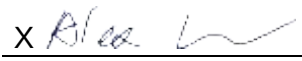
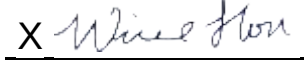


Prüfbericht-Nr.: Test report no.:	CN22DJA9 001	Auftrags-Nr.: Order no.:	168362723	Seite 1 von 26 Page 1 of 26
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2022-03-11	
Auftraggeber: Client:	Nortek Security&Control LLC 5919 Sea Otter Place, Suite 100, Carlsbad, CA 92010, USA			
Prüfgegenstand: Test item:	ELAN 8" Touch Panel User Interface			
Bezeichnung / Typ-Nr.: Identification / Type no.:	ITP-8			
Auftrags-Inhalt: Order content:	FCC and IC approval			
Prüfgrundlage: Test specification:	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109 RSS-247 Issue 2 February 2017 RSS-Gen Issue 5 March 2019 ICES-003 Issue 7 October 2020			
Wareneingangsdatum: Date of sample receipt:	2022-03-31	Please refer to Photo Document		
Prüfmuster-Nr.: Test sample no.:	A003230744-001~011 A003237194-001			
Prüfzeitraum: Testing period:	2022-04-06 - 2022-04-17			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:			genehmigt von: authorized by:	
Datum: Date: 2022-05-05	Signed by: Alex Lan		Ausstellungsdatum: Issue date: 2022-05-09	Signed by: Winnie Hou
Stellung / Position	Assistant Project Manager	Stellung / Position	Reviewer	
Sonstiges / Other:	FCC ID: EF400229 IC: 1078A-00229 HVIN: ITP-8B Software update to enable the Bluetooth function, the hardware are same with ITP-8 with FCC ID: EF400182, IC: 1078A-00182, and with spot check the max. Wi-Fi output power with no degradation, so refer to report STS1811128W01 for Wi-Fi test data.			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut 3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft N/T = nicht getestet
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good 3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 6dB BANDWIDTH

RESULT: Pass

5.1.5 99% BANDWIDTH

RESULT: Pass

5.1.6 20dB BANDWIDTH

RESULT: Pass

5.1.7 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.8 NUMBER OF HOPPING FREQUENCY

RESULT: Pass

5.1.9 TIME OF OCCUPANCY

RESULT: Pass

5.1.10 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH

RESULT: Pass

5.1.11 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.12 RADIATED EMISSIONS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

Appendix B: Test Results of Bluetooth BR/EDR mode

Appendix C: Test Results of Bluetooth Low Energy

Appendix D: Test Results of FCC 15B & ICES-003

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Registration No.: 694916

ISED wireless device testing laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (SRD-Tonscend)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2022-09-28
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2022-09-28
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2022-09-28
DC power supply	Keysight	E3642A	MY61276100	2022-09-28
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2022-09-28
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2022-09-28
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
Unwanted Emission Testing (TS9975)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	2022-08-10
Signal Analyzer	R&S	FSV 40	101439	2022-08-09
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2022-08-09
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2022-08-09
Amplifier	R&S	SCU-18F	180070	2022-08-09
Amplifier	R&S	SCU40A	100475	2022-08-09
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2022-08-08
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2022-08-08
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2022-08-08
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2022-09-13
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A

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Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22

Radiated Emission (3m chamber)				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
3m SAC	ETS-Lindgren	SAC3	CT001632-Q1362	2024-04-26
EMI Test Receiver	R&S	ESR7	102111	2022-12-01
Horn Antenna	R&S	HF907	102706	2022-08-07
Preamplifier (1-18GHz)	FIT	SCU-18F	180077	2022-08-13
Trilog-Broadband antenna	SCHWARZBECK	VULB9168	0945	2022-12-12
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF Power (conducted)	± 2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	± 6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	± 6 dB
Radiated Emission (3m SAC), 30MHz to 1000MHz	± 4.52 dB
Radiated Emission (3m SAC), above 1000MHz	± 4.37 dB
Temperature	± 1 °C
Humidity	± 5 %
Voltage (DC)	± 1 %
Voltage (AC, <10kHz)	± 2 %

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2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B & C & D of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is an ELAN 8" Touch Panel User Interface which supports Bluetooth and Wi-Fi 802.11 b/g/n wireless technology.

The EUT adds Bluetooth function by upgrading firmware, the hardware part is the same as original product.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	ELAN 8" Touch Panel User Interface
Type Designation:	ITP-8
FCC ID:	EF400229
IC:	1078A-00229
HVIN:	ITP-8B
Operating Voltage:	DC 12~14V or via POE Interface
Testing Voltage:	AC 120V, 60Hz
Technical Specification of Bluetooth (dual mode)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Channel Number:	BR/EDR: 79 channels; Low Energy: 40 channels
Channel Separation:	BR/EDR: 1MHz; Low Energy: 2MHz
Data Rate:	BR/EDR: 1Mbps, 2Mbps, 3Mbps Low Energy: 1Mbps
Antenna Type:	Integral Antenna
Antenna Gain of Bluetooth:	3.5 dBi
Technical Specification of Wi-Fi 802.11 b/g/n	
Frequency Range:	2412 - 2462 MHz for 802.11b/g/n(HT20)
Type of Modulation:	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM)
Data Rate:	6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n
Channel Number:	11 channels for 802.11b/g/n(HT20)
Channel Separation:	5 MHz
Antenna Type:	Integral Antenna
Antenna Gain of Wi-Fi:	3.5 dBi

Table 4: RF Channel and Frequency of Bluetooth BR/EDR

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

Test frequencies are lowest channel: 2402 MHz, middle channel: 2441 MHz and highest channel: 2480 MHz for Bluetooth BR/EDR

Table 5: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz for Bluetooth LE

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth transmitting mode (BR & EDR mode)
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- B. On, Bluetooth transmitting mode (Bluetooth Low Energy)
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- C. On, Bluetooth Hopping
- D. On, Wi-fi connection with Camera and Trumpet on
- E. On, Bluetooth connection
- F. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|--------------------|-------------------------|
| - Application Form | - User Manual |
| - Block Diagram | - Rating Label |
| - Schematics | - Operation Description |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013 & ANSI C63.4: 2014.

According to clause 3.1, full test for Bluetooth was performed in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 6: Auxiliary Equipment Used during Test

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	T480	PF-16A6N8	/
AC/DC Adapter 1	/	SRP1202500P	/	Output: 12V, 2.5A
AC/DC Adapter 2	/	SW-140170	/	Output: 14V, 1.7A
PoE Injector	/	ZX900-AFG-N301	/	Output: 52V, 0.58A
Ferrite core 1	/	/	/	/
Ferrite core 2	/	/	/	/
Ferrite core 3	/	/	/	/

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

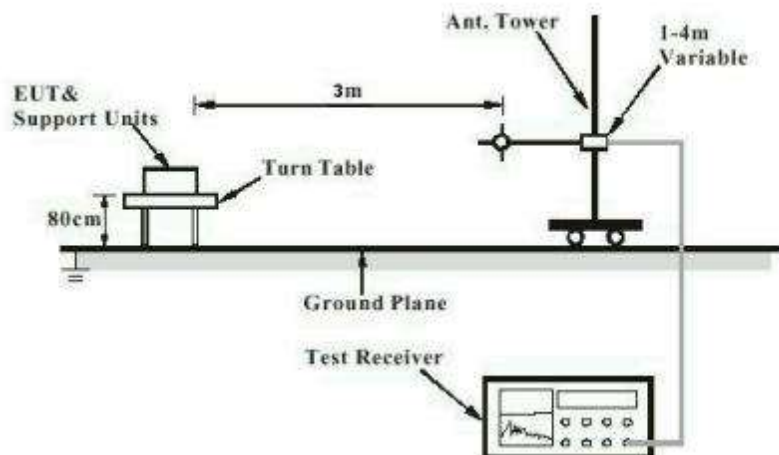


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

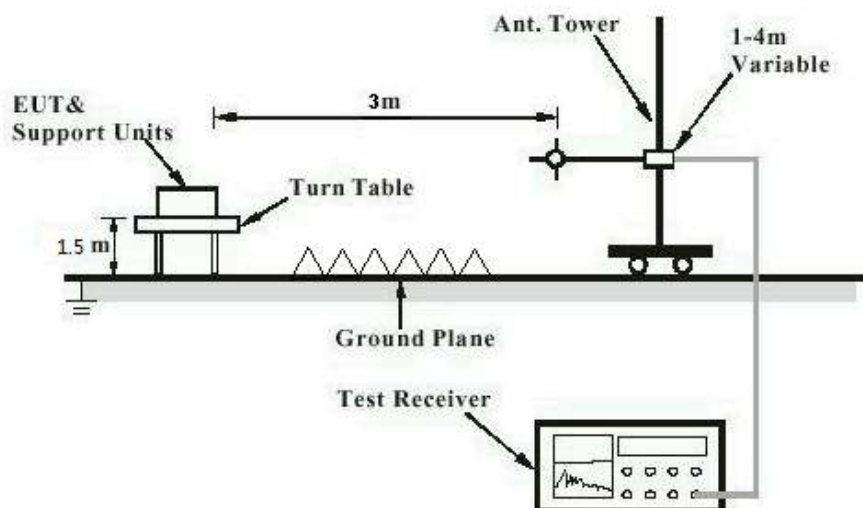


Diagram of Measurement Configuration for Mains Conduction Measurement

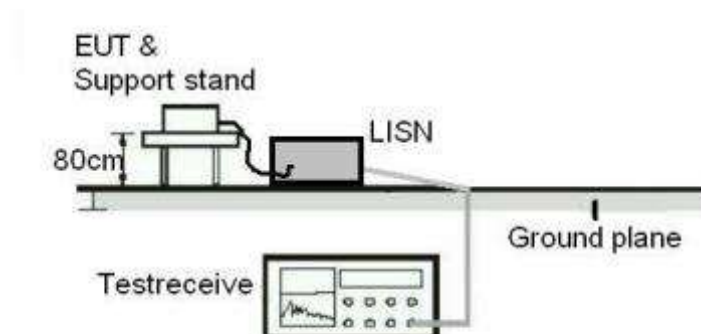
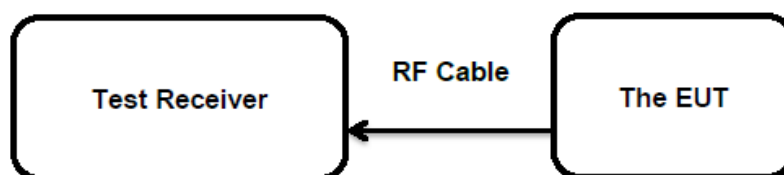


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203
RSS-Gen Clause 6.8

According to the manufacturer declared, the EUT has an Integral antenna for Bluetooth, the directional gain of antenna is 3.5 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

- 1) The cable loss is taken into account in results.
 - 2) Antenna gain(G): 3.5 dBi
- e.i.r.p.= $P_{(\text{Peak power})} + G$, which is far below the 4 W

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5.1.3 Conducted Power Spectral Density

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(e) RSS-247 Clause 5.2(b)
Basic standard	: ANSI C63.10: 2013
Limits	: < 8 dBm / 3kHz
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2022-04-06
Input voltage	: AC 120V, 60Hz
Operation mode	: B
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix C.

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5.1.4 6dB Bandwidth

RESULT:**Pass****Test Specification**

Test standard	:	FCC Part 15.247(a)(2) RSS-247 Clause 5.2(a)
Basic standard	:	ANSI C63.10: 2013
Limits	:	> 500 KHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-04-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 °C
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix C.

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5.1.5 99% Bandwidth

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.247(a) RSS-Gen Clause 6.7
Basic standard	: ANSI C63.10: 2013
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2022-04-06
Input voltage	: AC 120V, 60Hz
Operation mode	: A, B
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B & C.

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5.1.6 20dB Bandwidth

RESULT:

Pass

Test Specification

Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(a)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-04-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 °C
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

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5.1.7 Carrier Frequency Separation

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(a)(1) RSS-247 Clause 5.1(b)
Basic standard	: ANSI C63.10: 2013
Limits	: $\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth, whichever is greater
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2022-04-06
Input voltage	: AC 120V, 60Hz
Operation mode	: C
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B.

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5.1.8 Number of Hopping Frequency

RESULT:

Pass

Test Specification

Test standard	: FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	: ANSI C63.10: 2013
Limits	: ≥ 15 non-overlapping channels
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2022-04-06
Input voltage	: AC 120V, 60Hz
Operation mode	: C
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B.

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5.1.9 Time of Occupancy

RESULT:

Pass

Test Specification

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 0.4s
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-04-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	C
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 °C
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

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5.1.10 Conducted Spurious Emissions Measured in 100 kHz Bandwidth**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	: ANSI C63.10: 2013
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: Refer to test result
Input voltage	: AC 120V, 60Hz
Operation mode	: A, B
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to test plots, and compliance is achieved as well.

For the measurement records, refer to the appendix B & C.

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Test Report No.:

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5.1.11 Radiated Spurious Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Section 8.9 & 8.10
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2022-04-15 to 2022-04-16
Input voltage	: AC 120V, 60Hz
Operation mode	: A, B
Test channel	: Low / Middle / High
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B & C.

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Test Report No.:Seite 25 von 26
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5.1.12 Radiated Emissions

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.109(a) & 15.209(a) ICES-003 Section 3.2.2
Basic standard	: ANSI C63.4:2014
Frequency range	: Refer to FCC Part15.33
Classification	: Class B
Limits	: FCC Part 15.109(a) & 15.209(a) ICES-003 Table 2 & 4
Kind of test site	: 3m Semi-Anechoic Chamber

Test Setup

Date of testing	: 2022-04-12 to 2022-04-17
Input voltage	: AC 120V, 60Hz
Operation mode	: D, E
Earthing	: Not connected
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

This testing was carried out on all operation modes, but only the worst case was presented in this report.

For the measurement records, refer to the appendix D.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

7 List of Tables

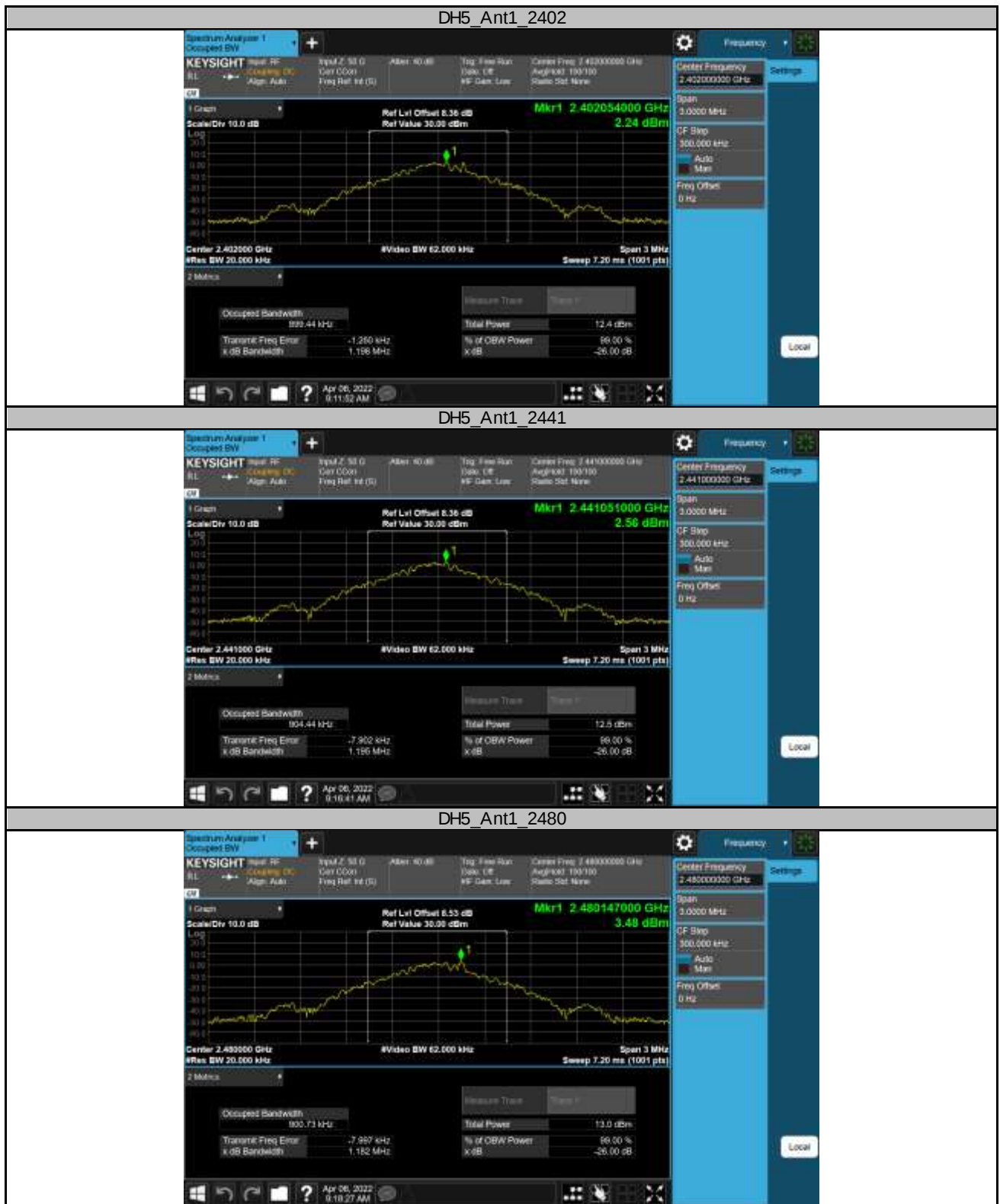
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Appendix B: Test Results of Bluetooth BR/EDR mode

