EMC TEST REPORT



Report No.: 18070029-FCC-E

Supersede Report No: N/A			
Applicant	TECNO MOBILE LIMITED		
Product Name	Mobile phone		
Model No.	CA7		
Serial No.	N/A		
Test Standard	FCC Part 1	5 Subpart B Class B:2016, A	NSI C63.4: 2014
Test Date	January 10 to February 06, 2018		
Issue Date	February 07, 2018		
Test Result	Pass Fail		
Equipment complied with the specification			
Equipment did not comply with the specification			
Wars. He David Huang			
Evans He David Huang			
Test Engineer Checked By			
This test report may be reproduced in full only			
Test result presented in this test report is applicable to the tested sample only			o the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108 Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn



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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

•
Scope
EMC, RF/Wireless, SAR, Telecom
EMC, RF/Wireless, SAR, Telecom
EMC, RF, Telecom, SAR, Safety
RF/Wireless, SAR, Telecom
EMC, RF, Telecom, SAR, Safety
EMI, EMS, RF, SAR, Telecom, Safety
EMI, RF/Wireless, SAR, Telecom
EMC, RF, SAR, Telecom
EMC, RF, SAR, Telecom, Safety

Accreditations for Conformity Assessment



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1. Report Revision History

Report No.	Report Version	Description	Issue Date
18070029-FCC-E	NONE	Original	February 07, 2018

2. Customer information

Applicant Name	TECNO MOBILE LIMITED
Applicant Add	ROOMS 05-15, 13A/F., SOUTH TOWER, WORLD FINANCE CENTRE, HARBOUR
	CITY, 17 CANTON ROAD, TSIM SHA TSUI, KOWLOON, HONG KONG
Manufacturer	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Manufacturer Add	1-4th Floor,3rd Building,Pacific Industrial Park,No.2088,Shenyan Road,Yantian
	District,Shenzhen,Guangdong,China

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China	
	518108	
FCC Test Site No.	535293	
IC Test Site No.	4842E-1	
Test Software of	Radiated Emission Program-To Shenzhen v2.0	
Radiated Emission		
Test Software of	EZ-EMC(ver.lcp-03A1)	
Conducted Emission		



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4. Equipment under Test (EUT) Information

Description of EUT:	Mobile phone
Main Model:	CA7
Serial Model:	N/A
	GSM850: -0.2dBi
	PCS1900: 1.7dBi
	UMTS-FDD Band V: -0.2dBi
	UMTS-FDD Band II: 1.7dBi
	LTE Band II: 1.7dBi
Antenna Gain:	LTE Band IV: 1.7dBi
	LTE Band V: -0.2dBi
	LTE Band VII: 2.5dBi
	WIFI: 2.0dBi
	Bluetooth/BLE: 2.0dBi
	GPS: 2.0dBi
Antenna Type:	PIFA antenna
	Adapter:
	Model: A88-502000
	Input: AC100-240V~50/60Hz, 0.35A
Input Dowori	Output: DC 5.0V, 2.0A
Input Power:	Battery
	Model: BL-36BT
	Rating: 3.85V, 3650mAh/3750mAh, 14.05Wh/14.43Wh
	Limited charge voltage: 4.4V
Equipment Category :	JBP
	GSM / GPRS: GMSK
	EGPRS: GMSK,8PSK
	UMTS-FDD: QPSK
Type of Modulation:	LTE Band: QPSK, 16QAM
	802.11b/g/n: DSSS, OFDM
	Bluetooth: GFSK, π /4DQPSK, 8DPSK



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BLE: GFSK

GPS:BPSK

	Group Sk
RF Operating Frequency (ies):	GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz LTE Band II TX: 1850.7 ~ 1909.3MHz; RX : 1930.7 ~ 1989.3 MHz LTE Band IV TX: 1710.7 ~ 1754.3 MHz; RX : 2110.7~ 2154.3 MHz LTE Band V TX: 824.7~ 848.3 MHz; RX : 869.7 ~ 893.3MHz LTE Band VII TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11b/g/n(20M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz GPS: 1575.42 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH UMTS-FDD Band V: 102CH UMTS-FDD Band II: 277CH WIFI :802.11b/g/n(20M): 11CH WIFI :802.11n(40M): 7CH Bluetooth: 79CH BLE: 40CH GPS:1CH
Port:	USB Port, Earphone Port
Trade Name :	TECNO
FCC ID:	2ADYY-CA7
Date EUT received:	January 09, 2018
Test Date(s):	January 10 to February 06, 2018



