

# **TEST REPORT**

Report No.: BCTC2501698786-2E

Applicant: Shenzhen Efercro Electronic Technology Co., Ltd.

Product Name: Smart PTZ Battery Camera

Test Model: S1

Tested Date: 2025-01-09 to 2025-01-15

Issued Date: 2025-02-18

Shenzhen BCTC Testing Co., Ltd.



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# FCC ID:2AW9M-S1

Product Name: Smart PTZ Battery Camera

Trademark: N/A

Model/Type reference: S1,S1 Pro,S2,S2 Pro,S3,S3 Pro,S4,S4 Pro,S5,S5 Pro,S6,S6 Pro,S7,S7

Pro,S8,S8 Pro,S9,S9Pro

Prepared For: Shenzhen Efercro Electronic Technology Co., Ltd.

Address: Room 901,Block E,Building 1, Section 1,Chuangzhi Yuncheng,Liuxian Avenue,

Xili Community, Xili Street, Nanshan District, Shenzhen China 518055

Manufacturer: Shenzhen Efercro Electronic Technology Co., Ltd.

Address: Room 901,Block E,Building 1, Section 1,Chuangzhi Yuncheng,Liuxian Avenue,

Xili Community, Xili Street, Nanshan District, Shenzhen China 518055

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road,

Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Sample Received Date: 2025-01-09

Sample tested Date: 2025-01-09 to 2025-01-15

Report No.: BCTC2501698786-2E

FCC CFR Title 47 Part 2

Test Standards: FCC CFR Title 47 Part 22 FCC CFR Title 47 Part 24

FCC CFR Title 47 Part 24
FCC CFR Title 47 Part 27

Test Results: PASS

Remark: This is radio test report for 4G in US full bands.

Tested by:

Brave 2emg

Brave Zeng/ Project Handler

Approved by:

127

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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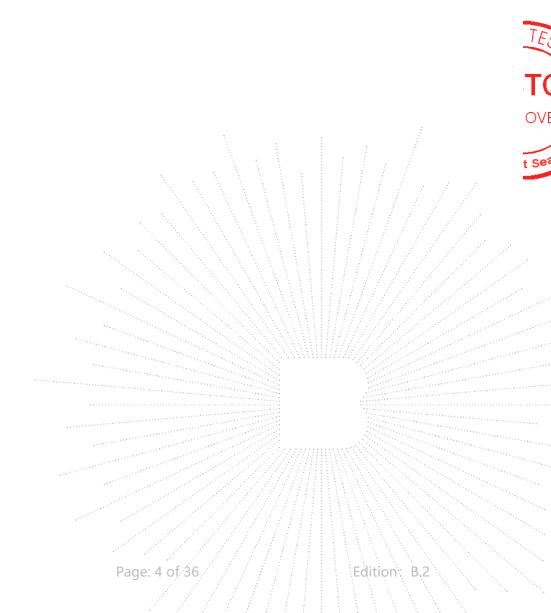


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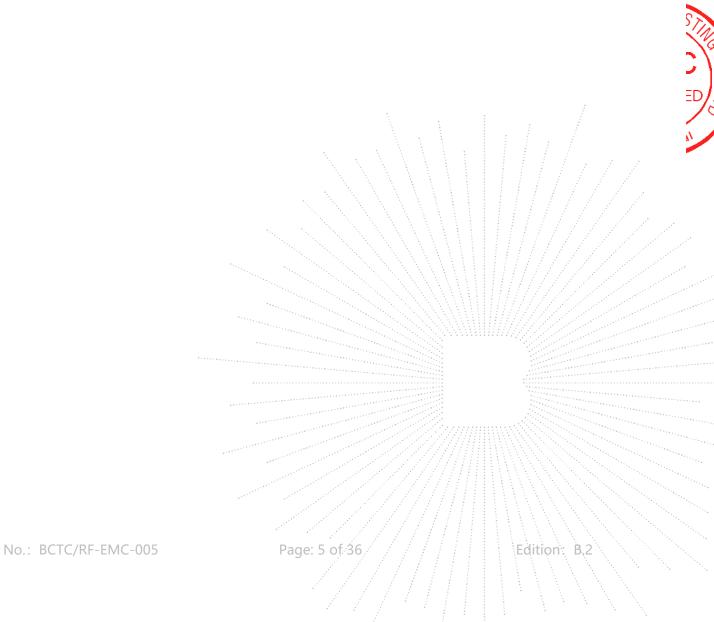
(Note: N/A Means Not Applicable)





