

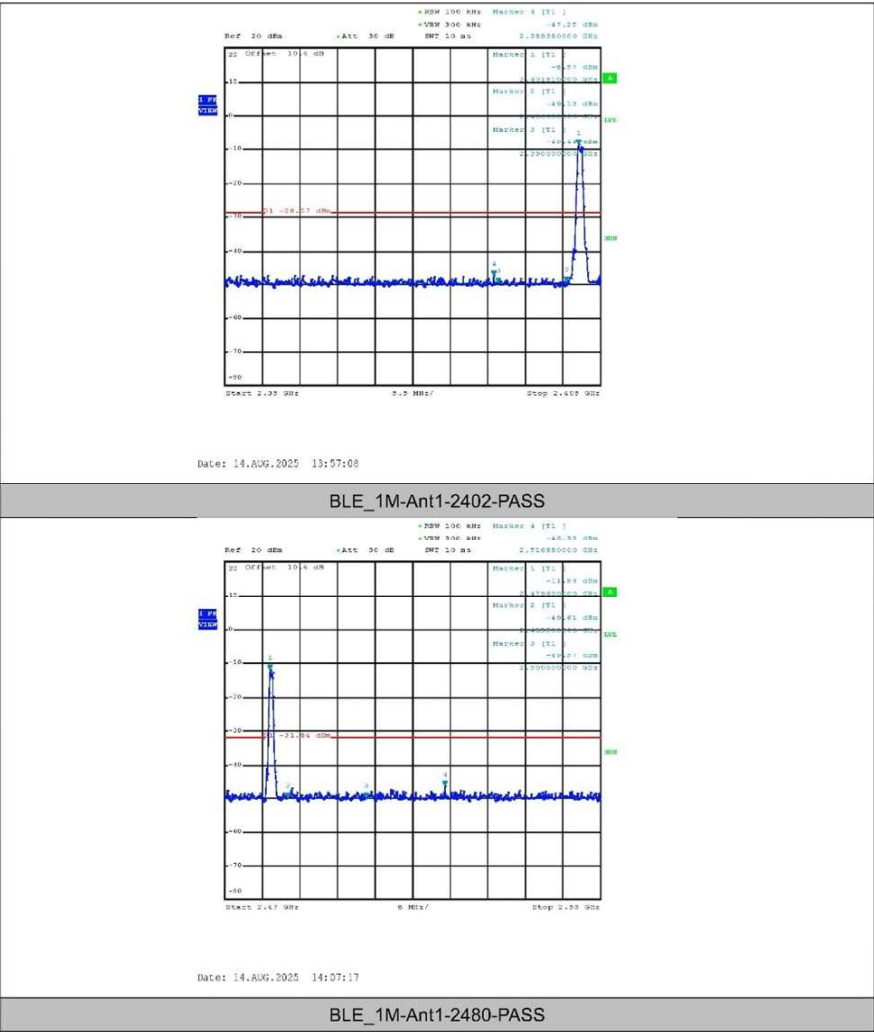
14. Band edge measurements of BLE

Appendix F: Band edge measurements

Test Result

TestMod e	Antenn a	ChNam e	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-8.57	-47.25	≤-28.57	PASS
BLE_1M	Ant1	High	2480	-11.84	-46.33	≤-31.84	PASS

Test Graphs



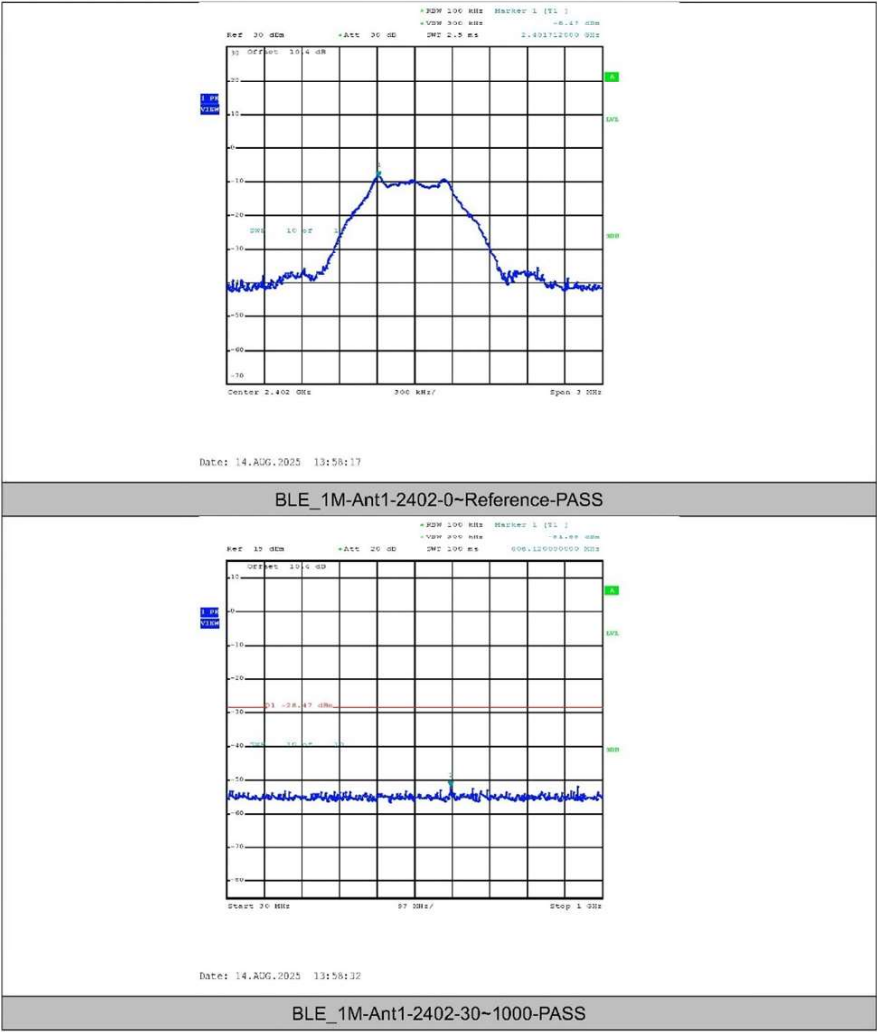
15. Conducted Spurious Emission of BLE

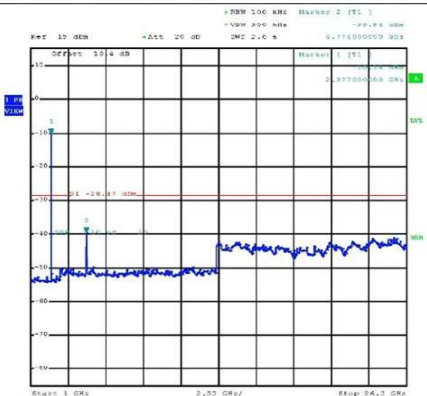
Appendix G: Conducted Spurious Emission

Test Result

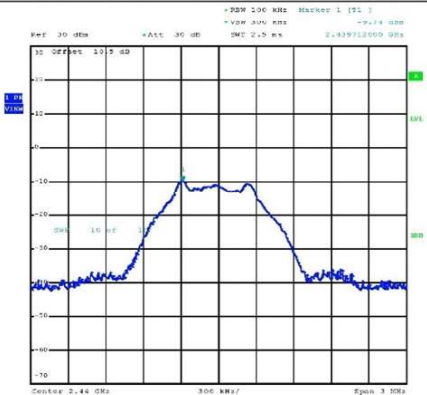
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-8.47	-8.47	---	PASS
BLE_1M	Ant1	2402	30~1000	-8.47	-51.85	≤-28.47	PASS
BLE_1M	Ant1	2402	1000~26500	-8.47	-39.54	≤-28.47	PASS
BLE_1M	Ant1	2440	0~Reference	-9.74	-9.74	---	PASS
BLE_1M	Ant1	2440	30~1000	-9.74	-53.03	≤-29.74	PASS
BLE_1M	Ant1	2440	1000~26500	-9.74	-39.63	≤-29.74	PASS
BLE_1M	Ant1	2480	0~Reference	-11.76	-11.76	---	PASS
BLE_1M	Ant1	2480	30~1000	-11.76	-52.8	≤-31.76	PASS
BLE_1M	Ant1	2480	1000~26500	-11.76	-38.74	≤-31.76	PASS

