EMC Test Report

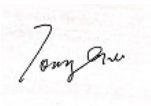
Product Name	:	USB Flash drives
Model No.	:	Nano (NN)

Applicant	:	Flashbay Electronics
Address	:	Building2 ,Jixun Industrial Park ,Xinjiao ,Dong'ao Village ,Shatian Town ,Huiyang District ,Huizhou City , Guangdong Province,P.R.China

Date of Receipt	:	November 13, 2025
Test Date	:	November 18, 2025~ November 19, 2025
Issued Date	:	November 25, 2025
Report Number	:	25B0377R.601
Report Template No.	:	TRF_VCCI CISPR 32 _EMC_V2.0

Issued Date : November 25, 2025
Report Number : 25B0377R.601

Product Name	:	USB Flash drives
Applicant	:	Flashbay Electronics
Address	:	Building2 ,Jixun Industrial Park ,Xinjiao ,Dong'ao Village ,Shatian Town ,Huiyang District ,Huizhou City , Guangdong Province,P.R.China
Manufacturer	:	N/A
Address	:	N/A
Model No.	:	Nano (NN)
EUT Rated Voltage	:	5 Vdc
EUT Test Voltage	:	110 Vac, 60 Hz, 230 Vac, 50 Hz
Trade Name	:	N/A
Applicable Standard	:	VCCI CISPR 32: 2016
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,215006, Jiangsu, China VCCI Registration Number: AC1: R-20217 (RE Below 1GHz); AC5: G-10041 (RE Above 1GHz) TR1: C-20173 (CE Mains); TR1: T-11531 (CE Telecommunication)

Tested By : 

(Tony Guo/ Project Engineer)

Approved By : Star Wang 2025.11.25 09:20:14 +08'00'

(Star Wang/Manager)

TABLE OF CONTENTS

Document History

Report Number	Date	Description
25B0377R.601	November 25, 2025	First release

1 General Information

1.1 EUT Description

Product Name	USB Flash drives
Model No.	Nano (NN)
Brand Name	N/A
Highest Internal Frequency (Fx)	> 108 MHz

Note 1: The EUT information is from customer declaration.

Note 2: Material composition: Zinc alloy iron casing + ABS + Stainless steel ring

1.2 Mode of Operation

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

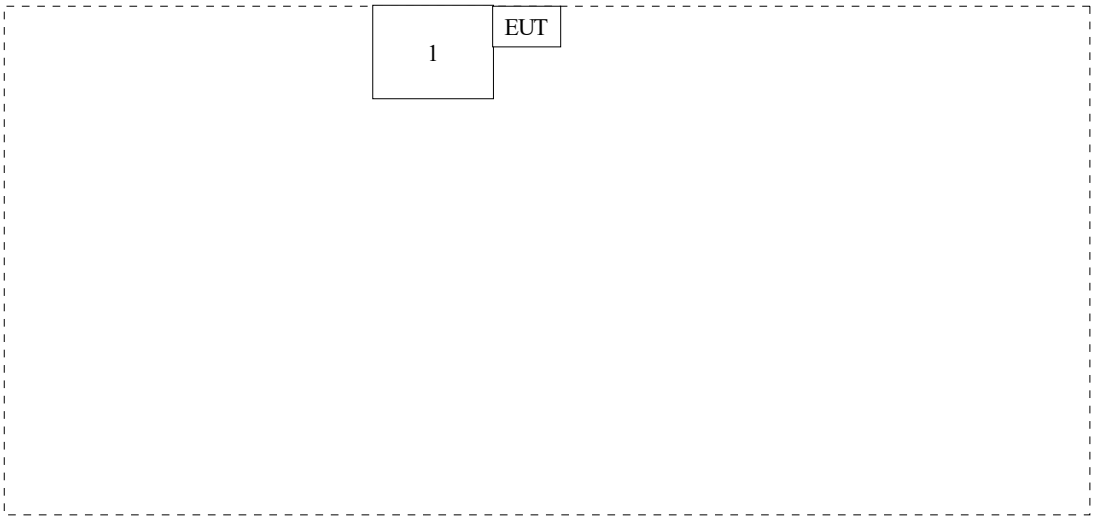
Final Test Mode	
Emission	Mode 1: Transmission mode by USB port Mode 2: Transmission mode by Type-C port

1.3 Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook computer	Lenovo	ThinkPad T14 GEN 3	N/A	Power by Adapter

1.4 Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal Cable Description
N/A	N/A	N/A

1.5 EUT Exercise Software

1	Set up the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Confirm the EUT working normally.
4	Start testing.

2 Technical Test

2.1 Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Emission			
Performed Item	Normative References	Test Result	Remark
Conducted Emissions	VCCI CISPR 32: 2016 CISPR 16-2-1:2008	Pass	---
Asymmetric Mode Conducted Emissions	VCCI CISPR 32: 2016 CISPR 16-2-1:2008	N/A	See 1)
Radiated Emissions	VCCI CISPR 32: 2016 CISPR 16-2-3:2010	Pass	See 2)
Supplementary information: 1) The EUT does not contain the interface defined below. a. wired network ports b. optical fibre ports with metallic shield or tension members c. broadcast receiver tuner ports d. antenna ports 2) The highest internal frequency of the EUT is no more than 108MHz.			

2.2 List of Test Equipment

Conducted Emission / TR1						
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Cali. Date**	**Cali. Due Date**	**Used In**
EMI Test Receiver	R&S	ESR7	102086	2025.01.11	2026.01.10	☒
Two-Line V-Network	R&S	ENV216	101190	2025.01.18	2026.01.17	☒
Two-Line V-Network	R&S	ENV216	102281	2025.03.23	2026.03.22	☐
Two-Line V-Network	R&S	ENV216	101044	2025.09.20	2026.09.19	☒
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2025.03.16	2026.03.15	☒
50ohm Termination	Lair Microwave	N-JR-10W11	N/A	2025.08.29	2026.08.28	☒
Coaxial Cable	Huber+Suhner	RG 223	TR1-C1	2025.03.16	2026.03.15	☒
Temperature/Humidity Meter	RTS	RTS-1909	THM-012	2025.04.30	2026.04.29	☒
Software	Quietek	EMI_V3	V3.0.0	N/A	N/A	☒
Shielding room	Quietek	4.9m*4m*3m	TR1	2023.03.04	2028.03.03	☒

Radiated Emission / AC1						
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Cali. Date**	**Cali. Due Date**	**Used In**
EMI Test Receiver	R&S	ESCI	100175	2025.03.23	2026.03.22	☒
EMI Test Receiver	R&S	ESCI	100176	2025.03.23	2026.03.22	☒
EMI Test Receiver	R&S	ESCI	100726	2025.05.18	2026.05.17	☐
Bilog Antenna	SCHWARZBECK	VULB 9168	01431	2025.08.19	2026.08.18	☒
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9168	01100	2025.05.28	2026.05.27	☐
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9168	01099	2025.03.23	2026.03.22	☒
Coaxial Cable	Huber+Suhner	RG 214_U	AC1-L	2025.03.16	2026.03.15	☒
Coaxial Cable	Huber+Suhner	RG 214_U	AC1-R	2025.03.16	2026.03.15	☒
Temperature/Humidity Meter	RTS	RTS-1909	THM-011	2025.04.30	2026.04.29	☒
Software	Tonscend	JS32-RE	5.0.0	N/A	N/A	☒
Pre-amplifier	TESEQ	LNA 6901	80381	2025.06.18	2026.06.17	☒
Pre-amplifier	TESEQ	LNA 6901	80382	2025.06.17	2026.06.16	☒
Anechoic chamber	Quietek	21m*13m*8m	AC1	2025.03.02	2030.03.01	☒

2.3 Measurement Uncertainty

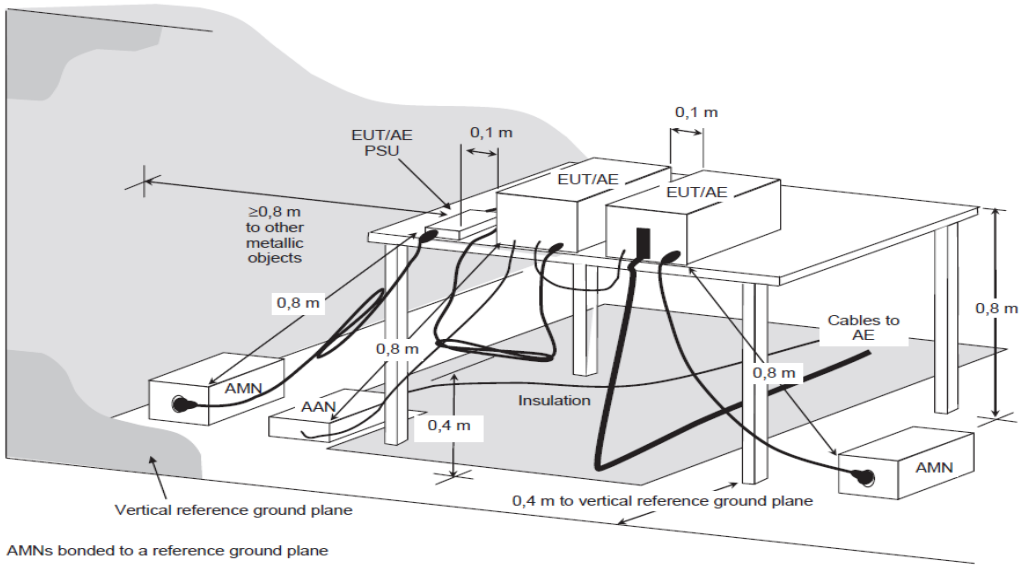
Conducted emissions – AC mains power ports / TR1
The maximum measurement uncertainty is evaluated as: Mains: 150kHz~30MHz: 2.6 dB
Radiated emission / AC1
The maximum measurement uncertainty is evaluated as: Horizontal: 30MHz~200MHz: 4.9 dB 200MHz~1000MHz: 4.5 dB Vertical: 30MHz~200MHz: 4.7 dB 200MHz~1000MHz: 4.5 dB

3 Conducted Emission (Main Terminals)

3.1 Test Specification

According to EMC Standard: VCCI CISPR 32:2016

3.2 Test Setup



3.3 Limit

Table 3.1 – Requirements for conducted emissions from the AC mains power ports of Class A equipment

Applicable to 1. AC mains power ports			
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class A limits dB(μV)
0.15 – 0.5	AMN	Quasi Peak / 9 kHz	79
0.5 – 30			73
0.15 – 0.5	AMN	Average / 9 kHz	66
0.5 – 30			60
Both apply across the entire frequency range.			

Table 3.2 – Requirements for conducted emissions from the AC mains power ports of Class B equipment

Applicable to 1. AC mains power ports			
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class B limits dB(μV)
0.15 – 0.5	AMN	Quasi Peak / 9 kHz	66 – 56
0.5 – 5			56
5 – 30			60
0.15 – 0.5	AMN	Average / 9 kHz	56 – 46
0.5 – 5			46
5 – 30			50
Both apply across the entire frequency range.			

Remarks:

If the limits for the average detector are met when using the quasi-peak detector, then the limits for the measurement with the average detector are considered to be met.

