187.0	-16.3
499.965000	27.78	36.00	8.22	100.0	V	204.0	-8.9
569.611000	27.08	36.00	8.92	100.0	H	282.0	-7.3
623.834000	25.54	36.00	10.46	100.0	H	238.0	-6.2
624.998000	24.87	36.00	11.13	100.0	H	358.0	-6.2
895.046000	26.55	36.00	9.45	100.0	H	114.0	-1.3

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

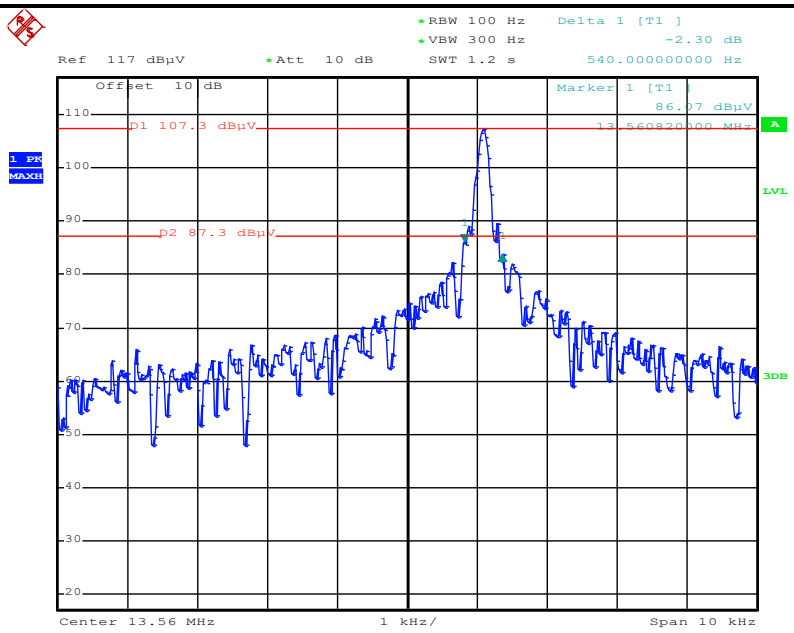
6.3 20dB Bandwidth

Test Requirement:	FCC Part15 C Section 15.215 (c)
Receiver setup:	RBW=100Hz, VBW=300Hz, detector: Peak
Limit:	The fundamental emission be kept within at least the central 80% of the permitted band
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. 4. Read 20dB bandwidth.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

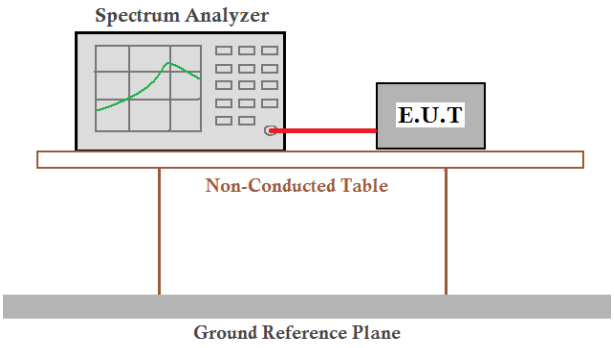
Measurement Data

20dB bandwidth (kHz)	Results
0.54	Passed

Test plot as follows:



6.4 Frequency Tolerance

Test Requirement:	FCC Part15 C Section 15.225 (e)
Receiver setup:	RBW=200Hz, VBW=300Hz, span=14kHz, detector: Peak
Limit:	±0.01% of the operating frequency
Test mode:	Transmitting mode
Test Procedure:	**Frequency stability V.S. Temperature measurement** 1. The equipment under test was powered by a fresh battery. 2. RF output was connected to spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20℃ operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to –20℃. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10℃ increased per stage until the highest temperature of +50℃ reached **Frequency stability V.S. Voltage measurement** 1. Set chamber temperature to 25℃. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

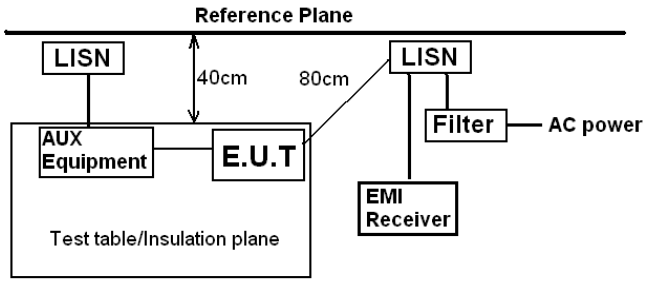
a) Frequency stability V.S. Temperature measurement