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5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.107; ANSI C63.4: 2014	AC Power Line Conducted Emissions	Compliance
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

Measurement Uncertainty

Parameter	Uncertainty	
AC Power Line Conducted Emissions	+2 11dP	
(150kHz~30MHz)	±3.11dB	
Radiated Emission(30MHz~1GHz)	±5.12dB	
Radiated Emission(1GHz~6GHz)	±5.34dB	



6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	25 °C
Relative Humidity	55%
Atmospheric Pressure	1017mbar
Test date :	January 23, 2018
Tested By :	Evans He

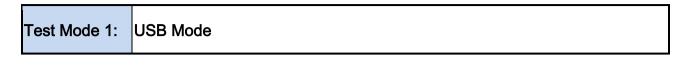
Requirement(s):

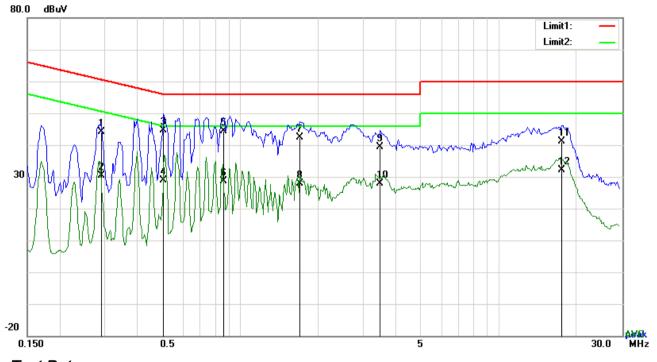
Spec	Item	Requirement	Applicable		
47CFR§15. 107	a)	For Low-power radio-fr connected to the public voltage that is conductor frequency or frequencies not exceed the limits in [mu] H/50 ohms line im lower limit applies at the Frequency ranges (MHz) $0.15 \sim 0.5$ $0.5 \sim 5$ $5 \sim 30$	c utility (AC) power line ed back onto the AC po es, within the band 150 the following table, as pedance stabilization r e boundary between th	, the radio frequency ower line on any 0 kHz to 30 MHz, shall measured using a 50 network (LISN). The	۲
Test Setup		Vert Refe 40 cm LISN Note: 1.Support u 2.Both of L	Test Receiver		
Procedure	 The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table. The power supply for the EUT was fed through a 50Ω /50mH EUT LISN, connected to filtered mains. 				

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SIF	MIC	Test Report	18070029-FCC-E					
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		3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.						
			ng an EMI test receiver.					
	7. High peaks, relative	to the limit line, T	he EMI test receiver was then tuned to the					
	selected frequencies setting of 10 kHz.	s and the necessa	ary measurements made with a receiver bandwidth					
	C C	eated for the LIVF	E line (for AC mains) or DC line (for DC power).					
Remark	<u> </u>							
Result	Pass	Fail						
Test Plot	Yes (See below)	N/A						
Test Mode 1:	USB Mode							
_								
Test Mode 2:	MP4 Mode							
Test Mode 3:	Test Mode 3: Camera Mode							
Test Mode 4:	FM Mode							
Note: All moc	les were investigated	, the results be	elow show only the worst case(USB mode).					



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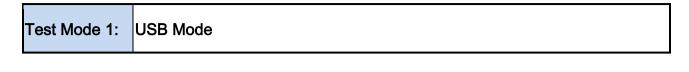
Test Data

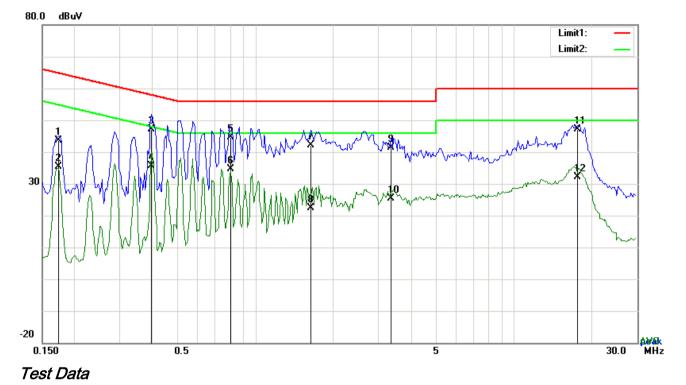
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.2904	34.07	QP	10.03	44.10	60.51	-16.41
2	L1	0.2904	20.44	AVG	10.03	30.47	50.51	-20.04
3	L1	0.5049	34.66	QP	10.03	44.69	56.00	-11.31
4	L1	0.5049	18.91	AVG	10.03	28.94	46.00	-17.06
5	L1	0.8637	34.27	QP	10.03	44.30	56.00	-11.70
6	L1	0.8637	18.56	AVG	10.03	28.59	46.00	-17.41
7	L1	1.7022	32.45	QP	10.04	42.49	56.00	-13.51
8	L1	1.7022	17.82	AVG	10.04	27.86	46.00	-18.14
9	L1	3.4836	29.31	QP	10.06	39.37	56.00	-16.63
10	L1	3.4836	17.76	AVG	10.06	27.82	46.00	-18.18
11	L1	17.5509	30.93	QP	10.26	41.19	60.00	-18.81
12	L1	17.5509	21.88	AVG	10.26	32.14	50.00	-17.86