3.4 Test Procedure

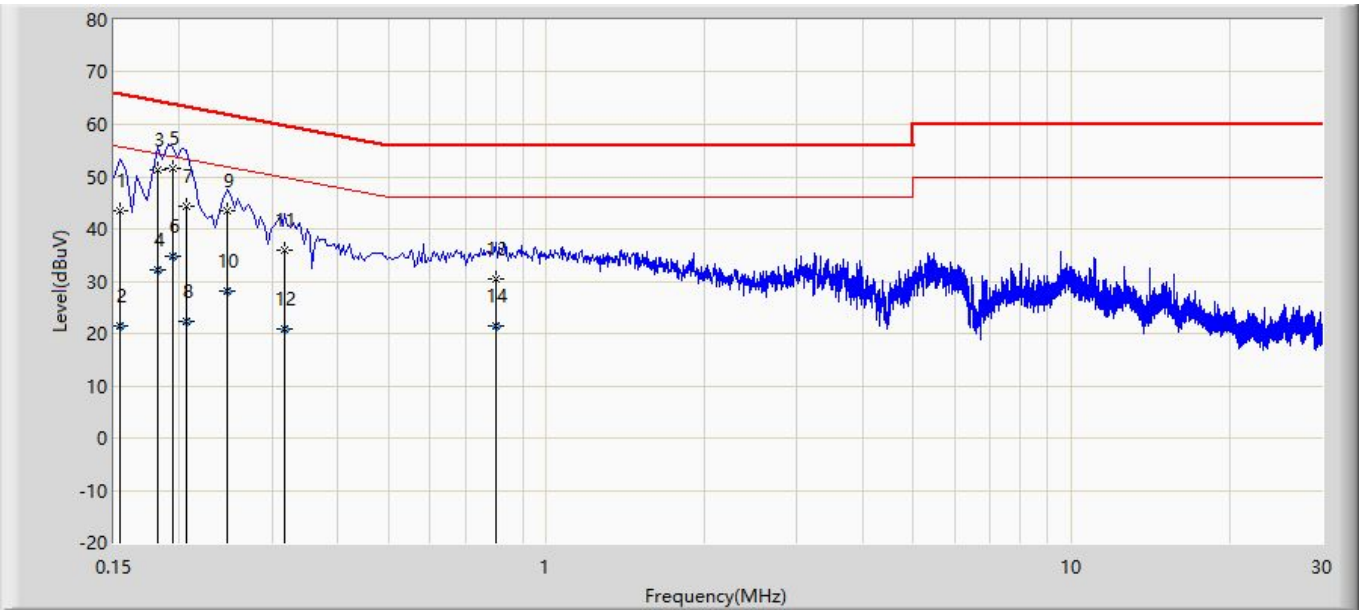
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.
(Please refers to the block diagram of the test setup and photographs.)
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 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5 Deviation from Test Standard

No deviation.

3.6 Test Result

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: USB Flash drives	Power: 110 Vac, 60 Hz
Note: Mode 1	

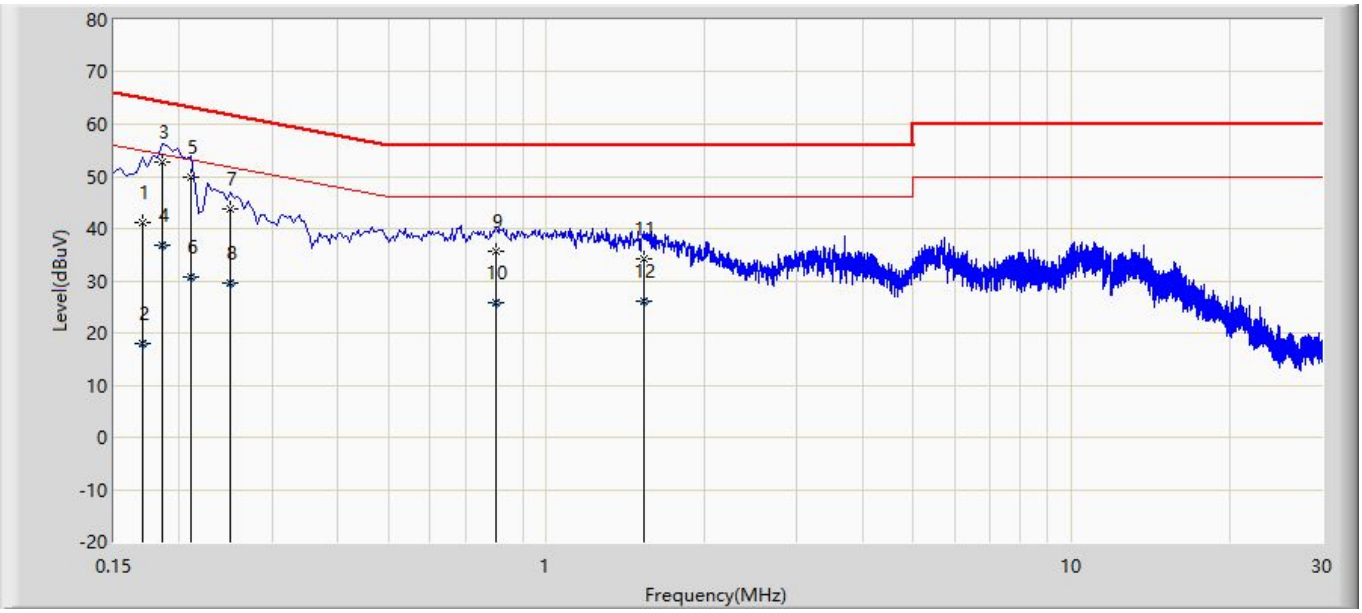


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.154	43.609	24.276	-22.172	65.781	9.501	9.832	0.000	QP
2		0.154	21.355	2.022	-34.426	55.781	9.501	9.832	0.000	AV
3		0.182	51.375	32.036	-13.019	64.394	9.507	9.833	0.000	QP
4		0.182	32.252	12.913	-22.142	54.394	9.507	9.833	0.000	AV
5	*	0.194	51.523	32.181	-12.341	63.864	9.509	9.833	0.000	QP
6		0.194	34.689	15.346	-19.175	53.864	9.509	9.833	0.000	AV
7		0.206	44.328	24.983	-19.037	63.365	9.511	9.834	0.000	QP
8		0.206	22.271	2.926	-31.094	53.365	9.511	9.834	0.000	AV
9		0.246	43.534	24.180	-18.357	61.891	9.519	9.835	0.000	QP
10		0.246	28.207	8.853	-23.684	51.891	9.519	9.835	0.000	AV
11		0.318	35.905	16.537	-23.854	59.759	9.531	9.837	0.000	QP
12		0.318	20.744	1.376	-29.015	49.759	9.531	9.837	0.000	AV
13		0.802	30.419	11.022	-25.581	56.000	9.543	9.853	0.000	QP
14		0.802	21.353	1.956	-24.647	46.000	9.543	9.853	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: USB Flash drives	Power: 110 Vac, 60 Hz
Note: Mode 1	

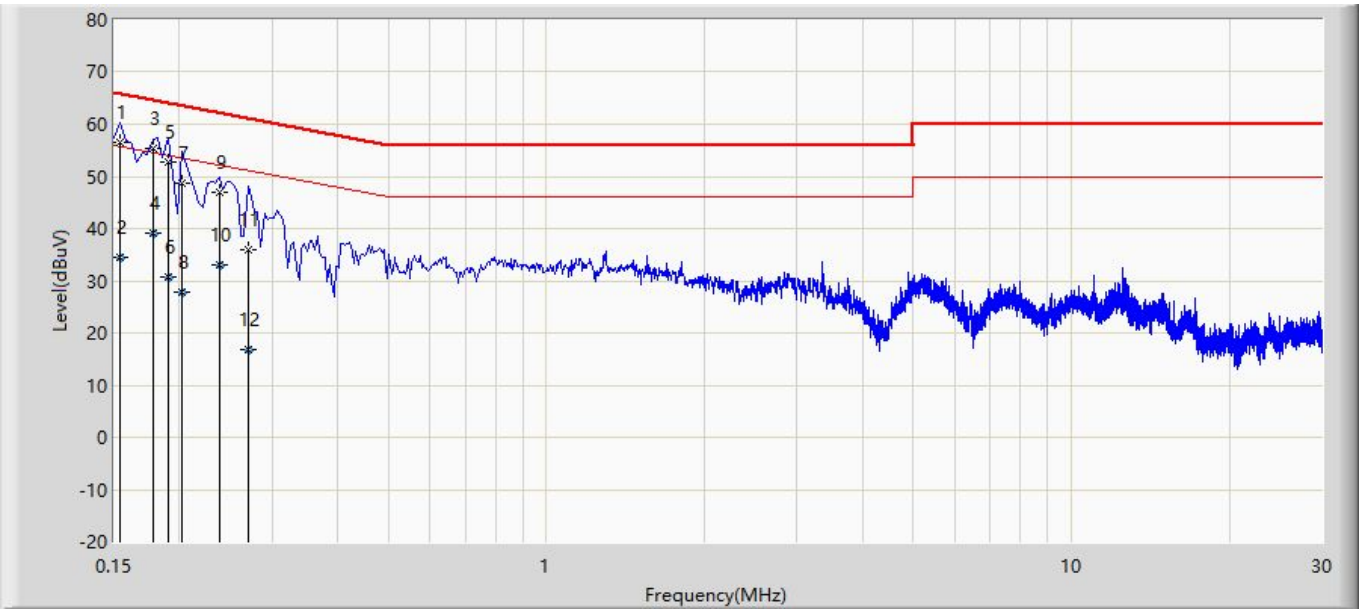


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.170	41.036	21.706	-23.924	64.960	9.498	9.832	0.000	QP
2		0.170	17.930	-1.401	-37.030	54.960	9.498	9.832	0.000	AV
3	*	0.186	52.801	33.464	-11.412	64.213	9.505	9.833	0.000	QP
4		0.186	36.796	17.459	-17.417	54.213	9.505	9.833	0.000	AV
5		0.210	49.950	30.606	-13.256	63.205	9.510	9.834	0.000	QP
6		0.210	30.657	11.313	-22.548	53.205	9.510	9.834	0.000	AV
7		0.250	43.819	24.468	-17.939	61.757	9.515	9.835	0.000	QP
8		0.250	29.481	10.131	-22.276	51.757	9.515	9.835	0.000	AV
9		0.802	35.718	16.321	-20.282	56.000	9.543	9.853	0.000	QP
10		0.802	25.859	6.462	-20.141	46.000	9.543	9.853	0.000	AV
11		1.538	34.285	14.851	-21.715	56.000	9.555	9.879	0.000	QP
12		1.538	26.024	6.590	-19.976	46.000	9.555	9.879	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: USB Flash drives	Power: 230 Vac, 50 Hz
Note: Mode 1	

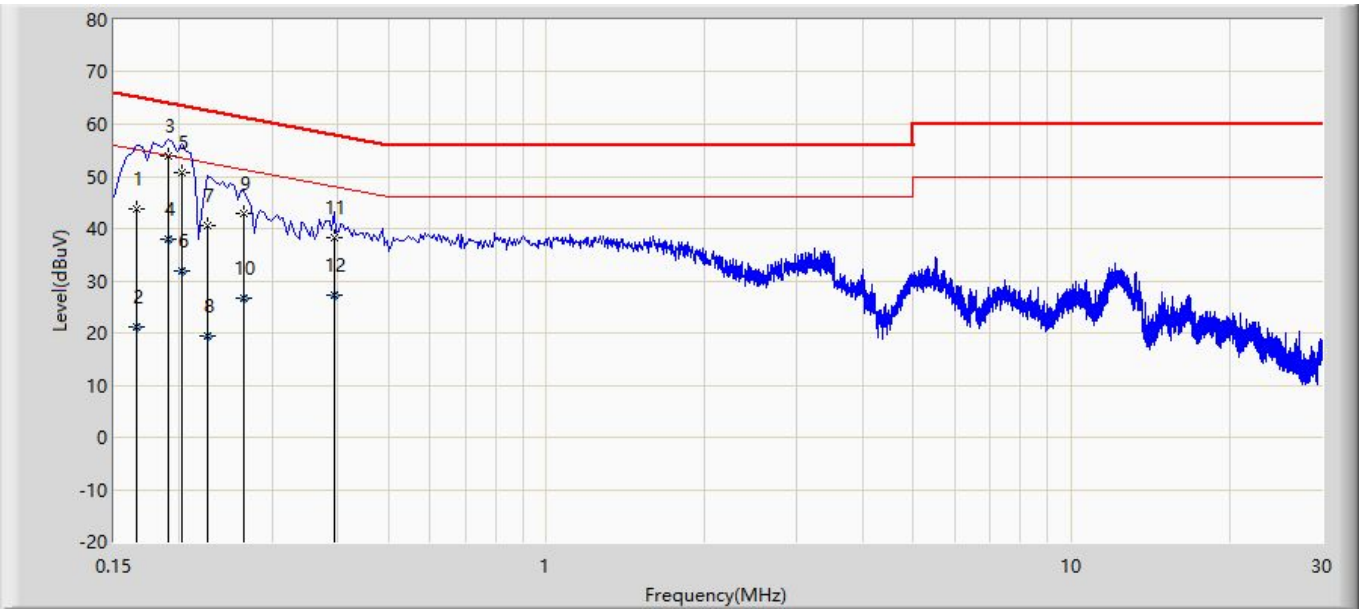


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.154	56.450	37.117	-9.331	65.781	9.501	9.832	0.000	QP
2		0.154	34.530	15.198	-21.251	55.781	9.501	9.832	0.000	AV
3	*	0.178	55.268	35.929	-9.311	64.578	9.506	9.833	0.000	QP
4		0.178	39.004	19.665	-15.575	54.578	9.506	9.833	0.000	AV
5		0.190	52.755	33.414	-11.282	64.037	9.508	9.833	0.000	QP
6		0.190	30.826	11.485	-23.211	54.037	9.508	9.833	0.000	AV
7		0.202	48.552	29.208	-14.976	63.528	9.511	9.833	0.000	QP
8		0.202	27.913	8.569	-25.615	53.528	9.511	9.833	0.000	AV
9		0.238	47.003	27.651	-15.163	62.166	9.518	9.835	0.000	QP
10		0.238	33.017	13.665	-19.148	52.166	9.518	9.835	0.000	AV
11		0.270	36.061	16.701	-25.057	61.118	9.524	9.836	0.000	QP
12		0.270	16.946	-2.414	-34.172	51.118	9.524	9.836	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: USB Flash drives	Power: 230 Vac, 50 Hz
Note: Mode 1	