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Appendix B.1: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.89944	2401.549	2402.448	---	PASS
		2441	0.90444	2440.540	2441.444	---	PASS
		2480	0.90073	2479.542	2480.442	---	PASS
3DH5	Ant1	2402	1.2590	2401.358	2402.617	---	PASS
		2441	2.2443	2439.552	2441.797	---	PASS
		2480	1.3308	2479.326	2480.656	---	PASS



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix B.2: Test Results of 20dB Bandwidth

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.954	2401.517	2402.471	---	PASS
		2441	0.951	2440.517	2441.468	---	PASS
		2480	0.942	2479.529	2480.471	---	PASS
3DH5	Ant1	2402	1.299	2401.340	2402.639	---	PASS
		2441	1.317	2440.322	2441.639	---	PASS
		2480	1.314	2479.322	2480.636	---	PASS

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix B.3: Test Results of Carrier Frequency Separation

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	Hop	1.116	≥0.954	PASS
3DH5	Ant1	Hop	1.006	≥0.878	PASS

DH5_Ant1_Hop



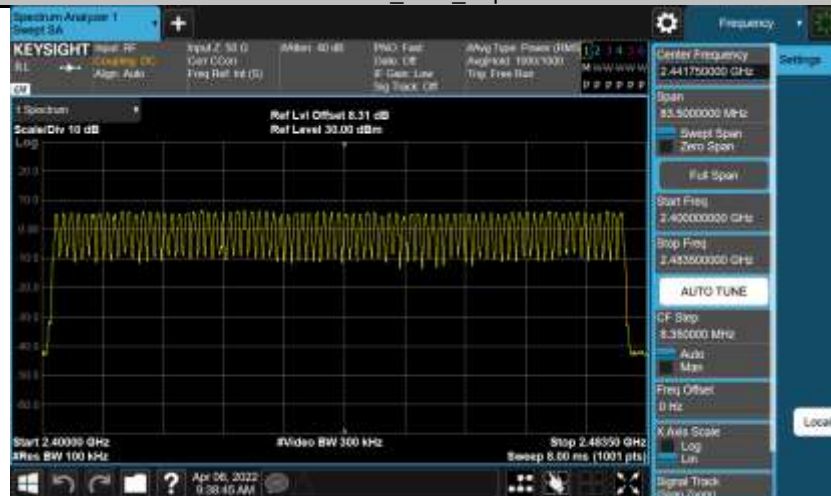
3DH5_Ant1_Hop



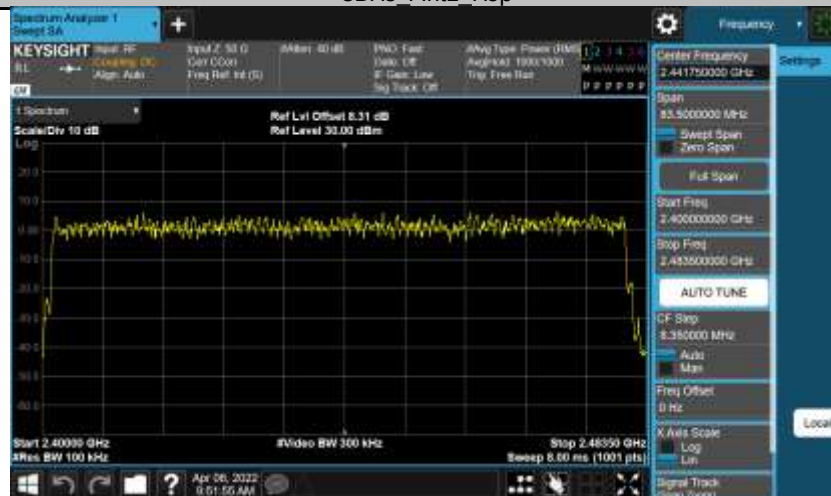
Appendix B.4: Test Results of Number of Hopping Frequency

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

DH5_Ant1_Hop



3DH5_Ant1_Hop



Appendix B.5: Test Results of Time of Occupancy

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.38	311	0.119	≤0.4	PASS
DH3	Ant1	Hop	1.64	156	0.255	≤0.4	PASS
DH5	Ant1	Hop	2.89	118	0.34	≤0.4	PASS
3DH1	Ant1	Hop	0.39	309	0.12	≤0.4	PASS
3DH3	Ant1	Hop	1.64	158	0.259	≤0.4	PASS
3DH5	Ant1	Hop	2.89	102	0.295	≤0.4	PASS

DH1_Ant1_Hop



DH3_Ant1_Hop





DH5_Ant1_Hop



3DH1_Ant1_Hop

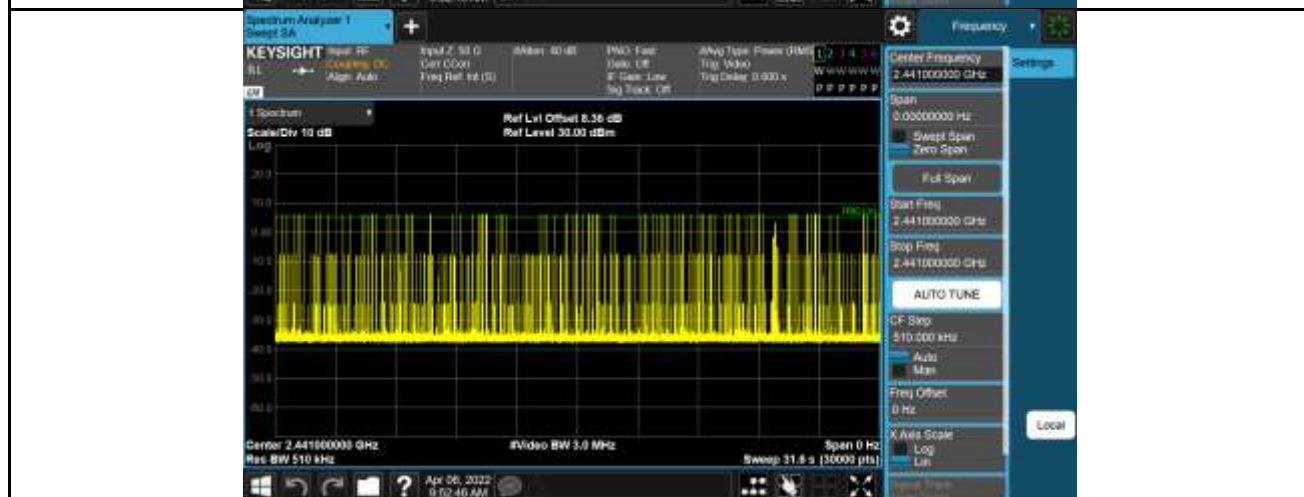


3DH3_Ant1_Hop





3DH5_Ant1_Hop



Appendix B.6: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Conducted Spurious Emission

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	4.98	4.98	---	PASS
			30~1000	4.98	-62.95	≤-15.02	PASS
			1000~26500	4.98	-54.26	≤-15.02	PASS
		2441	Reference	5.38	5.38	---	PASS
			30~1000	5.38	-62.47	≤-14.62	PASS
			1000~26500	5.38	-54.65	≤-14.62	PASS
		2480	Reference	5.59	5.59	---	PASS
			30~1000	5.59	-62.21	≤-14.41	PASS
			1000~26500	5.59	-53.9	≤-14.41	PASS
3DH5	Ant1	2402	Reference	3.02	3.02	---	PASS
			30~1000	3.02	-63.1	≤-16.98	PASS
			1000~26500	3.02	-52.84	≤-16.98	PASS
		2441	Reference	4.10	4.10	---	PASS
			30~1000	4.10	-63.23	≤-15.9	PASS
			1000~26500	4.10	-53.34	≤-15.9	PASS
		2480	Reference	4.78	4.78	---	PASS
			30~1000	4.78	-62.24	≤-15.22	PASS
			1000~26500	4.78	-53.45	≤-15.22	PASS

DH5_Ant1_2402_0-Reference



DH5_Ant1_2402_30-1000



DH5_Ant1_2402_1000-26500



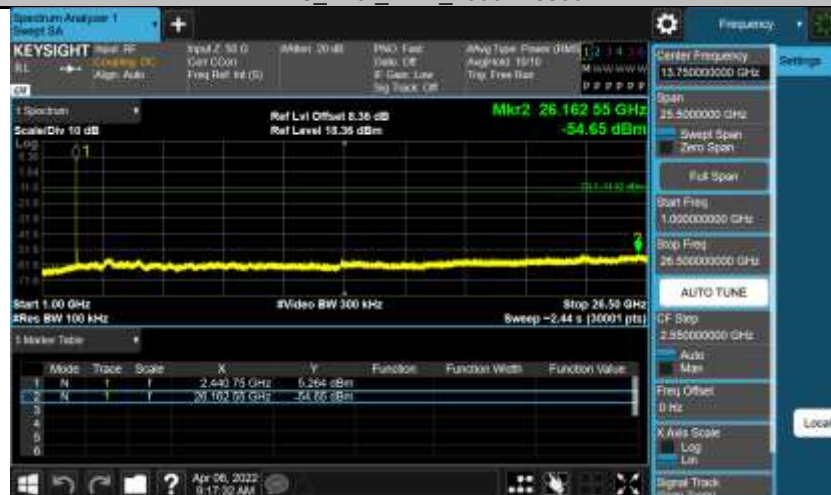
DH5_Ant1_2441_0-Reference



DH5_Ant1_2441_30-1000



DH5_Ant1_2441_1000-26500



DH5_Ant1_2480_0-Reference



DH5_Ant1_2480_30-1000



DH5_Ant1_2480_1000-26500



3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



3DH5_Ant1_2402_1000~26500



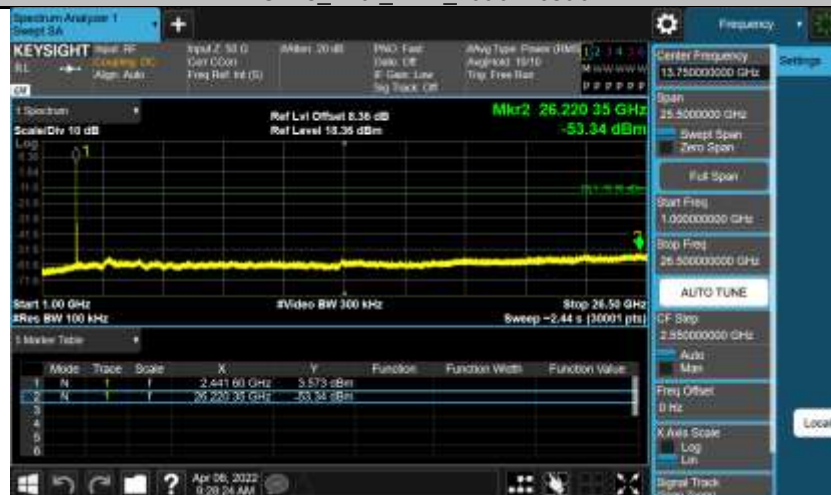
3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0-Reference



3DH5_Ant1_2480_30-1000



3DH5_Ant1_2480_1000-26500



Band Edge

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	5.65	-51.06	≤-14.35	PASS
		High	2480	6.11	-50.58	≤-13.89	PASS
		Low	Hop_2402	5.58	-49.98	≤-14.42	PASS
		High	Hop_2480	6.51	-49.84	≤-13.49	PASS
3DH5	Ant1	Low	2402	4.52	-35.52	≤-15.48	PASS
		High	2480	6.78	-45.42	≤-13.22	PASS
		Low	Hop_2402	2.53	-50.13	≤-17.47	PASS
		High	Hop_2480	5.53	-50	≤-14.47	PASS

DH5_Ant1_Low_2402



DH5_Ant1_High_2480



DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402



3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



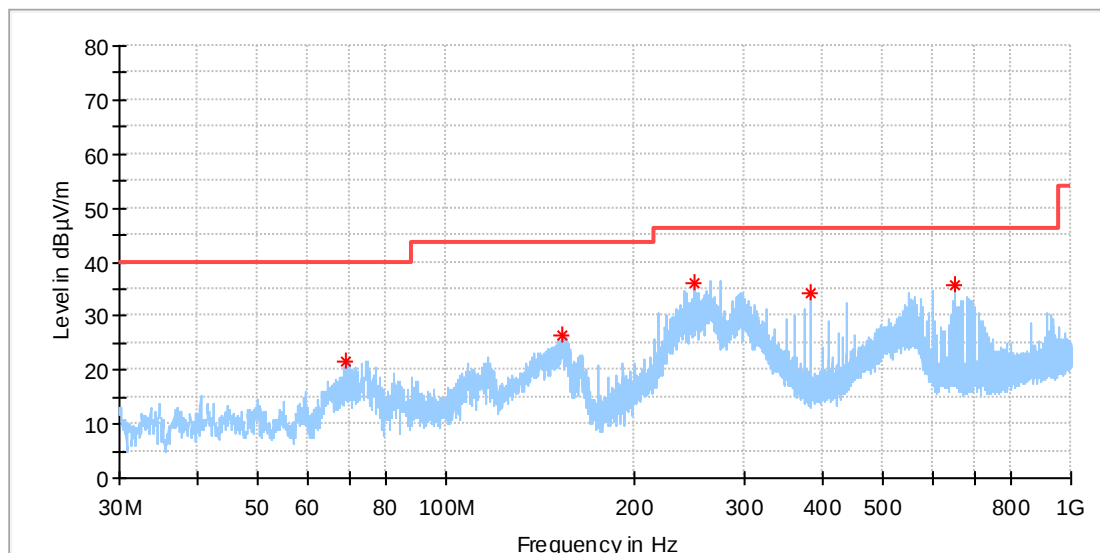
Appendix B.7: Test Results of Radiated Spurious Emissions

Note: 1. This testing was carried out on different modulations, but only the worst case was presented in this report. 2. Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30MHz - 1GHz

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
TestMode:	BR_DH5_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

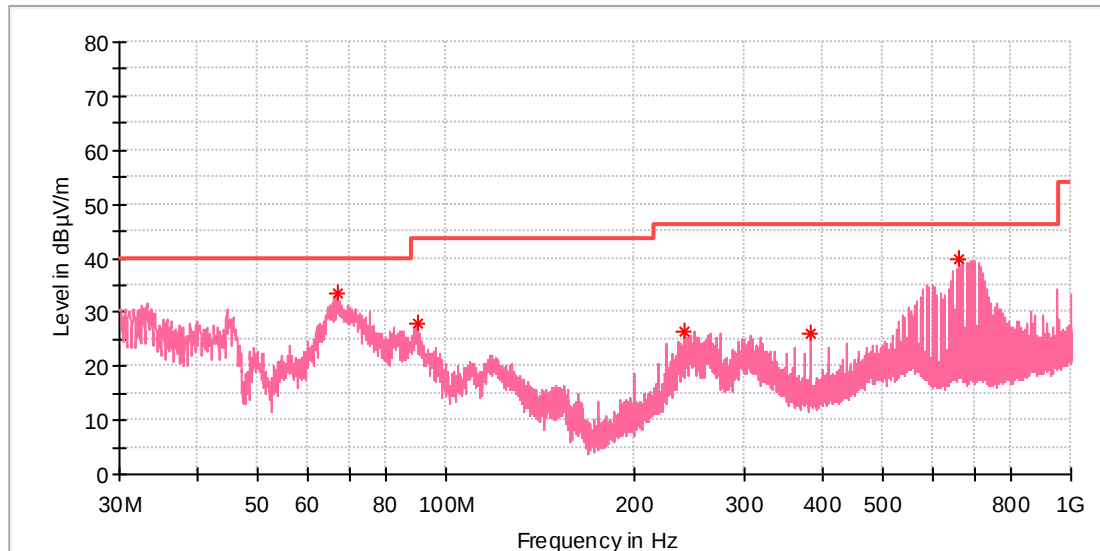
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
69.210385	21.51	40.00	18.49	100.0	H	87.0	-21.9
153.786923	26.31	43.50	17.19	100.0	H	94.0	-22.3
250.003462	36.20	46.00	9.80	100.0	H	47.0	-17.7
383.975385	34.35	46.00	11.65	100.0	H	71.0	-14.5
650.016539	35.64	46.00	10.36	100.0	H	163.0	-9.4