Phase Line Plot at 120Vac, 60Hz



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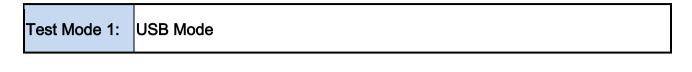


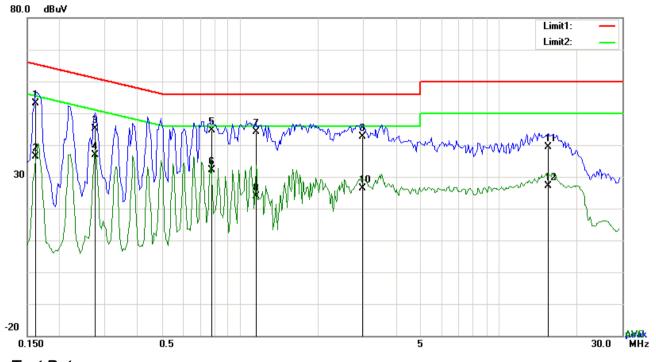
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	Ν	0.1734	33.61	QP	10.03	43.64	64.80	-21.16
2	Ν	0.1734	25.24	AVG	10.03	35.27	54.80	-19.53
3	Ν	0.3957	37.19	QP	10.03	47.22	57.94	-10.72
4	Ν	0.3957	25.62	AVG	10.03	35.65	47.94	-12.29
5	Ν	0.8013	34.62	QP	10.03	44.65	56.00	-11.35
6	Ν	0.8013	24.53	AVG	10.03	34.56	46.00	-11.44
7	Ν	1.6398	32.02	QP	10.04	42.06	56.00	-13.94
8	Ν	1.6398	12.45	AVG	10.04	22.49	46.00	-23.51
9	Ν	3.3627	31.28	QP	10.06	41.34	56.00	-14.66
10	Ν	3.3627	15.25	AVG	10.06	25.31	46.00	-20.69
11	Ν	17.5743	36.85	QP	10.26	47.11	60.00	-12.89
12	Ν	17.5743	21.80	AVG	10.26	32.06	50.00	-17.94



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Test Data

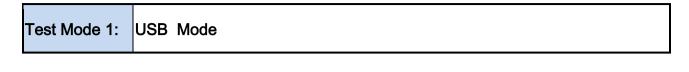
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1617	43.13	QP	10.03	53.16	65.38	-12.22
2	L1	0.1617	26.31	AVG	10.03	36.34	55.38	-19.04
3	L1	0.2748	35.04	QP	10.03	45.07	60.97	-15.90
4	L1	0.2748	26.74	AVG	10.03	36.77	50.97	-14.20
5	L1	0.7779	34.66	QP	10.03	44.69	56.00	-11.31
6	L1	0.7779	22.03	AVG	10.03	32.06	46.00	-13.94
7	L1	1.1484	34.06	QP	10.03	44.09	56.00	-11.91
8	L1	1.1484	13.74	AVG	10.03	23.77	46.00	-22.23
9	L1	2.9697	32.56	QP	10.05	42.61	56.00	-13.39
10	L1	2.9697	16.28	AVG	10.05	26.33	46.00	-19.67
11	L1	15.5229	29.11	QP	10.23	39.34	60.00	-20.66
12	L1	15.5229	16.86	AVG	10.23	27.09	50.00	-22.91