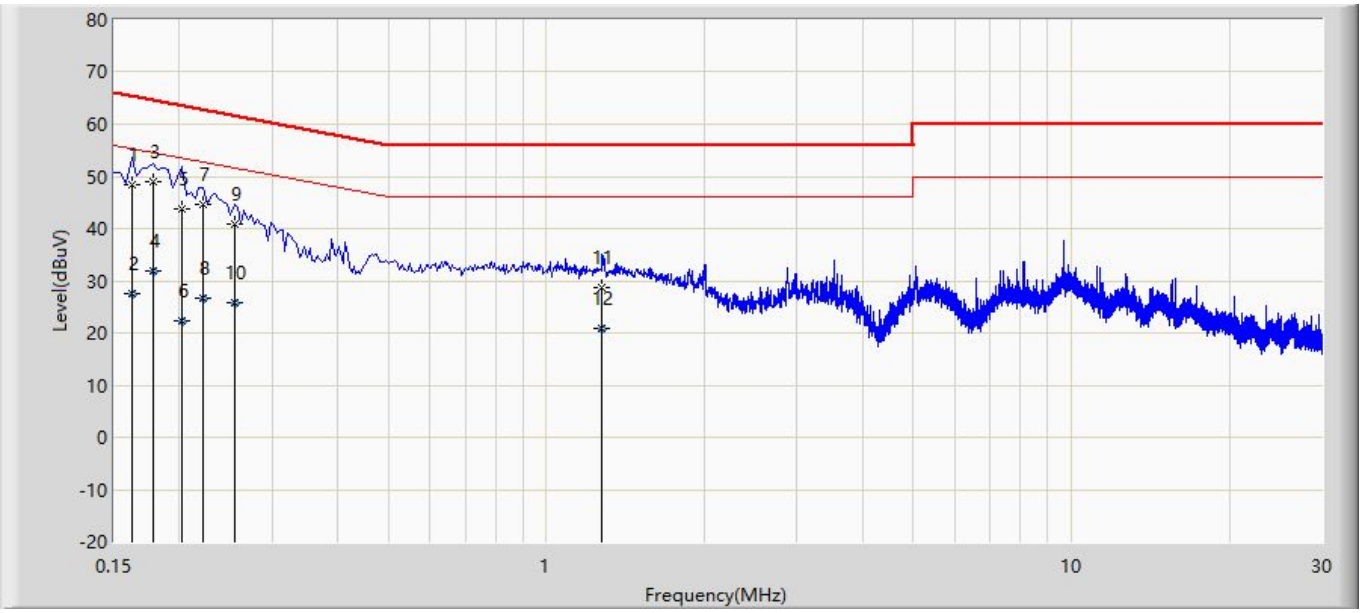


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.166	43.625	24.296	-21.533	65.158	9.497	9.832	0.000	QP
2		0.166	21.193	1.864	-33.965	55.158	9.497	9.832	0.000	AV
3	*	0.190	54.057	34.718	-9.979	64.037	9.506	9.833	0.000	QP
4		0.190	38.005	18.665	-16.032	54.037	9.506	9.833	0.000	AV
5		0.202	50.798	31.456	-12.730	63.528	9.509	9.833	0.000	QP
6		0.202	31.894	12.552	-21.634	53.528	9.509	9.833	0.000	AV
7		0.226	40.705	21.358	-21.890	62.595	9.513	9.834	0.000	QP
8		0.226	19.473	0.126	-33.123	52.595	9.513	9.834	0.000	AV
9		0.266	42.915	23.563	-18.327	61.242	9.517	9.836	0.000	QP
10		0.266	26.753	7.400	-24.489	51.242	9.517	9.836	0.000	AV
11		0.394	38.118	18.754	-19.861	57.979	9.525	9.840	0.000	QP
12		0.394	27.261	7.896	-20.718	47.979	9.525	9.840	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: USB Flash drives	Power: 110 Vac, 60 Hz
Note: Mode 2	

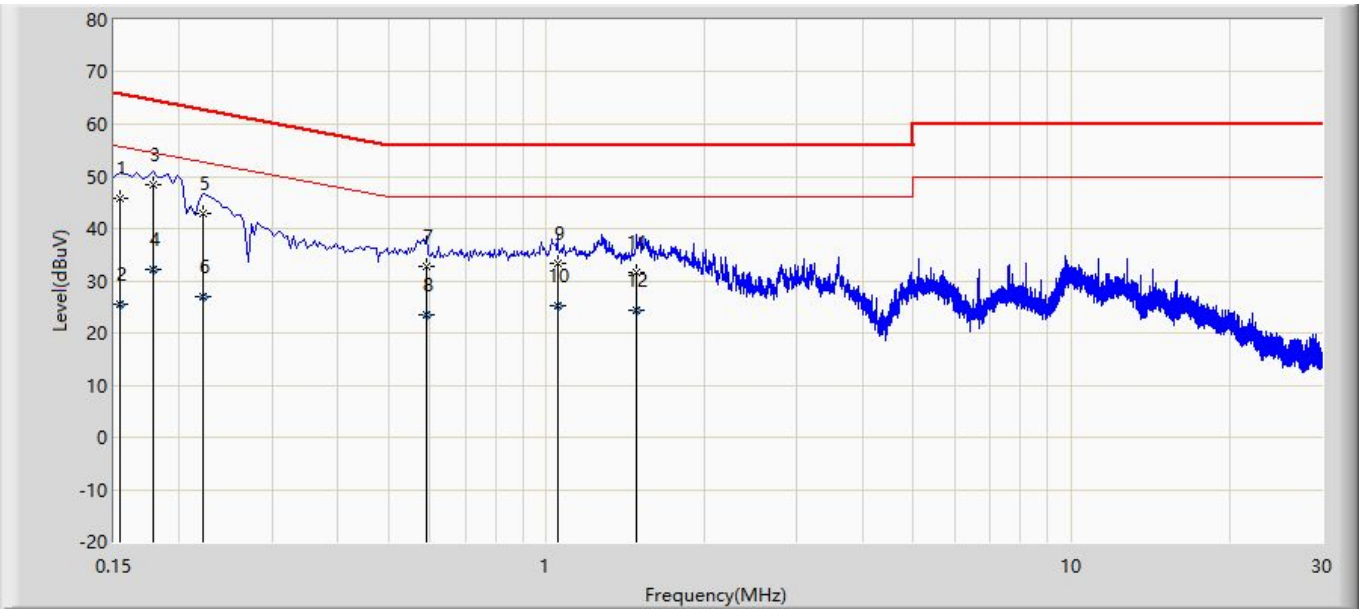


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.162	48.328	28.994	-17.032	65.361	9.503	9.832	0.000	QP
2		0.162	27.420	8.085	-27.941	55.361	9.503	9.832	0.000	AV
3	*	0.178	48.882	29.543	-15.697	64.578	9.506	9.833	0.000	QP
4		0.178	31.961	12.623	-22.617	54.578	9.506	9.833	0.000	AV
5		0.202	43.775	24.431	-19.753	63.528	9.511	9.833	0.000	QP
6		0.202	22.436	3.092	-31.092	53.528	9.511	9.833	0.000	AV
7		0.222	44.496	25.147	-18.248	62.744	9.515	9.834	0.000	QP
8		0.222	26.688	7.340	-26.055	52.744	9.515	9.834	0.000	AV
9		0.254	40.921	21.565	-20.704	61.625	9.521	9.835	0.000	QP
10		0.254	25.789	6.432	-25.837	51.625	9.521	9.835	0.000	AV
11		1.274	28.711	9.289	-27.289	56.000	9.553	9.869	0.000	QP
12		1.274	20.733	1.311	-25.267	46.000	9.553	9.869	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: USB Flash drives	Power: 110 Vac, 60 Hz
Note: Mode 2	

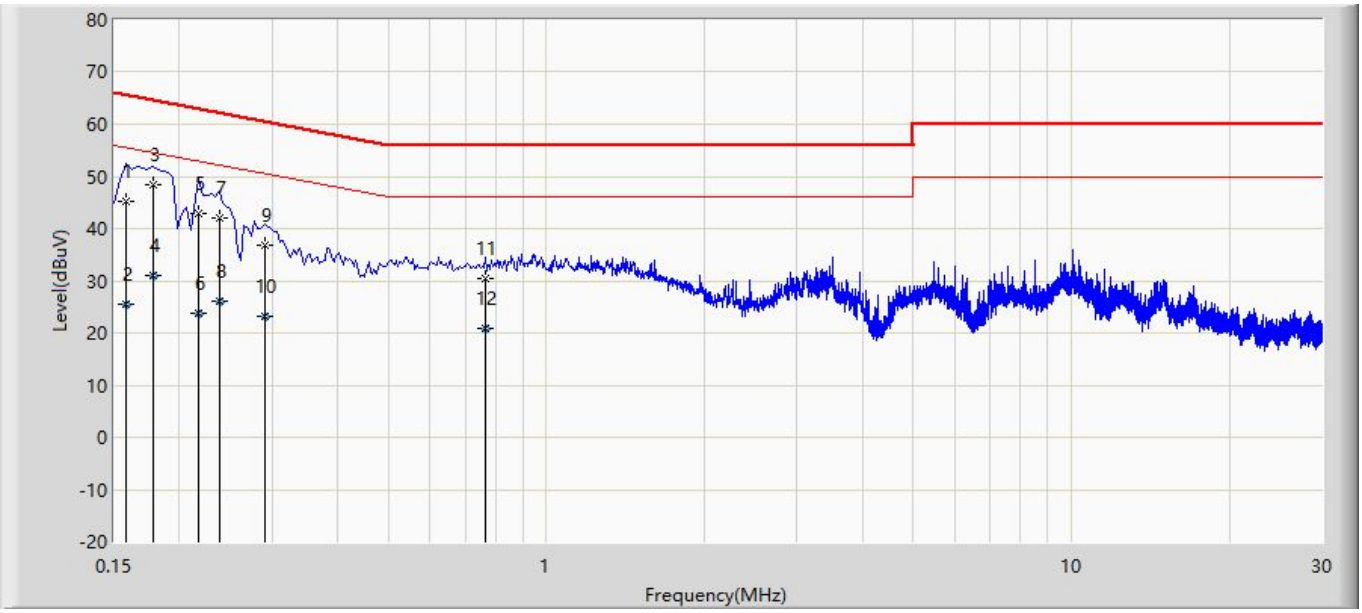


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.154	45.678	26.355	-20.103	65.781	9.492	9.832	0.000	QP
2		0.154	25.532	6.208	-30.249	55.781	9.492	9.832	0.000	AV
3	*	0.178	48.539	29.205	-16.039	64.578	9.502	9.833	0.000	QP
4		0.178	32.073	12.738	-22.506	54.578	9.502	9.833	0.000	AV
5		0.222	42.888	23.542	-19.856	62.744	9.512	9.834	0.000	QP
6		0.222	26.862	7.516	-25.882	52.744	9.512	9.834	0.000	AV
7		0.590	32.796	13.416	-23.204	56.000	9.534	9.846	0.000	QP
8		0.590	23.387	4.006	-22.613	46.000	9.534	9.846	0.000	AV
9		1.050	33.357	13.944	-22.643	56.000	9.551	9.862	0.000	QP
10		1.050	25.145	5.733	-20.855	46.000	9.551	9.862	0.000	AV
11		1.486	31.689	12.257	-24.311	56.000	9.555	9.877	0.000	QP
12		1.486	24.448	5.015	-21.552	46.000	9.555	9.877	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: USB Flash drives	Power: 230 Vac, 50 Hz
Note: Mode 2	

