

# FCC Test Report

For

Applicant Name : TECNO MOBILE LIMITED  
Address: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25  
SHAN MEI STREET FOTAN NT HONGKONG  
EUT Name: Laptop Computer  
Brand Name: TECNO  
Model Number: K16AS  
Series Model Number: Refer to section 2

## Issued By

Company Name : BTF Testing Lab (Shenzhen) Co., Ltd.  
Address: F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park,  
Tantou Community, Songgang Street, Bao'an District, Shenzhen,  
China

Report Number: BTF231027R00206  
Test Standards: 47 CFR Part 15, Subpart B  
FCC ID: 2ADYY-K16AS  
Test Conclusion: Pass  
Test Date: 2023-09-25 to 2023-10-26  
Date of Issue: 2023-10-27

Prepared By:

Chris Liu / Project Engineer  
Date: 2023-10-27

Approved By:

Ryan.CJ / EMC Manager  
Date: 2023-10-27

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-10-27	Original
Note: Once the revision has been made, then previous versions reports are invalid.		

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## 1 Introduction

### 1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

### 1.2 Identification of the Responsible Testing Location

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130
FCC Registration Number:	518915
Designation Number:	CN1330

### 1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

## 2 Product Information

### 2.1 Application Information

Company Name:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG

### 2.2 Manufacturer Information

Company Name:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG

### 2.3 Factory Information

Company Name:	SHENZHEN TECNO TECHNOLOGY CO.,LTD. Dongguan Bmorn Technology Co., LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R. China 101 Room, 6 No. Huanzhuli Industrial Road, Changping Town, Dongguan City, Guangdong

### 2.4 General Description of Equipment under Test (EUT)

EUT Name:	Laptop Computer
Test Model Number:	K16AS
Series Model Number:	N/A
Software Version:	Windows 11
Hardware Version:	V2.2

### 2.5 Technical Information

Power Supply:	Rechargeable Li-ion Polymer Battery: K16 Rated Voltage: 11.55V Rated Capacity: 6060mAh Rated nergy: 70Wh Limited Charge Voltage: 13.2V
Power Adaptor:	Adapter1: RYG910B200325VU Input: 100-240V~50/60Hz 2.0A Output: 20.0V=3.25A Adapter2: GA20032U Input: 100-240V~50/60Hz 1.8A Output: 20.0V=3.25A 65W

### 3 Summary of Test Results

#### 3.1 Test Standards

The tests were performed according to following standards:  
47 CFR Part 15, Subpart B: Unintentional Radiators

#### 3.2 Uncertainty of Test

Item	Measurement Uncertainty
Conducted Emission (150 kHz-30 MHz)	$\pm 2.64\text{dB}$
All emissions, radiated (<1GHz)	$\pm 4.12\text{dB}$

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

#### 3.3 Summary of Test Result

Item	Standard	Requirement	Result
Conducted emissions on AC mains	47 CFR Part 15, Subpart B	15.107, Class B	Pass
Radiated emissions (Below 1GHz)	47 CFR Part 15, Subpart B	15.109, Class B	Pass
Radiated emissions (Above 1GHz)	47 CFR Part 15, Subpart B	15.109, Class B	Pass

## 4 Test Configuration

### 4.1 Test Equipment List

Conducted emissions on AC mains					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	00953	2022-11-24	2023-11-23
Coaxial Switcher	SCHWARZBECK	CX210	CX210	2022-11-24	2023-11-23
V-LISN	SCHWARZBECK	NSLK 8127	01073	2022-11-24	2023-11-23
LISN	AFJ	LS16/110VAC	16010020076	2023-02-23	2024-02-22
EMI Receiver	ROHDE&SCHWARZ	ESCI3	101422	2022-11-24	2023-11-23

Radiated emissions (Below 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

Radiated emissions (Above 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23

RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preampilifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27



## 4.2 Test Auxiliary Equipment

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

## 4.3 Test Modes

Pretest Mode	Description
Mode 1	Video Recording
Mode 2	Video Playing
Mode 3	Transferring with USB Disk (the worst case)
Mode 4	TF Card Playing