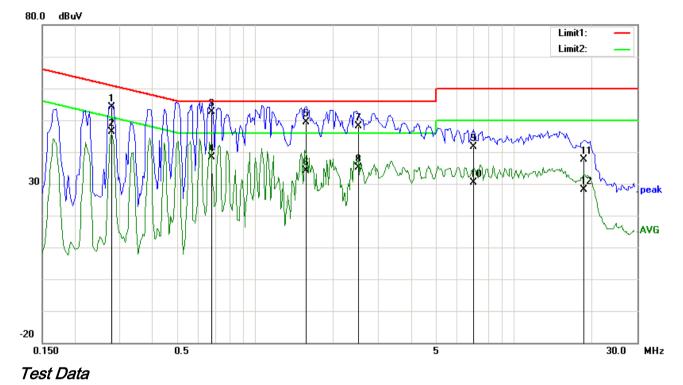
Phase Line Plot at 240Vac, 60Hz



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Phase Neutral Plot	at 240Vac.	60Hz
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No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	Ν	0.2787	44.05	QP	10.03	54.08	60.85	-6.77
2	Ν	0.2787	36.40	AVG	10.03	46.43	50.85	-4.42
3	Ν	0.6765	42.69	QP	10.03	52.72	56.00	-3.28
4	Ν	0.6765	28.25	AVG	10.03	38.28	46.00	-7.72
5	Ν	1.5735	39.34	QP	10.04	49.38	56.00	-6.62
6	Ν	1.5735	24.09	AVG	10.04	34.13	46.00	-11.87
7	Ν	2.5000	37.98	QP	10.05	48.03	56.00	-7.97
8	Ν	2.5000	25.16	AVG	10.05	35.21	46.00	-10.79
9	Ν	6.9702	31.50	QP	10.11	41.61	60.00	-18.39
10	Ν	6.9702	20.31	AVG	10.11	30.42	50.00	-19.58
11	Ν	18.6897	27.46	QP	10.28	37.74	60.00	-22.26
12	Ν	18.6897	17.97	AVG	10.28	28.25	50.00	-21.75



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6.2 Radiated Emissions

Temperature	24 °C
Relative Humidity	55%
Atmospheric Pressure	1013mbar
Test date :	February 05, 2018
Tested By :	Evans He

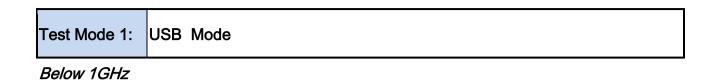
Requirement(s):

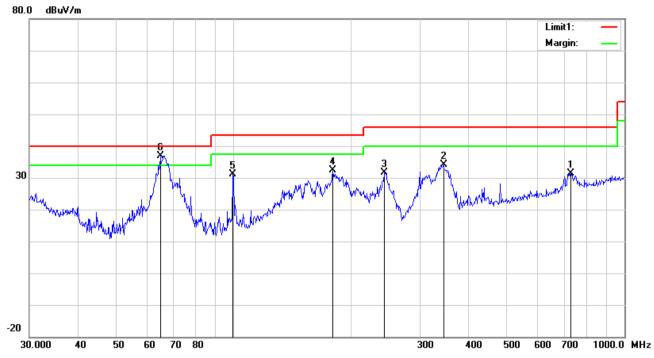
Spec	Item	Requirement Applicable						
47CFR§15. 109(d) a)		Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table ar the level of any unwanted emissions shall not exceed the level of 						
Test Setup	Above 960 500 Ant. Tower Units Turn Table Socm Ground Plane Test Receiver							
Procedure	 The EUT was switched on and allowed to warm up to its normal operating condition. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: Vertical or horizontal polarization (whichever gave the higher emission level 							

3								
SĬE	MIC	Test Report	18070029-FCC-E					
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	over a full	rotation of the E	UT) was chosen.					
	b. The EUT	was then rotated	to the direction that gave the maximum					
	emission.							
	c. Finally, the emission.	e antenna height	was adjusted to the height that gave the maximum					
	3. The resolution bar	dwidth and video	o bandwidth of test receiver/spectrum analyzer is					
	120 kHz for Quasi	y Peak detection	at frequency below 1GHz.					
	4. The resolution band	dwidth of test rec	eiver/spectrum analyzer is 1MHz and video					
	bandwidth is 3MH: 1GHz.	z with Peak dete	ction for Peak measurement at frequency above					
		ndwidth of test re	eceiver/spectrum analyzer is 1MHz and the video					
			Average Measurement as below at frequency					
	above 1GHz.							
		r -	Hz (Duty cycle > 98%)					
			e next frequency point, until all selected frequency					
	points were measu	ured.						
Remark								
Result	Pass 🗖 F	ail						
_	Yes	N/A N/A						
Test Mode 1	USB Mode							
Test Mode 2	Test Mode 2: MP4 Mode							
Test Mode 3: Camera Mode								
Test Mode 4	FM Mode							
Note: All mod	des were investigated,	the results be	low show only the worst case(USB mode).					