Test Graphs

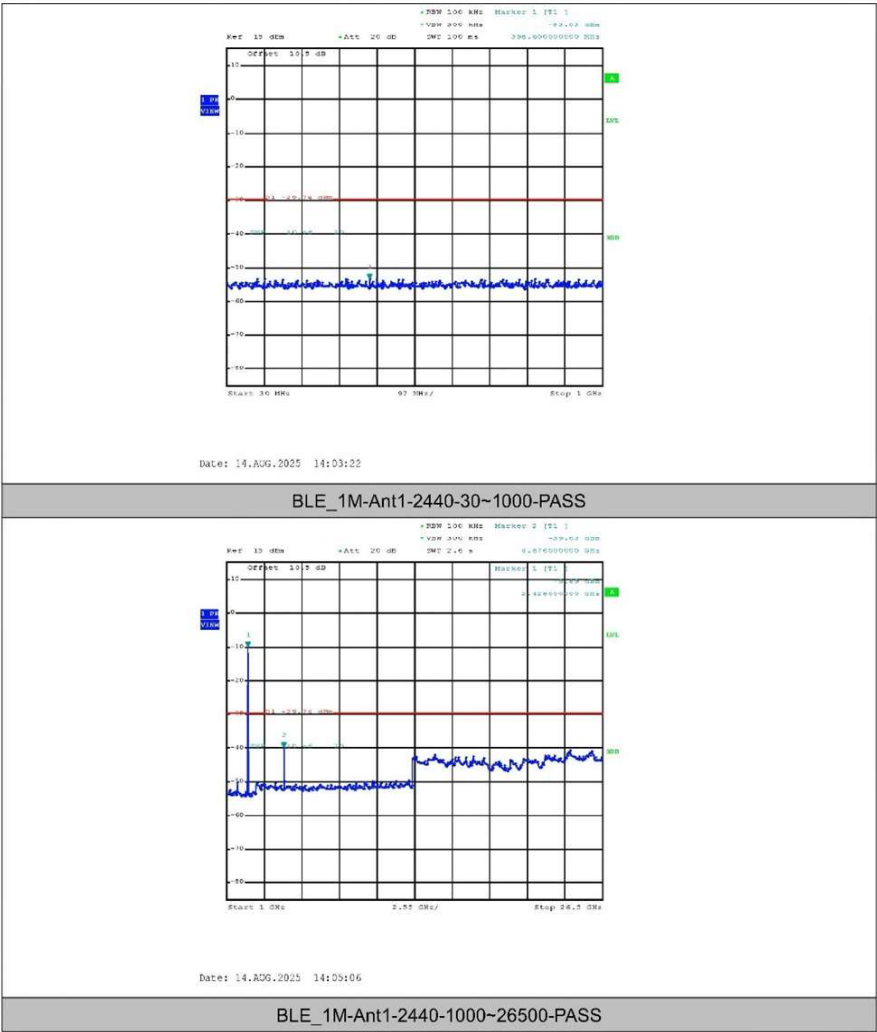


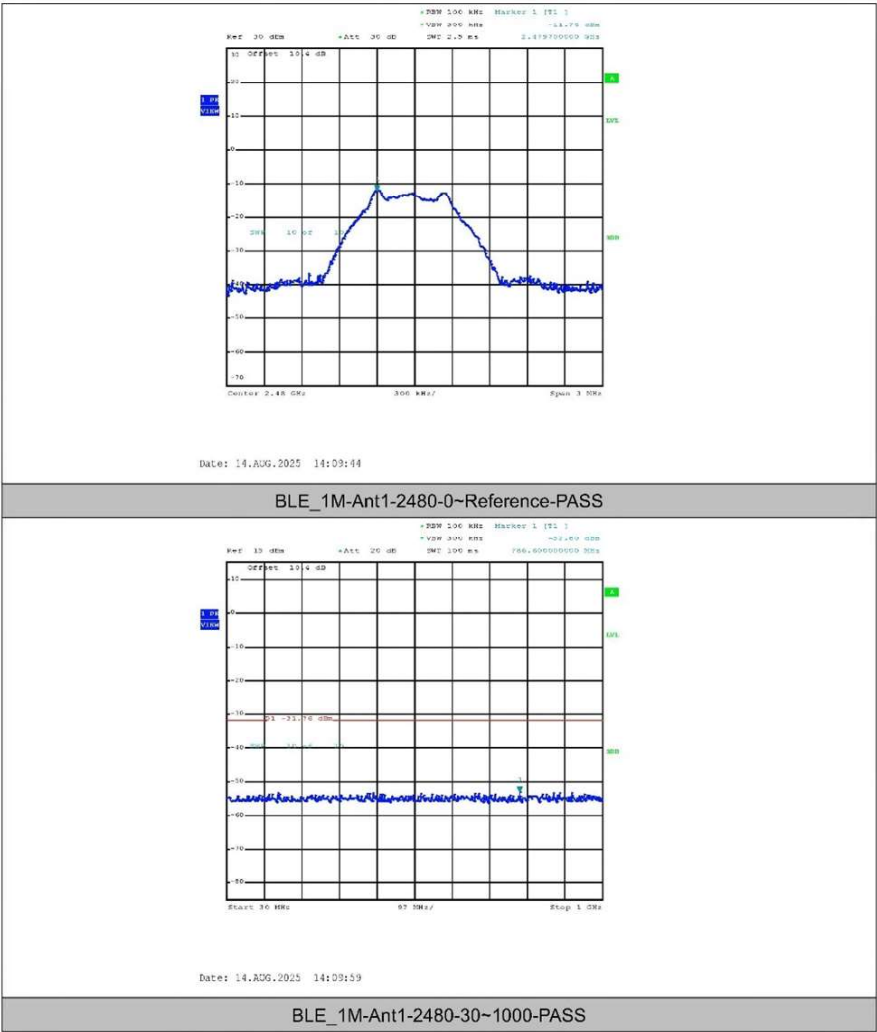


BLE_1M-Ant1-2402-1000-26500-PASS



BLE_1M-Ant1-2440-0-Reference-PASS





16. Test Results of Radiated Spurious Emissions

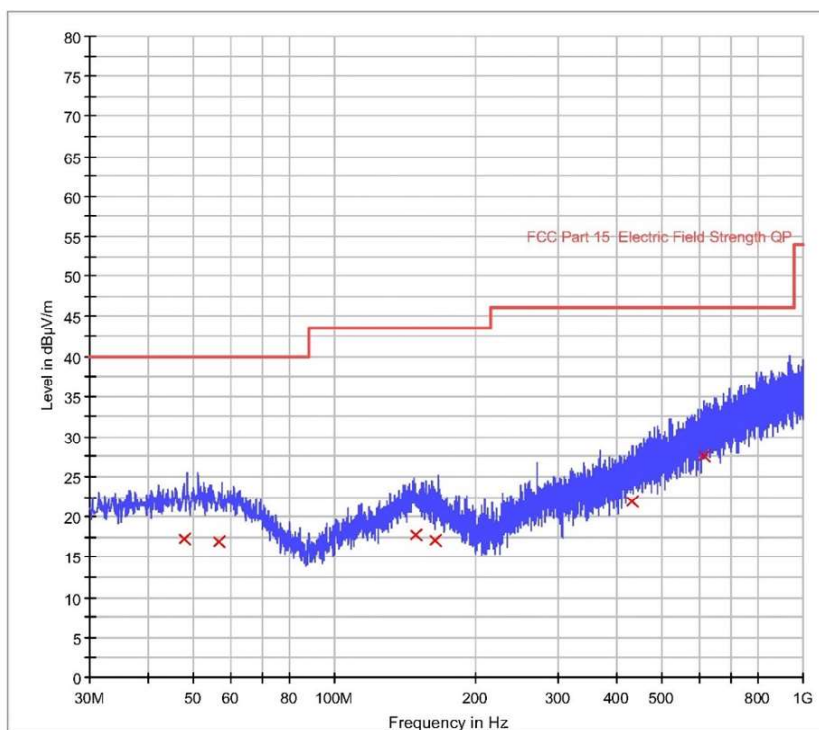
BLE mode

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency range: 30-1000MHz



Tested by: Cesare Gao
20250729

Reviewed by: Jacky Chen
20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dB μ V/m)
47.720000	17.3	1000.0	120.000	H	20.7	22.7	40.0
56.560000	17.0	1000.0	120.000	H	20.6	23.0	40.0
148.720000	17.9	1000.0	120.000	H	21.3	25.6	43.5
163.360000	17.2	1000.0	120.000	H	21.0	26.4	43.5
430.240000	22.0	1000.0	120.000	H	25.7	24.1	46.0
614.200000	27.5	1000.0	120.000	H	30.4	18.5	46.0

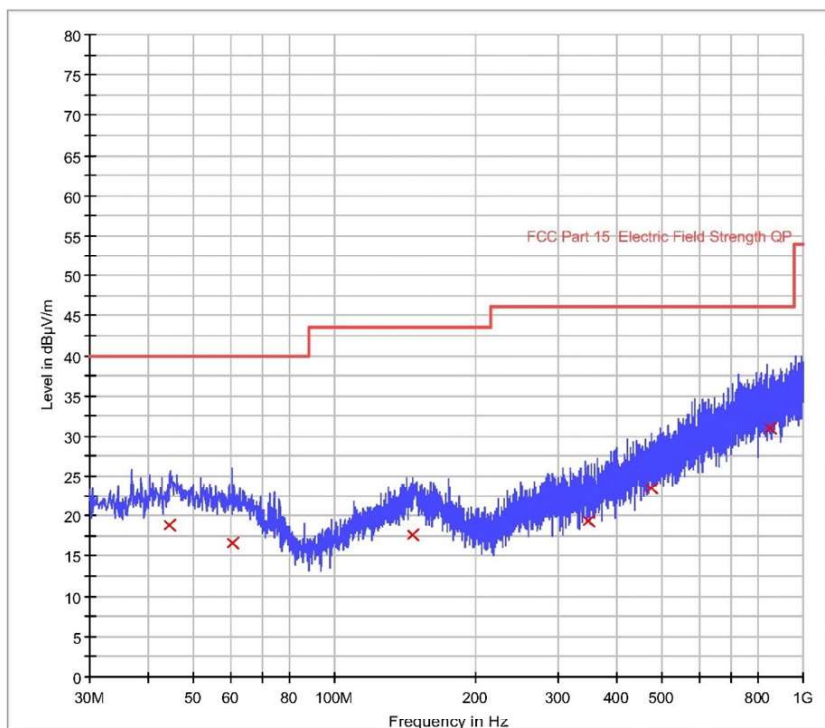
Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency range:	30-1000MHz



Tested by:	Cesare Biao	Reviewed by:	Jacky Chen
	20250729		20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
44.440000	18.8	1000.0	120.000	V	20.5	21.2	40.0
60.560000	16.7	1000.0	120.000	V	20.2	23.3	40.0
146.640000	17.6	1000.0	120.000	V	21.2	25.9	43.5
348.160000	19.4	1000.0	120.000	V	23.1	26.6	46.0
474.240000	23.4	1000.0	120.000	V	27.0	22.6	46.0
852.680000	31.0	1000.0	120.000	V	33.8	15.0	46.0