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
Model: ITP-8
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168362723/A003230744-003
Test Voltage: 120V/60Hz
Remark: Temp 23 Humi:56%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
67.083846	33.43	40.00	6.57	100.0	V	0.0	-21.1
90.102692	27.87	43.50	15.63	100.0	V	148.0	-21.3
240.005000	26.37	46.00	19.63	100.0	V	165.0	-18.0
383.975385	26.21	46.00	19.79	100.0	V	6.0	-14.5
660.500000	39.70	46.00	6.30	100.0	V	33.0	-9.2

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

Prüfbericht - Produkte

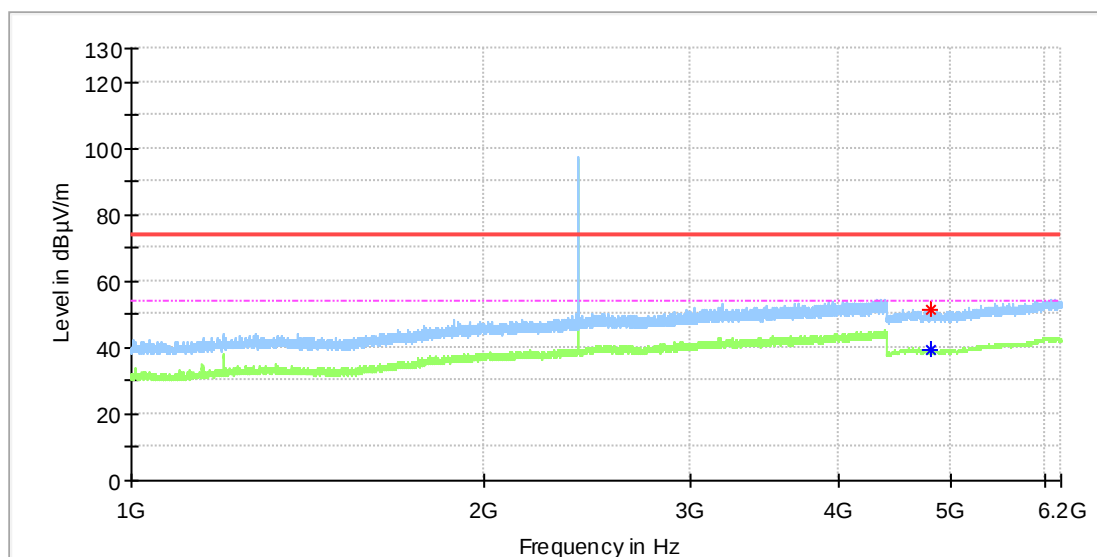
Test Report - Products

1GHz - 18GHz

Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

**Critical Freqs**

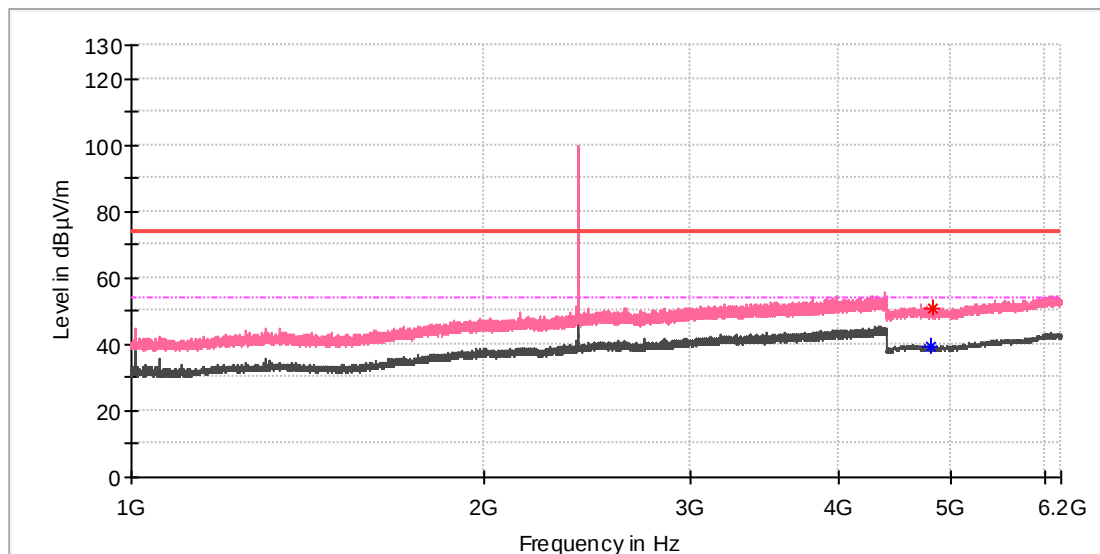
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4802.000000	---	39.46	54.00	14.54	100.0	H	77.0	11.8
4808.500000	51.17	---	74.00	22.83	100.0	H	233.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
Model: ITP-8
Test Mode: BR_DH5_Low channel
Order No/Sample No: 168362723/A003230744-003
Test Voltage: 120V/60Hz
Remark: Temp 23 Humi:56%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

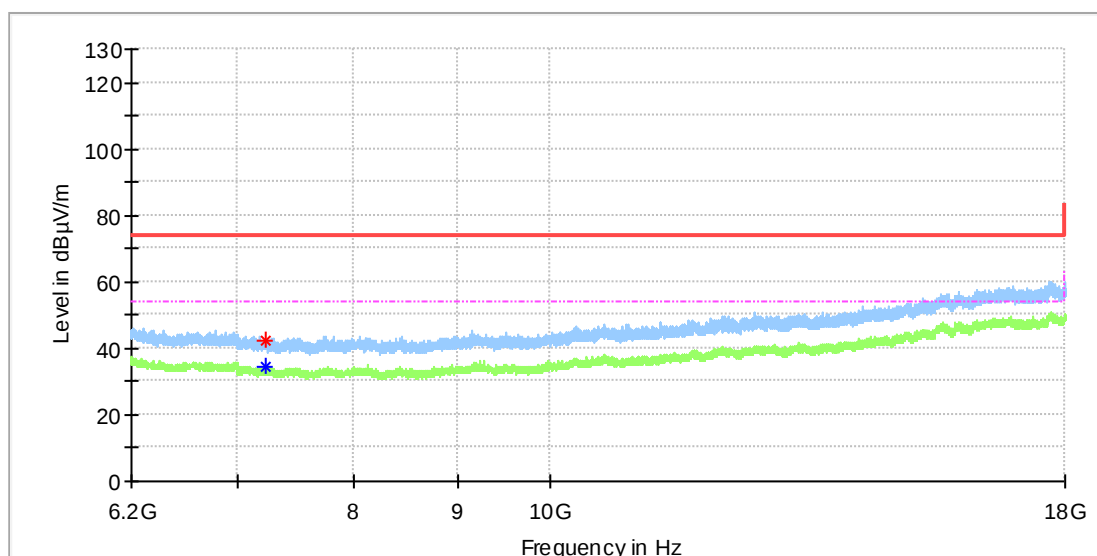
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4802.500000	---	39.18	54.00	14.82	100.0	V	312.0	11.8
4812.000000	50.55	---	74.00	23.45	100.0	V	67.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

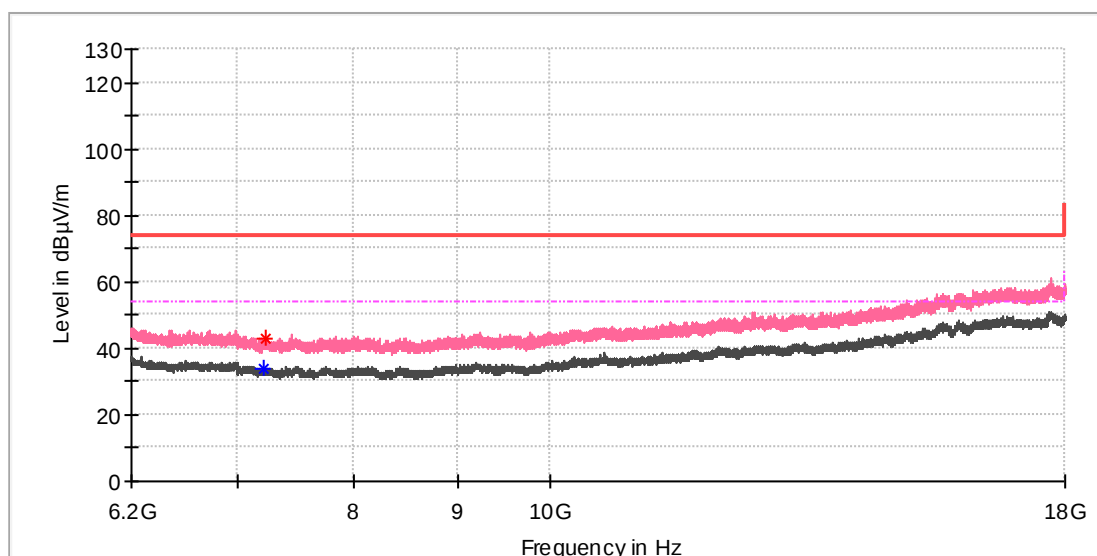
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7221.683333	42.50	---	74.00	31.50	100.0	H	215.0	8.7
7230.041667	---	34.17	54.00	19.83	100.0	H	201.0	8.6

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

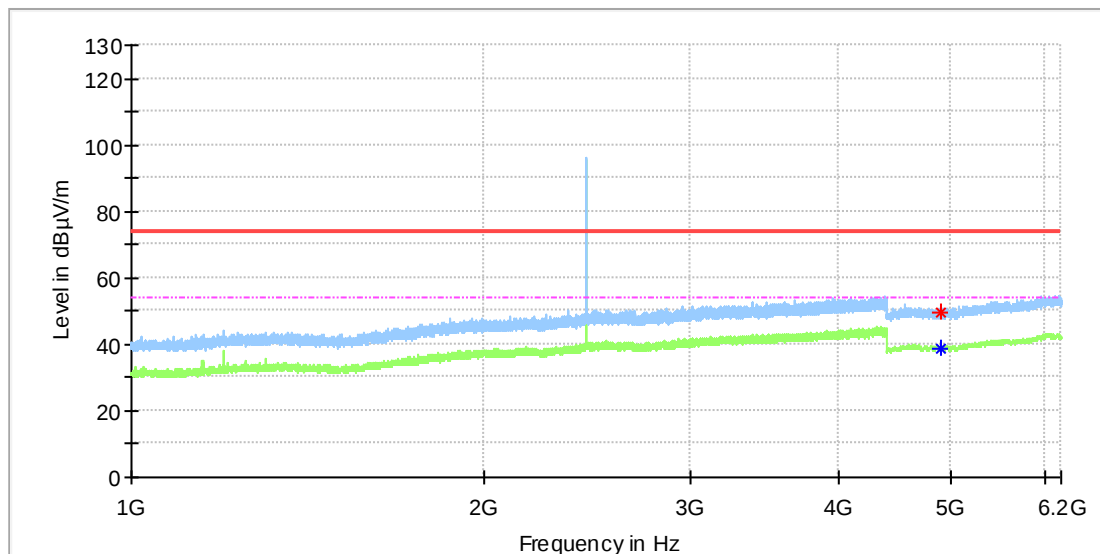
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7203.983333	---	33.73	54.00	20.27	100.0	V	171.0	8.8
7228.566667	42.72	---	74.00	31.28	100.0	V	171.0	8.6

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
 Model: ITP-8
 Test Mode: BR_DH5_Mid channel
 Order No/Sample No: 168362723/A003230744-003
 Test Voltage: 120V/60Hz
 Remark: Temp 23 Humi:56%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

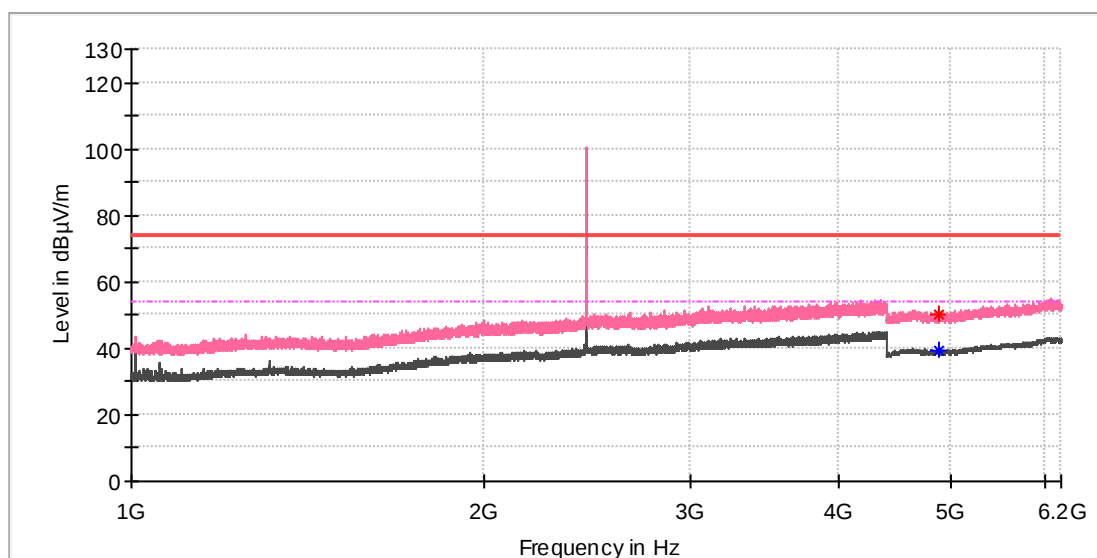
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4889.500000	---	38.81	54.00	15.19	100.0	H	352.0	11.8
4891.000000	49.83	---	74.00	24.17	100.0	H	337.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

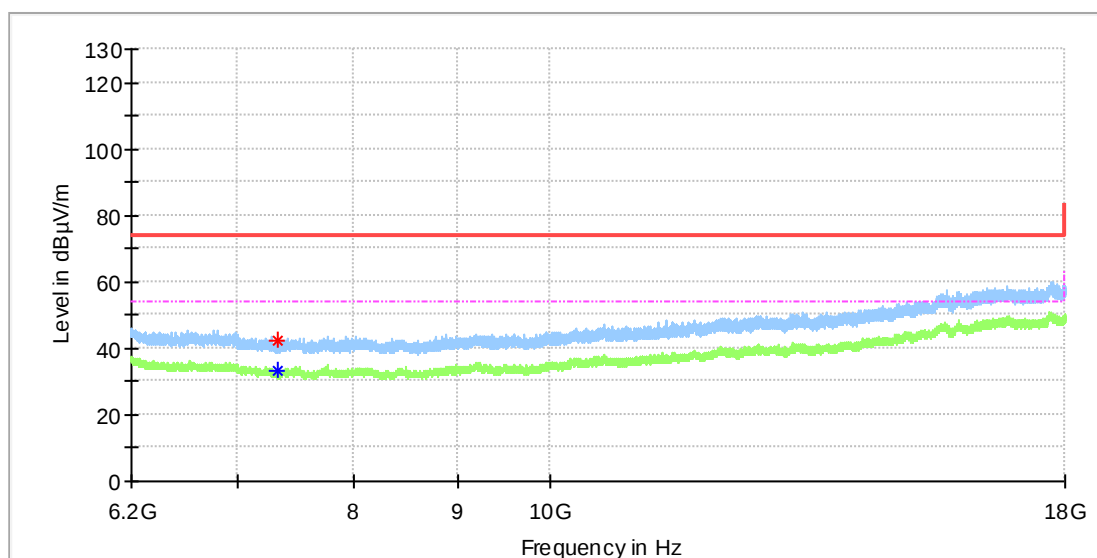
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4879.500000	49.96	---	74.00	24.04	100.0	V	320.0	11.8
4882.000000	---	39.21	54.00	14.79	100.0	V	130.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

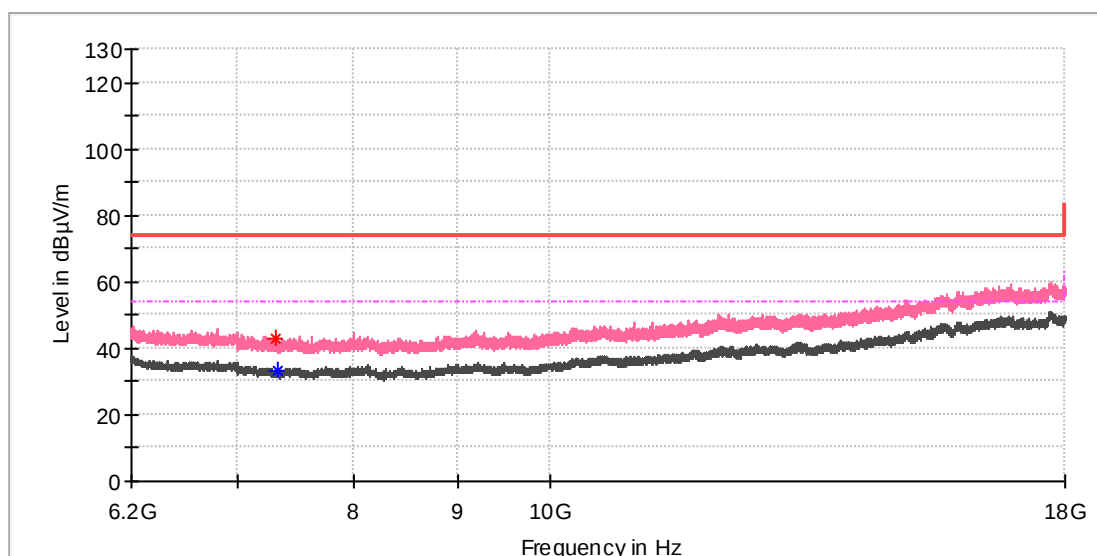
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7324.441667	42.08	---	74.00	31.92	100.0	H	332.0	8.2
7330.833333	---	33.16	54.00	20.84	100.0	H	197.0	8.1