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Test Data

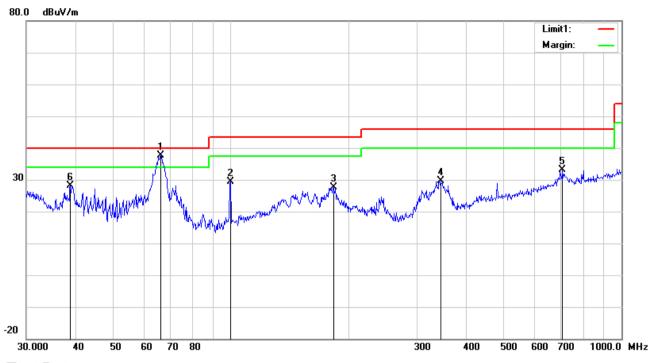
Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	(cm)	()
1	Н	729.3583	29.39	peak	20.55	21.30	2.73	31.37	46.00	-14.63	100	125
2	Н	344.3855	39.65	peak	14.53	22.17	2.01	34.02	46.00	-11.98	100	76
3	Н	242.5253	40.65	peak	11.50	22.30	1.68	31.53	46.00	-14.47	100	323
4	Н	179.3864	42.23	peak	11.05	22.25	1.36	32.39	43.50	-11.11	100	120
5	Н	99.5281	41.93	peak	10.29	22.32	1.11	31.01	43.50	-12.49	100	132
6	н	64.8865	50.92	QP	7.54	22.40	0.88	36.94	40.00	-3.06	100	129



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Below 1GHz



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	(cm)	()
1	۷	66.2662	51.45	QP	7.61	22.39	0.91	37.58	40.00	-2.42	100	262
2	۷	99.8777	40.28	peak	10.37	22.32	1.12	29.45	43.50	-14.05	100	119
3	V	183.2005	37.41	peak	11.18	22.27	1.42	27.74	43.50	-15.76	100	5
4	V	344.3855	35.31	peak	14.53	22.17	2.01	29.68	46.00	-16.32	100	97
5	V	706.6999	31.53	peak	20.28	21.35	2.58	33.04	46.00	-12.96	200	45
6	V	38.8879	34.97	peak	14.71	22.27	0.78	28.19	40.00	-11.81	100	136



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Above 1GHz

Frequency	Read_level	Azimuth	Height	Polarity	Level	Factors	Limit	Margin	Detector
(MHz)	(dBµV/m)	Azimuu	(cm)	(H/V)	(dBµV/m)	(dB)	(dBµV/m)	(dB)	(PK/AV)
1416.45	68.05	344	100	V	-19.3	48.75	74	-25.25	PK
2182.89	60.45	214	100	V	-14.12	46.33	74	-27.67	PK
3097.48	60.72	170	100	V	-13.14	47.58	74	-26.42	PK
1379.82	64.14	215	100	Н	-19.85	44.29	74	-29.71	PK
2594.61	59.9	289	100	Н	-13.63	46.27	74	-27.73	PK
3600.27	58.39	267	100	Н	-11.51	46.88	74	-27.12	PK

Note1: The highest frequency of the EUT is 2567.5 MHz, so the testing has been conformed to 5*2567.5MHz

=12,838MHz.

Note2: The frequency that above 3GHz is mainly from the environment noise.

Note3: The AV measurement performed, more than 20dB below limit so AV test data was not presented.