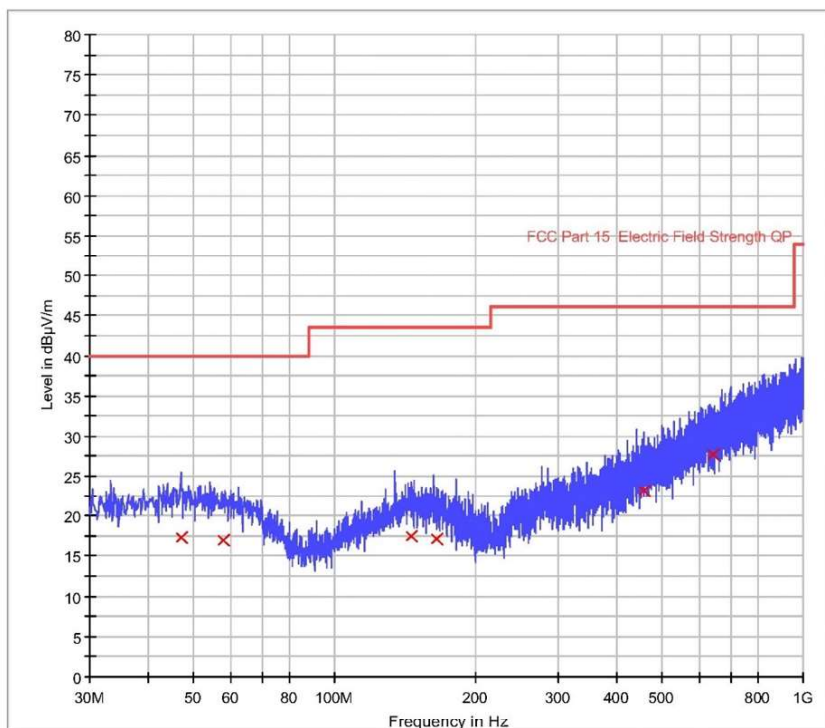
Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE LOW
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency range: 30-1000MHz



Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
46.960000	17.3	1000.0	120.000	H	20.8	22.7	40.0
57.760000	17.0	1000.0	120.000	H	20.5	23.0	40.0
145.920000	17.5	1000.0	120.000	H	21.1	26.0	43.5
165.080000	17.1	1000.0	120.000	H	20.9	26.4	43.5
457.760000	23.1	1000.0	120.000	H	26.6	23.0	46.0
640.120000	27.8	1000.0	120.000	H	30.6	18.2	46.0

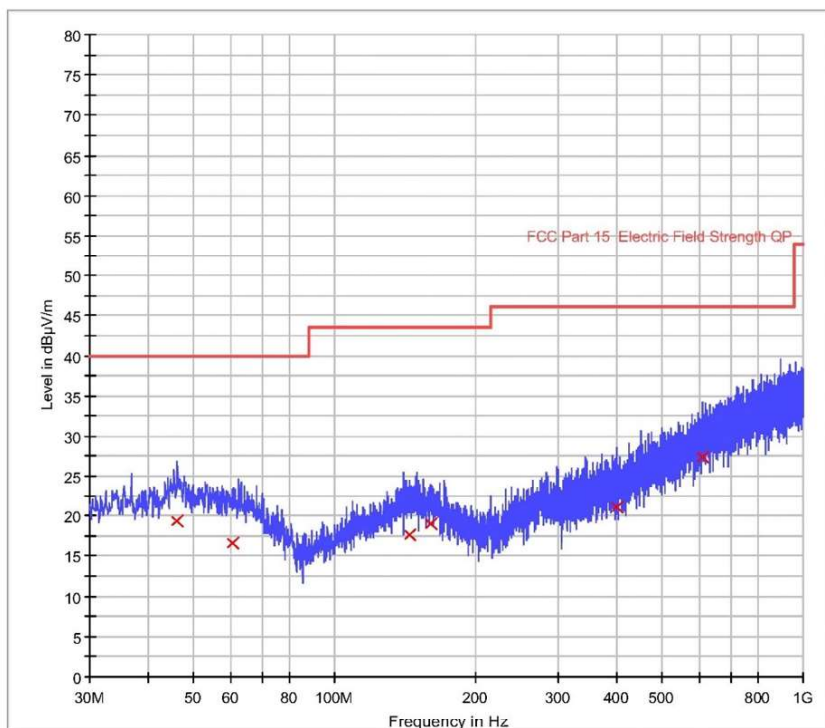
Tested by: *Cesare Gioia* Reviewed by: *Jacky Chen*
20250729 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE LOW
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency range:	30-1000MHz



Tested by:	Cesare Biao	Reviewed by:	Jacky Chen
	20250729		20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
46.120000	19.3	1000.0	120.000	V	20.7	20.7	40.0
60.560000	16.7	1000.0	120.000	V	20.2	23.3	40.0
144.720000	17.7	1000.0	120.000	V	21.0	25.8	43.5
159.720000	19.1	1000.0	120.000	V	21.1	24.4	43.5
400.160000	21.0	1000.0	120.000	V	24.7	25.0	46.0
612.000000	27.4	1000.0	120.000	V	30.2	18.6	46.0

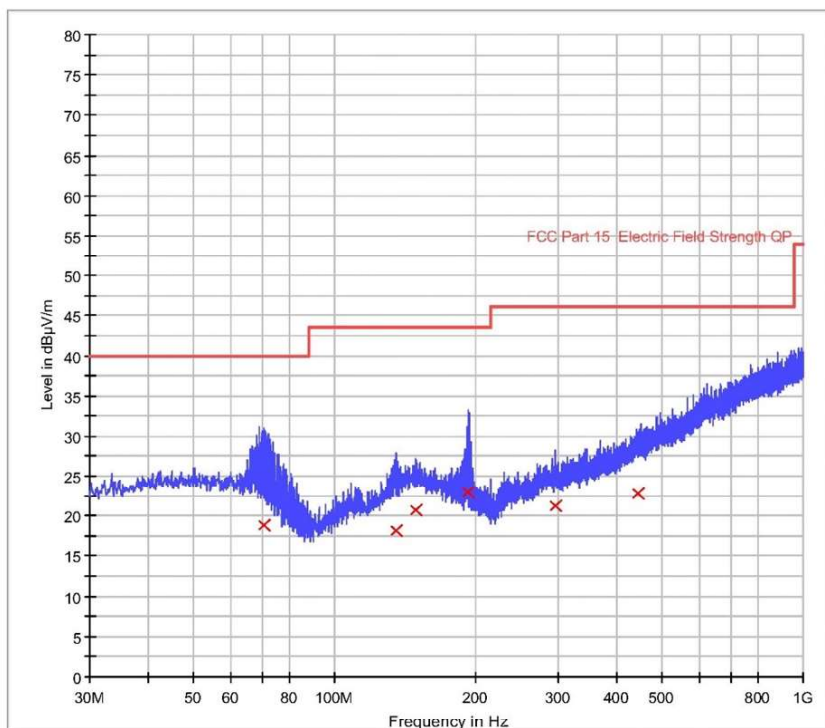
Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250729 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE MID
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency range: 30-1000MHz



Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
70.600000	18.9	1000.0	120.000	H	18.7	21.1	40.0
135.120000	18.1	1000.0	120.000	H	20.1	25.4	43.5
148.600000	20.8	1000.0	120.000	H	21.3	22.7	43.5
193.200000	23.0	1000.0	120.000	H	18.5	20.5	43.5
294.920000	21.2	1000.0	120.000	H	21.8	24.8	46.0
445.160000	22.8	1000.0	120.000	H	26.5	23.2	46.0

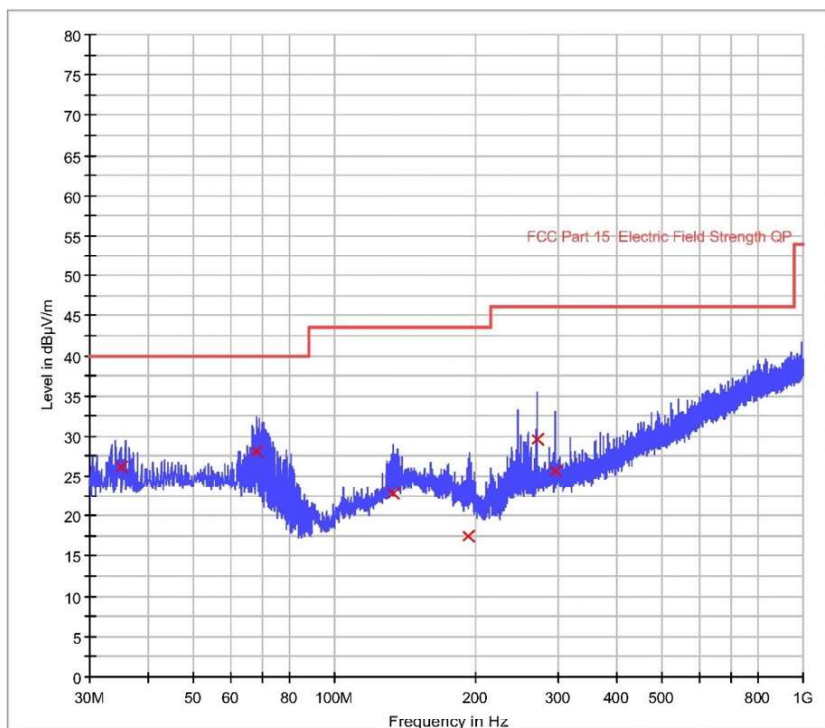
Tested by: *Cesare Gioè* Reviewed by: *Jacky Chen*
20250729 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE MID
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency range:	30-1000MHz