Voltage (Vdc)	Temperature (℃)	Frequency Tolerance (MHz)	Frequency Error (%)	Limit (%)	Results
48.0	-20	0.078	0.0058	±0.01	Pass
	-10	0.085	0.0063	±0.01	Pass
	0	-0.074	-0.0055	±0.01	Pass
	+10	0.079	0.0058	±0.01	Pass
	+20	-0.066	-0.0049	±0.01	Pass
	+30	0.084	0.0062	±0.01	Pass
	+40	0.067	0.0049	±0.01	Pass
	+50	-0.036	-0.0027	±0.01	Pass

b) Frequency stability V.S. Voltage measurement

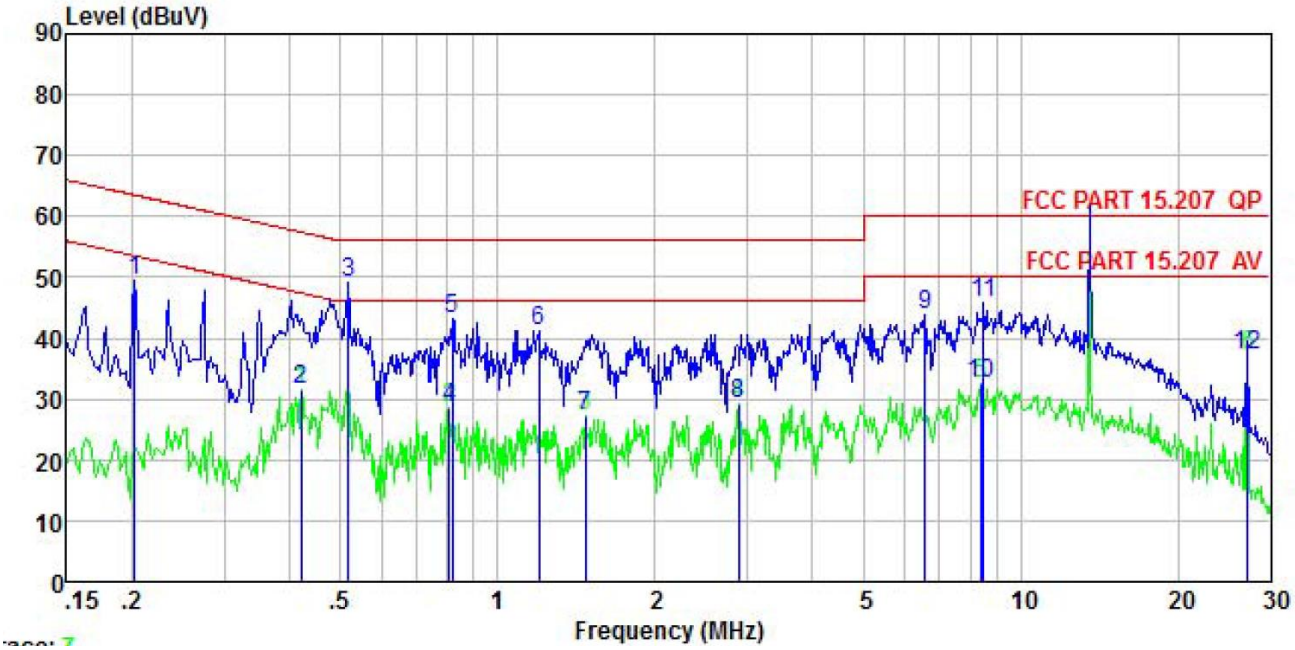
Temperature (℃)	Voltage (Vdc)	Frequency Tolerance (MHz)	Frequency Error (%)	Limit (%)	Results
25.0	40.8	-0.085	-0.0063	±0.01	Pass
	48.0	0.071	0.0052	±0.01	Pass
	55.2	0.092	0.0068	±0.01	Pass

6.5 Conducted Emission

Test Requirement:	FCC Part15 B Section 15.207		
TestFrequencyRange:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)	Limit (dBμV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	0.5-30	60	50
	* Decreases with the logarithm of the frequency.		
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*		
Test procedure	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.).It provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.		
Test Instruments:	Refer to section 5.9 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

Measurement Data:

Product name:	280 Villa Panel	**Product model:**	280SD-C5
Test by:	Janet	**Test mode:**	NFC Tx mode
Test frequency:	150 kHz ~ 30 MHz	**Phase:**	Line
Test voltage:	POE 48V	**Environment:**	Temp: 22.5℃ Huni: 55%