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Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use				
AC Line Conducted Emis	AC Line Conducted Emissions								
EMI test receiver	ESCS30	8471241027	09/15/2017	09/14/2018					
Line Impedance Stabilization Network	LI-125A	191106	09/23/2017	09/22/2018	K				
Line Impedance Stabilization Network	LI-125A	191107	09/23/2017	09/22/2018	V				
LISN	ISN T800	34373	09/23/2017	09/22/2018	V				
Transient Limiter	LIT-153	531118	08/30/2017	08/29/2018	V				
Radiated Emissions									
EMI test receiver	ESL6	100262	09/15/2017	09/14/2018					
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/30/2017	08/29/2018	V				
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	K				
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/19/2017	09/18/2018	K				
Double Ridge Horn Antenna	AH-118	71259	09/22/2017	09/21/2018	×				

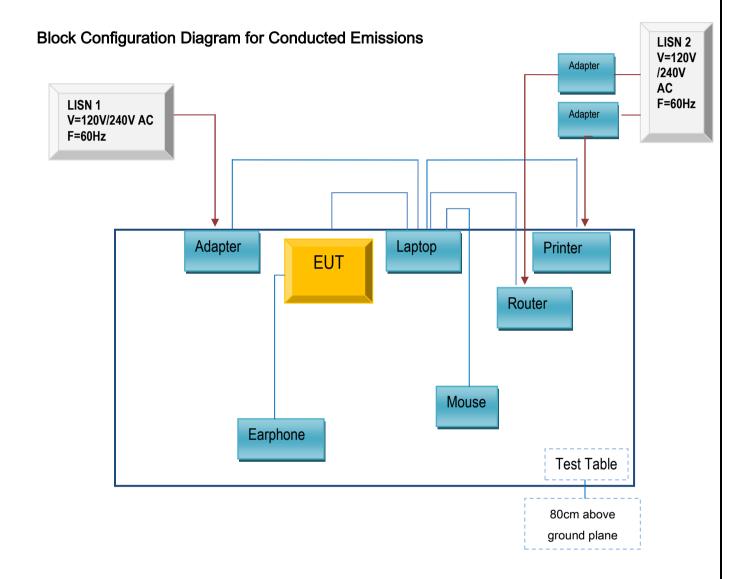


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Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

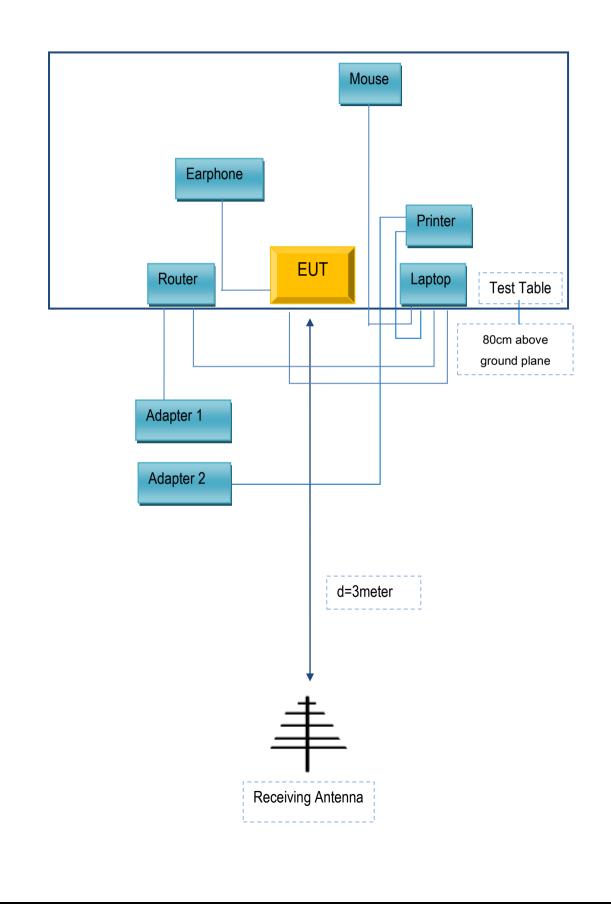
Annex C.ii. TEST SET UP BLOCK





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Block Configuration Diagram for Radiated Emissions





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Annex C. il. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
Lenovo	Laptop	E40	LR-1EHRX
GOLDWEB	GOLDWEB Router		1202032094
Lenovo	AC Adapter	42T4416	21D9JU
HP	Printer	VCVRA-1003	CN36M19JWX
DELL	Mouse	E100	912NMTUT41481
BULL	BULL Socket		GN201203
TECNO MOBILE LIMITED	Earphone	CA7	N/A

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	2m	JX120051274
USB Cable	Un-shielding	No	2m	CBA3000AH0C1
RJ45 Cable	Un-shielding	No	2m	KX156327541
Router Power cable	Un-shielding	No	2m	13274630Z
Printer Power cable	Un-shielding	No	2m	127581031
Power Cable	Un-shielding	No	0.8m	GT211032



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Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see the attachment



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Annex E. DECLARATION OF SIMILARITY

N/A