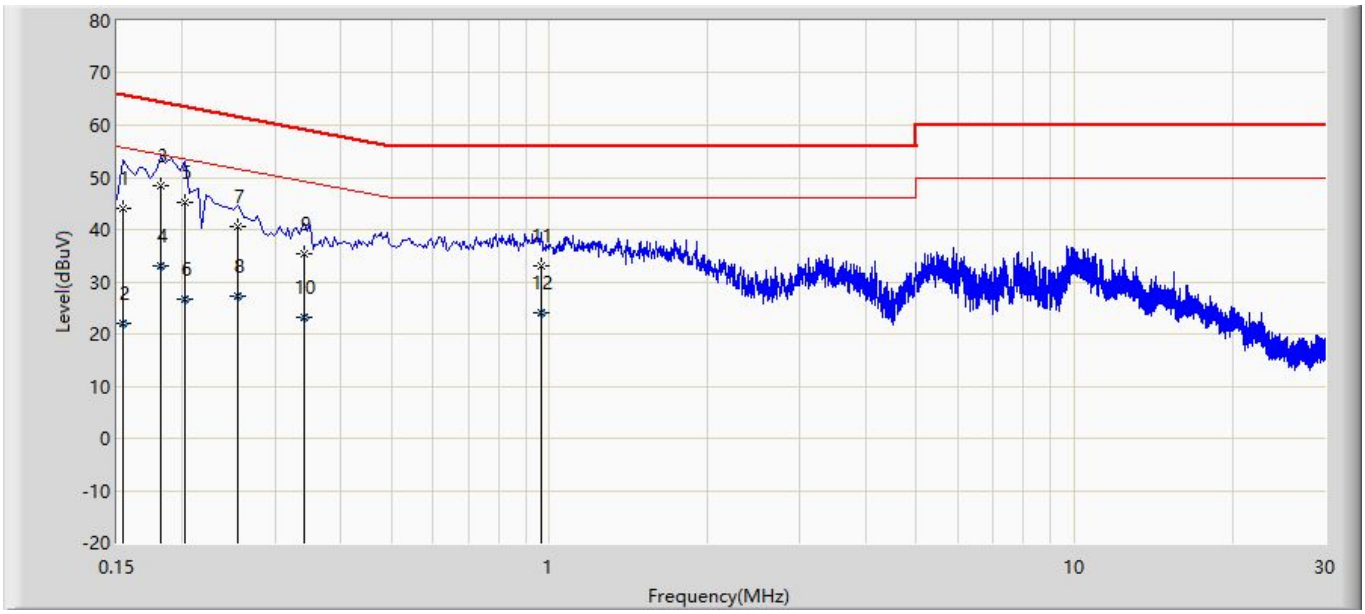


	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.158	45.254	25.920	-20.315	65.568	9.502	9.832	0.000	QP
2		0.158	25.475	6.141	-30.093	55.568	9.502	9.832	0.000	AV
3	*	0.178	48.277	28.938	-16.302	64.578	9.506	9.833	0.000	QP
4		0.178	31.118	11.780	-23.460	54.578	9.506	9.833	0.000	AV
5		0.218	42.977	23.630	-19.917	62.895	9.514	9.834	0.000	QP
6		0.218	23.685	4.337	-29.210	52.895	9.514	9.834	0.000	AV
7		0.238	41.934	22.582	-20.231	62.166	9.518	9.835	0.000	QP
8		0.238	26.019	6.666	-26.147	52.166	9.518	9.835	0.000	AV
9		0.290	36.900	17.536	-23.624	60.524	9.527	9.836	0.000	QP
10		0.290	23.237	3.873	-27.287	50.524	9.527	9.836	0.000	AV
11		0.766	30.316	10.921	-25.684	56.000	9.542	9.852	0.000	QP
12		0.766	20.823	1.429	-25.177	46.000	9.542	9.852	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Jim Fu	
Site: TR1	Time: 2025/11/19
Limit: VCCI_CE_Mains_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: USB Flash drives	Power: 230 Vac, 50 Hz
Note: Mode 2	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.154	43.995	24.671	-21.786	65.781	9.492	9.832	0.000	QP
2		0.154	22.070	2.746	-33.711	55.781	9.492	9.832	0.000	AV
3	*	0.182	48.484	29.148	-15.909	64.394	9.503	9.833	0.000	QP
4		0.182	32.989	13.653	-21.404	54.394	9.503	9.833	0.000	AV
5		0.202	45.147	25.805	-18.381	63.528	9.509	9.833	0.000	QP
6		0.202	26.563	7.221	-26.965	53.528	9.509	9.833	0.000	AV
7		0.254	40.514	21.164	-21.111	61.625	9.516	9.835	0.000	QP
8		0.254	27.191	7.840	-24.435	51.625	9.516	9.835	0.000	AV
9		0.342	35.442	16.081	-23.713	59.155	9.522	9.838	0.000	QP
10		0.342	23.156	3.796	-25.998	49.155	9.522	9.838	0.000	AV
11		0.962	33.009	13.601	-22.991	56.000	9.549	9.859	0.000	QP
12		0.962	23.952	4.544	-22.048	46.000	9.549	9.859	0.000	AV

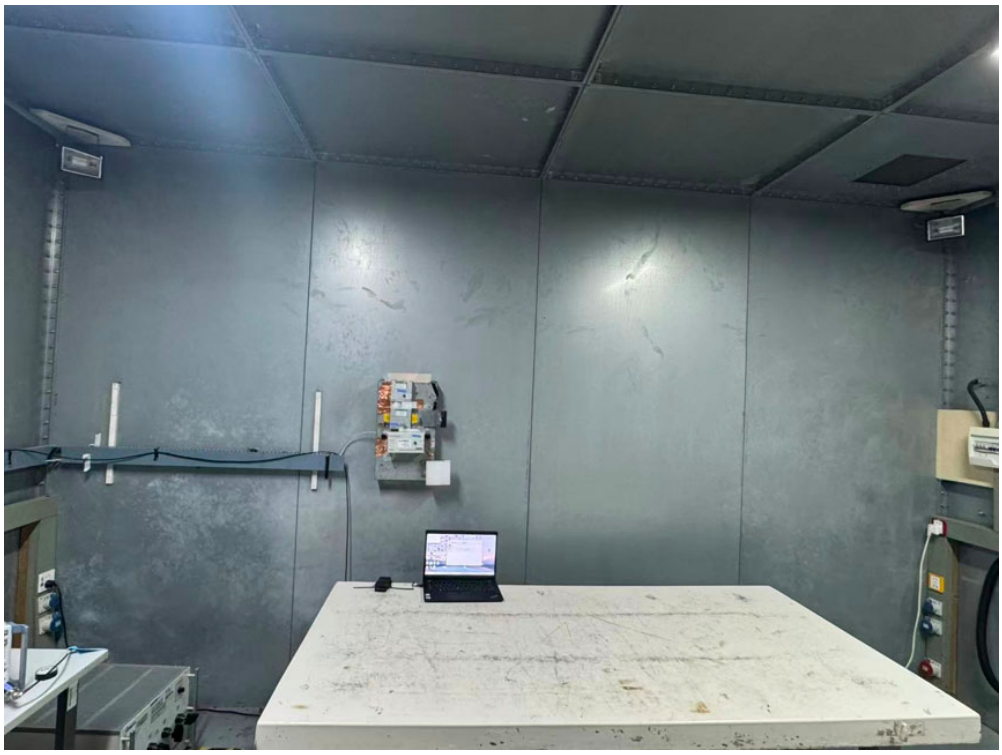
Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