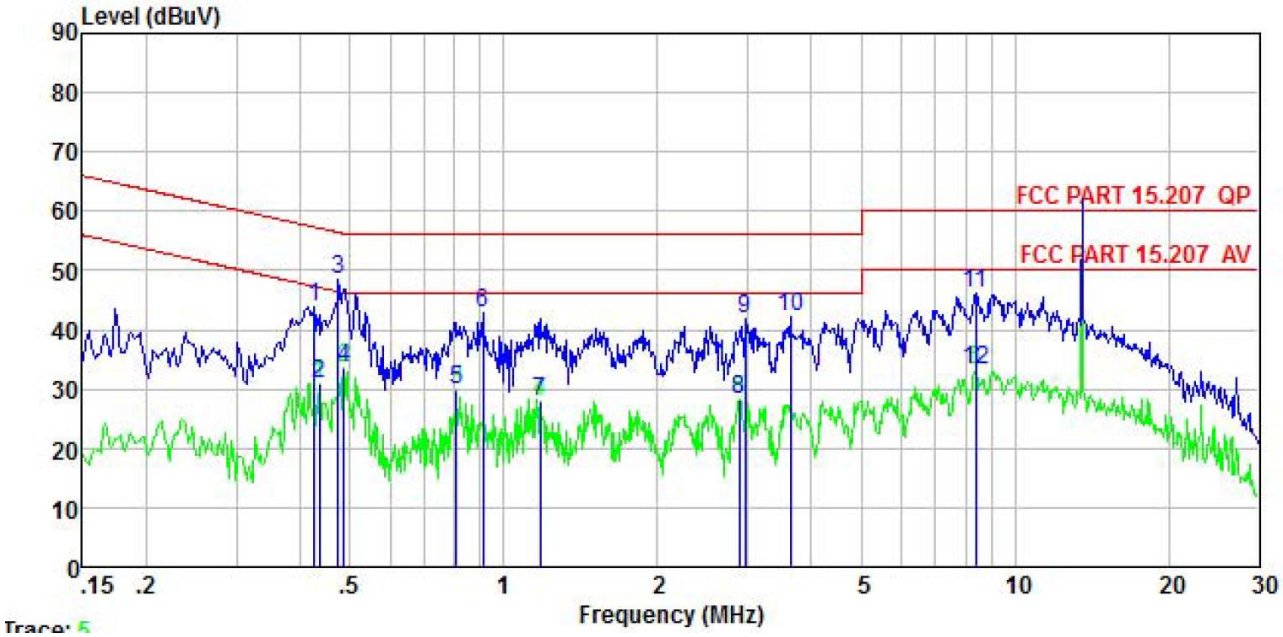


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.202	39.43	10.14	0.00	0.04	49.61	63.54	-13.93	QP
2	0.421	21.25	10.30	-0.04	0.04	31.55	47.42	-15.87	Average
3	0.518	38.70	10.35	0.03	0.03	49.11	56.00	-6.89	QP
4	0.809	17.87	10.44	0.06	0.03	28.40	46.00	-17.60	Average
5	0.817	32.76	10.44	0.06	0.03	43.29	56.00	-12.71	QP
6	1.197	30.63	10.50	0.10	0.09	41.32	56.00	-14.68	QP
7	1.472	16.50	10.51	0.13	0.14	27.28	46.00	-18.72	Average
8	2.884	18.30	10.58	0.30	0.08	29.26	46.00	-16.74	Average
9	6.557	32.10	10.72	0.81	0.10	43.73	60.00	-16.27	QP
10	8.367	20.57	10.78	1.12	0.10	32.57	50.00	-17.43	Average
11	8.501	33.70	10.78	1.15	0.11	45.74	60.00	-14.26	QP
12	27.127	24.97	11.28	0.91	0.20	37.36	50.00	-12.64	Average

Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Cable Loss.*

Product name:	280 Villa Panel	Product model:	280SD-C5
Test by:	Janet	Test mode:	NFC Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	POE 48V	Environment:	Temp: 22.5℃ Huni: 55%



	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.426	33.41	10.14	0.19	0.03	43.77	57.33	-13.56	QP
2	0.435	20.71	10.15	0.13	0.03	31.02	47.15	-16.13	Average
3	0.474	38.57	10.18	-0.18	0.03	48.60	56.45	-7.85	QP
4	0.486	23.67	10.19	-0.26	0.03	33.63	46.23	-12.60	Average
5	0.809	19.38	10.45	-0.05	0.03	29.81	46.00	-16.19	Average
6	0.909	31.98	10.51	0.23	0.04	42.76	56.00	-13.24	QP
7	1.178	17.06	10.62	0.28	0.09	28.05	46.00	-17.95	Average
8	2.884	17.49	10.89	-0.22	0.08	28.24	46.00	-17.76	Average
9	2.962	31.24	10.90	-0.21	0.07	42.00	56.00	-14.00	QP
10	3.642	31.28	10.94	-0.10	0.08	42.20	56.00	-13.80	QP
11	8.367	33.21	11.16	1.64	0.10	46.11	60.00	-13.89	QP
12	8.367	20.45	11.16	1.64	0.10	33.35	50.00	-16.65	Average

Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Cable Loss.*