## 5 Emission Test Results (EMI)

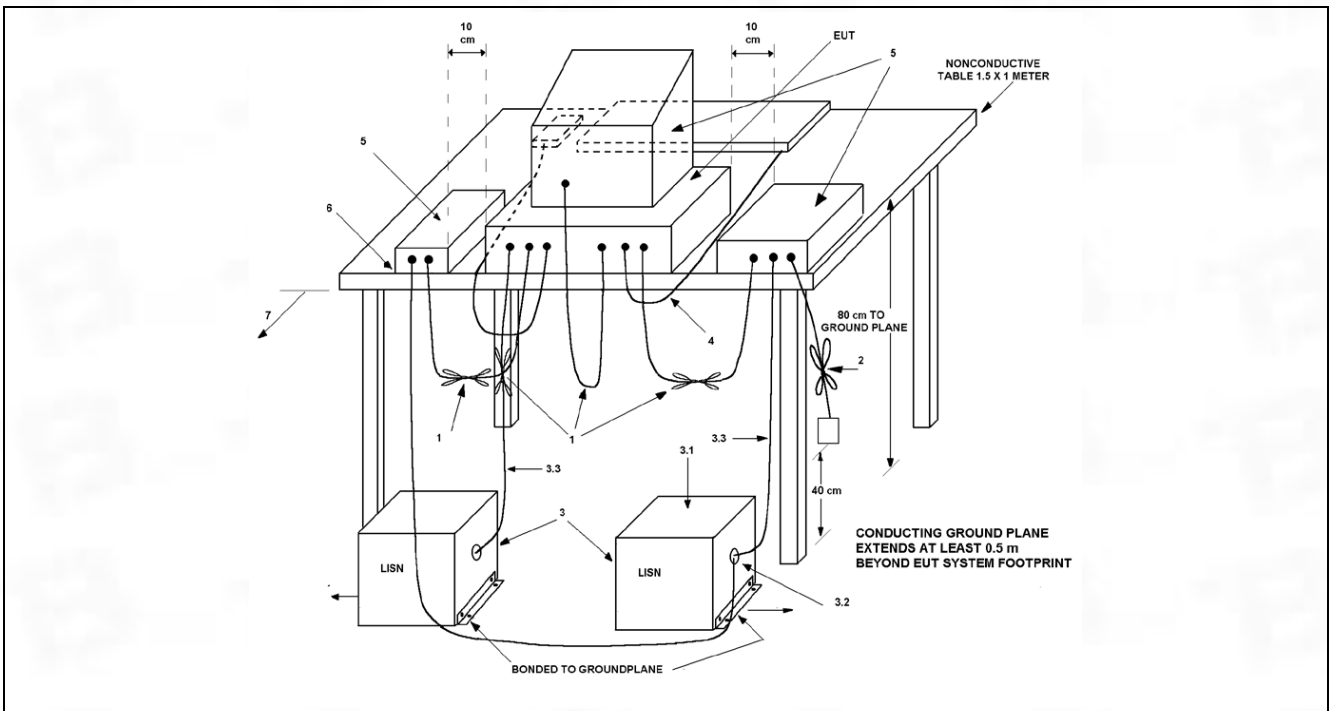
### 5.1 Conducted emissions on AC mains

Test Requirement:	15.107, Class B		
Test Method:	ANSI C63.4		
Test Limit:	Frequency of emission (MHz)	<b>Conducted limit (dB<math>\mu</math>V)</b>	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
	*Decreases with the logarithm of the frequency.		
Procedure:	An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected. Remark: Level= Read Level+ Cable Loss+ LISN Factor		

#### 5.1.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24.1 $^{\circ}$ C
Humidity:	48.7 %
Atmospheric Pressure:	1010 mbar