# 1. Version

Report No.	Issue Date	Description	Approved
BCTC2501698786-2E	2025-02-18	Original	Valid





# 2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	RF Exposure	§1.1307,§2.1093	PASS
2	RF Output Power	§2.1046; §22.913; §22.913 (a) §24.232(c); §27.50(d); §27.50(c); §27.50(b);	PASS
3	Peak-to-average Ratio(PAR) of Transmitter	§22.913 §2.1046; §24.232(d) §27.50(d);§27.50(c); §27.50(b);	PASS
4	Emission Bandwidth	§22.917 (b) §2.1049; §24.238(b);§27.53;	PASS
5	Spurious Emissions at Antenna Terminal	§22.917 (a), §24.238 (a), §27.53(g),§27.53(h)	PASS
6	Spurious Radiation Emissions	§22.917 (a) §2.1051; §22.917(a); §27.53(h); §27.53(g); §27.53(c); §24.238(a);	PASS
7	Out of Band Emissions	§22.917 (a) §2.1051; §22.917(a); §27.53(h); §27.53(c); §27.53(g); §24.238(a);	PASS
8	Frequency Stability	§2.1055;§22.355; §27.54; §24.235;	PASS

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# 3. Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59℃

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### 4. **Product Information And Test Setup**

### **Product Information** 4.1

S1,S1 Pro,S2,S2 Pro,S3,S3 Pro,S4,S4 Pro,S5,S5 Pro,S6,S6 Pro,S7,S7 Pro,S8,S8 Model/Type reference:

Pro.S9.S9Pro

The following models of units we produce are identical in electrical, mechanical and Model differences:

physical structure; The difference is only in the model name and shell, we finally

have S1 as test model.

Hardware Version: N/A

Software Version: N/A

> LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz

Tx Frequency: LTE Band 12: 699 MHz ~ 716 MHz

LTE Band 13: 777 MHz ~787 MHz LTE Band 66: 1710 MHz -1780 MHz LTE Band 2: 1930 MHz ~ 1990 MHz LTE Band 4: 2110 MHz ~ 2155 MHz LTE Band 5: 869 MHz ~ 894 MHz

Rx Frequency: LTE Band 12: 729 MHz ~ 746 MHz LTE Band 13: 746 MHz ~756 MHz

LTE Band 66: 2110 MHz -2180 MHz

LTE Band 2: 1.4MHz /3MHz /5MHz /10MHz /15MHz /20MHz LTE Band 4: 1.4MHz /3MHz /5MHz /10MHz /15MHz /20MHz

LTE Band 5: 1.4MHz /3MHz /5MHz /10MHz Bandwidth: LTE Band 12: 1.4MHz /3MHz /5MHz /10MHz

LTE Band 13: 5MHz /10MHz

LTE Band 66:1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz

LTE Band 2: 24.65dBm LTE Band 4: 25.11dBm LTE Band 5: 24.67 dBm

Maximum Output Power to

Antenna:

LTE Band 12: 24.79dBm LTE Band 13: 23.65 dBm LTE Band 66: 25.69 dBm LTE Band 2: 17M9G7D LTE Band 4: 18M04W7D

LTE Band 5: 9M01W7D 99% Occupied Bandwidth:

LTE Band 12: 8M99G7D LTE Band 13: 9M03G7D

LTE Band 66: 18M0G7D

QPSK/16QAM Type of Modulation:

Antenna Type: External antenna

> LTE Band 2:3.92 dBi LTE Band 4:4.39dBi LTE Band 5:3.71dBi

Antenna Gain: LTE Band 12:2.99dBi

LTE Band 13:3.16dBi LTE Band 66:4.39dBi

DC 5V Ratings:

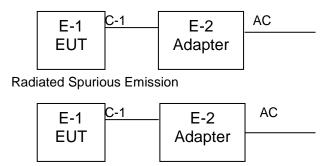
Battery DC 3.6V 9200mAh

No.: BCTC/RF-EMC-005



# **Test Setup Configuration**

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment. Conducted Emission:



# **Emission Designator**

LTE Band 2	QPSK		16C	)AM
BW(MHz)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)
1.4	1M09G7D	0.195	1M09W7D	0.170
3	2M70G7D	0.193	2M70W7D	0.164
5	4M53G7D	0.199	4M51W7D	0.179
10	8M98G7D	0.244	9M01W7D	0.245
15	13M5G7D	0.259	13M50W7D	0.251
20	17M9G7D	0.292	18M06W7D	0.254

LTE Band 4	QPSK		160	QAM
BW(MHz)	Emission Designator (99%OBW)  Maximum EIR		Emission Designator (99%OBW)	Maximum EIRP(W)
1.4	1M10G7D	0.324	1M11W7D	0.307
3	2M71G7D	0.321	2M72W7D	0.283
5	4M52G7D	0.315	4M53W7D	0.288
10	9M02G7D	0.314	9M00W7D	0.316
15	13M52G7D	0.252	13M53W7D	0.270
20	18M04G7D	0.249	18M03W7D	0.251

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LTE Band 5	QPSK		160	AM
BW(MHz)	Emission Designator (99%OBW)  Maximum ERP(W)		Emission Designator (99%OBW)	Maximum ERP(W)
1.4	1M09G7D	0.210	1M09W7D	0.174
3	2M70G7D	0.212	2M72W7D	0.190
5	4M54G7D	0.214	4M53W7D	0.195
10	9M00G7D	0.246	9M01W7D	0.293

LTE Band 12	QPSK		E Band 12 QPSK 16QAM		QAM MA
BW(MHz)	Emission Designator (99%OBW)  Maximum ERP		Emission Designator (99%OBW)	Maximum ERP(W)	
1.4	1M09G7D	0.188	1M09W7D	0.161	
3	2M70G7D	0.191	2M70W7D	0.163	
5	4M53G7D	0.211	4M51W7D	0.195	
10	8M99G7D	0.230	8M99W7D	0.301	

LE Band 13	QPSK		E Band 13 QPSK 16QAM		AM
BW(MHz)	Emission Designator (99%OBW)  Maximum ERP(W)		Emission Designator (99%OBW)	Maximum ERP(W)	
5	4M54G7D	0.214	4M51W7D	0.200	
10	9M03G7D	0.232	8M95W7D	0.228	

LTE Band 66	QPSK		LTE Band 66 QPSK		16Q	AM
BW(MHz)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)		
1.4	1M09G7D	0.209	1M10W7D	0.175		
3	2M70G7D	0.204	2M70W7D	0.183		
5	4M52G7D	0.211	4M51W7D	0.186		
10	9M00G7D	0.235	9M0W7D	0.242		
15	13M4G7D	0.243	13M47W7D	0.237		
20	18M0G7D	0.250	18M0W7D	0.238		

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# 4.3 Description Operation Frequency

LTE Band	2(1.4MHz)	LTE Ban	d 2(3MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18607	1850.7	18615	1851.5
18900	1880	18900	1880
19193	1909.3	19185	1908.5
LTE Band 2(5MHz)		LTE Band	2(10MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18625	1852.5	18650	1855
18900	1880	18900	1880
19175	1907.5	19150	1905
LTE Band	2(15MHz)	LTE Band	d 2(20MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18675	1857.5	18700	1860
18900	1880	18900	1880
19125	1902.5	19100	1900

LTE Band	4(1.4MHz)	LTE Ban	d 4(3MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19957	1710.7	19965	1711.5
20175	1732.5	20175	1732.5
20393	1754.3	20385	1753.5
LTE Band	4(5MHz)	LTE Band	d 4(10MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19975	1712.5	20000	1715
20175	1732.5	20175	1732.5
20375	1752.5	20350	1750
LTE Band	4(15MHz)	LTE Band	d 4(20MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20025	1717.5	20050	1720
20175	1732.5	20175	1732.5
20325	1747.5	20300	1745

LTE Band	5(1.4MHz)	LTE Band 5(3MHz)				
Channel	Frequency (MHz)	Channel	Frequency (MHz)			
20407	824.7	20415	825.5			
20525	836.5	20525	836.5			
20643	848.3	20635	847.5			
LTE Band	d 5(5MHz)	LTE Band	5(10MHz)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)			
20425	826.5	20450	829			
20525	836.5	20525	836.5			
20625	846.5	20600	844			