Tested by:	Cesare Biao	Reviewed by:	Jacky Chen
	20250729		20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
34.960000	26.2	1000.0	120.000	V	19.7	13.8	40.0
68.320000	28.2	1000.0	120.000	V	19.0	11.8	40.0
133.680000	22.7	1000.0	120.000	V	20.0	20.8	43.5
193.080000	17.6	1000.0	120.000	V	18.5	26.0	43.5
270.320000	29.6	1000.0	120.000	V	21.0	16.4	46.0
294.920000	25.7	1000.0	120.000	V	21.8	20.3	46.0

Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

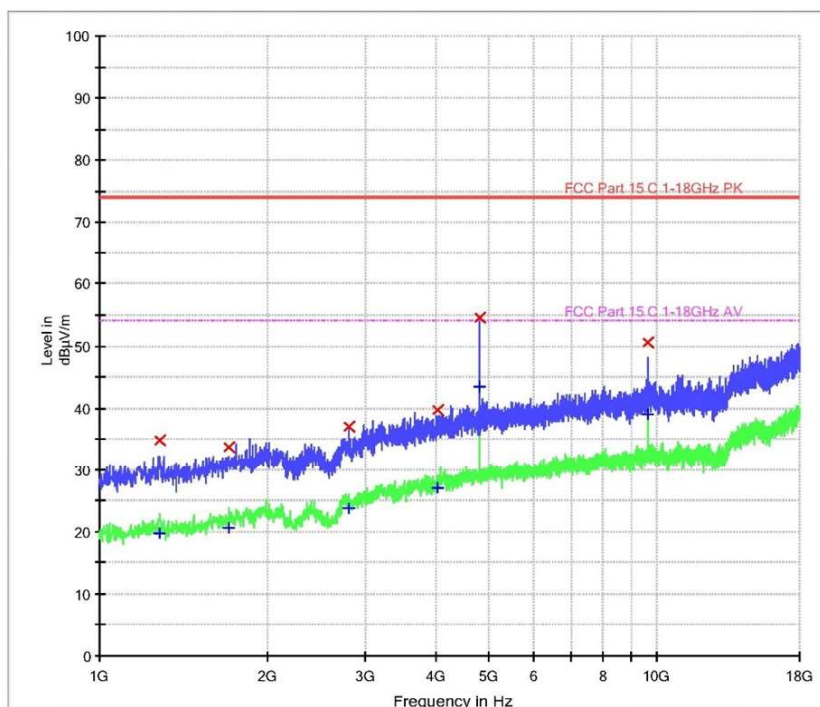
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz

EMCTT_EREFO11-A02-06_1GHz-18GHz_With PreAMP EXT& Hight-pass filter



Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1280.000000	34.7	1000.0	1000.000	H	-23.7	39.3	74.0
1701.000000	33.8	1000.0	1000.000	H	-22.0	40.3	74.0
2806.000000	36.9	1000.0	1000.000	H	-17.7	37.1	74.0
4032.000000	39.7	1000.0	1000.000	H	-13.9	34.3	74.0
4804.000000	54.7	1000.0	1000.000	H	-12.2	19.4	74.0
9608.000000	50.6	1000.0	1000.000	H	-6.4	23.4	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1280.000000	19.8	1000.0	1000.000	H	-23.7	34.2	54.0
1701.000000	20.6	1000.0	1000.000	H	-22.0	33.4	54.0
2806.000000	23.8	1000.0	1000.000	H	-17.7	30.2	54.0
4032.000000	27.0	1000.0	1000.000	H	-13.9	27.0	54.0
4804.000000	43.4	1000.0	1000.000	H	-12.2	10.6	54.0
9608.000000	39.1	1000.0	1000.000	H	-6.4	14.9	54.0

Tested by: Cesare Orso
20250729

Reviewed by: Jacky Chen
20250808

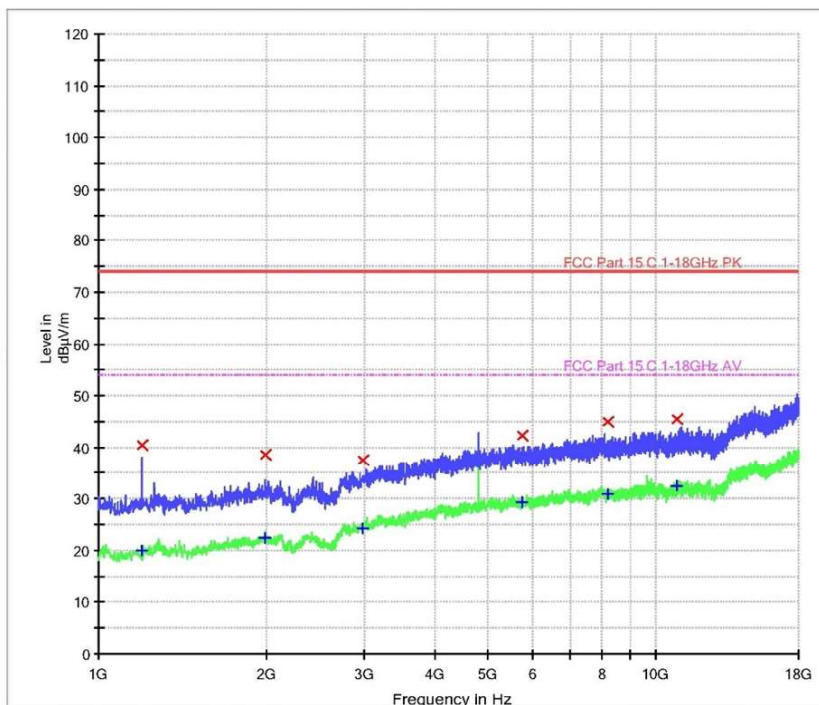
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Notch filter



Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1195.000000	40.4	1000.0	1000.000	V	-24.0	33.6	74.0
1994.000000	38.7	1000.0	1000.000	V	-20.7	35.3	74.0
2983.000000	37.6	1000.0	1000.000	V	-17.0	36.5	74.0
5737.000000	42.3	1000.0	1000.000	V	-10.9	31.7	74.0
8180.000000	45.0	1000.0	1000.000	V	-7.9	29.0	74.0
10907.000000	45.4	1000.0	1000.000	V	-5.9	28.6	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1195.000000	19.9	1000.0	1000.000	V	-24.0	34.1	54.0
1994.000000	22.4	1000.0	1000.000	V	-20.7	31.7	54.0
2983.000000	24.1	1000.0	1000.000	V	-17.0	29.9	54.0
5737.000000	29.2	1000.0	1000.000	V	-10.9	24.8	54.0
8180.000000	30.8	1000.0	1000.000	V	-7.9	23.2	54.0
10907.000000	32.5	1000.0	1000.000	V	-5.9	21.5	54.0

Tested by: Cesare Orso
20250729

Reviewed by: Jacky Chen
20250808

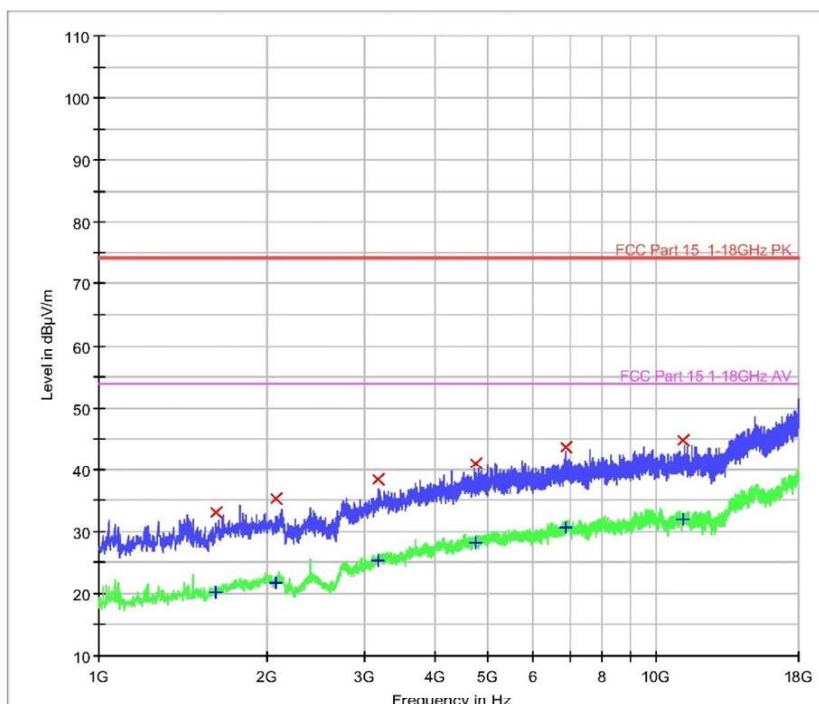
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz

EMCTT_ERE011-A02-05_1GHz-18GHz_With PreAMP EXT



Tested by:	<i>Cesare Biao</i>	Reviewed by:	<i>Jacky Chen</i>
	20250729		20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1623.000000	33.0	1000.0	1000.000	H	-22.4	41.0	74.0
2084.000000	35.2	1000.0	1000.000	H	-20.3	38.8	74.0
3163.000000	38.5	1000.0	1000.000	H	-16.5	35.5	74.0
4757.000000	41.0	1000.0	1000.000	H	-12.3	33.0	74.0
6863.000000	43.6	1000.0	1000.000	H	-9.1	30.4	74.0
11187.000000	44.7	1000.0	1000.000	H	-6.0	29.3	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1623.000000	20.2	1000.0	1000.000	H	-22.4	33.8	54.0
2084.000000	21.7	1000.0	1000.000	H	-20.3	32.3	54.0
3163.000000	25.4	1000.0	1000.000	H	-16.5	28.6	54.0
4757.000000	28.3	1000.0	1000.000	H	-12.3	25.7	54.0
6863.000000	30.6	1000.0	1000.000	H	-9.1	23.4	54.0
11187.000000	32.0	1000.0	1000.000	H	-6.0	22.0	54.0

Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

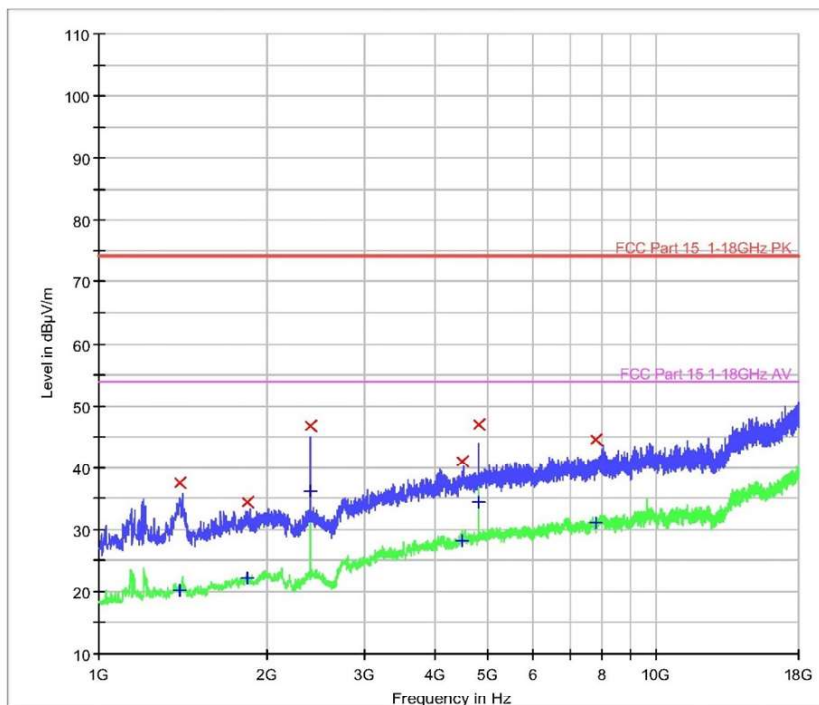
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE LOW
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz

EMCTT_EREFO11-A02-05_1GHz-18GHz_With PreAMP EXT



Tested by: *Cesare Gao* 20250729
Reviewed by: *Jacky Chen* 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dB μ V/m)
1399.000000	37.6	1000.0	1000.000	V	-23.4	36.4	74.0
1852.000000	34.4	1000.0	1000.000	V	-21.3	39.6	74.0
2402.000000	46.7	1000.0	1000.000	V	-19.3	27.3	74.0
4489.000000	41.1	1000.0	1000.000	V	-12.8	32.9	74.0
4804.000000	46.9	1000.0	1000.000	V	-12.2	27.1	74.0
7794.000000	44.6	1000.0	1000.000	V	-8.3	29.4	74.0

Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dB μ V/m)
1399.000000	20.2	1000.0	1000.000	V	-23.4	33.8	54.0
1852.000000	22.2	1000.0	1000.000	V	-21.3	31.8	54.0
2402.000000	36.2	1000.0	1000.000	V	-19.3	17.8	54.0
4489.000000	28.3	1000.0	1000.000	V	-12.8	25.7	54.0
4804.000000	34.5	1000.0	1000.000	V	-12.2	19.5	54.0
7794.000000	31.0	1000.0	1000.000	V	-8.3	23.0	54.0

Tested by: *Cesare Gioia* Reviewed by: *Jacky Chen*
20250729 20250808

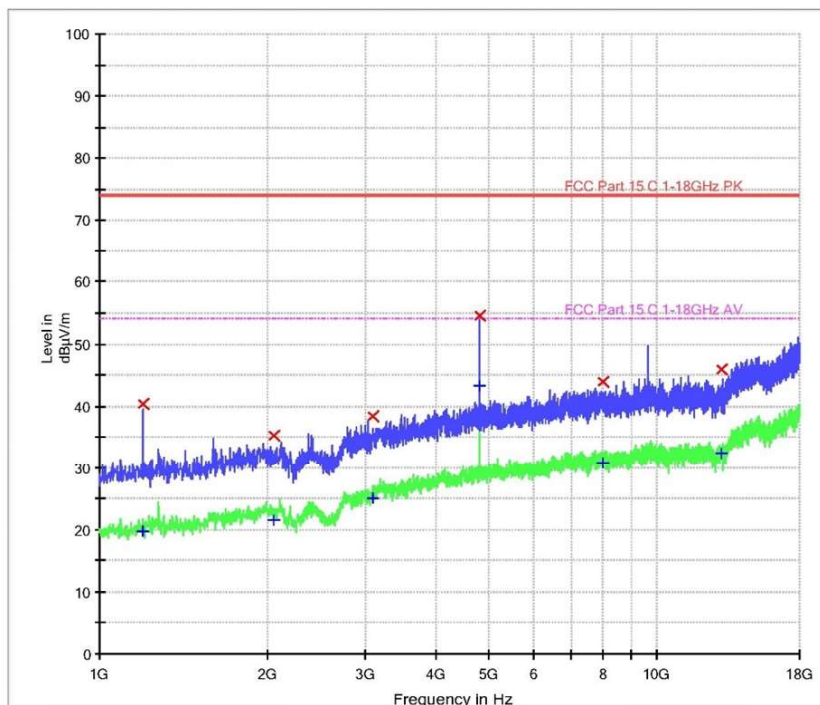
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE MID
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz

EMCTT_EREFO11-A02-06_1GHz-18GHz_With PreAMP EXT& Hight-pass filter



Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1195.000000	40.3	1000.0	1000.000	H	-24.0	33.7	74.0
2058.000000	35.3	1000.0	1000.000	H	-20.4	38.7	74.0
3087.000000	38.4	1000.0	1000.000	H	-16.7	35.6	74.0
4804.000000	54.6	1000.0	1000.000	H	-12.2	19.4	74.0
7981.000000	43.8	1000.0	1000.000	H	-8.0	30.2	74.0
13051.000000	45.8	1000.0	1000.000	H	-5.1	28.2	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1195.000000	19.8	1000.0	1000.000	H	-24.0	34.2	54.0
2058.000000	21.5	1000.0	1000.000	H	-20.4	32.5	54.0
3087.000000	25.1	1000.0	1000.000	H	-16.7	28.9	54.0
4804.000000	43.3	1000.0	1000.000	H	-12.2	10.7	54.0
7981.000000	30.9	1000.0	1000.000	H	-8.0	23.1	54.0
13051.000000	32.5	1000.0	1000.000	H	-5.1	21.5	54.0

Tested by: Cesare Orso Reviewed by: Jacky Chen
20250729 20250808

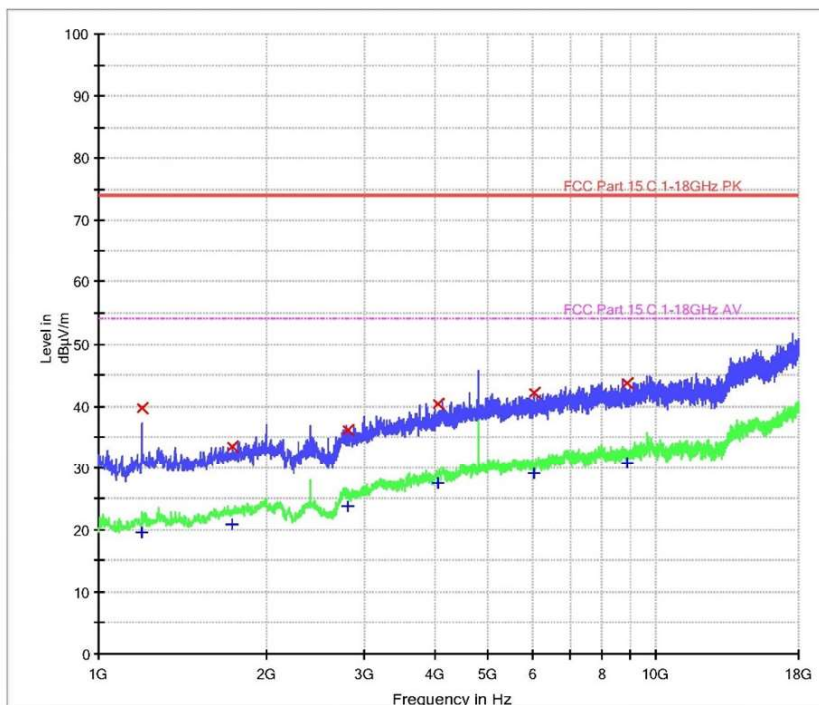
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE MID
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1
Frequency Range: 1GHz-18GHz

EMCTT_EREFO11-A02-06_1GHz-18GHz_With PreAMP EXT& Hight-pass filter



Tested by:	Cesare Orso	Reviewed by:	Jacky Chen
	20250729		20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1198.000000	39.7	1000.0	1000.000	V	-24.0	34.4	74.0
1739.000000	33.6	1000.0	1000.000	V	-21.8	40.4	74.0
2793.000000	36.3	1000.0	1000.000	V	-17.7	37.8	74.0
4060.000000	40.4	1000.0	1000.000	V	-13.9	33.6	74.0
6028.000000	42.1	1000.0	1000.000	V	-10.6	31.9	74.0
8896.000000	43.7	1000.0	1000.000	V	-7.3	30.3	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1198.000000	19.6	1000.0	1000.000	V	-24.0	34.4	54.0
1739.000000	20.8	1000.0	1000.000	V	-21.8	33.2	54.0
2793.000000	23.7	1000.0	1000.000	V	-17.7	30.3	54.0
4060.000000	27.4	1000.0	1000.000	V	-13.9	26.6	54.0
6028.000000	29.1	1000.0	1000.000	V	-10.6	24.9	54.0
8896.000000	30.9	1000.0	1000.000	V	-7.3	23.1	54.0

