

Report No: CCISE200800305

FCC REPORT

Applicant:	TECNO MOBILE LIMITED		
Address of Applicant:	ROOM 604 6/F SOUTH TOWER WORLD FINANCE CTR HARBOUR CITY 17 CANTON ROAD TST KL		
Equipment Under Test (E	EUT)		
Product Name:	Mobile Phone		
Model No.:	BC1		
Trade mark:	TECNO		
FCC ID:	2ADYY-BC1		
Applicable standards:	FCC CFR Title 47 Part 15 Subpart B		
Date of sample receipt:	03 Aug., 2020		
Date of Test:	04 Aug., to 26 Aug., 2020		
Date of report issued:	27 Aug., 2020		
Test Result:	PASS *		

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

Authorized Signature:



Laboratory Manager

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

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2 Version

Version No.	Date	Description
00	27 Aug., 2020	Original

Tested by:

Mike.OU Test Engineer Winner Thang Project Engineer

Date: 27 Aug., 2020

Reviewed by:

Date: 27 Aug., 2020

<u>CCIS</u>

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4 Test Summary

Test Item	Section in CFR 47	Result	
Conducted Emission	Part 15.107	Pass	
Radiated Emission	Part 15.109	Pass	
Remark: 1. Pass: The EUT complies with the essential requirements in the standard. 2. N/A: The EUT not applicable of the test item.			
Test Method: ANSI C63.4:2014			



5 General Information

5.1 Client Information

Applicant:	TECNO MOBILE LIMITED
Address:	ROOM 604 6/F SOUTH TOWER WORLD FINANCE CTR HARBOUR CITY 17 CANTON ROAD TST KL
Manufacturer:	TECNO MOBILE LIMITED
Address:	ROOM 604 6/F SOUTH TOWER WORLD FINANCE CTR HARBOUR CITY 17 CANTON ROAD TST KL
Factory:	SHENZHEN TECNO TECHNOLOGY CO., LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P. R. China

5.2 General Description of E.U.T.

Product Name:	Mobile Phone
Model No.:	BC1
Power supply:	Rechargeable Li-ion Battery DC3.85V, 4900mAh
AC adapter:	Model: A8-501000
	Input: AC100-240V, 50/60Hz, 0.2A
	Output: DC 5.0V, 1.0A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

5.3 Test Mode and test samples plans

Operating mode	Detail description	
PC mode	Keep the EUT in Downloading mode(Worst case)	
Charging+Recording mode Keep the EUT in Charging+Recording mode		
Charging+Playing mode	Keep the EUT in Charging+Playing mode	
FM mode	Keep the EUT in FM receiver mode	
GPS mode Keep the EUT in GPS receiver mode		

The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

Test Samples Plans :

Samples Number	Used for Test Items		
2#	Conducted Emission		
2#	Radiated Emission		
2# EUT constructional details			
Remark: Shenzhen Zhongjian Nanfang Testing Co., Ltd. is only responsible for the test project data of the above samples, and will keep the above samples for a month.			



5.4 Measurement Uncertainty

Parameters	Expanded Uncertainty		
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)		
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)		
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)		
Radiated Emission (1GHz ~ 18GHz)	±5.16 dB (k=2)		
Radiated Emission (18GHz ~ 40GHz)	±3.20 dB (k=2)		

5.5 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX7070	2J8XSZ2	DoC
DELL	MONITOR	SE2018HR	3M7QPY2	DoC
DELL	KEYBOARD	KB216d	N/A	DoC
DELL	MOUSE	MS116t1	N/A	DoC
HP	Printer	HP LaserJet P1007	VNFP409729	DoC

5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

5.7 Description of Cable Used

Cable Type	Description	Length	From	То
Detached USB Cable	Shielding	1.05m	EUT	PC/Adapter
Detached headset cable	Unshielded	1.20m	EUT	Headset

5.8 Additions to, deviations, or exclusions from the method

No

5.9 Laboratory Facility

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

• FCC - Designation No.: CN1211

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

• ISED – CAB identifier.: CN0021

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

• A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <u>https://portal.a2la.org/scopepdf/4346-01.pdf</u>

5.10 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd. Address: No.110~116, Building B, Jinyuan Business Building, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China Tel: +86-755-23118282, Fax: +86-755-23116366 Email: info@ccis-cb.com, Website: <u>http://www.ccis-cb.com</u>

5.11 Test Instruments list

Radiated Emission:						
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020	
SIII SAC	SAEINIC	911 011 011	900	07-22-2020	07-21-2021	
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-07-2020	03-06-2021	
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-07-2020	03-06-2021	
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-07-2020	03-06-2021	
Llama Antonna			4005	06-22-2017	06-21-2020	
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2020	06-21-2021	
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2019	11-17-2020	
EMI Test Software	AUDIX	E3	١	/ersion: 6.110919	b	
Pre-amplifier	HP	8447D	2944A09358	03-07-2020	03-06-2021	
Pre-amplifier	CD	PAP-1G18	11804	03-07-2020	03-06-2021	
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-05-2020	03-04-2021	
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2019	11-17-2020	
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-05-2020	03-04-2021	
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2020	03-06-2021	
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2020	03-06-2021	
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2020	03-06-2021	