3.7 Test Photograph

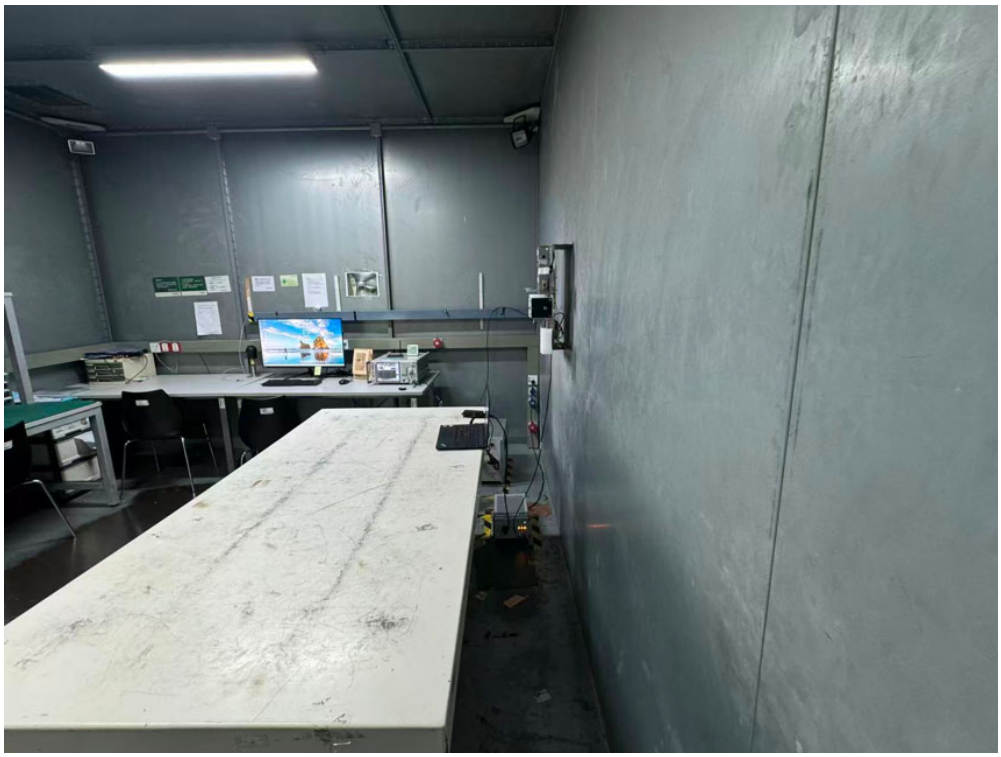
Test Mode: Mode 1

Description: Front View of Conducted Emission (Main Terminals) Test Setup



Test Mode: Mode 1

Description: Back View of Conducted Emission (Main Terminals) Test Setup

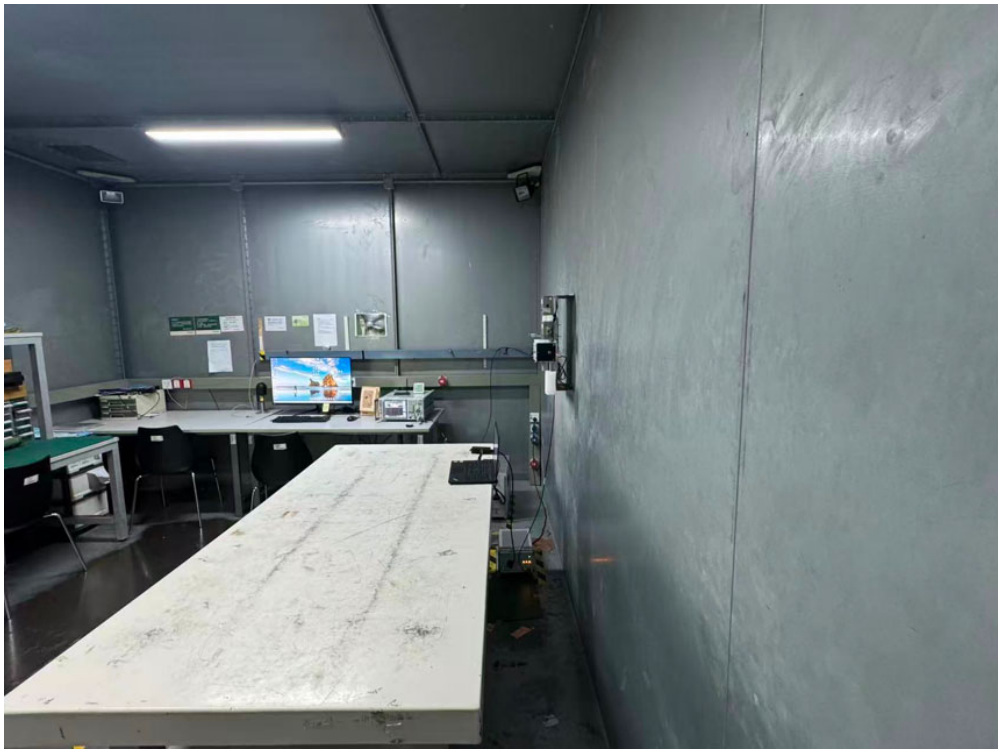


Test Mode: Mode 2

Description: Front View of Conducted Emission (Main Terminals) Test Setup

Test Mode: Mode 2

Description: Back View of Conducted Emission (Main Terminals) Test Setup

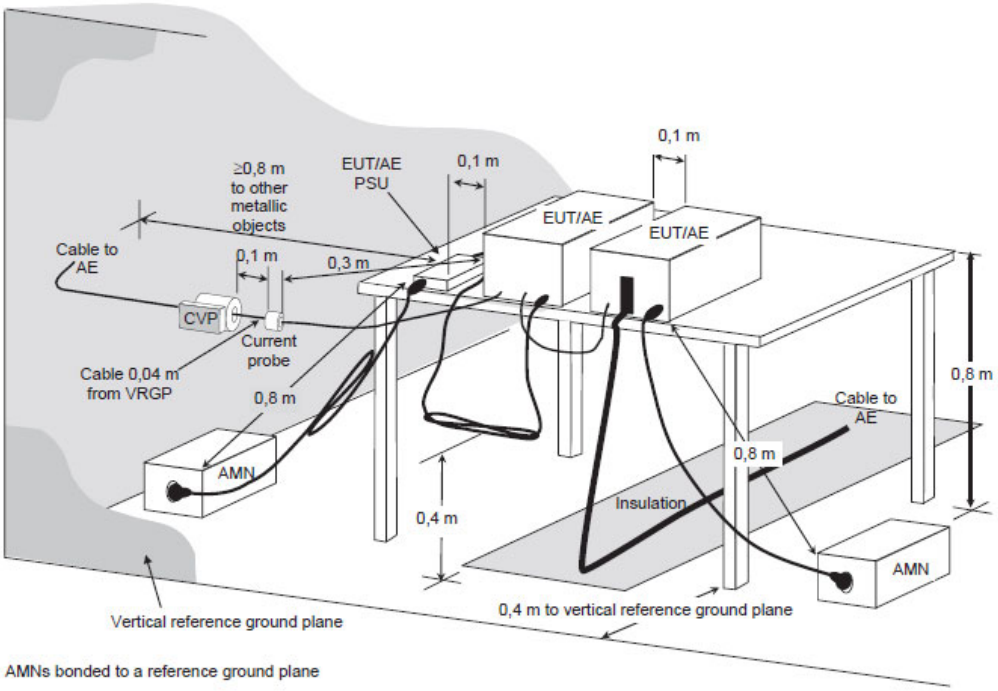


4 Asymmetric mode conducted emissions

4.1 Test Specification

According to EMC Standard: VCCI CISPR 32:2016

4.2 Test Setup



4.3 Limit

Table 4.1 – Requirements for asymmetric mode conducted emissions from class A equipment

Applicable to 1. wired network ports 2. optical fibre ports with metallic shield or tension members 3. antenna ports				
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class A voltage limits dB(μV)	Class A current limits dB(μA)
0.15 – 0.5	AAN	Quasi Peak / 9 kHz	97 – 87	N / A
0.5 – 30			87	
0.15 – 0.5	AAN	Average / 9 kHz	84 – 74	
0.5 – 30			74	
0.15 – 0.5	CVP	Quasi Peak / 9 kHz	97 – 87	53 – 43

Applicable to 1. wired network ports 2. optical fibre ports with metallic shield or tension members 3. antenna ports				
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class A voltage limits dB(μV)	Class A current limits dB(μA)
0.5 – 30	and current probe		87	43
0.15 – 0.5	CVP and current probe	Average / 9 kHz	84 – 74	40 – 30
0.5 – 30			74	30
0.15 – 0.5	Current Probe	Quasi Peak / 9 kHz	N / A	53 – 43
0.5 – 30				43
0.15 – 0.5	Current Probe	Average / 9 kHz		40 – 30
0.5 – 30				30
The choice of coupling device and measurement procedure is defined in CISPR 32:2015 Annex C. AC mains ports that also have the function of a wired network port shall meet the limits given in Table 3.1. The test shall cover the entire frequency range. The application of the voltage and/or current limits is dependent on the measurement procedure used. Refer to CISPR 32:2015 Table C.1 for applicability. Testing is required at only one EUT supply voltage and frequency. Applicable to ports listed above and intended to connect to cables longer than 3 m.				

Table 4.2 – Requirements for asymmetric mode conducted emissions from class B equipment

Applicable to 1. wired network ports 2. optical fibre ports with metallic shield or tension members 3. broadcast receiver tuner ports 4. antenna ports				
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class B voltage limits dB(μV)	Class B current limits dB(μA)
0.15 – 0.5	AAN	Quasi Peak / 9 kHz	84 – 74	N / A
0.5 – 30			74	
0.15 – 0.5	AAN	Average / 9 kHz	74 – 64	
0.5 – 30			64	
0.15 – 0.5	CVP	Quasi Peak / 9 kHz	84 – 74	40 – 30

Applicable to 1. wired network ports 2. optical fibre ports with metallic shield or tension members 3. broadcast receiver tuner ports 4. antenna ports				
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class B voltage limits dB(μV)	Class B current limits dB(μA)
0.5 – 30	and current probe		74	30
0.15 – 0.5	CVP and current probe	Average / 9 kHz	74 – 64	30 – 20
0.5 – 30			64	20
0.15 – 0.5	Current Probe	Quasi Peak / 9 kHz	N / A	40 – 30
0.5 – 30				30
0.15 – 0.5	Current Probe	Average / 9 kHz		30 – 20
0.5 – 30				20
The choice of coupling device and measurement procedure is defined in CISPR 32:2015 Annex C. Screened ports including TV broadcast receiver tuner ports are tested with a common-mode impedance of 150 Ω. This is typically accomplished with the screen terminated by 150 Ω to earth. AC mains ports that also have the function of a wired network port shall meet the limits given in Table 3.2. The test shall cover the entire frequency range. The application of the voltage and/or current limits is dependent on the measurement procedure used. Refer to CISPR 32:2015 Table C.1 for applicability. Testing is required at only one EUT supply voltage and frequency. Applicable to ports listed above and intended to connect to cables longer than 3 m.				

4.4 Test Procedure

Telecommunication Port:

The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.
Both alternative cables are tested related to the LCL requested. The measurement range is from 150kHz to 30MHz. The bandwidth of measurement is set to 9kHz.
The 75dB LCL ISN is used for cat. 6 cable, the 65dB LCL ISN is used for cat. 5 cable, 55dB LCL ISN is used for cat. 3.

4.5 Deviation from Test Standard

No deviation.

4.6 Test Result

The EUT does not contain the interface defined below.

a. wired network ports

b. optical fibre ports with metallic shield or tension members

c. broadcast receiver tuner ports

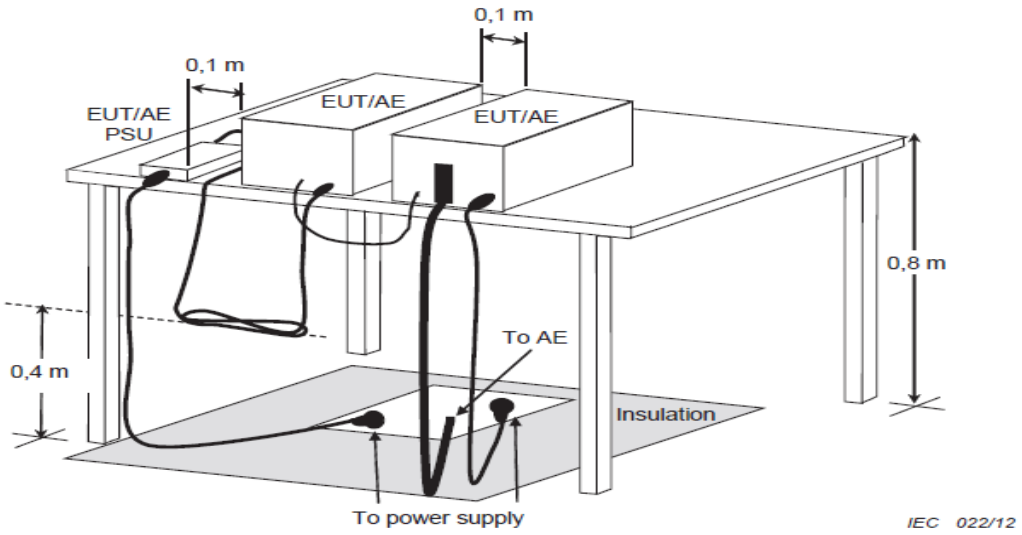
d. antenna ports

5 Radiated Emission

5.1 Test Specification

According to EMC Standard: VCCI CISPR 32:2016

5.2 Test Setup



5.3 Limit

Table 5.1 – Requirements for radiated emissions at frequencies up to 1 GHz for class A equipment

Frequency range MHz	Measurement		Class A limits dB(μV/m)
	Distance m	Detector type/ Bandwidth	OATS / SAC
30-230	10	Quasi Peak / 120 kHz	40
230-1000			47
30-230	3		50
230-1000			57
Apply only 3m or 10m across the entire frequency range.			

Table 5.2 – Requirements for radiated emissions at frequencies above to 1 GHz for class A equipment

Frequency range MHz	Measurement		Class A limits dB(µV/m)
	Distance m	Detector type/ Bandwidth	OATS / SAC
1000-3000	3	Average / 1 MHz	56
3000-6000			60
1000-3000		Peak / 1 MHz	76
3000-6000			80
Apply limit across the frequency range from 1000 MHz to the highest required frequency of measurement derived from table 5.5.			

Table 5.3 – Requirements for radiated emissions at frequencies up to 1 GHz for class B equipment

Frequency range MHz	Measurement		Class B limits dB(µV/m)
	Distance m	Detector type/ Bandwidth	OATS / SAC
30-230	10	Quasi Peak / 120 kHz	30
230-1000			37
30-230	3		40
230-1000			47
Apply only 3m or 10m across the entire frequency range.			

Table 5.4 – Requirements for radiated emissions at frequencies above to 1 GHz for class B equipment

Frequency range MHz	Measurement		Class B limits dB(µV/m)
	Distance m	Detector type/ Bandwidth	OATS / SAC
1000-3000	3	Average / 1 MHz	50
3000-6000			54
1000-3000		Peak / 1 MHz	70
3000-6000			74
Apply limit across the frequency range from 1000 MHz to the highest required frequency of measurement derived from table 5.5.			