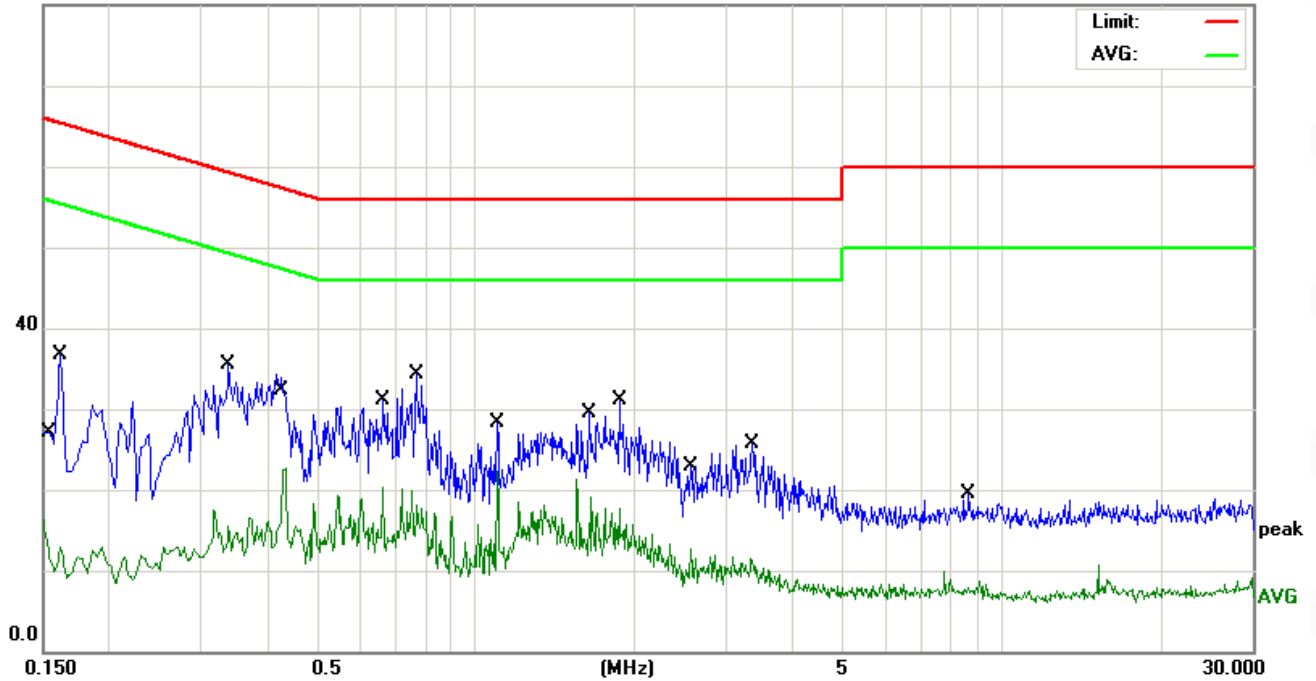
#### 5.1.2 Test Setup Diagram:



## 5.1.3 Test Data:

TM1 / Line: Line Mode 3(the worst case)