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

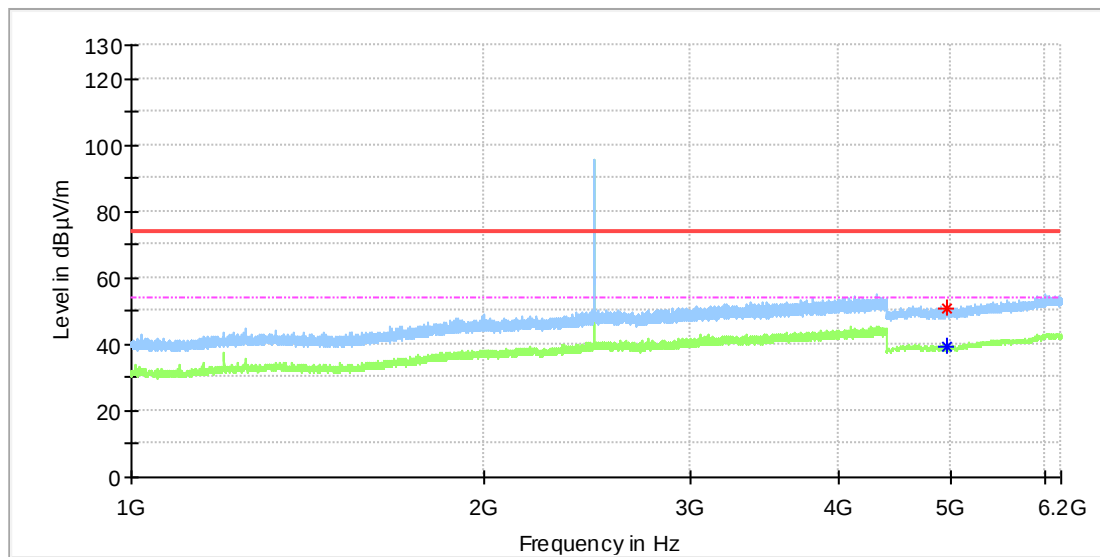
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7309.691667	42.67	---	74.00	31.33	100.0	V	0.0	8.2
7324.441667	---	33.21	54.00	20.79	100.0	V	45.0	8.2

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
 Model: ITP-8
 Test Mode: BR_DH5_High channel
 Order No/Sample No: 168362723/A003230744-003
 Test Voltage: 120V/60Hz
 Remark: Temp 23 Humi:56%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

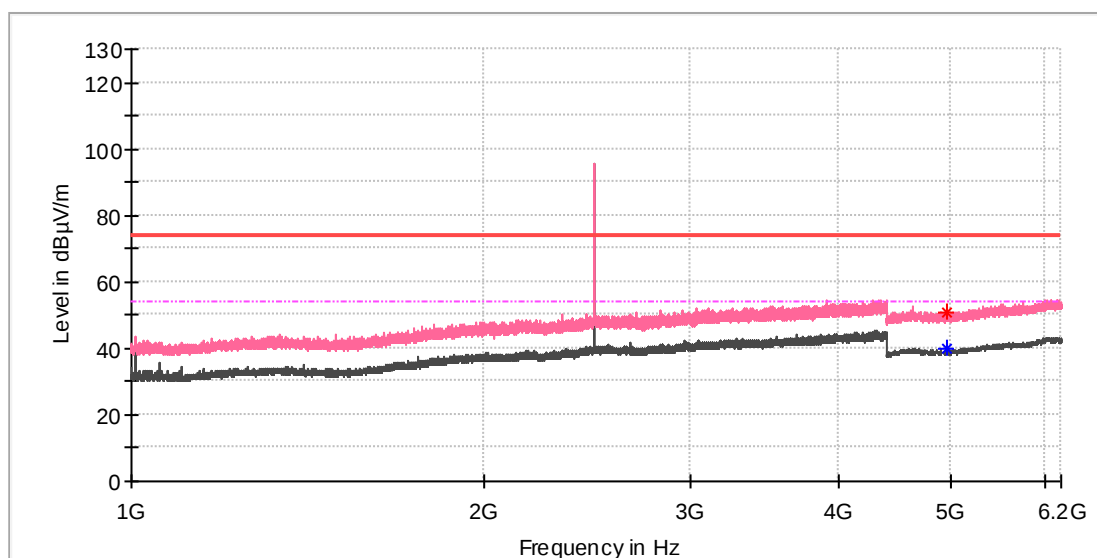
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4958.500000	50.60	---	74.00	23.40	100.0	H	192.0	11.8
4960.000000	---	39.55	54.00	14.45	100.0	H	83.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

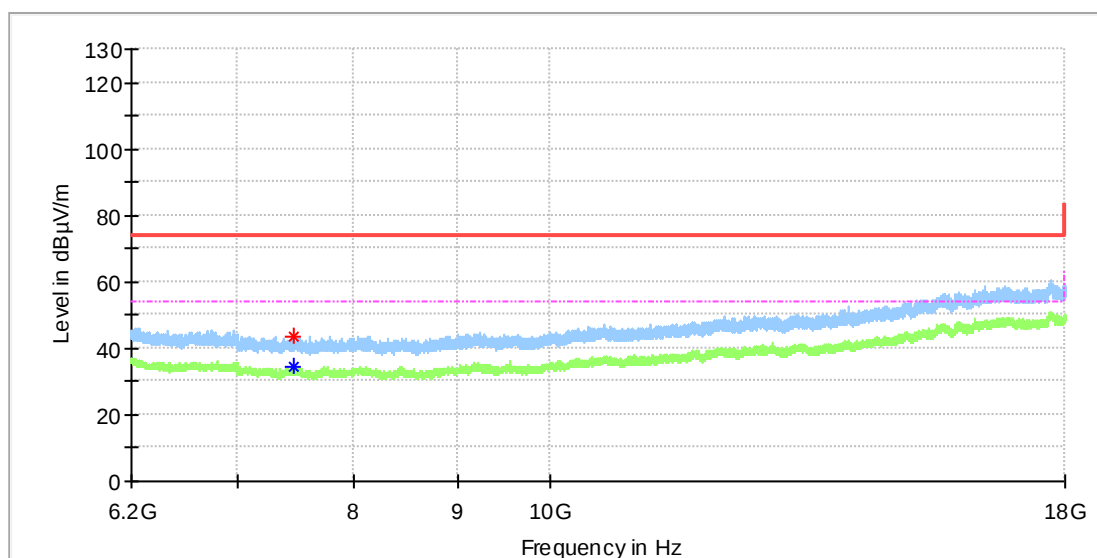
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4947.000000	50.98	---	74.00	23.02	100.0	V	83.0	11.8
4960.000000	---	39.67	54.00	14.33	100.0	V	331.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

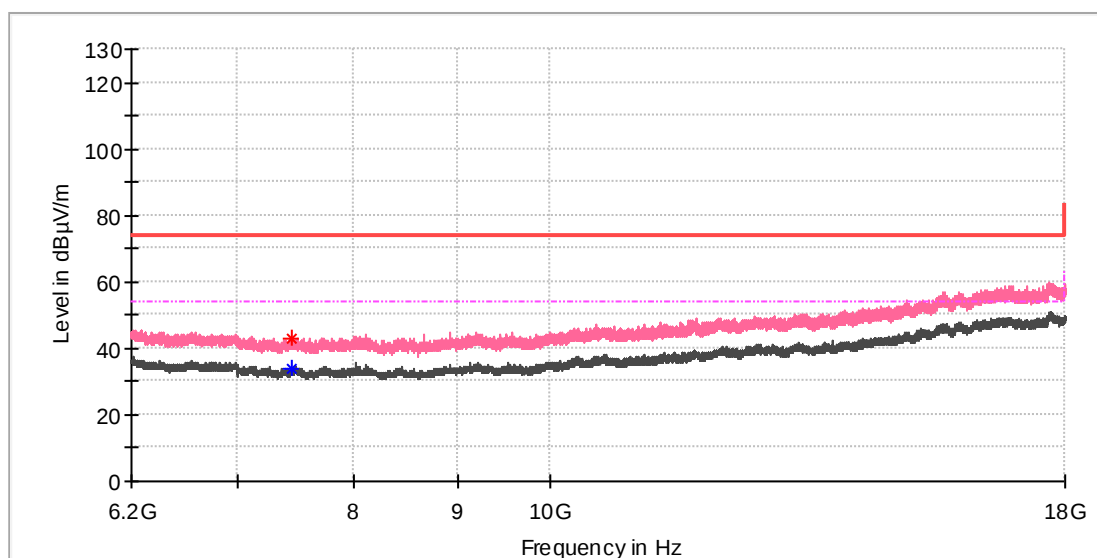
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7468.008333	43.35	---	74.00	30.65	100.0	H	86.0	8.6
7469.975000	---	34.35	54.00	19.65	100.0	H	50.0	8.6

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7444.900000	42.77	---	74.00	31.23	100.0	V	122.0	8.5
7450.800000	---	33.99	54.00	20.01	100.0	V	0.0	8.5

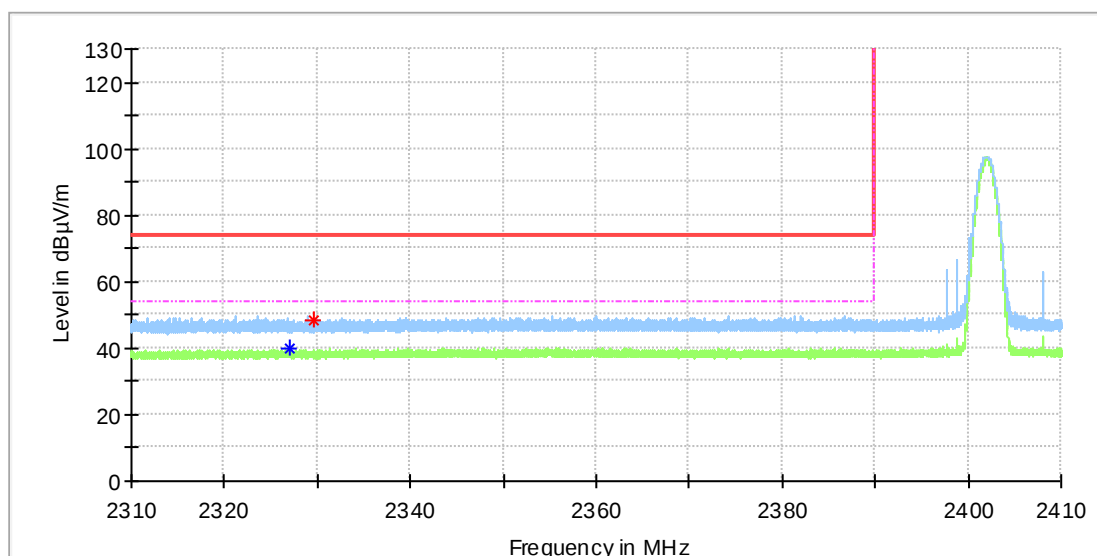
Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Appendix B.8: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

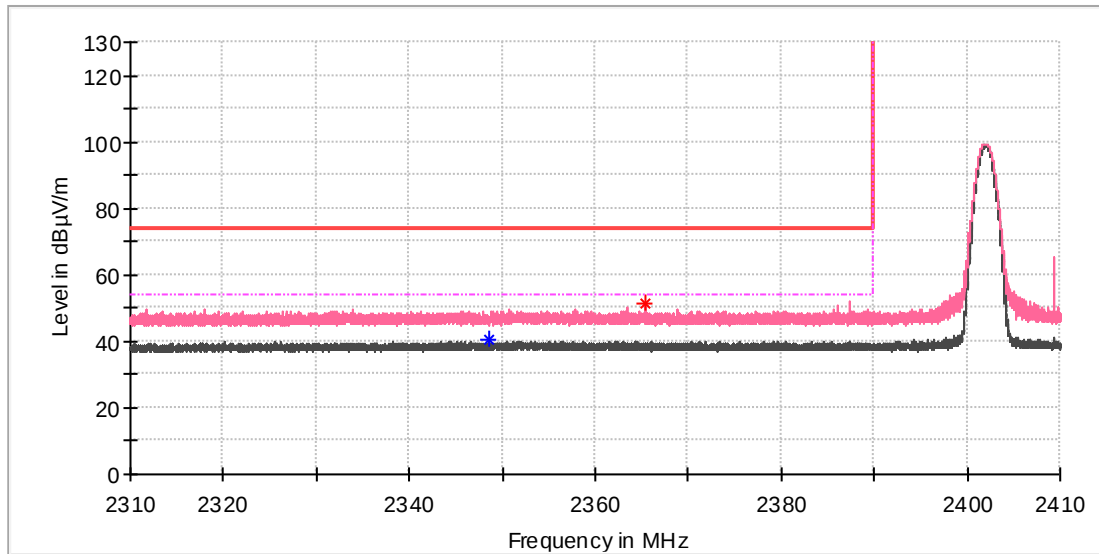
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2326.930000	---	40.20	54.00	13.80	100.0	H	0.0	6.7
2329.660000	48.58	---	74.00	25.42	100.0	H	217.0	6.7

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

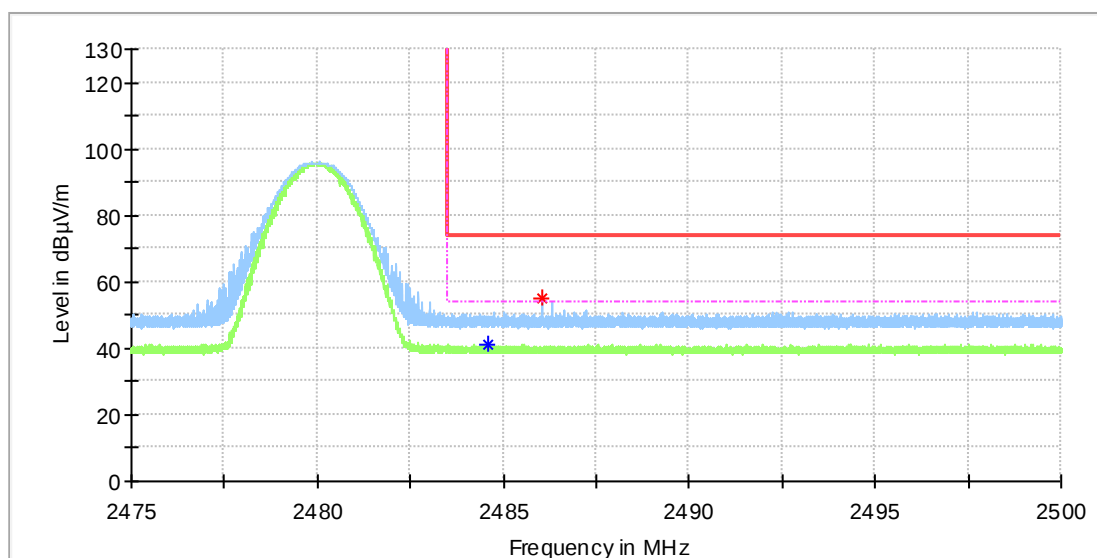
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2348.640000	---	40.35	54.00	13.65	100.0	V	338.0	6.9
2365.355000	51.29	---	74.00	22.71	100.0	V	154.0	6.9