Tested by: Cesare Orso
20250729

Reviewed by: Jacky Chen
20250808

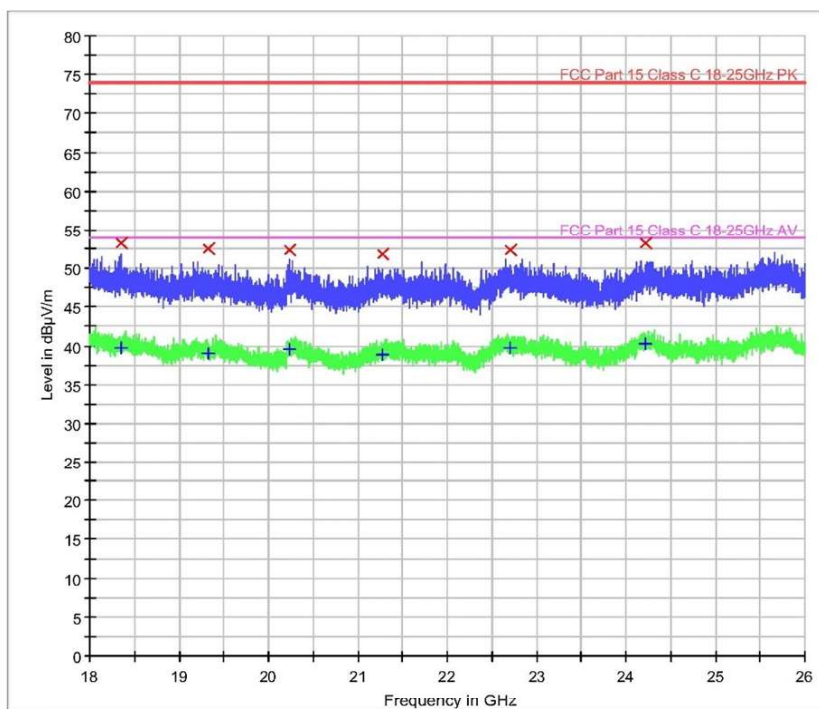
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 18GHz-26GHz

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
18349.000000	53.2	1000.0	1000.000	H	6.6	20.8	74.0
19331.000000	52.4	1000.0	1000.000	H	6.5	21.6	74.0
20234.000000	52.4	1000.0	1000.000	H	6.1	21.7	74.0
21271.000000	51.8	1000.0	1000.000	H	5.7	22.2	74.0
22714.000000	52.4	1000.0	1000.000	H	6.2	21.6	74.0
24222.000000	53.3	1000.0	1000.000	H	5.8	20.7	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
18349.000000	39.7	1000.0	1000.000	H	6.6	14.3	54.0
19331.000000	39.1	1000.0	1000.000	H	6.5	15.0	54.0
20234.000000	39.6	1000.0	1000.000	H	6.1	14.4	54.0
21271.000000	38.9	1000.0	1000.000	H	5.7	15.1	54.0
22714.000000	39.7	1000.0	1000.000	H	6.2	14.3	54.0
24222.000000	40.2	1000.0	1000.000	H	5.8	13.8	54.0

Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

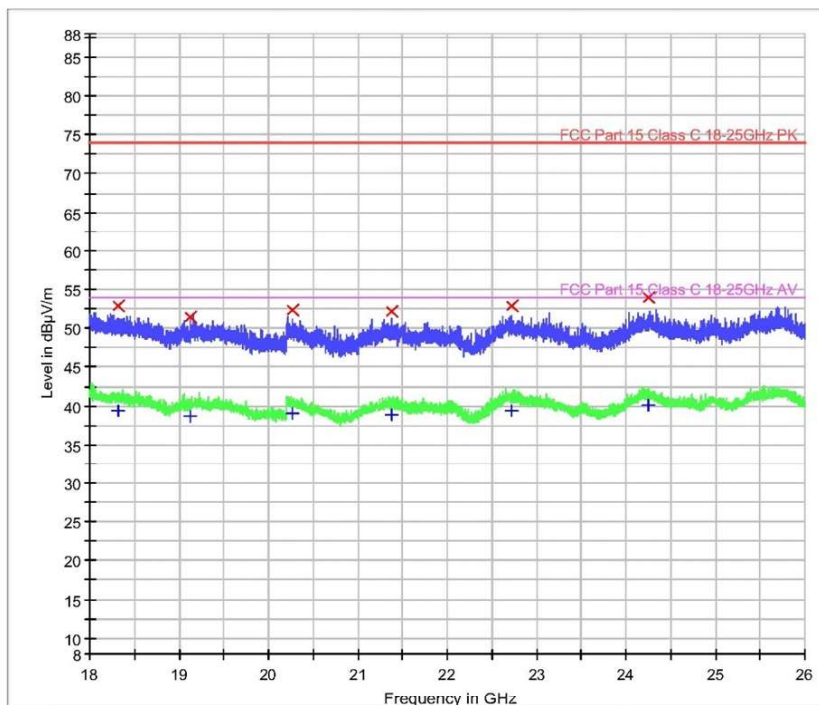
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1
Frequency Range: 18GHz-26GHz

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



Tested by: *Cesare Gao* 20250729
Reviewed by: *Jacky Chen* 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
18325.000000	52.8	1000.0	1000.000	V	6.6	21.2	74.0
19123.000000	51.5	1000.0	1000.000	V	6.6	22.5	74.0
20267.000000	52.4	1000.0	1000.000	V	6.1	21.6	74.0
21375.000000	52.2	1000.0	1000.000	V	5.7	21.8	74.0
22722.000000	52.9	1000.0	1000.000	V	6.1	21.2	74.0
24252.000000	53.9	1000.0	1000.000	V	5.8	20.1	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
18325.000000	39.5	1000.0	1000.000	V	6.6	14.5	54.0
19123.000000	38.7	1000.0	1000.000	V	6.6	15.3	54.0
20267.000000	39.1	1000.0	1000.000	V	6.1	14.9	54.0
21375.000000	38.9	1000.0	1000.000	V	5.7	15.1	54.0
22722.000000	39.3	1000.0	1000.000	V	6.1	14.7	54.0
24252.000000	40.1	1000.0	1000.000	V	5.8	13.9	54.0

Tested by: *Cesare Biao* 20250729
Reviewed by: *Jacky Chen* 20250808

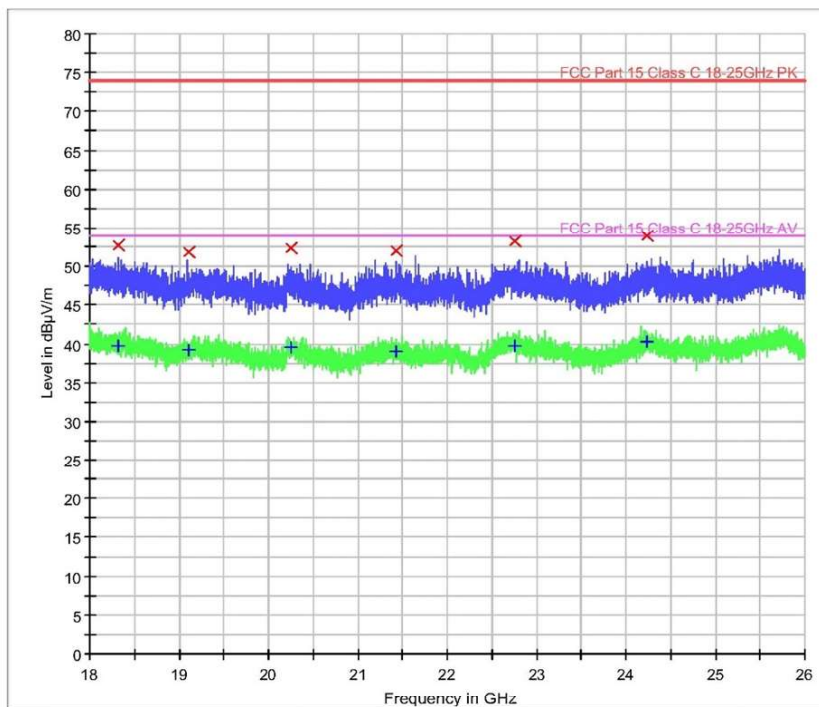
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE LOW
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 18GHz-26GHz

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
18324.000000	52.6	1000.0	1000.000	H	6.6	21.4	74.0
19110.000000	51.9	1000.0	1000.000	H	6.6	22.1	74.0
20260.000000	52.4	1000.0	1000.000	H	6.1	21.6	74.0
21427.000000	52.0	1000.0	1000.000	H	5.8	22.0	74.0
22760.000000	53.2	1000.0	1000.000	H	6.1	20.8	74.0
24240.000000	53.9	1000.0	1000.000	H	5.8	20.1	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
18324.000000	39.7	1000.0	1000.000	H	6.6	14.3	54.0
19110.000000	39.1	1000.0	1000.000	H	6.6	14.9	54.0
20260.000000	39.5	1000.0	1000.000	H	6.1	14.5	54.0
21427.000000	39.1	1000.0	1000.000	H	5.8	14.9	54.0
22760.000000	39.7	1000.0	1000.000	H	6.1	14.3	54.0
24240.000000	40.3	1000.0	1000.000	H	5.8	13.7	54.0

Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

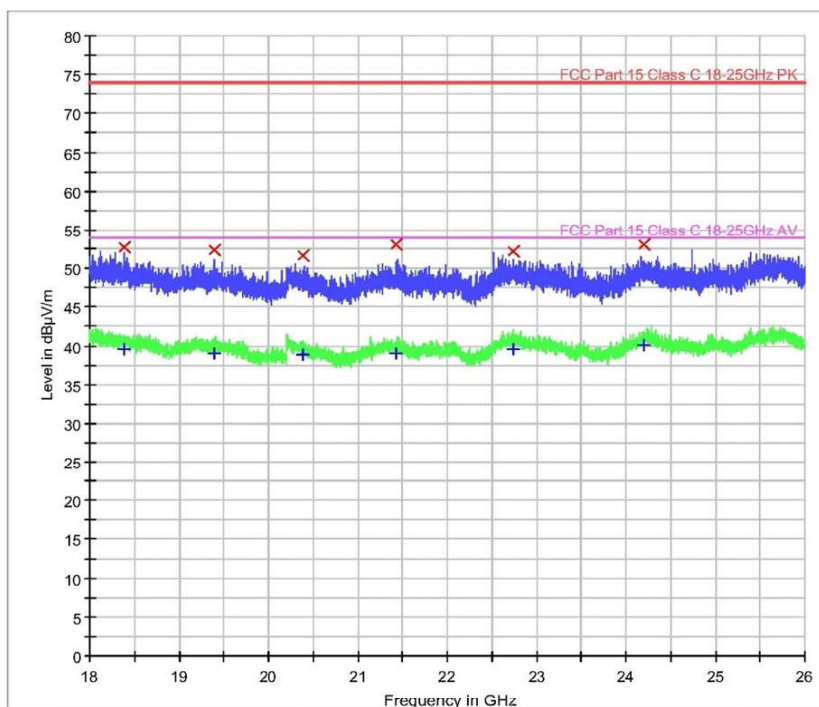
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE LOW
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1
Frequency Range: 18GHz-26GHz

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
18380.000000	52.7	1000.0	1000.000	V	6.6	21.3	74.0
19394.000000	52.4	1000.0	1000.000	V	6.5	21.7	74.0
20388.000000	51.6	1000.0	1000.000	V	6.1	22.4	74.0
21424.000000	53.0	1000.0	1000.000	V	5.8	21.0	74.0
22741.000000	52.2	1000.0	1000.000	V	6.1	21.8	74.0
24201.000000	53.0	1000.0	1000.000	V	5.8	21.0	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
18380.000000	39.6	1000.0	1000.000	V	6.6	14.4	54.0
19394.000000	39.0	1000.0	1000.000	V	6.5	15.0	54.0
20388.000000	38.9	1000.0	1000.000	V	6.1	15.1	54.0
21424.000000	39.0	1000.0	1000.000	V	5.8	15.1	54.0
22741.000000	39.5	1000.0	1000.000	V	6.1	14.5	54.0
24201.000000	40.1	1000.0	1000.000	V	5.8	13.9	54.0

Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

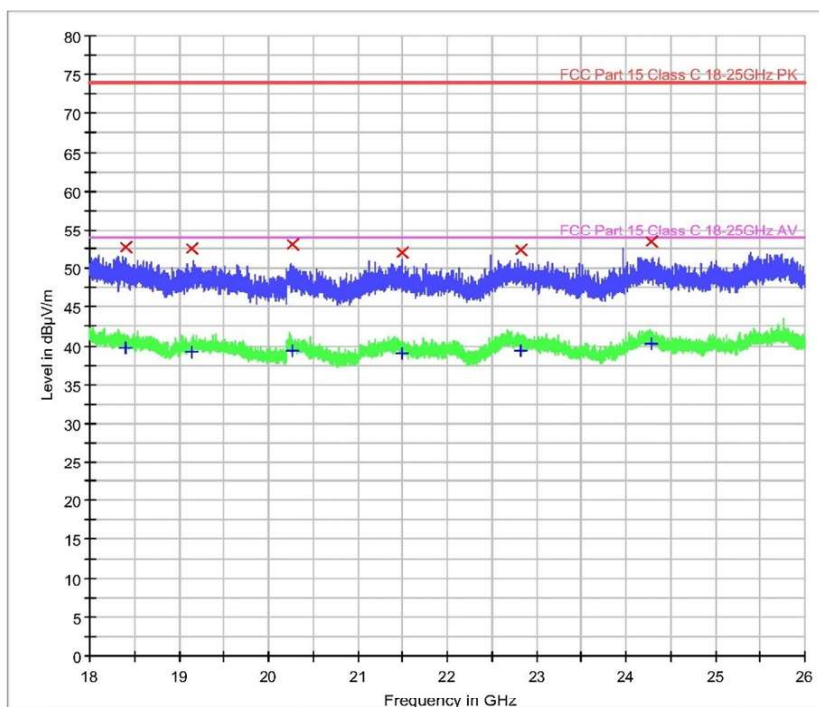
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE MID
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency Range: 18GHz-26GHz

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
18405.000000	52.8	1000.0	1000.000	H	6.6	21.2	74.0
19151.000000	52.4	1000.0	1000.000	H	6.6	21.6	74.0
20265.000000	53.1	1000.0	1000.000	H	6.1	21.0	74.0
21491.000000	52.1	1000.0	1000.000	H	5.8	21.9	74.0
22825.000000	52.3	1000.0	1000.000	H	6.1	21.7	74.0
24285.000000	53.3	1000.0	1000.000	H	5.8	20.7	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
18405.000000	39.8	1000.0	1000.000	H	6.6	14.3	54.0
19151.000000	39.2	1000.0	1000.000	H	6.6	14.8	54.0
20265.000000	39.4	1000.0	1000.000	H	6.1	14.6	54.0
21491.000000	38.9	1000.0	1000.000	H	5.8	15.1	54.0
22825.000000	39.5	1000.0	1000.000	H	6.1	14.6	54.0
24285.000000	40.2	1000.0	1000.000	H	5.8	13.8	54.0

Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250729 20250808

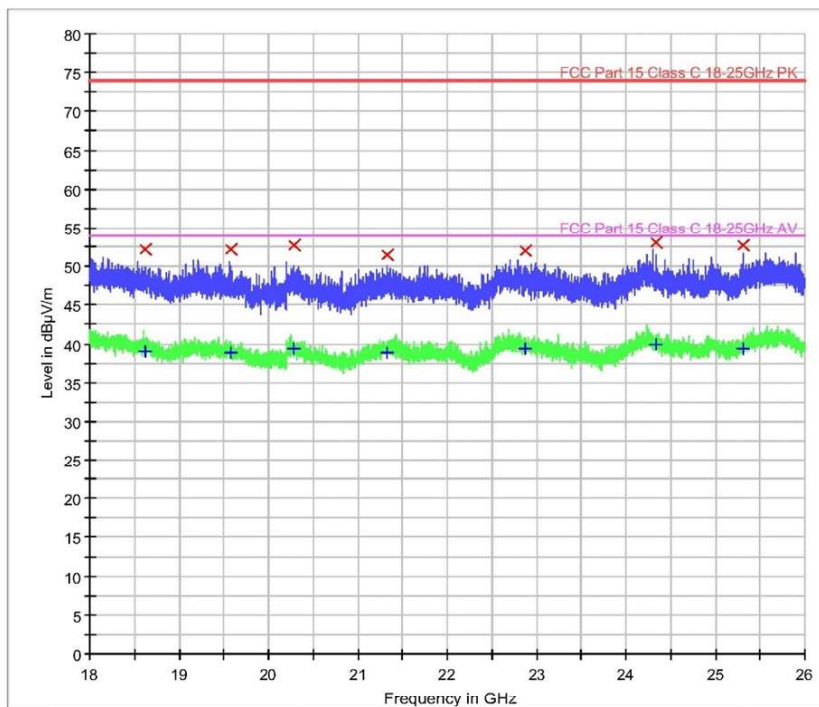
EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BLE MID
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1
Frequency Range: 18GHz-26GHz

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250729 20250808

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
18629.000000	52.2	1000.0	1000.000	V	6.6	21.8	74.0
19576.000000	52.1	1000.0	1000.000	V	6.4	21.9	74.0
20278.000000	52.7	1000.0	1000.000	V	6.1	21.3	74.0
21325.000000	51.5	1000.0	1000.000	V	5.7	22.5	74.0
22875.000000	52.0	1000.0	1000.000	V	6.1	22.0	74.0
24334.000000	53.1	1000.0	1000.000	V	5.9	20.9	74.0
25309.000000	52.7	1000.0	1000.000	V	6.1	21.3	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
18629.000000	39.0	1000.0	1000.000	V	6.6	15.0	54.0
19576.000000	38.8	1000.0	1000.000	V	6.4	15.2	54.0
20278.000000	39.4	1000.0	1000.000	V	6.1	14.7	54.0
21325.000000	38.9	1000.0	1000.000	V	5.7	15.1	54.0
22875.000000	39.4	1000.0	1000.000	V	6.1	14.6	54.0
24334.000000	39.9	1000.0	1000.000	V	5.9	14.1	54.0
25309.000000	39.3	1000.0	1000.000	V	6.1	14.7	54.0

Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250729 20250808

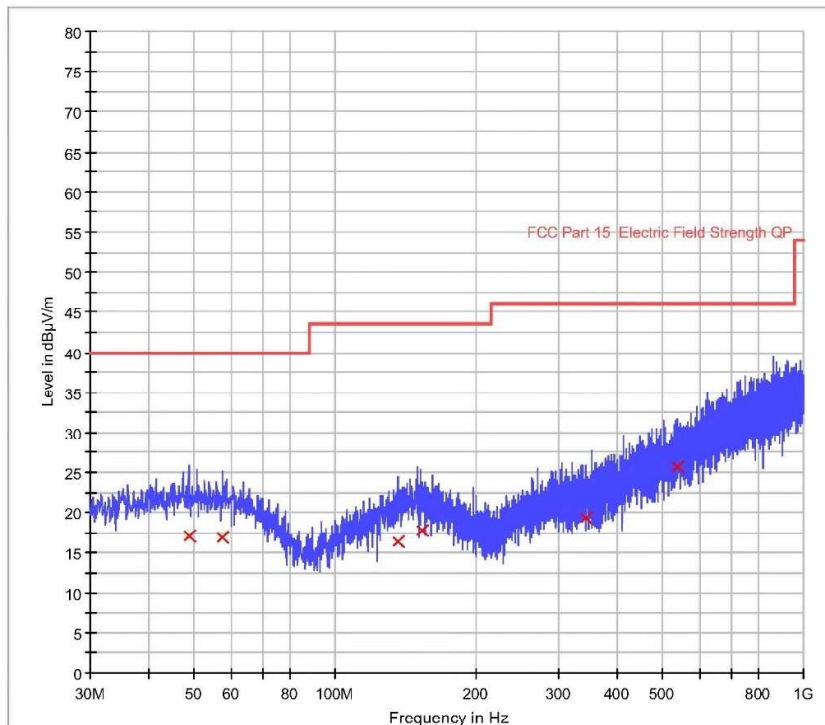
BR mode

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BR HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency range:	30-1000MHz
Receiver:	ESCI 3
Transducer:	VULB9168