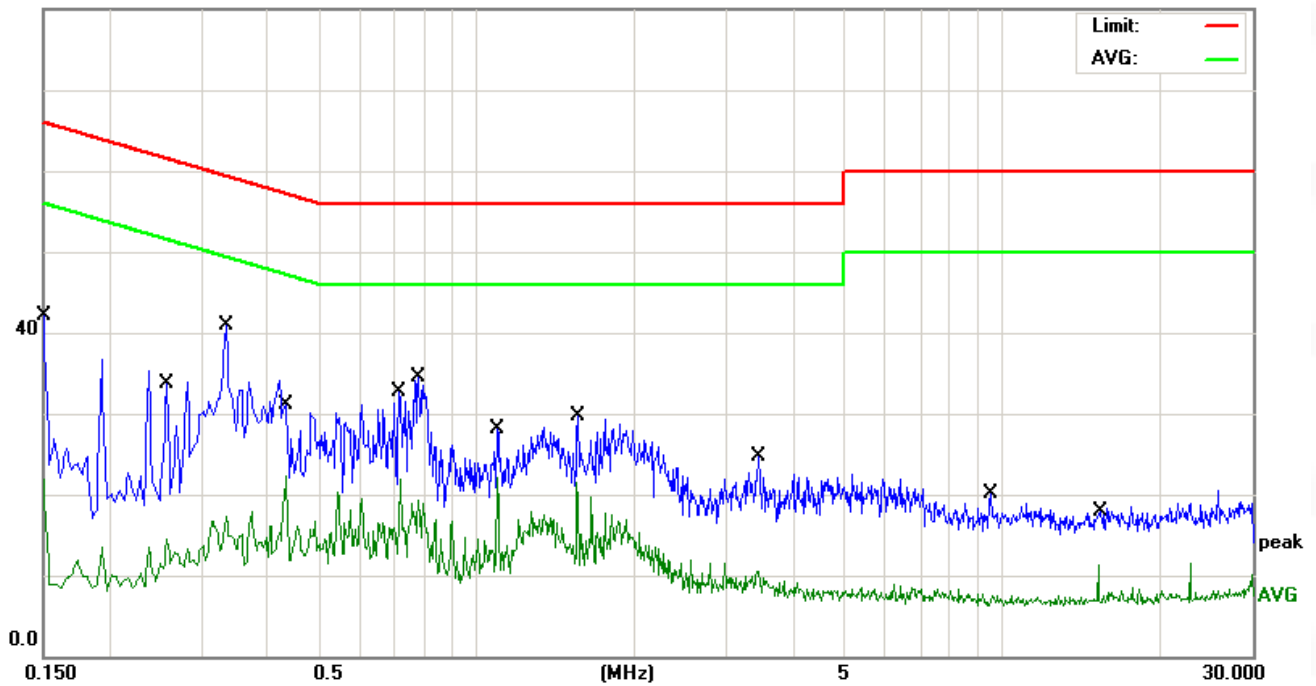
80.0 dBuV



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1500	5.86	10.45	16.31	55.99	-39.68	AVG
2		0.1620	26.21	10.45	36.66	65.36	-28.70	QP
3		0.3379	24.94	10.48	35.42	59.25	-23.83	QP
4		0.4340	12.27	10.50	22.77	47.18	-24.41	AVG
5		0.6660	9.82	10.53	20.35	46.00	-25.65	AVG
6	*	0.7700	23.76	10.54	34.30	56.00	-21.70	QP
7		1.0980	11.76	10.57	22.33	46.00	-23.67	AVG
8		1.6620	8.48	10.66	19.14	46.00	-26.86	AVG
9		1.8740	20.32	10.69	31.01	56.00	-24.99	QP
10		2.5660	1.91	10.72	12.63	46.00	-33.37	AVG
11		3.3460	15.01	10.72	25.73	56.00	-30.27	QP
12		8.6620	8.76	10.81	19.57	60.00	-40.43	QP

TM1 / Line: Neutral

80.0 dBuV



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1500	31.61	10.45	42.06	65.99	-23.93	QP
2		0.2580	4.01	10.46	14.47	51.49	-37.02	AVG
3	*	0.3339	30.33	10.48	40.81	59.35	-18.54	QP
4		0.4340	11.86	10.50	22.36	47.18	-24.82	AVG
5		0.7180	11.34	10.53	21.87	46.00	-24.13	AVG
6		0.7780	24.04	10.54	34.58	56.00	-21.42	QP
7		1.0980	11.56	10.57	22.13	46.00	-23.87	AVG
8		1.5580	10.86	10.64	21.50	46.00	-24.50	AVG
9		1.5620	19.16	10.64	29.80	56.00	-26.20	QP
10		3.4500	14.05	10.72	24.77	56.00	-31.23	QP
11		9.5140	9.28	10.82	20.10	60.00	-39.90	QP
12		15.2580	0.20	11.19	11.39	50.00	-38.61	AVG