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

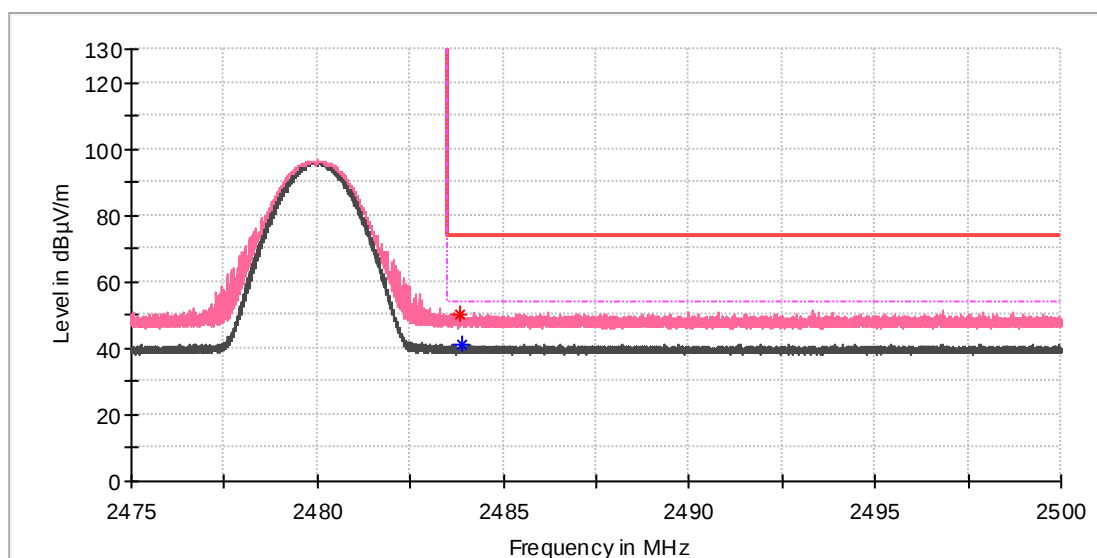
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.615000	---	40.90	54.00	13.10	100.0	H	5.0	7.4
2486.028750	55.21	---	74.00	18.79	100.0	H	31.0	7.4

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.841250	50.36	---	74.00	23.64	100.0	V	347.0	7.4
2483.903750	---	41.29	54.00	12.71	100.0	V	0.0	7.4

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Appendix C: Test Results of Bluetooth Low Energy

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Appendix C.1: Test Results of Conducted Power Spectral Density

TestMode	Antenna	Channel	Result[dBm/3-100 kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-9.46	≤8.00	PASS
		2440	-9.17	≤8.00	PASS
		2480	-8.93	≤8.00	PASS

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix C.2: Test Results of 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.672	2401.648	2402.320	0.5	PASS
		2440	0.680	2439.656	2440.336	0.5	PASS
		2480	0.684	2479.636	2480.320	0.5	PASS

BLE_1M Ant1_2402



BLE_1M Ant1_2440



BLE_1M Ant1_2480



Appendix C.3: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0614	2401.466	2402.527	---	---
		2440	1.0609	2439.469	2440.530	---	---
		2480	1.0535	2479.465	2480.519	---	---

BLE_1M Ant1_2402



BLE_1M Ant1_2440



BLE_1M Ant1_2480



Appendix C.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Conducted Spurious Emission

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	3.34	3.34	---	PASS
			30~1000	3.34	-63.09	≤-16.66	PASS
			1000~26500	3.34	-52.61	≤-16.66	PASS
		2440	Reference	2.90	2.90	---	PASS
			30~1000	2.90	-62.52	≤-17.1	PASS
			1000~26500	2.90	-52.91	≤-17.1	PASS
		2480	Reference	3.13	3.13	---	PASS
			30~1000	3.13	-62.22	≤-16.87	PASS
			1000~26500	3.13	-53.47	≤-16.87	PASS

BLE 1M Ant1 2402 0-Reference



BLE 1M Ant1 2402 30-1000



BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



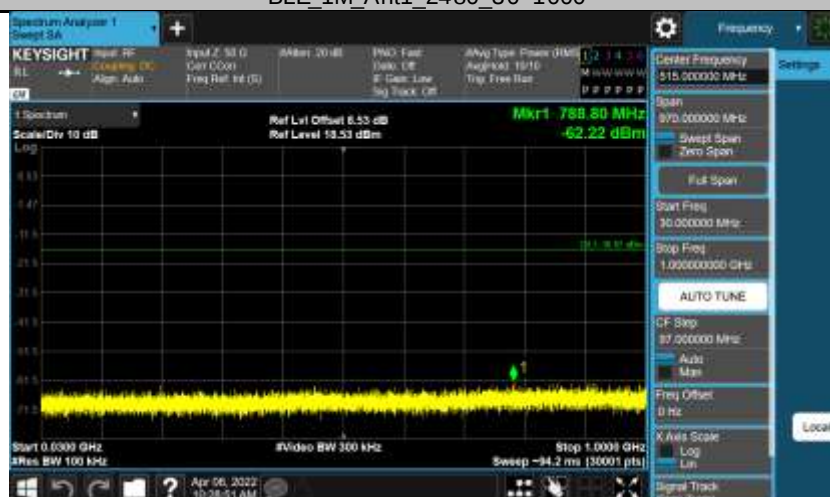
BLE_1M_Ant1_2440_1000~26500



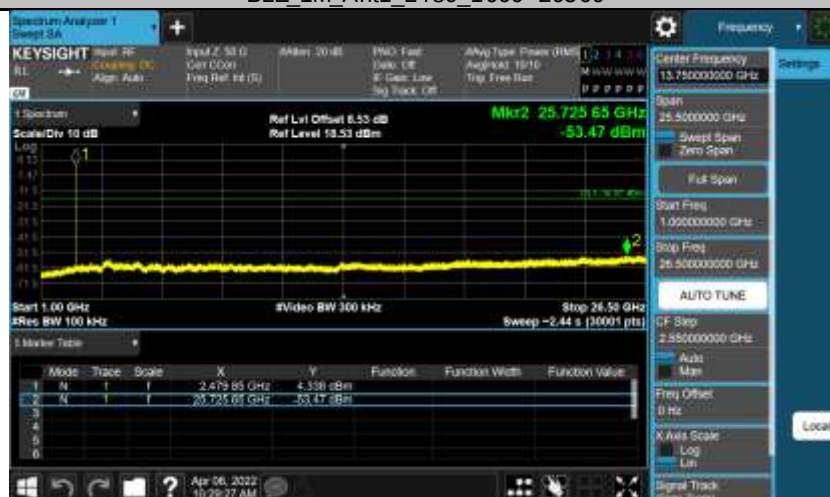
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



Band Edge

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	3.84	-49.6	≤-16.16	PASS
		High	2480	4.30	-48.17	≤-15.7	PASS

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



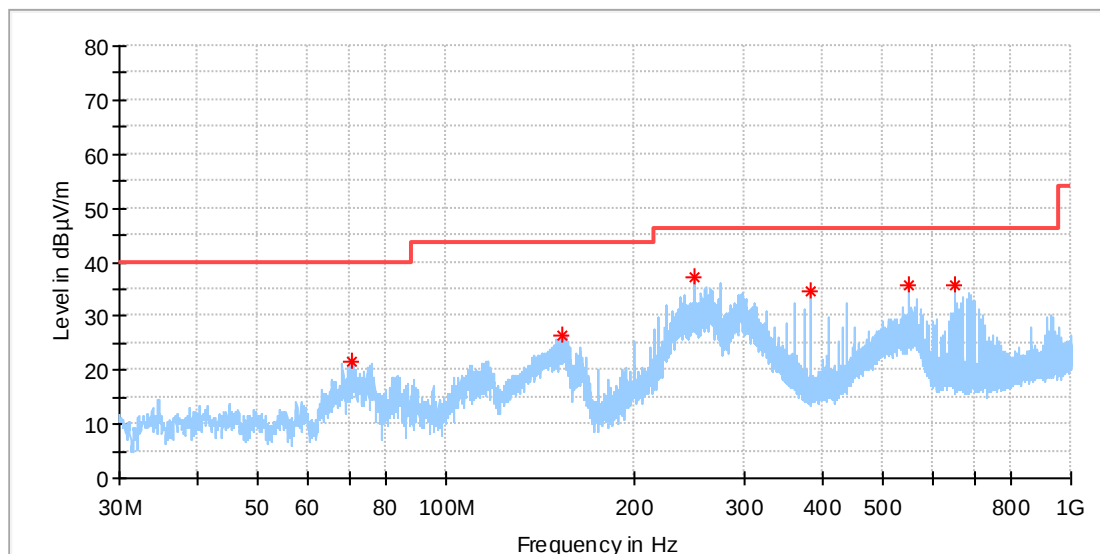
Appendix C.5: Test Results of Radiated Spurious Emissions

Note: Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30 MHz to 1GHz

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

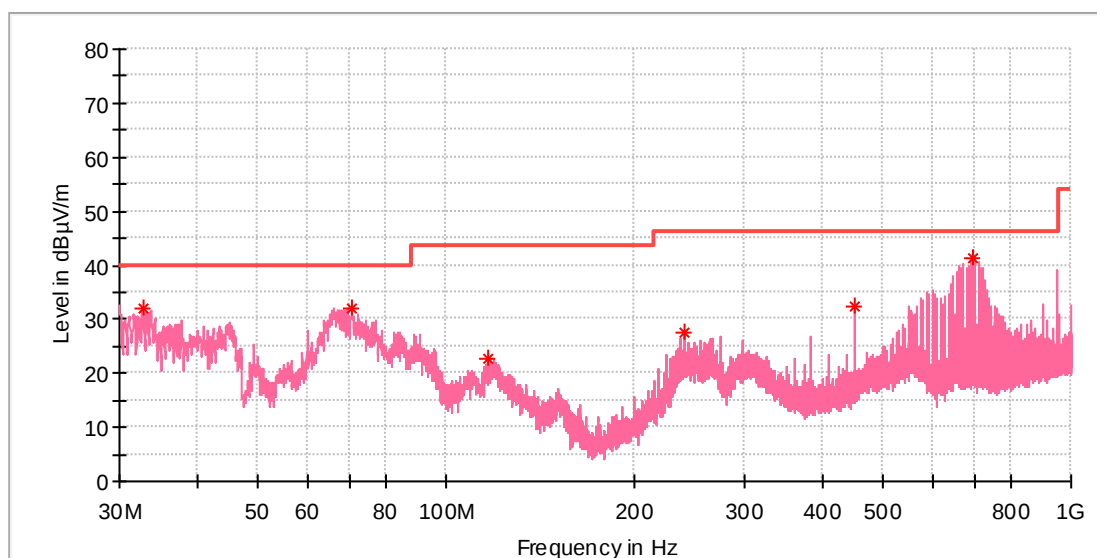
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
70.516154	21.72	40.00	18.28	100.0	H	99.0	-22.3
153.301923	26.45	43.50	17.05	100.0	H	90.0	-22.4
250.003462	37.15	46.00	8.85	100.0	H	233.0	-17.7
383.975385	34.63	46.00	11.37	100.0	H	50.0	-14.5
549.994615	35.61	46.00	10.39	100.0	H	140.0	-11.2
650.016539	35.64	46.00	10.36	100.0	H	155.0	-9.4

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
 Model: ITP-8
 Test Mode: BLE_Mid channel
 Order No/Sample No: 168362723/A003230744-003
 Test Voltage: 120V/60Hz
 Remark: Temp 23 Humi:56%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.686154	31.91	40.00	8.09	100.0	V	6.0	-22.9
70.665385	32.16	40.00	7.84	100.0	V	6.0	-22.3
116.330000	22.75	43.50	20.75	100.0	V	124.0	-20.3
240.005000	27.60	46.00	18.40	100.0	V	147.0	-18.0
450.010000	32.49	46.00	13.51	100.0	V	6.0	-13.3
697.360000	41.29	46.00	4.71	100.0	V	13.0	-8.5

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

Prüfbericht - Produkte

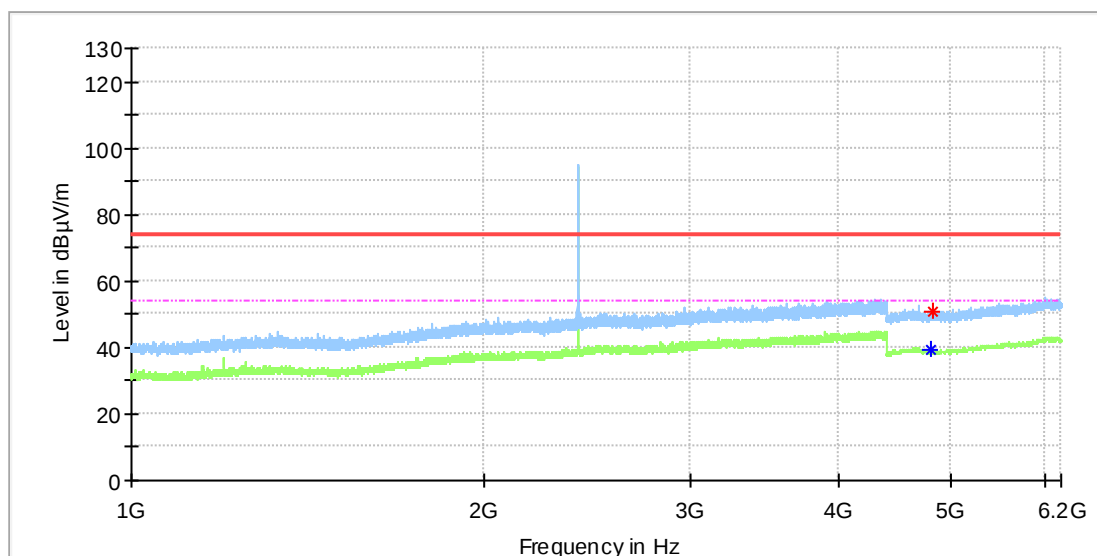
Test Report - Products

1GHz-18GHz

Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

**Critical_Freqs**

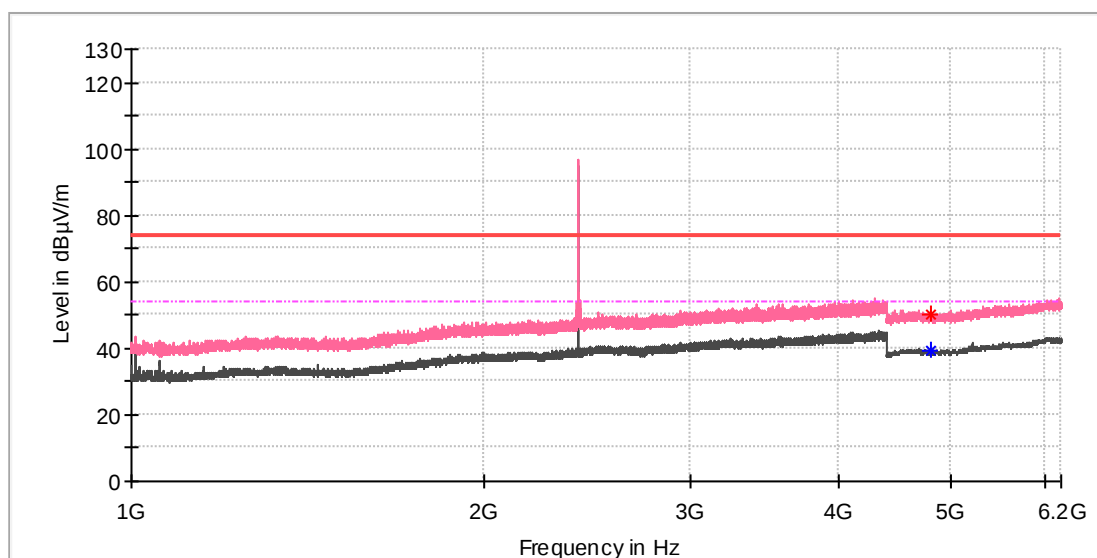
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4809.000000	---	39.33	54.00	14.67	100.0	H	78.0	11.8
4813.000000	50.59	---	74.00	23.41	100.0	H	217.0	11.8

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

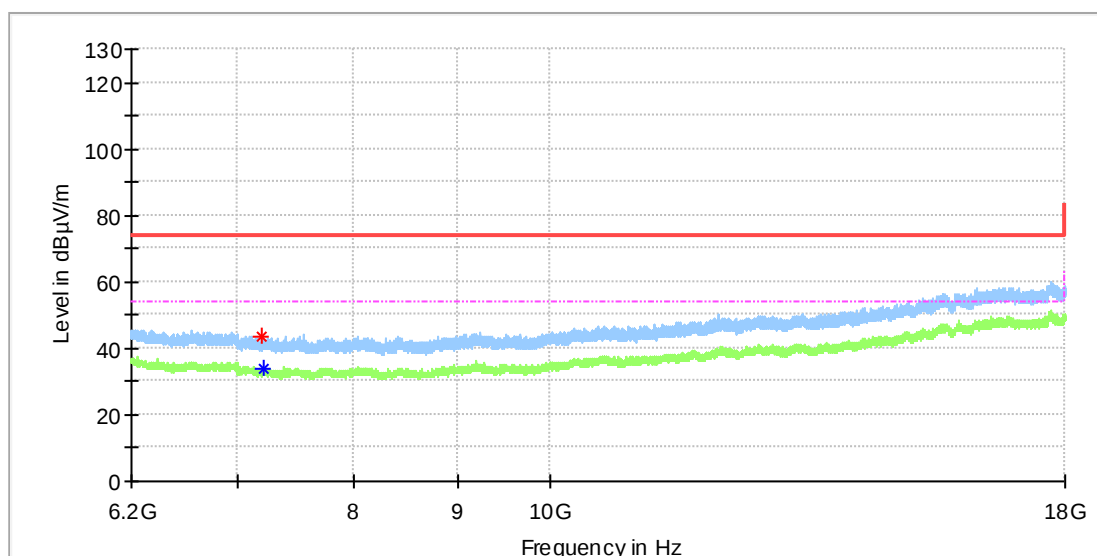
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4802.500000	50.19	---	74.00	23.81	100.0	V	12.0	11.8
4802.500000	---	39.39	54.00	14.61	100.0	V	12.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