Tested by:	<i>Cesare Biao</i>	Reviewed by:	<i>Jacky Chen</i>
	20250731		20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
48.680000	17.1	1000.0	120.000	H	20.7	22.9	40.0
57.400000	16.9	1000.0	120.000	H	20.5	23.1	40.0
135.840000	16.5	1000.0	120.000	H	20.1	27.0	43.5
153.560000	17.8	1000.0	120.000	H	21.3	25.7	43.5
342.080000	19.3	1000.0	120.000	H	23.1	26.7	46.0
539.600000	25.6	1000.0	120.000	H	28.1	20.4	46.0

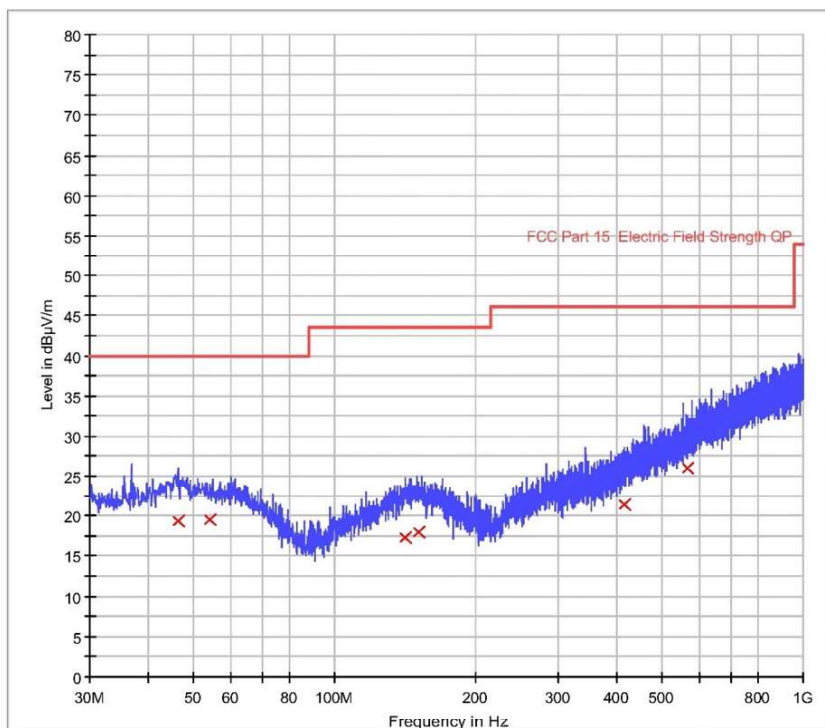
Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250731 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BR HIGH
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency range:	30-1000MHz



Tested by:	Cesare Biao	Reviewed by:	Jacky Chen
	20250731		20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
46.240000	19.3	1000.0	120.000	V	20.7	20.7	40.0
54.120000	19.6	1000.0	120.000	V	20.7	20.4	40.0
141.800000	17.4	1000.0	120.000	V	20.9	26.1	43.5
150.880000	18.1	1000.0	120.000	V	21.3	25.4	43.5
416.440000	21.4	1000.0	120.000	V	25.2	24.6	46.0
564.360000	26.1	1000.0	120.000	V	28.7	20.0	46.0

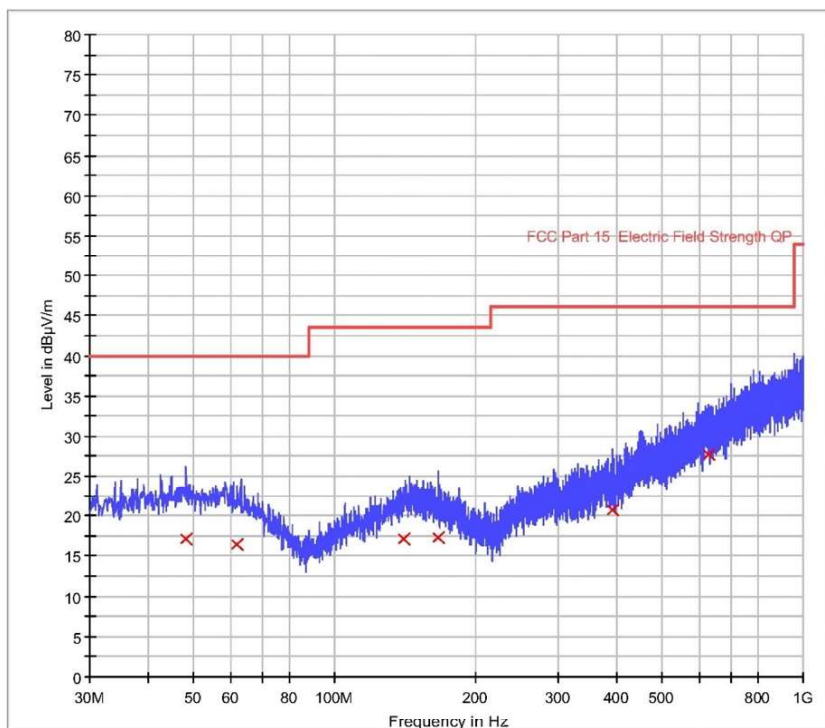
Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
20250731 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BR LOW
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1
Frequency range: 30-1000MHz



Tested by: *Cesare Gao* Reviewed by: *Jacky Chen*
20250731 20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
48.200000	17.2	1000.0	120.000	H	20.7	22.8	40.0
62.000000	16.5	1000.0	120.000	H	19.9	23.5	40.0
140.440000	17.1	1000.0	120.000	H	20.7	26.4	43.5
166.160000	17.3	1000.0	120.000	H	20.8	26.2	43.5
391.560000	20.7	1000.0	120.000	H	24.5	25.3	46.0
629.200000	27.7	1000.0	120.000	H	30.6	18.3	46.0

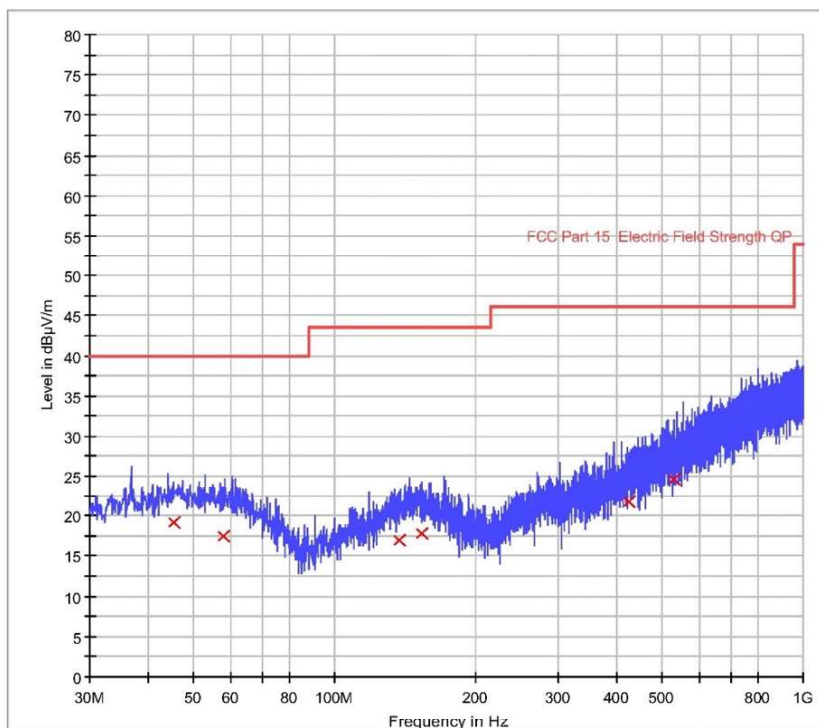
Tested by: *Cesare Gioia* Reviewed by: *Jacky Chen*
20250731 20250808

EMC Test Record (Emission)

Common Information

Manufacturer:	
Test Item:	Entertainment System
Identification:	ES503
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	TX BR LOW
Climate Condition:	26 °C, 63 %, 101kPa
Test Voltage/ Freq:	AC 120 V / 60 Hz
Receipt No:	170423584
Report No:	
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency range:	30-1000MHz



Tested by: *Cesare Gao*
20250731

Reviewed by: *Jacky Chen*
20250808

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
45.280000	19.3	1000.0	120.000	V	20.6	20.7	40.0
58.000000	17.5	1000.0	120.000	V	20.5	22.5	40.0
137.200000	16.9	1000.0	120.000	V	20.4	26.6	43.5
153.560000	17.8	1000.0	120.000	V	21.3	25.7	43.5
424.440000	21.8	1000.0	120.000	V	25.6	24.2	46.0
530.880000	24.6	1000.0	120.000	V	27.9	21.4	46.0

Tested by: *Cesare Biao* Reviewed by: *Jacky Chen*
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