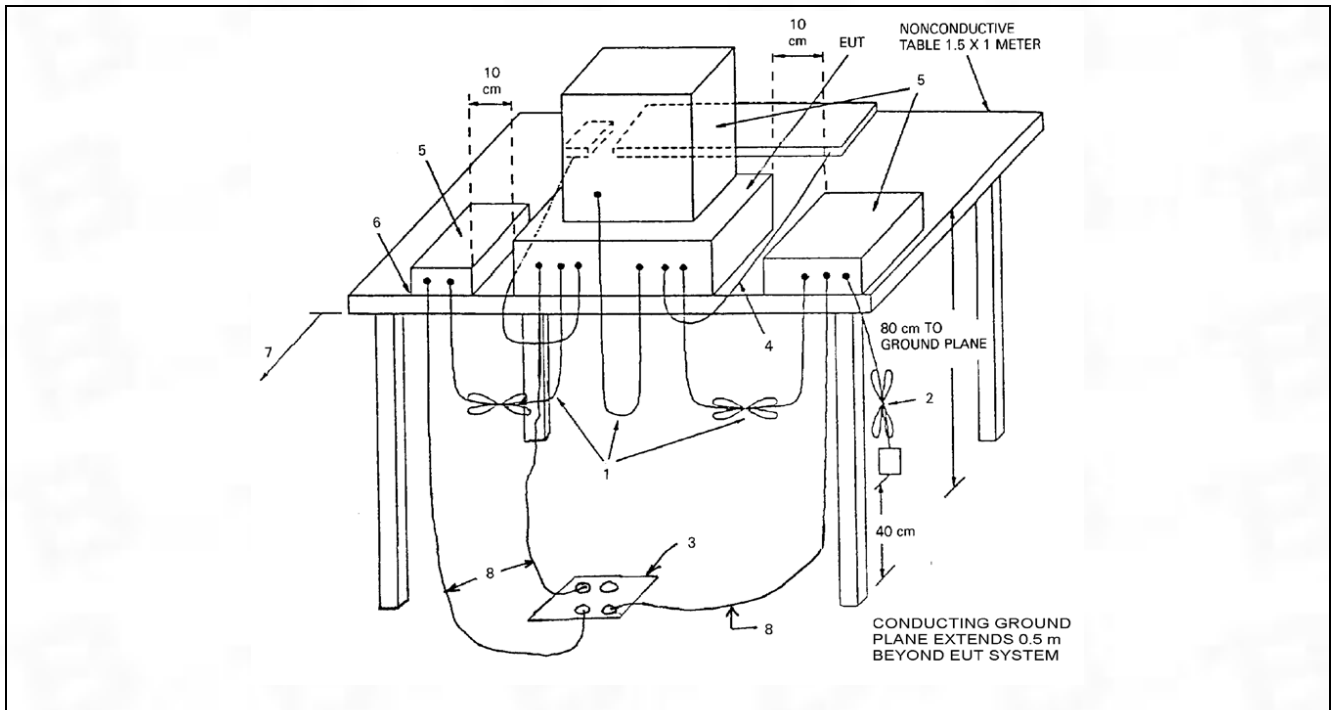
## 5.2 Radiated emissions (Below 1GHz)

Test Requirement:	15.109, Class B				
Test Method:	ANSI C63.4				
Test Limit:	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:				
	Frequency of emission (MHz)	Field strength @3m (uV/m)	Field strength @3m (dBuV/m)	Field strength @10m (uV/m)	Field strength @10m (dBuV/m)
	30 – 88	100	40	30	29.5
	88 – 216	150	43.5	45	33.1
	216 – 960	200	46	60	35.6
Above 960	500	54	150	43.5	
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor				

### 5.2.1 E.U.T. Operation:

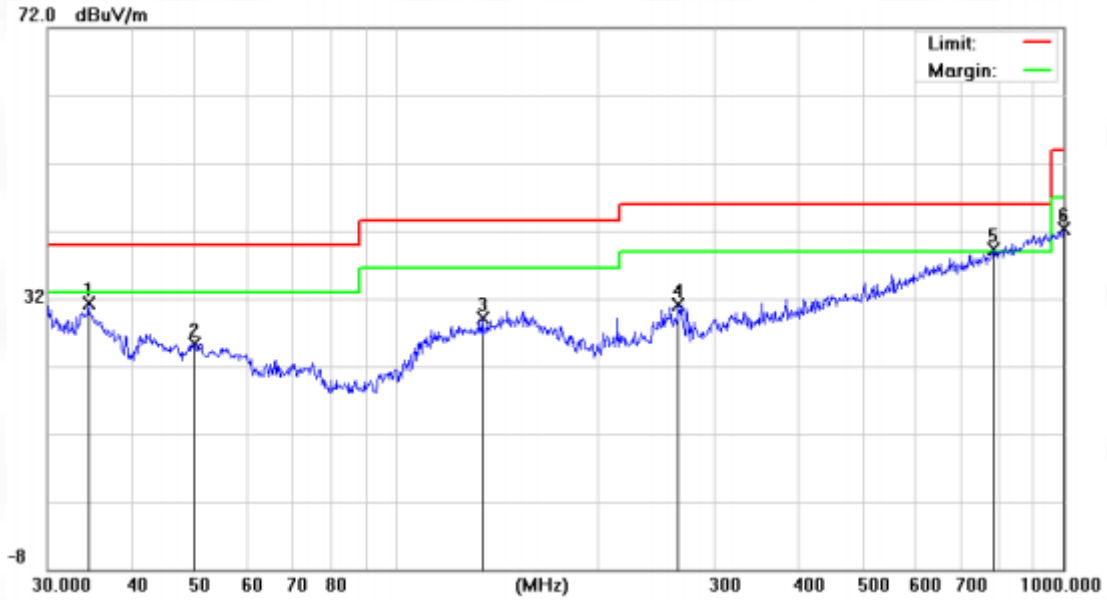
Operating Environment:	
Temperature:	24.1 °C
Humidity:	48.7 %
Atmospheric Pressure:	1010 mbar