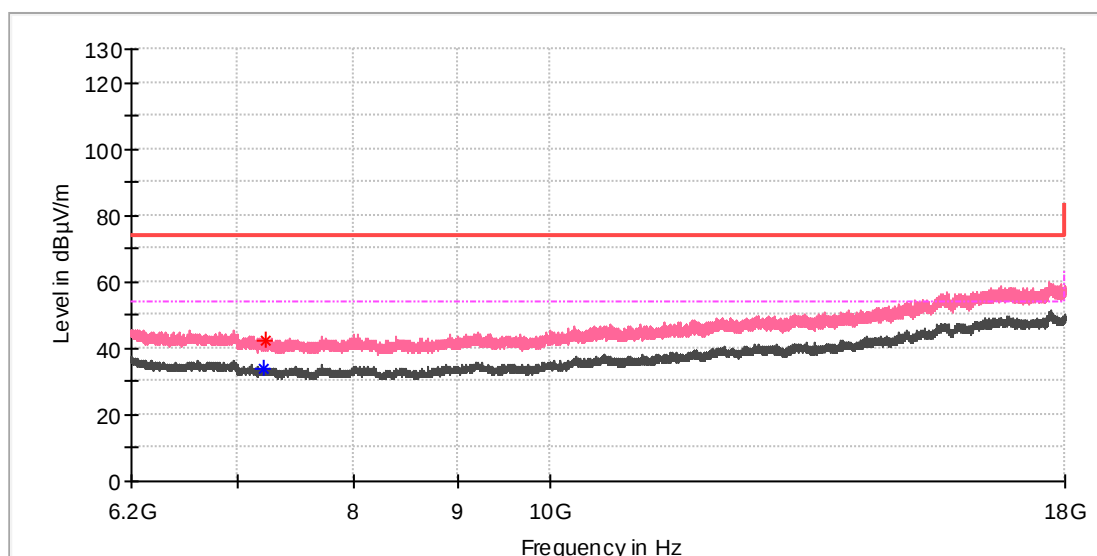
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7190.708333	43.39	---	74.00	30.61	100.0	H	59.0	8.8
7208.900000	---	34.13	54.00	19.87	100.0	H	282.0	8.8

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

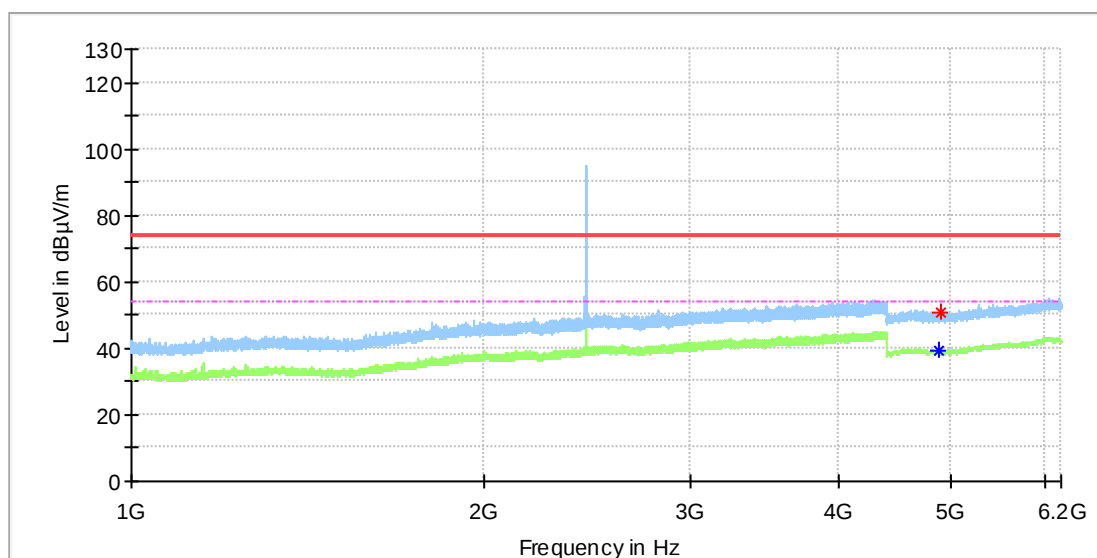
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7215.291667	---	33.68	54.00	20.32	100.0	V	168.0	8.7
7227.583333	42.17	---	74.00	31.83	100.0	V	318.0	8.7

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
Model: ITP-8
Test Mode: BLE_Mid channel
Order No/Sample No: 168362723/A003230744-003
Test Voltage: 120V/60Hz
Remark: Temp 23 Humi:56%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

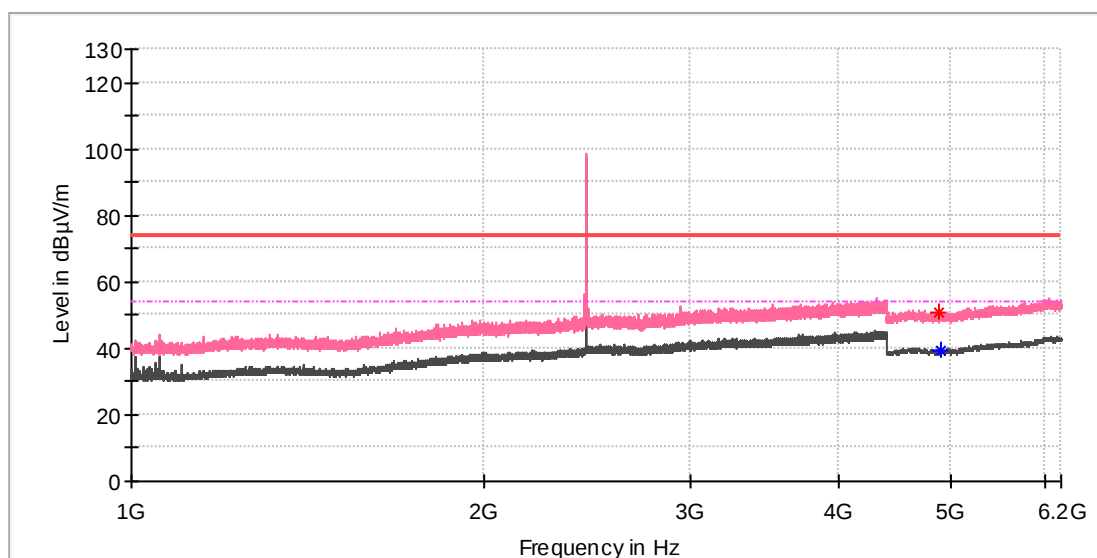
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4869.000000	---	39.45	54.00	14.55	100.0	H	15.0	11.8
4888.000000	50.93	---	74.00	23.07	100.0	H	312.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

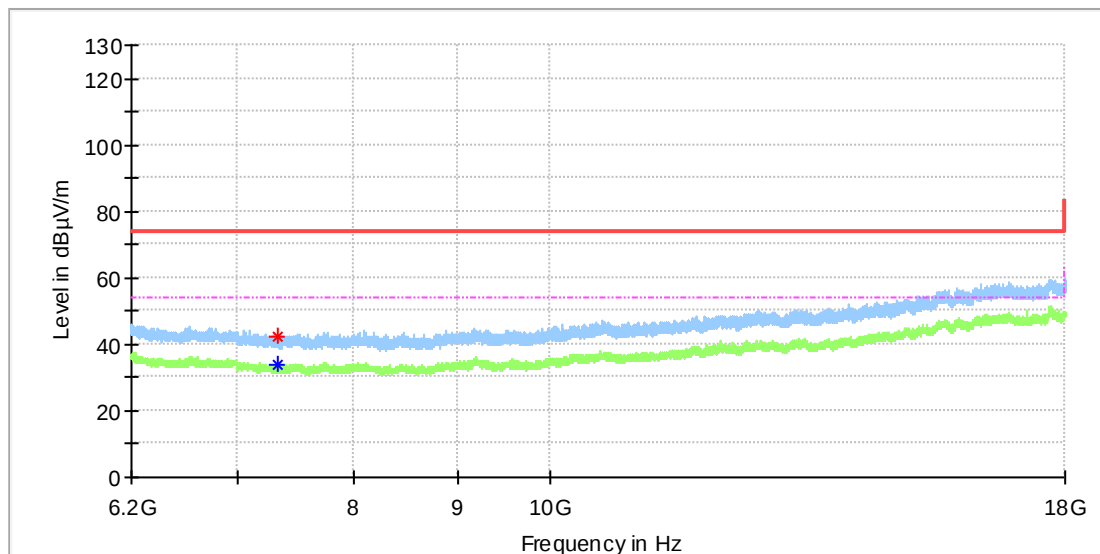
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4876.500000	51.01	---	74.00	22.99	100.0	V	195.0	11.8
4895.500000	---	39.46	54.00	14.54	100.0	V	5.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

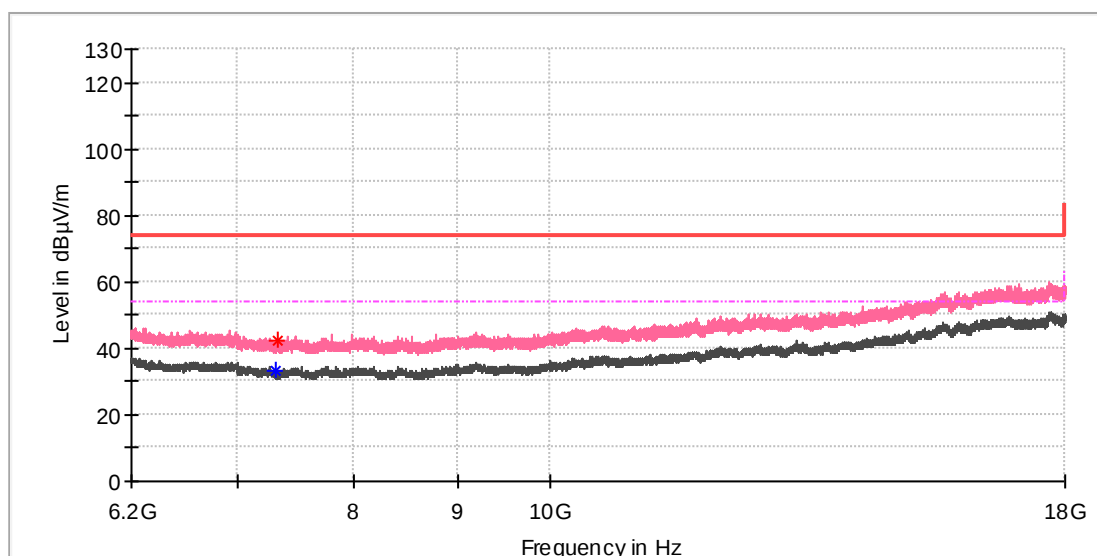
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7326.408333	42.23	---	74.00	31.77	100.0	H	314.0	8.1
7327.883333	---	33.67	54.00	20.33	100.0	H	255.0	8.1

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Mid channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

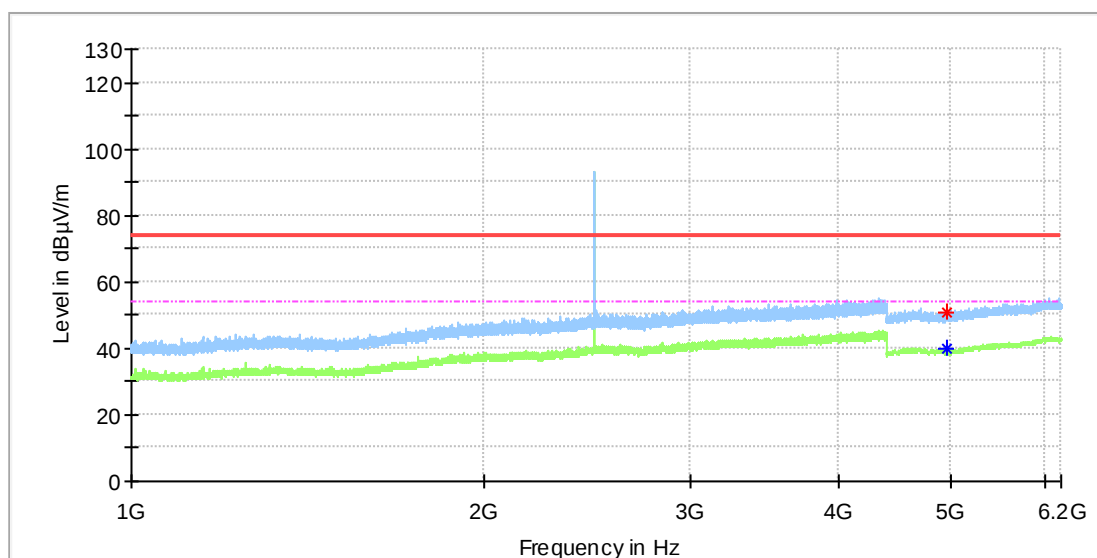
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7314.116667	---	33.38	54.00	20.62	100.0	V	121.0	8.2
7322.966667	42.03	---	74.00	31.97	100.0	V	49.0	8.2

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

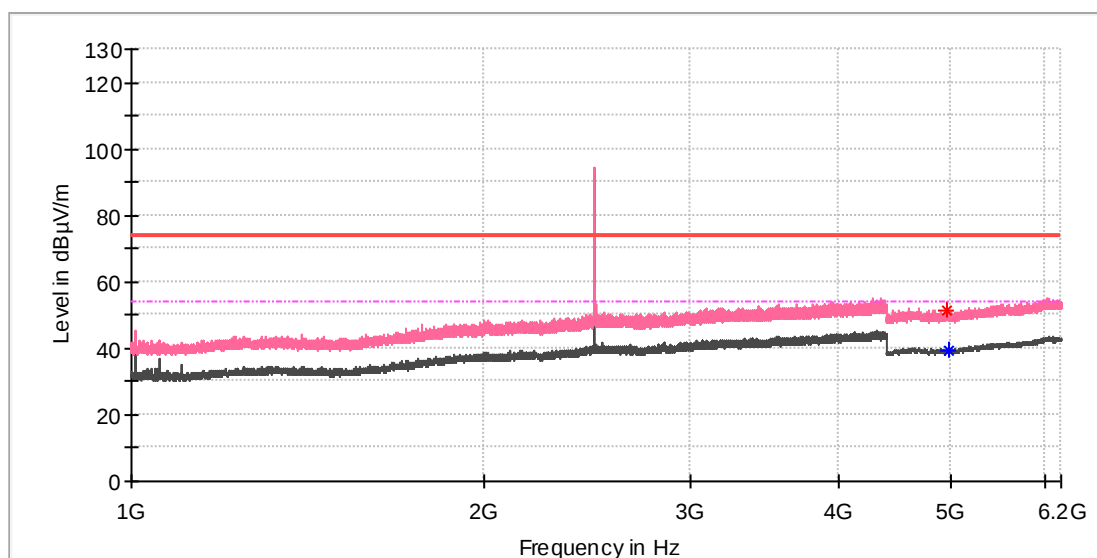
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4955.500000	---	39.74	54.00	14.26	100.0	H	118.0	11.8
4964.500000	51.04	---	74.00	22.96	100.0	H	227.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

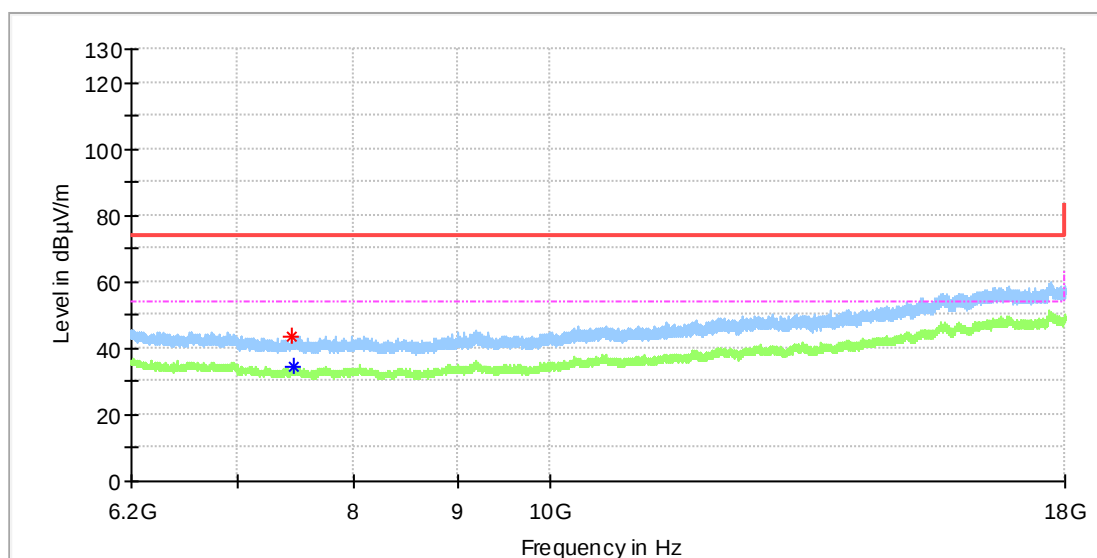
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4949.500000	51.57	---	74.00	22.43	100.0	V	291.0	11.8
4968.000000	---	39.38	54.00	14.62	100.0	V	40.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