Table 5.5 – Required highest frequency for radiated measurement

Highest internal frequency (*F*x)	Highest measured frequency
*F*x ≤ 108 MHz	1 GHz
108 MHz < *F*x ≤ 500 MHz	2 GHz
500 MHz < *F*x ≤ 1 GHz	5 GHz
*F*x > 1 GHz	5 × *F*x up to a maximum of 6 GHz

5.4 Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8m above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 /10m.
The antenna can move up and down between 1 m and 4 m to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.
Radiated emissions were invested over the frequency range from 30MHz to1GHz using a receiver bandwidth of 120kHz and above 1GHz using a receiver bandwidth of 1MHz.
Frequency from 30MHz to1GHz, radiated was performed at an antenna to EUT distance of 10m.
Frequency above1GHz, radiated was performed at an antenna to EUT distance of 3m.
It is placed with absorb on the ground between EUT and antenna.

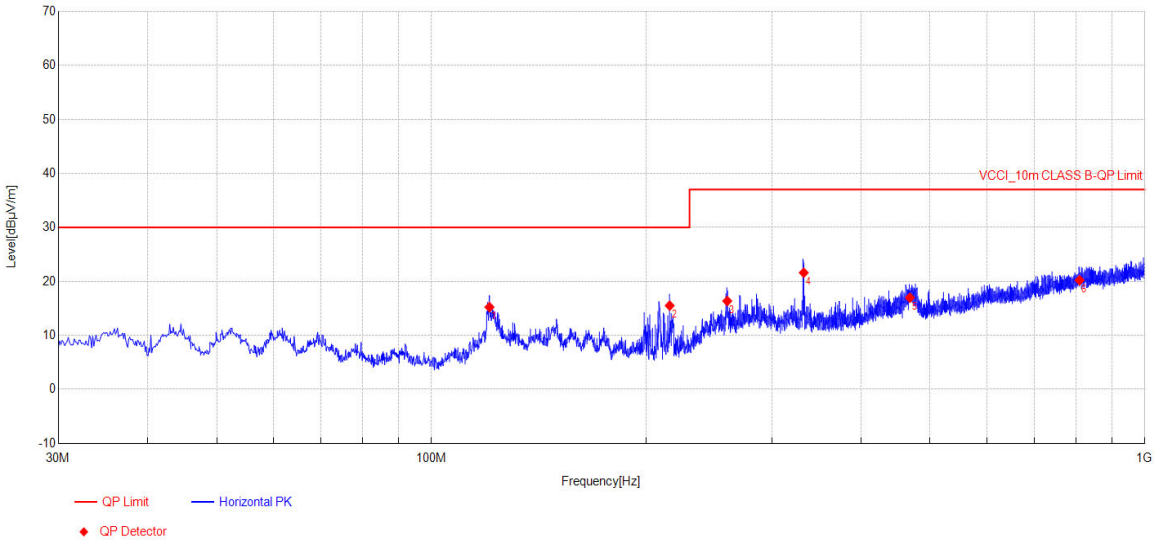
5.5 Deviation from Test Standard

No deviation.

5.6 Test Result

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	110 Vac, 60 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 1		

Test Graph



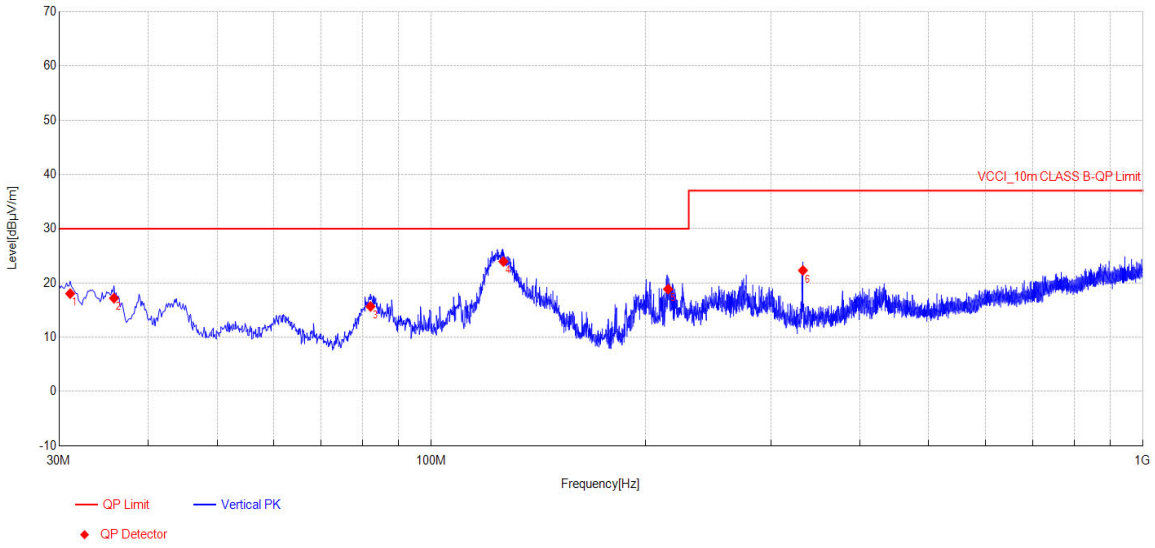
Final Data List									
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	120.5738	31.39	15.22	30.00	-14.78	-16.17	167	73	Horizontal
2	215.7550	32.28	15.50	30.00	-14.50	-16.78	100	230	Horizontal
3	259.7688	30.60	16.35	37.00	-20.65	-14.25	110	30	Horizontal
4	332.5188	33.08	21.60	37.00	-15.40	-11.48	189	355	Horizontal
5	468.4400	24.78	16.97	37.00	-20.03	-7.81	268	19	Horizontal
6	809.8800	20.79	20.21	37.00	-16.79	-0.58	295	271	Horizontal

Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	110 Vac, 60 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 1		

Test Graph



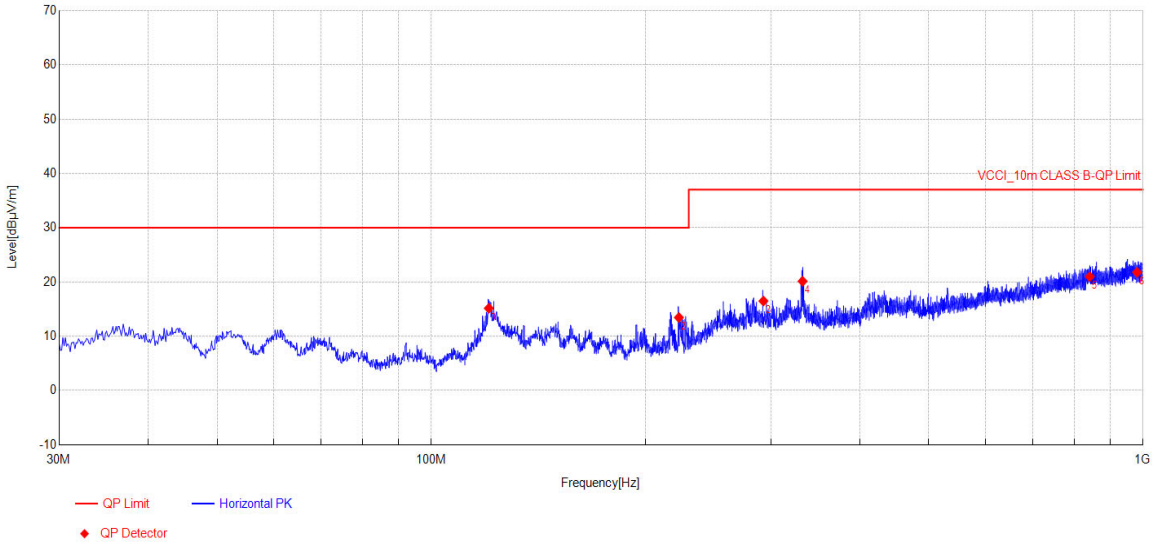
Final Data List									
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	31.0913	33.96	18.02	30.00	-11.98	-15.94	100	168	Vertical
2	35.8200	32.39	17.18	30.00	-12.82	-15.21	177	324	Vertical
3	82.1375	34.39	15.66	30.00	-14.34	-18.73	326	297	Vertical
4	126.2725	39.44	23.94	30.00	-6.06	-15.50	107	290	Vertical
5	215.1488	35.37	18.85	30.00	-11.15	-16.52	288	236	Vertical
6	332.7613	33.44	22.30	37.00	-14.70	-11.14	106	332	Vertical

Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	230 Vac, 50 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 1		

Test Graph



Final Data List

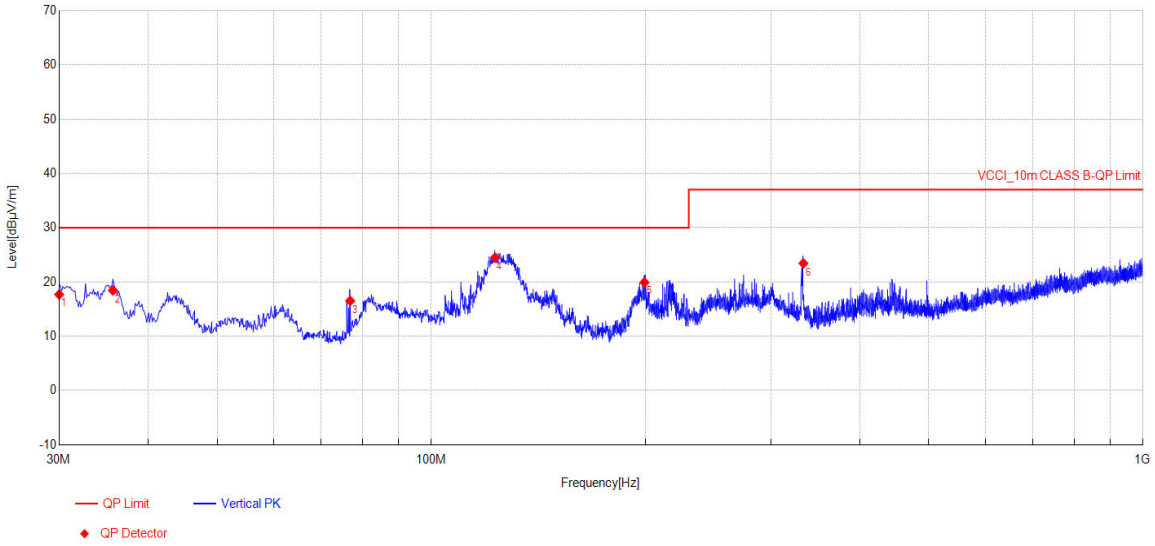
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	120.4525	31.33	15.14	30.00	-14.86	-16.19	136	260	Horizontal
2	222.7875	30.10	13.44	30.00	-16.56	-16.66	296	124	Horizontal
3	292.8700	29.21	16.48	37.00	-20.52	-12.73	216	172	Horizontal
4	332.3975	31.61	20.12	37.00	-16.88	-11.49	100	41	Horizontal
5	841.7688	20.82	20.97	37.00	-16.03	0.15	300	326	Horizontal
6	980.8425	19.89	21.76	37.00	-15.24	1.87	277	210	Horizontal

Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	230 Vac, 50 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 1		