### 5.2.2 Test Setup Diagram:



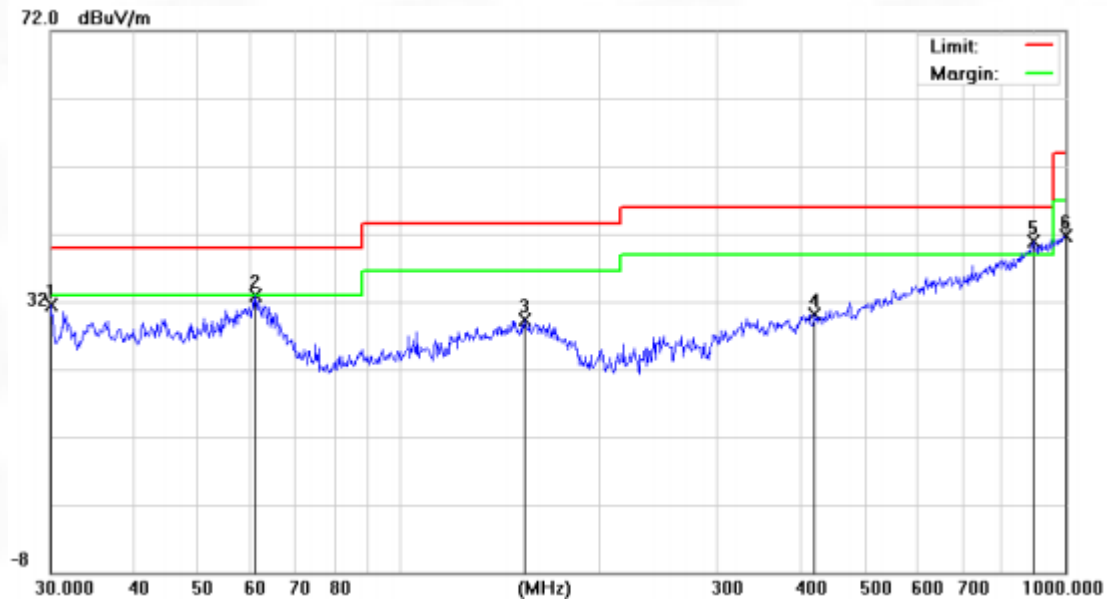
5.2.3 Test Data:

TM1 / Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		34.5173	7.29	23.97	31.26	40.00	-8.74	QP
2		49.7068	0.89	24.38	25.27	40.00	-14.73	QP
3		134.5592	5.19	23.91	29.10	43.50	-14.40	QP
4		264.7457	8.11	22.98	31.09	46.00	-14.91	QP
5	*	785.0935	5.43	33.82	39.25	46.00	-6.75	QP
6		1000.000	5.42	36.92	42.34	54.00	-11.66	QP

TM1 / Polarization: Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		30.0000	8.00	23.59	31.59	40.00	-8.41	QP
2		60.9176	9.63	23.23	32.86	40.00	-7.14	QP
3		154.2786	4.26	25.13	29.39	43.50	-14.11	QP
4		420.5803	3.62	26.44	30.06	46.00	-15.94	QP
5	*	896.9965	5.31	35.63	40.94	46.00	-5.06	QP
6		1000.000	4.72	36.92	41.64	54.00	-12.36	QP