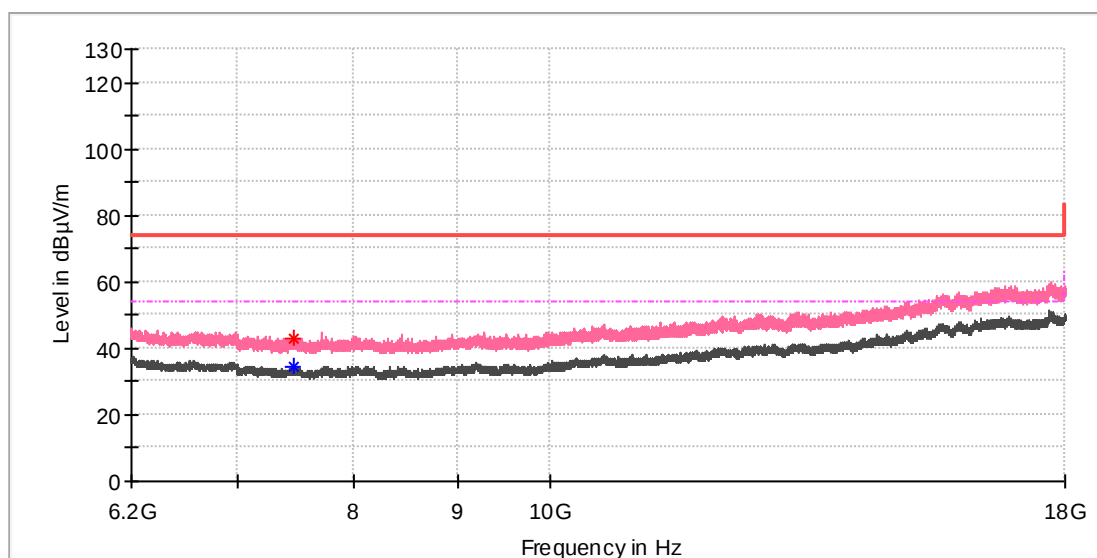
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7450.800000	43.24	---	74.00	30.76	100.0	H	233.0	8.5
7464.075000	---	34.49	54.00	19.51	100.0	H	0.0	8.6

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7453.750000	42.92	---	74.00	31.08	100.0	V	207.0	8.5
7453.750000	---	34.51	54.00	19.49	100.0	V	207.0	8.5

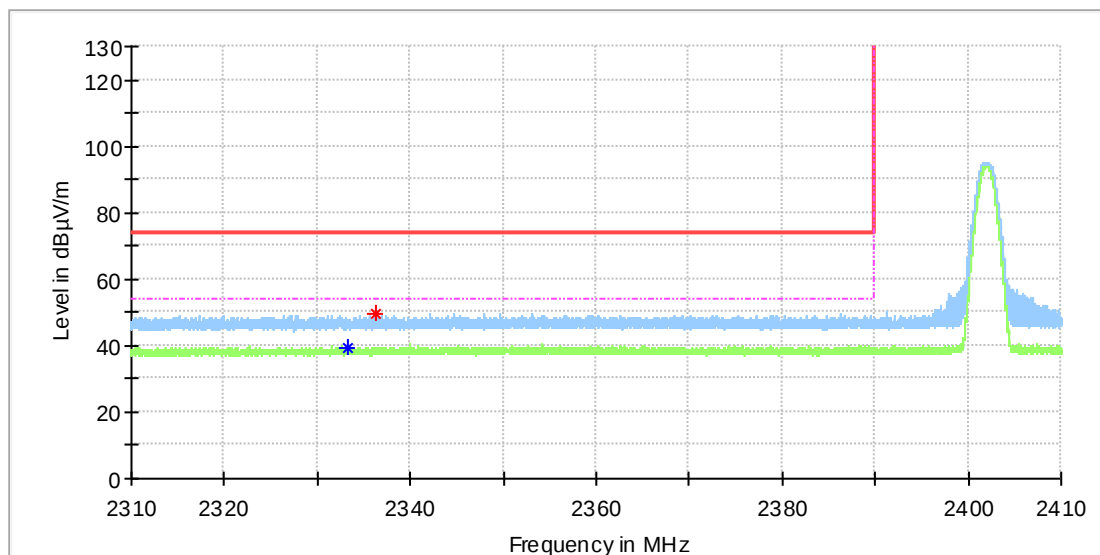
Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

Appendix C.6: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

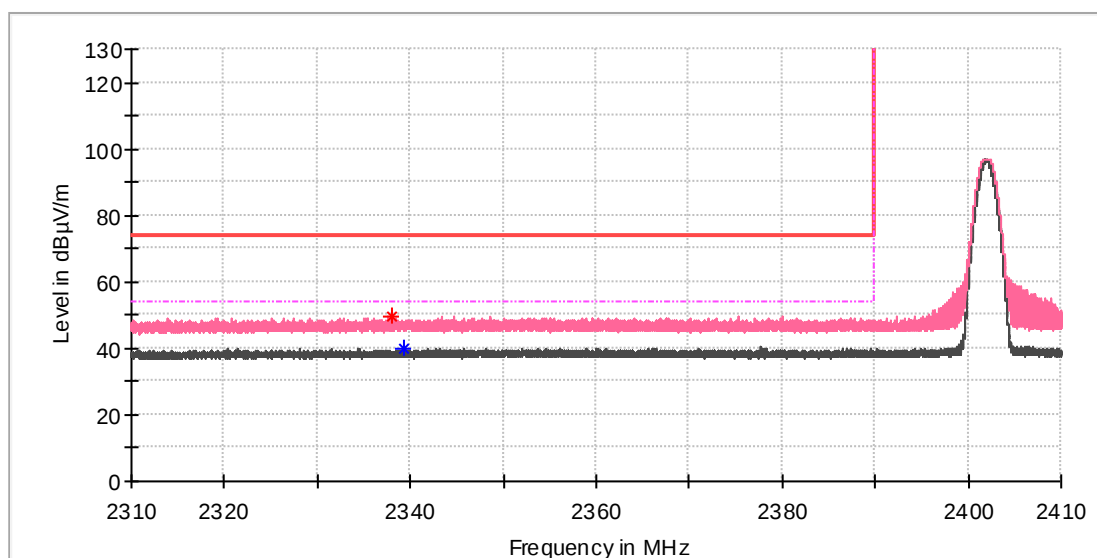
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2333.180000	---	39.20	54.00	14.80	100.0	H	10.0	6.7
2336.360000	49.63	---	74.00	24.37	100.0	H	44.0	6.8

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_Low channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

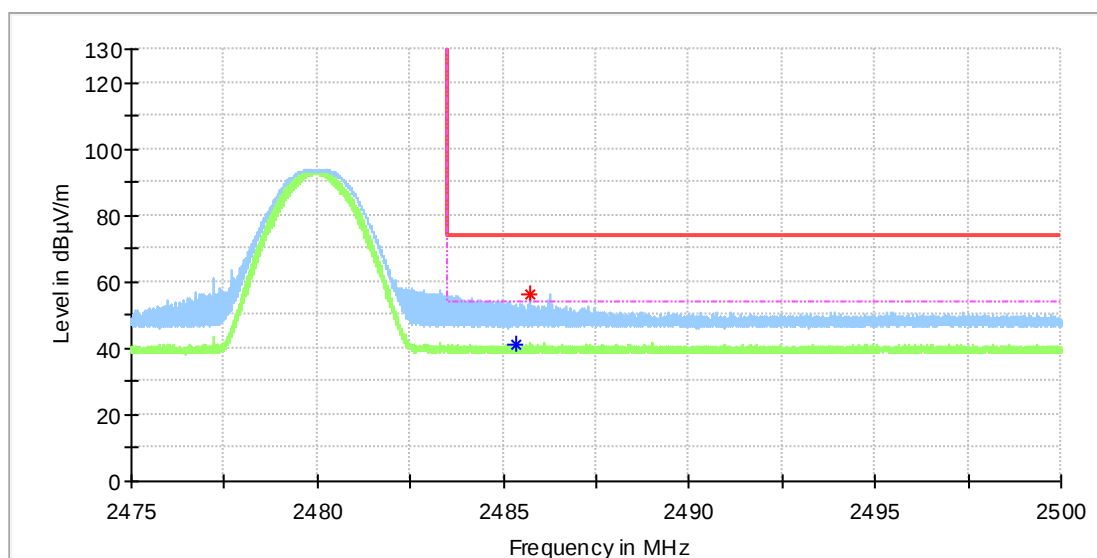
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2338.120000	49.63	---	74.00	24.37	100.0	V	232.0	6.8
2339.370000	---	40.04	54.00	13.96	100.0	V	232.0	6.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

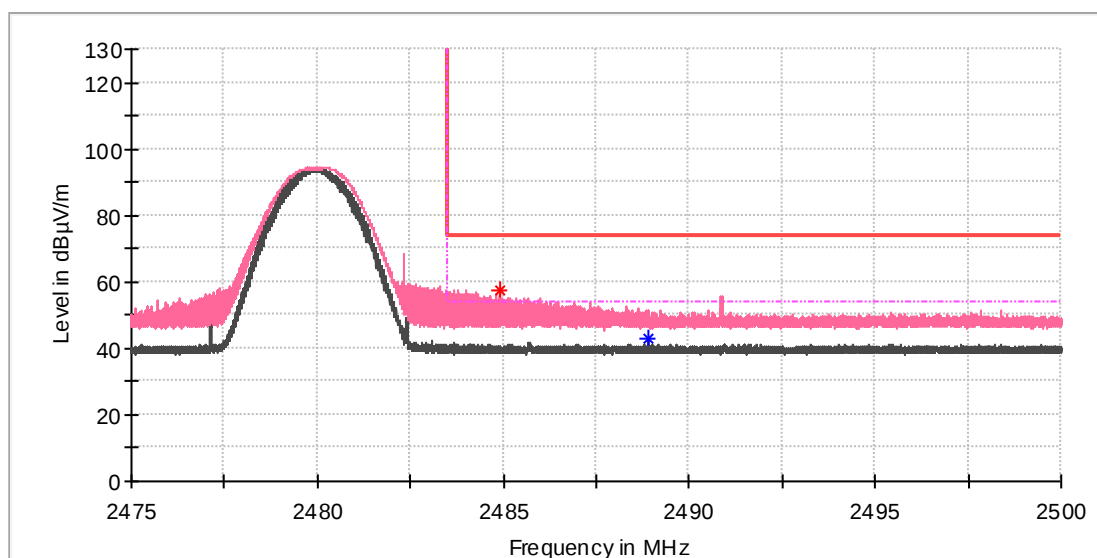
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.350000	---	41.39	54.00	12.61	100.0	H	94.0	7.4
2485.718750	56.41	---	74.00	17.59	100.0	H	131.0	7.4

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Model:	ITP-8
Test Mode:	BLE_High channel
Order No/Sample No:	168362723/A003230744-003
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.887500	57.22	---	74.00	16.78	100.0	V	48.0	7.4
2488.920000	---	42.91	54.00	11.09	100.0	V	36.0	7.4

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

Appendix D: Test Results of FCC 15B & ICES-003

APPENDIX D: TEST RESULTS OF FCC 15B & ICES-003.....	1
APPENDIX D.1: TEST PLOTS OF RADIATED EMISSION, BELOW 1GHz.....	2
<i>Wi-fi connection with Camera and Trumpet on</i>	<i>2</i>
<i>Bluetooth connection</i>	<i>4</i>
APPENDIX D.2: TEST PLOTS OF RADIATED EMISSION, ABOVE 1GHz	6
<i>Wi-fi connection with Camera and Trumpet on</i>	<i>6</i>
<i>Bluetooth connection</i>	<i>8</i>

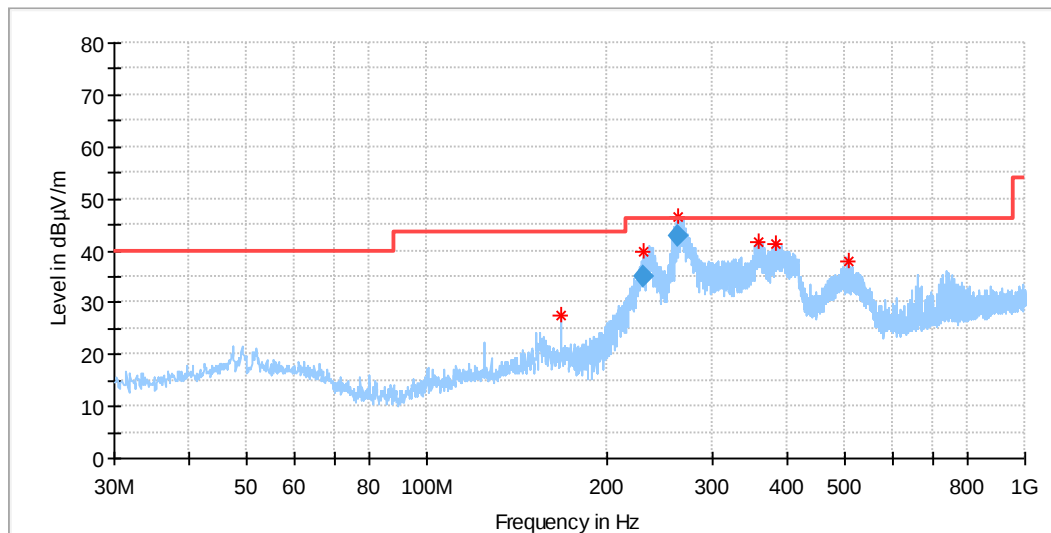
Appendix D.1: Test Plots of Radiated Emission, Below 1GHz

Note: 1. The following illustration shows the limit that meet the FCC requirements, and these measured value also comply with IC requirements. 2. This testing was carried out on all operation modes, but only the worst case was presented in this report.