Test Graph



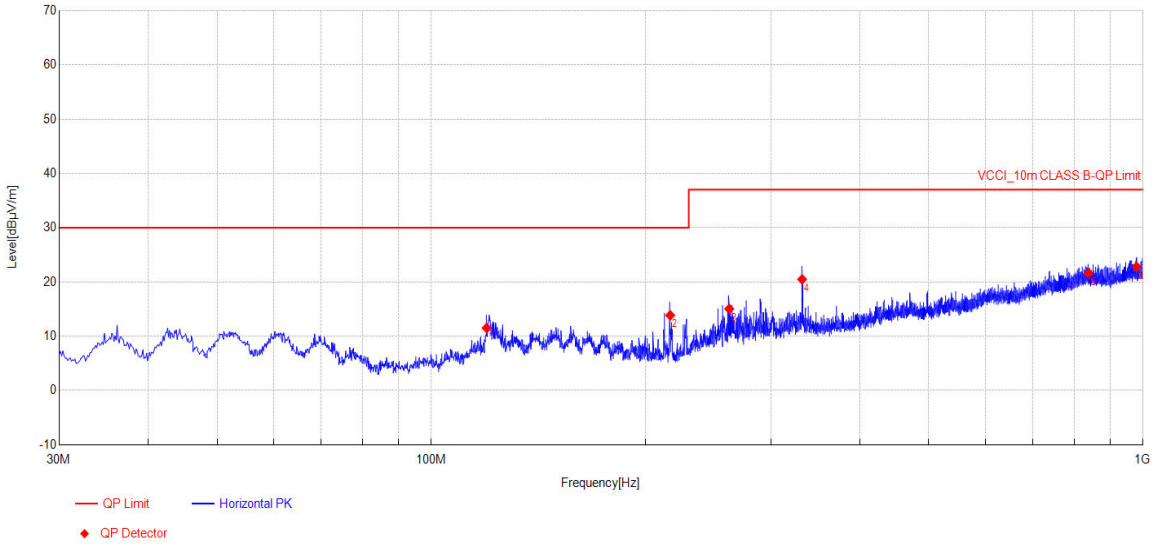
Final Data List									
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	30.0000	33.70	17.69	30.00	-12.31	-16.01	142	147	Vertical
2	35.6988	33.65	18.43	30.00	-11.57	-15.22	100	45	Vertical
3	76.9238	34.06	16.52	30.00	-13.48	-17.54	379	343	Vertical
4	122.8775	40.24	24.48	30.00	-5.52	-15.76	180	317	Vertical
5	199.2650	36.38	19.92	30.00	-10.08	-16.46	157	74	Vertical
6	333.2463	34.56	23.43	37.00	-13.57	-11.13	241	180	Vertical

Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	110 Vac, 60 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 2		

Test Graph



Final Data List

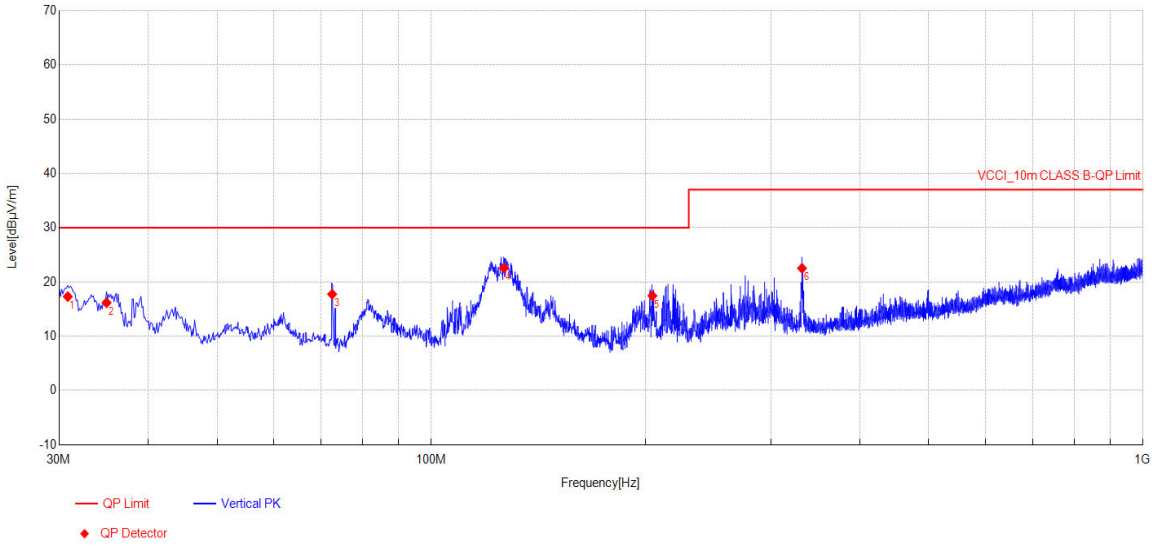
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	119.6038	27.82	11.49	30.00	-18.51	-16.33	184	118	Horizontal
2	216.6038	30.62	13.84	30.00	-16.16	-16.78	100	117	Horizontal
3	262.1938	29.18	15.03	37.00	-21.97	-14.15	293	135	Horizontal
4	331.9125	31.99	20.48	37.00	-16.52	-11.51	100	338	Horizontal
5	838.1313	21.37	21.59	37.00	-15.41	0.22	213	351	Horizontal
6	979.2663	20.93	22.79	37.00	-14.21	1.86	187	27	Horizontal

Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	110 Vac, 60 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 2		

Test Graph



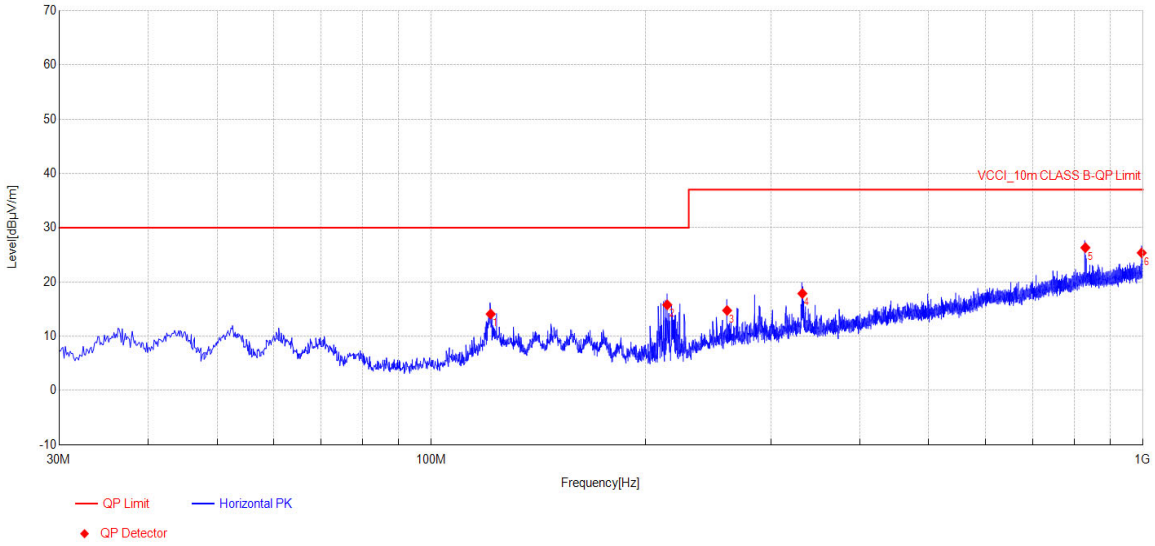
Final Data List									
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	30.8488	33.25	17.29	30.00	-12.71	-15.96	100	357	Vertical
2	34.9713	31.45	16.16	30.00	-13.84	-15.29	125	57	Vertical
3	72.5588	34.35	17.74	30.00	-12.26	-16.61	218	307	Vertical
4	126.5150	38.02	22.55	30.00	-7.45	-15.47	109	262	Vertical
5	204.4788	33.95	17.44	30.00	-12.56	-16.51	162	37	Vertical
6	331.7913	33.68	22.51	37.00	-14.49	-11.17	295	6	Vertical

Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	230 Vac, 50 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 2		

Test Graph



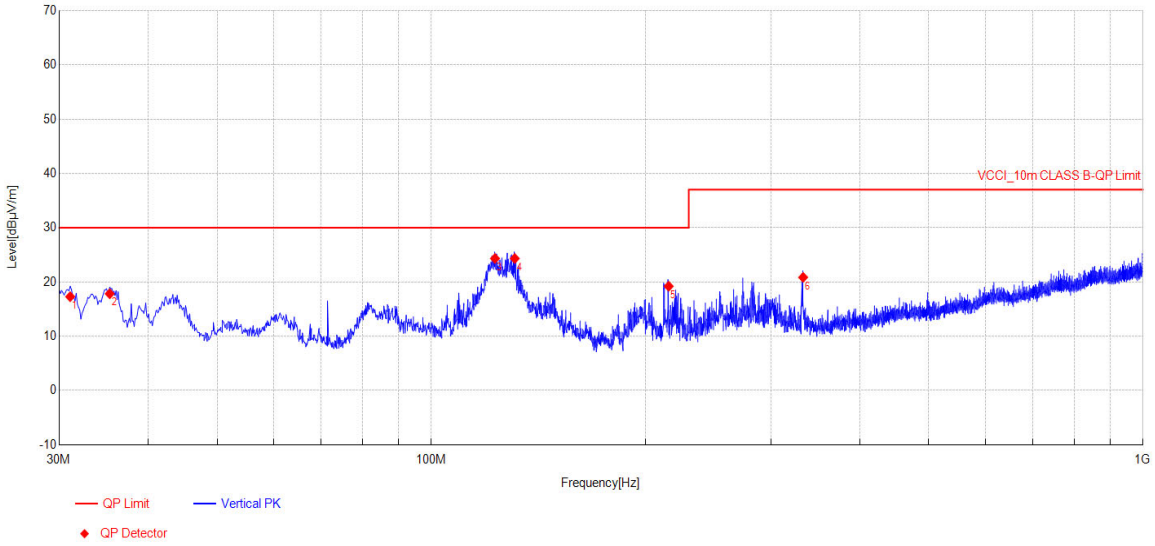
Final Data List									
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	121.1800	30.17	14.08	30.00	-15.92	-16.09	100	137	Horizontal
2	214.5425	32.55	15.77	30.00	-14.23	-16.78	223	344	Horizontal
3	260.3750	28.96	14.73	37.00	-22.27	-14.23	238	201	Horizontal
4	332.1550	29.36	17.86	37.00	-19.14	-11.50	131	341	Horizontal
5	829.8863	26.30	26.31	37.00	-10.69	0.01	286	28	Horizontal
6	995.7563	23.44	25.36	37.00	-11.64	1.92	400	280	Horizontal

Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

Project Information			
Test Time	2025-11-18		
Customer:	Flashbay Electronics	Site:	AC1
EUT:	USB Flash drives	Engineer:	Chengcheng Li
Margin:		Power:	230 Vac, 50 Hz
Environment:	Temperature: 23 ℃ ; Humidity: 51 %; Pressure:1025 mbar		
Remark:	Mode 2		

Test Graph



Final Data List									
NO.	Frequency [MHz]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Over [dB]	Factor [dB/m]	Height [cm]	Angle [°]	Polarity
1	31.0913	33.22	17.28	30.00	-12.72	-15.94	154	8	Vertical
2	35.3350	33.07	17.82	30.00	-12.18	-15.25	260	305	Vertical
3	122.8775	40.08	24.32	30.00	-5.68	-15.76	266	10	Vertical
4	131.0013	39.32	24.32	30.00	-5.68	-15.00	100	34	Vertical
5	215.5125	35.72	19.20	30.00	-10.80	-16.52	300	348	Vertical
6	333.0038	31.97	20.84	37.00	-16.16	-11.13	205	227	Vertical