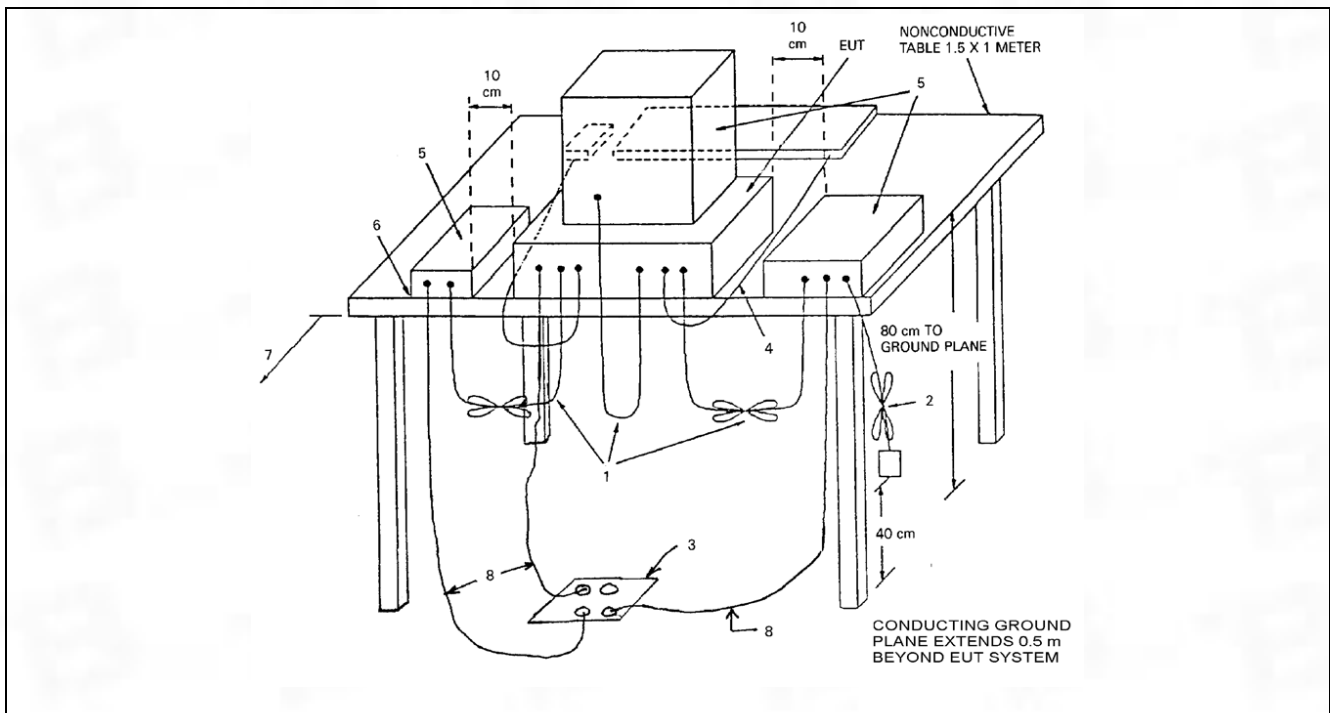
### 5.3 Radiated emissions (Above 1GHz)

Test Requirement:	15.109, Class B		
Test Method:	ANSI C63.4		
Test Limit:	Frequency of emission (MHz)	Field strength @3m	
		Average (uV/m)	Average (dBuV/m)
	Above 1GHz	500	54
Procedure:	<p>An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. For below 1GHz test, Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. For above 1GHz test, Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.</p> <p>Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor</p>		

#### 5.3.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.2 °C
Humidity:	54.7 %
Atmospheric Pressure:	1010 mbar

#### 5.3.2 Test Setup Diagram:





## 5.3.3 Test Data:

**TEST RESULTS**

Above 1GHz(1~6GHz) :( Mode 3—worst case)

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
1552.35	V	62.93	50.58	74	54	-11.07	-3.42
2399.95	V	68.22	49.27	74	54	-5.78	-4.73
1614.23	H	67.22	44.92	74	54	-6.78	-9.08
2333.72	H	67.59	41.77	74	54	-6.41	-12.23

## Remark:

All emissions not reported were more than 20dB below the specified limit or in the noise floor.

Freq.= Emission frequency in MHz

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Over= Emission Level - Limit.

All the x/y/z orientation has been investigated, and only worst case is presented in this report.



Test Report Number: BTF231027R00206



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