Conducted Emission:								
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)			
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-05-2020	03-04-2021			
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-05-2020	03-04-2021			
LISN	CHASE	MN2050D	1447	03-05-2020	03-04-2021			
	Dahda & Cabuvara	50110 75	0400004/040	07-21-2017	07-20-2020			
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2020	07-20-2021			
Cable	HP	10503A	N/A	03-05-2020	03-04-2021			
EMI Test Software	AUDIX	E3	Version: 6.110919b					



6 Test results and Measurement Data

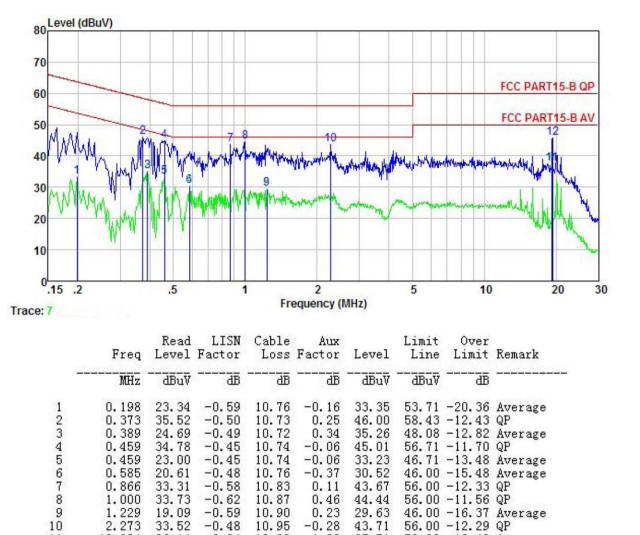
6.1 Conducted Emission

Test Requirement:	FCC Part 15 B Section 15.107					
Test Frequency Range:	150kHz to 30MHz					
Class / Severity:	Class B					
Receiver setup:	RBW=9kHz, VBW=30kHz					
Limit:	Limit (dBuV)					
Linnt.	Frequency range (MHz)	Quasi-peak	Average			
	0.15-0.5	66 to 56*	56 to 46*			
	0.5-5	46				
	0.5-30	60	50			
	* Decreases with the logarithm	of the frequency.				
Test setup:	Reference Plane					
Toot procedure	LISN 40cm 80cm Filter AC power Full EQuipment E.U.T EMI EMI Test table/Insulation plane EMI Receiver Remark: E.U.T EMI Receiver ISN: Line Impedence Stabilization Network Test table height=0.8m					
Test procedure	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4(latest version) on conducted measurement. 					
Test Instruments:	Refer to section 5.11 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Pass					



Measurement data:

Product name:	Mobile Phone	Product model:	BC1
Test by:	Mike	Test mode:	PC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



1.28

1.20

37.51

45.89

50.00 -12.49 Average

60.00 -14.11 QP

Notes:

11 12

1. An initial pre-scan was performed on the line and neutral lines with peak detector.

-0.84

-0.85

2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

10.93

10.93

3. Final Level =Receiver Read level + LISN Factor + Cable Loss.

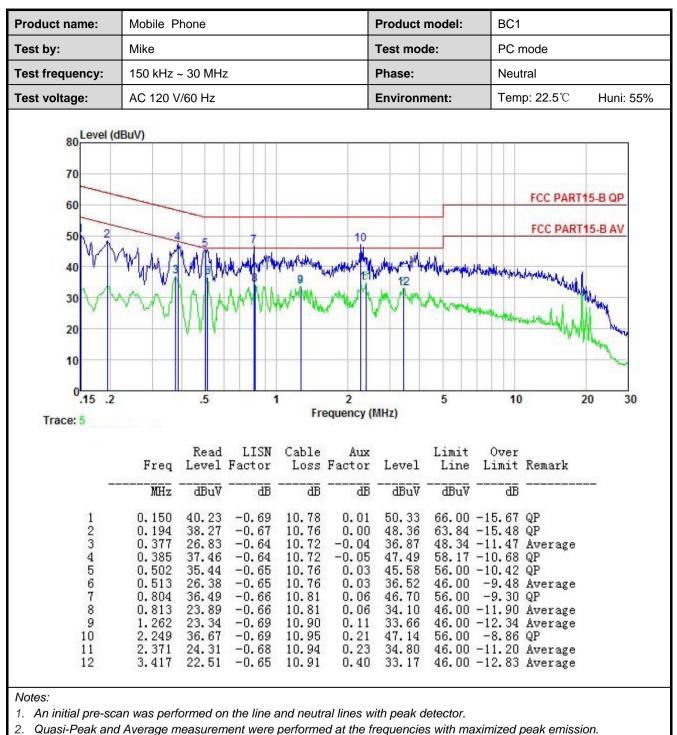
26.14

34.61

19.224

19.326





3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



6.2 Radiated Emission

Test Requirement:	FCC Part 15 B Section 15.109						
Test Frequency Range:	30MHz to 6000MHz						
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)						
Receiver setup:	Frequency Detector RI		RBW	VBW	Remark		
	30MHz-1GHz Quasi-pe			120kHz 300kH		Quasi-peak Value	
		Peak		1MHz	3MHz	Peak Value	
	Above 1GHz RMS			1MHz	3MHz	Average Value	
Limit:	Frequenc	y	Lin	nit (dBuV/m	@3m)	Remark	
	30MHz-88MHz			40.0		Quasi-peak Value	
	88MHz-216MHz			43.5		Quasi-peak Value	
	216MHz-960MHz 46.0			Quasi-peak Value			
	960MHz-1G	GHz		54.0		Quasi-peak Value	
	Abaya 1Cl		54.0			Average Value	
	Above 1GI		74.0			Peak Value	
Test setup:	Below 1GHz						
Test Procedure:	 The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 						



	4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
	 The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 5.11 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	All of the observed value above 6GHz ware the niose floor , which were no recorded



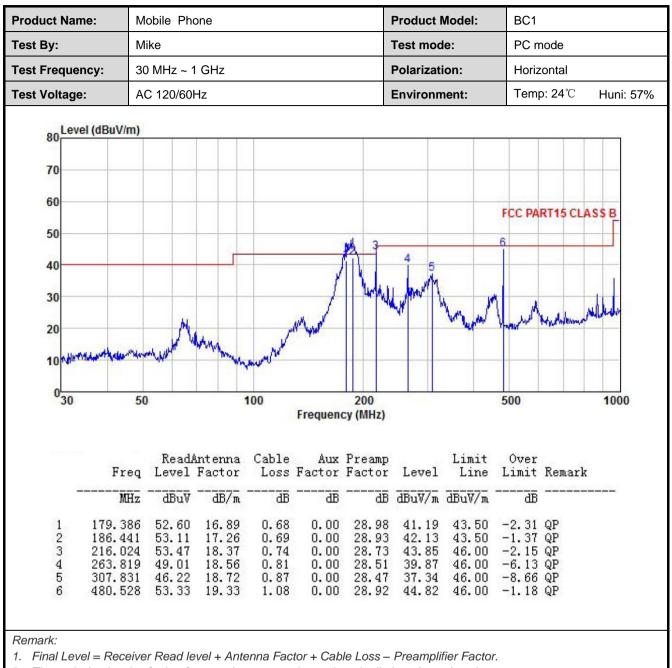
Measurement Data:

roduct Nam	ne: IN	Mobile Phone				Product Model:		BC1	BC1		
est By:	M	Mike					Test mode:		PC m	PC mode	
est Frequer	1cy: 30	30 MHz ~ 1 GHz					Polarization:		Vertic	Vertical	
est Voltage	: A	AC 120/60Hz					Environment:		Temp: 24°C Huni: 57		
80 Leve	el (dBuV/m)										
70				_							
60									FCC PAR	T15 CL	ASSB
50											
40			Г			3			6		
							4 c				
30 20	when when when when when when when when	where the	h water		and for	Way	1 million	hothere	Marthan	Manna	whended
30 20 10	Wytherman 5		Anamh	100	and the second	200	L Mult	ast work	500	Manna	1000
30 20 10 A			Anna	American	Frequence	200	L. Mully	hot have and	500	Manna	
30 20	5	0 Read	Antenna Factor	100 Cable	Aux	200 cy (MHz) Preamp		Limit	Over	Remar	1000
30 20 10	5	0 Read	Antenna Factor	100 Cable Loss	Aux Factor	200 cy (MHz) Preamp Factor		Line	Over Limit	Remar	1000

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

3. The Aux Factor is a notch filter switch box loss, this item is not used.





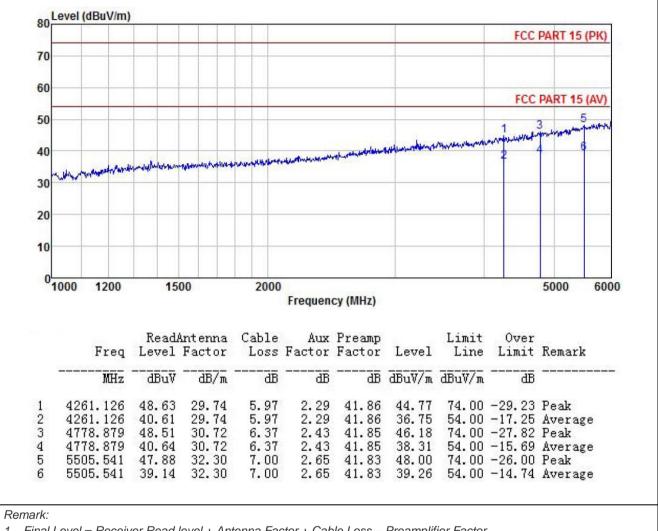
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

3. The Aux Factor is a notch filter switch box loss, this item is not used.



Above 1GHz:

Product Name:	Mobile Phone	Product Model:	BC1
Test By:	Mike	Test mode:	PC mode
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



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

2. The emission levels of other frequencies are very lower than the limit and not show in test report.