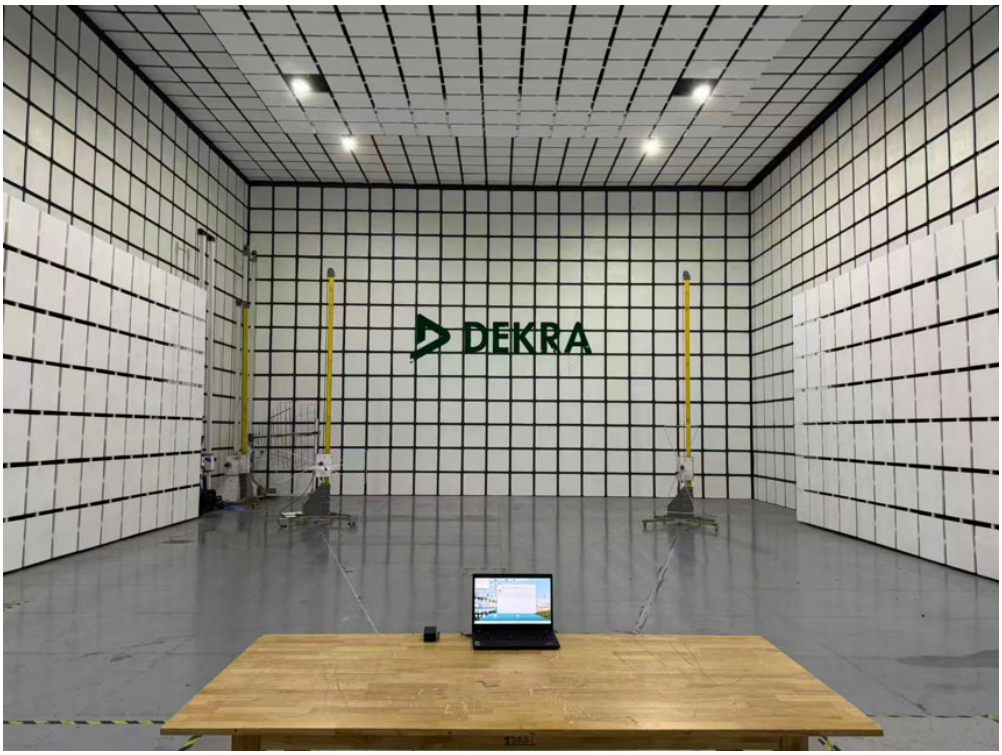
Note: (1) QP Value=QP Reading + Factor

(2) QP Over= QP Value -QP Limit

5.7 Test Photograph

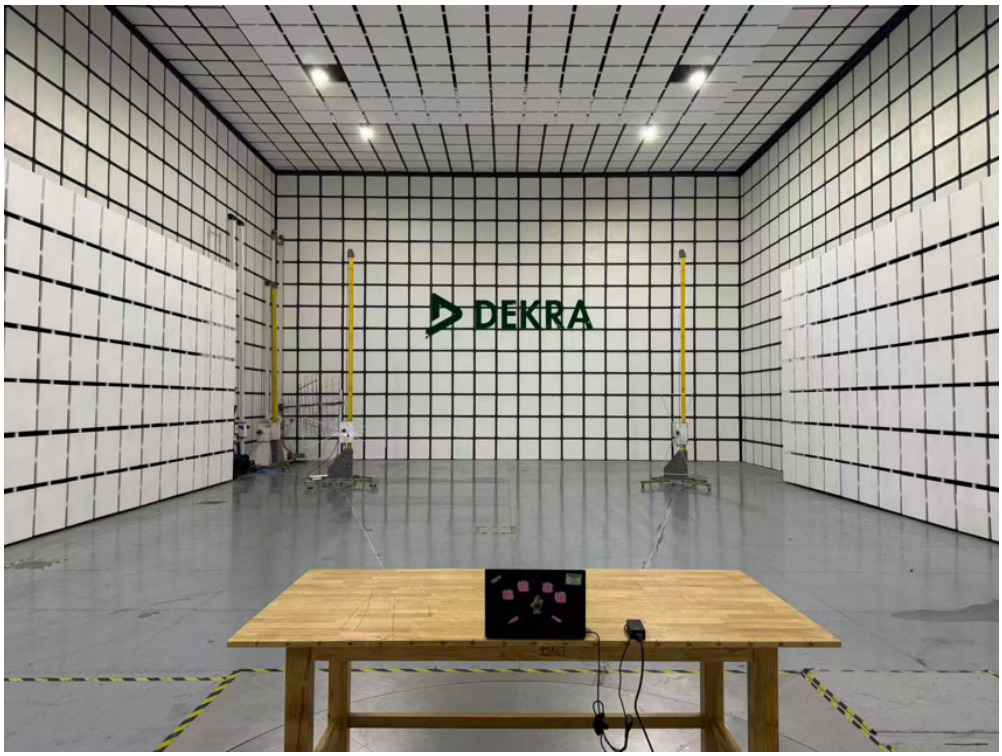
Test Mode: Mode 1

Description: Front View of Radiated Emissions Test Setup



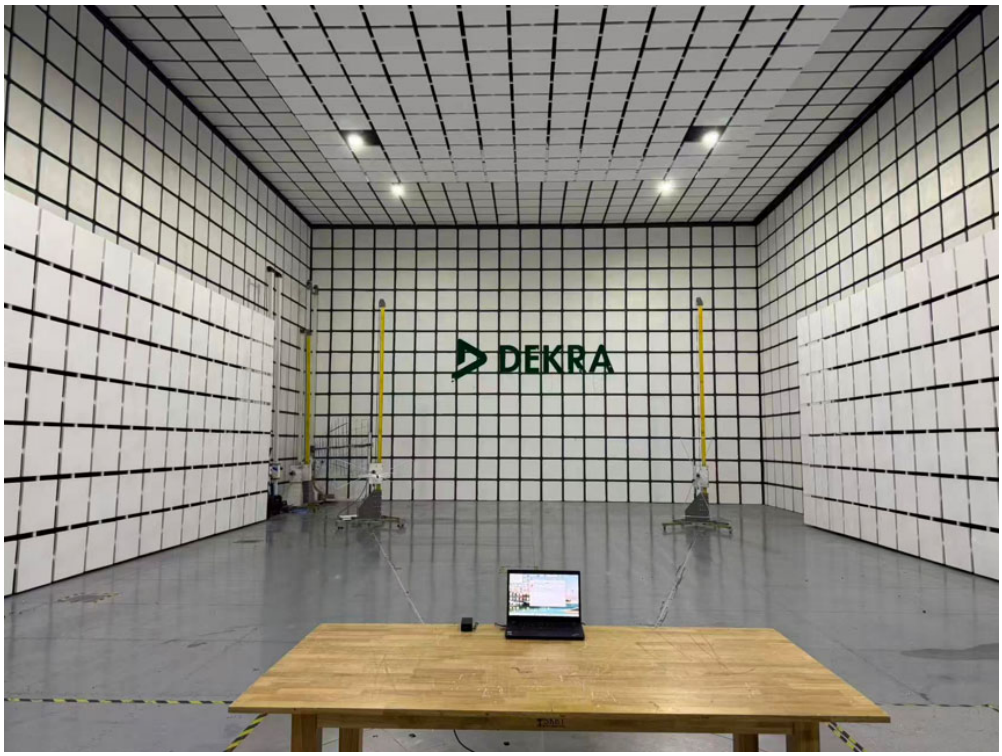
Test Mode: Mode 1

Description: Back View of Radiated Emissions Test Setup



Test Mode: Mode 2

Description: Front View of Radiated Emissions Test Setup



Test Mode: Mode 2

Description: Back View of Radiated Emissions Test Setup

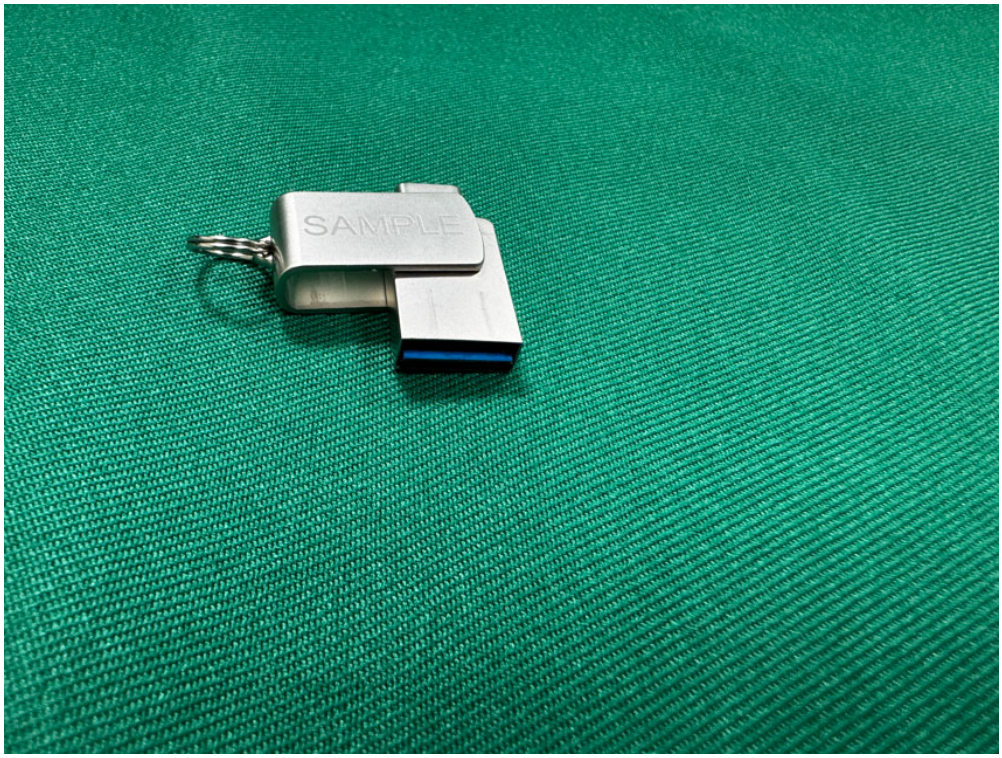
6 Attachment

EUT Photograph

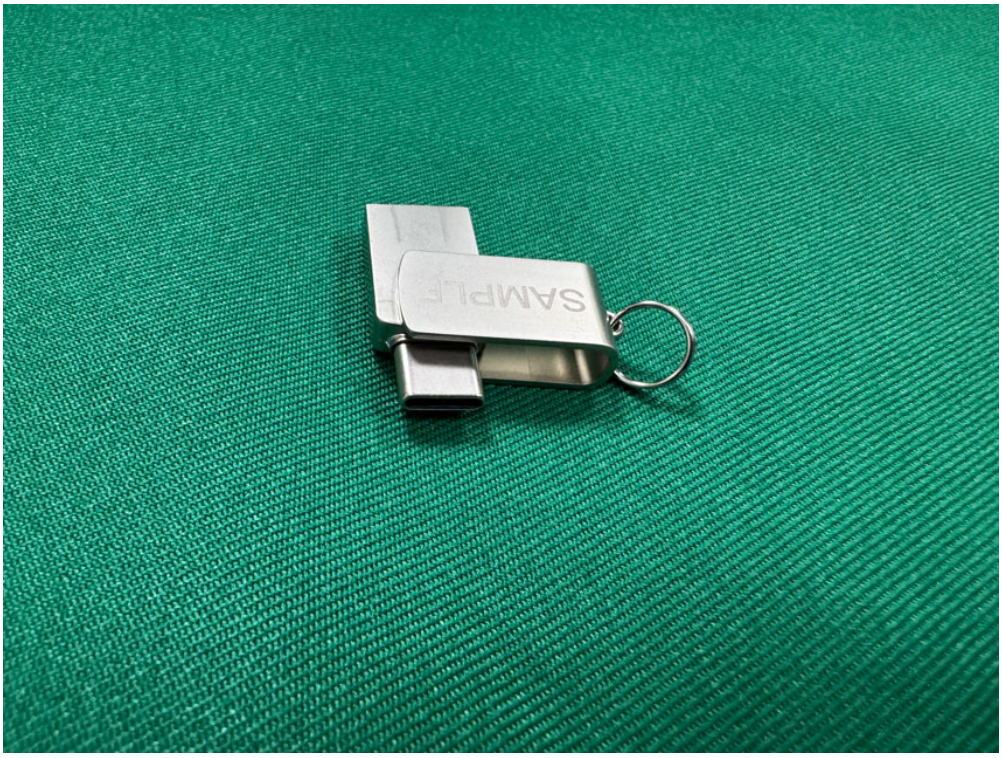
(1) EUT Photo

(2) EUT Photo

(3) EUT Photo



(4) EUT Photo



The End