Wi-fi connection with Camera and Trumpet on

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Order No:	168362723 120
Model:	ITP-8
Test Mode:	Wireless communication (wifi)
Test Voltage:	AC 120V, 60Hz
Test By:	Kevin Zhou
Review By:	Gary Chen
Tem./Hum./Pressure:	24.7°C/52%/101kPa



Critical_Freqs

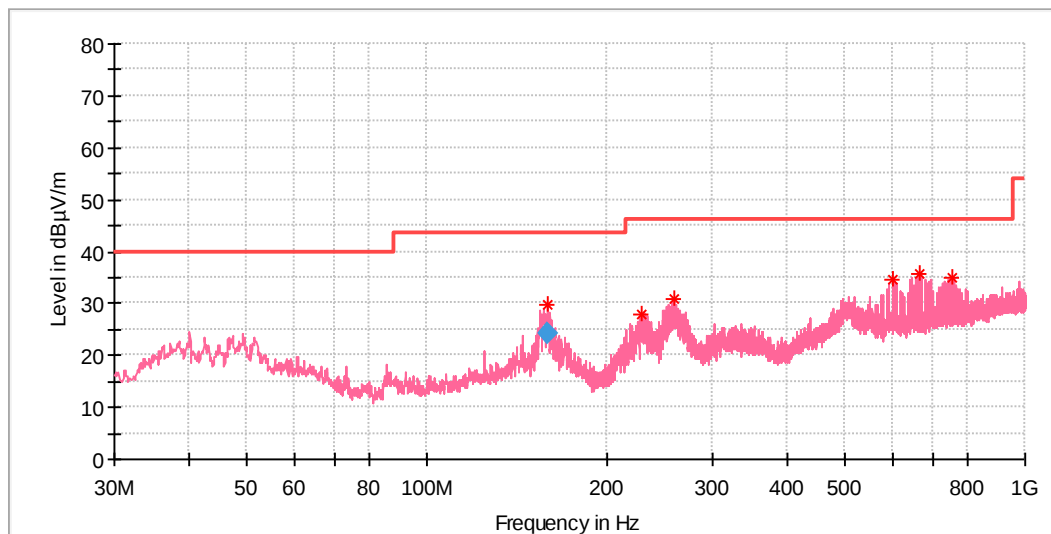
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
167.934000	27.61	43.50	15.89	100.0	H	286.0	21.5
229.355000	39.76	46.00	6.24	200.0	H	84.0	18.9
261.947000	46.61	46.00	-0.61	100.0	H	247.0	20.1
357.763000	41.82	46.00	4.18	100.0	H	111.0	22.6
384.147000	41.35	46.00	4.65	100.0	H	87.0	22.7
506.464000	37.99	46.00	8.01	200.0	H	153.0	25.7

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
229.355000	35.04	46.00	10.96	1000.0	120.000	200.0	H	84.0	18.9
261.947000	42.73	46.00	3.27	1000.0	120.000	100.0	H	247.0	20.1

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
Order No: 168362723 120
Model: ITP-8
Test Mode: Wireless communication (wifi)
Test Voltage: AC 120V, 60Hz
Test By: Kevin Zhou
Review By: Gary Chen
Tem./Hum./Pressure: 24.7°C/52%/101kPa



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
158.756000	29.83	43.50	13.67	100.0	V	354.0	21.6
229.141000	27.88	46.00	18.12	100.0	V	0.0	18.9
258.241000	30.91	46.00	15.09	200.0	V	304.0	19.7
599.002000	34.67	46.00	11.33	100.0	V	357.0	28.0
666.611000	35.57	46.00	10.43	100.0	V	4.0	28.1
752.650000	35.10	46.00	10.90	200.0	V	212.0	30.4

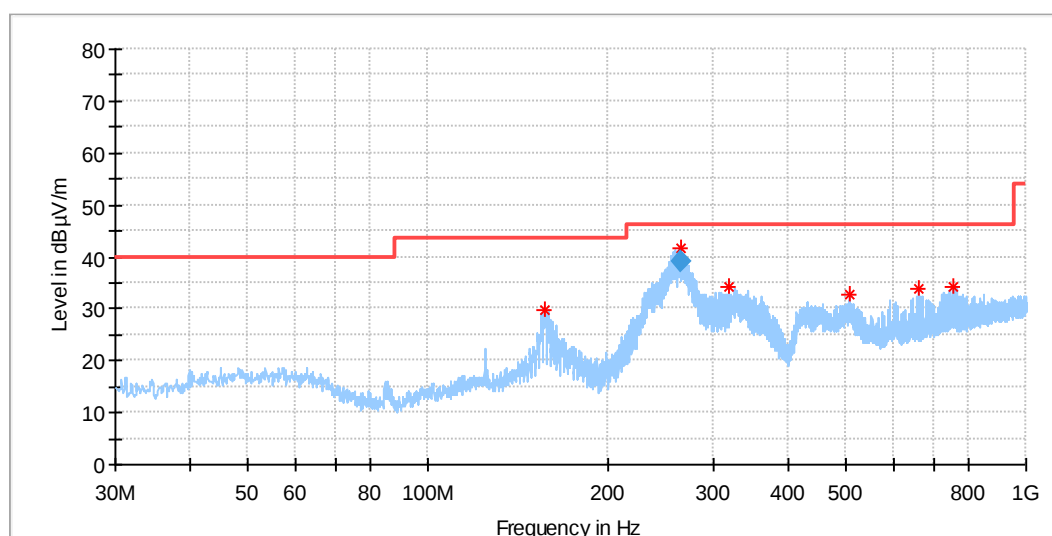
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
158.756000	24.18	43.50	19.32	1000.0	120.000	100.0	V	354.0	21.6

Bluetooth connection

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
 Order No: 168362723 120
 Model: ITP-8
 Test Mode: Play music through Bluetooth
 Test Voltage: AC 120V, 60Hz
 Test By: Kevin Zhou
 Review By: Gary Chen
 Tem./Hum./Pressure: 24.7°C/52%/101kPa



Critical_Freqs

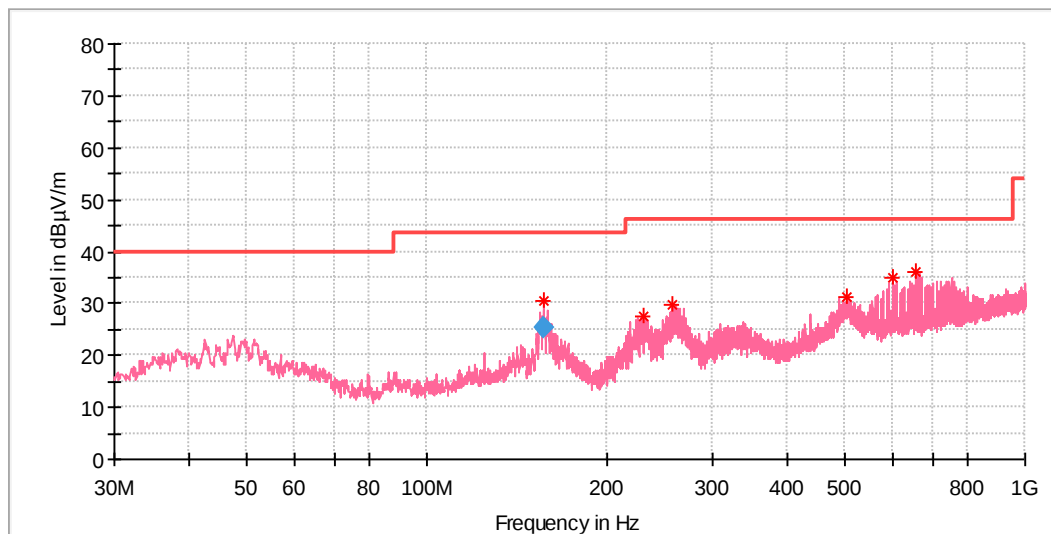
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
156.876000	29.73	43.50	13.77	200.0	H	188.0	21.5
264.098000	41.53	46.00	4.47	100.0	H	177.0	20.3
318.672000	34.10	46.00	11.90	100.0	H	190.0	21.9
506.076000	32.86	46.00	13.14	200.0	H	216.0	25.7
660.500000	33.72	46.00	12.28	200.0	H	38.0	28.1
752.650000	34.16	46.00	11.84	100.0	H	261.0	30.4

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
264.098000	39.09	46.00	6.91	1000.0	120.000	100.0	H	177.0	20.3

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
Order No: 168362723 120
Model: ITP-8
Test Mode: Play music through Bluetooth
Test Voltage: AC 120V, 60Hz
Test By: Kevin Zhou
Review By: Gary Chen
Tem./Hum./Pressure: 24.7°C/52%/101kPa



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
156.508000	30.35	43.50	13.15	100.0	V	0.0	21.5
229.626000	27.48	46.00	18.52	100.0	V	135.0	18.9
257.562000	29.67	46.00	16.33	200.0	V	252.0	19.7
503.457000	31.22	46.00	14.78	100.0	V	151.0	25.6
599.002000	34.95	46.00	11.05	100.0	V	0.0	28.0
654.292000	35.94	46.00	10.06	100.0	V	9.0	28.3

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
156.508000	25.22	43.50	18.28	1000.0	120.000	100.0	V	0.0	21.5

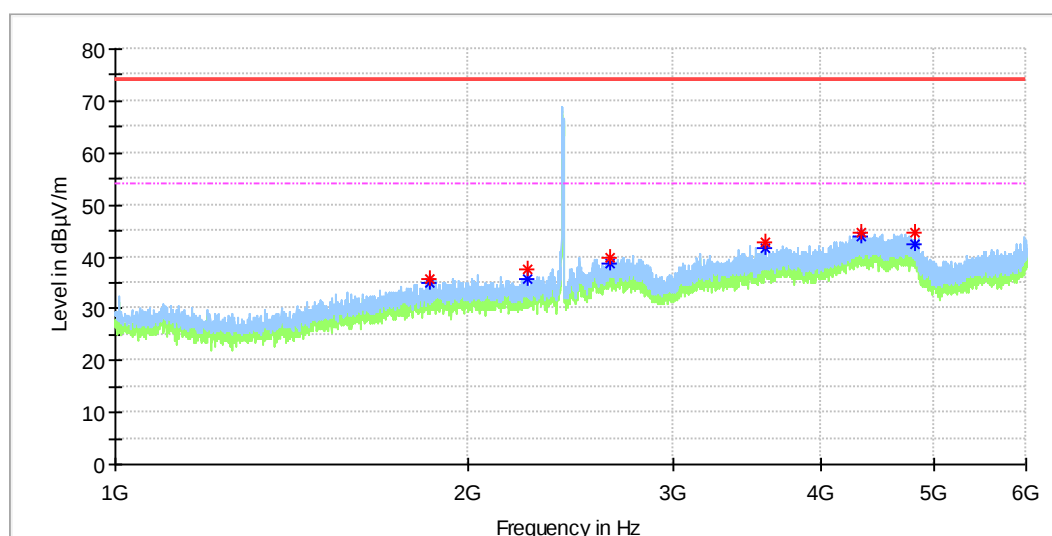
Appendix D.2: Test Plots of Radiated Emission, Above 1GHz

Note: 1. Testing was carried out within frequency range 30MHz to the 5th harmonics. The measurement results above 6GHz were greater than 20dB below the limit, so only record the test result within the 30MHz to 6GHz. 2. The highest waveform in the figure is Fundamental and/or harmonics frequency.

Wi-fi connection with Camera and Trumpet on

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Order No:	168362723 120
Model:	ITP-8
Test Mode:	Wireless communication (wifi)
Test Voltage:	AC 120V, 60Hz
Test By:	Kevin Zhou
Review By:	Gary Chen
Tem./Hum./Pressure:	24.7°C/52%/101kPa

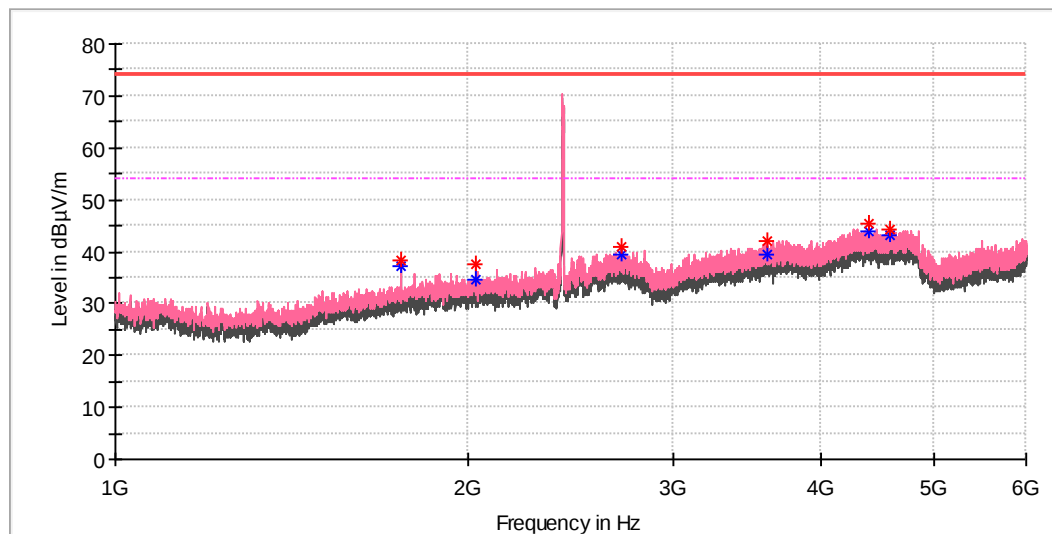


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1853.500000	---	34.95	54.00	19.05	100.0	H	139.0	-8.1
1853.500000	35.79	---	74.00	38.21	100.0	H	139.0	-8.1
2247.500000	---	35.62	54.00	18.38	100.0	H	186.0	-7.0
2247.500000	37.61	---	74.00	36.39	100.0	H	186.0	-7.0
2645.000000	---	38.54	54.00	15.46	100.0	H	135.0	-3.3
2645.000000	39.78	---	74.00	34.22	100.0	H	135.0	-3.3
3589.000000	---	41.68	54.00	12.32	100.0	H	324.0	-0.7
3589.000000	42.97	---	74.00	31.03	100.0	H	324.0	-0.7
4345.000000	---	43.98	54.00	10.02	100.0	H	296.0	2.2
4345.000000	44.75	---	74.00	29.25	100.0	H	296.0	2.2
4817.500000	---	42.56	54.00	11.44	100.0	H	16.0	2.1
4817.500000	44.56	---	74.00	29.44	100.0	H	16.0	2.1

EUT Information

EUT Name: ELAN 8" Touch Panel User Interface
Order No: 168362723 120
Model: ITP-8
Test Mode: Wireless communication (wifi)
Test Voltage: AC 120V, 60Hz
Test By: Kevin Zhou
Review By: Gary Chen
Tem./Hum./Pressure: 24.7°C/52%/101kPa



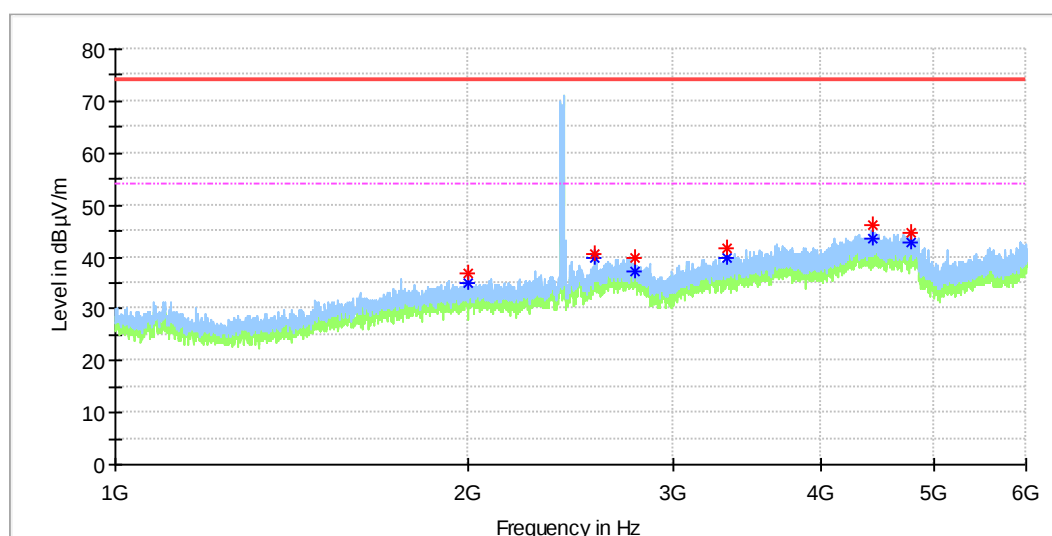
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1752.000000	---	37.37	54.00	16.63	100.0	V	197.0	-8.8
1752.000000	38.34	---	74.00	35.66	100.0	V	197.0	-8.8
2033.000000	---	34.44	54.00	19.56	100.0	V	138.0	-7.2
2033.000000	37.64	---	74.00	36.36	100.0	V	138.0	-7.2
2705.000000	---	39.38	54.00	14.62	100.0	V	307.0	-3.3
2706.000000	40.86	---	74.00	33.14	100.0	V	230.0	-3.3
3606.000000	---	39.27	54.00	14.73	100.0	V	22.0	-0.6
3606.000000	42.06	---	74.00	31.94	100.0	V	22.0	-0.6
4402.000000	---	43.93	54.00	10.07	100.0	V	317.0	1.9
4402.000000	45.28	---	74.00	28.72	100.0	V	317.0	1.9
4597.500000	---	43.29	54.00	10.71	100.0	V	184.0	1.9
4597.500000	44.25	---	74.00	29.75	100.0	V	184.0	1.9

Bluetooth connection

EUT Information

EUT Name:	ELAN 8" Touch Panel User Interface
Order No:	168362723 120
Model:	ITP-8
Test Mode:	Play music through Bluetooth
Test Voltage:	AC 120V, 60Hz
Test By:	Kevin Zhou
Review By:	Gary Chen
Tem./Hum./Pressure:	24.7°C/52%/101kPa



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2002.500000	---	35.15	54.00	18.85	100.0	H	334.0	-7.3
2002.500000	36.69	---	74.00	37.31	100.0	H	334.0	-7.3
2572.500000	40.64	---	74.00	33.36	100.0	H	162.0	-3.9
2572.500000	---	39.69	54.00	14.31	100.0	H	162.0	-3.9
2779.500000	---	37.07	54.00	16.93	100.0	H	147.0	-3.5
2779.500000	40.00	---	74.00	34.00	100.0	H	147.0	-3.5
3328.000000	---	39.94	54.00	14.06	100.0	H	316.0	-1.8
3328.000000	41.77	---	74.00	32.23	100.0	H	316.0	-1.8
4433.000000	---	43.59	54.00	10.41	100.0	H	186.0	1.9
4433.000000	46.00	---	74.00	28.00	100.0	H	186.0	1.9
4789.000000	---	42.97	54.00	11.03	100.0	H	48.0	2.6
4789.000000	44.51	---	74.00	29.49	100.0	H	48.0	2.6