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LTE Band	12(1.4MHz)	LTE Band	12(3MHz)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)			
23017	699.7	23025	700.5			
23095	707.5	23095	707.5			
23173	715.3	23165 714.5				
LTE Band	1 12(5MHz)	LTE Band	12(10MHz)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)			
23035	701.5	23060	704			
23095	707.5	23095	707.5			
23155	713.5	23130 711				

LTE Ban	d 13(5MHz)	LTE Band	13(10MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23205	779.5		
23230	782	23230	782
23255	784.5		

LTE Band 6	6(1.4MHz)	LTE Band	66( (3MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
131979	1710.7	131987	1711.5
132322	1745	132322	1745
132665	1779.3	132657	1778.5
LTE Band	66(5MHz)	LTE Band	66( (10MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
131997	1712.5	132022	1715
132322	1745	132322	1745
132647	1777.5	132622	1775
LTE Band 6	6( (15MHz)	LTE Band	66( (20MHz)
Channel	Frequency (MHz)	Channel	Frequency (MHz)
132047	1717.5	132072	1720
132322	1745	132322	1745
132597	1772.5	132572	1770

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## 4.4 Test Mode

Test modes are chosen to be reported as the worst case configuration below:

Test Mode										
Band	Radiated TCs	Conducted TCs								
LTE Band 2	QPSK Link (1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz)	16QAM Link (1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz)								
LTE Band 4	QPSK Link (1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz)	16QAM Link (1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz)								
LTE Band 5	QPSK Link (1.4MHz / 3MHz / 5MHz / 10MHz)	16QAM Link (1.4MHz / 3MHz / 5MHz / 10MHz)								
LTE Band 12	QPSK Link (1.4MHz / 3MHz / 5MHz / 10MHz)	16QAM Link (1.4MHz / 3MHz / 5MHz / 10MHz)								
LTE Band 13	QPSK Link (5MHz / 10MHz)	16QAM Link (5MHz / 10MHz)								
LTE Band 66	QPSK Link (1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz)	16QAM Link (1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz)								

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas License Digital Systems v03 with maximum output power.

### **EUT Cable List and Details**

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core				
/	1						
/	1 1						

## Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
1	1		

### Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/		

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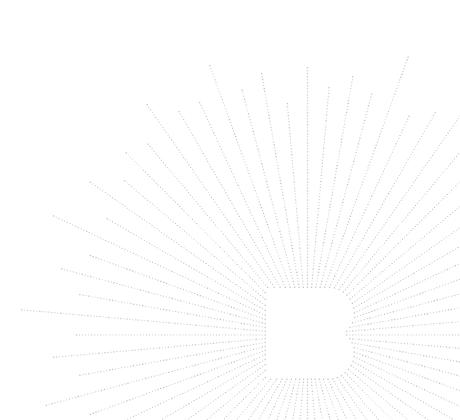
Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

T				Ban	dwidt	h (MH	lz)	Mod	ulation		RB#		Tes	t Cha	nnel
Test Items	Band	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	М	Н
	2	٧	٧	٧	٧	٧	٧	V	V	٧	V	٧	٧	٧	٧
	5	V	V	V	٧	-	-	v	v	v	v	v	v	v	٧
Max.Output Power	12	V	V	v	٧	-	-	v	v	v	v	v	٧	V	٧
	13	-	-	V	٧	-	-	v	v				-	v	-
	66	V	V	٧	٧	V	v	v	v	v	v	v	v	٧	٧
	2	V	٧	٧	٧	٧	v	V	٧	٧	٧	٧	٧	٧	٧
	5	V	٧	٧	٧	-	-	v	v	v	v	v	V	٧	٧
Peak-to-Average	12	V	V	V	٧	-	-	v	v	v	v	V	v	V	٧
Ratio	13							v	v						
	14							v	v						
	66	V	V	V	٧	V	v	v	v	v	v	v	٧	٧	٧
	2	V	٧	٧	٧	٧	٧	V	V	٧	V	V	٧	٧	٧
	5	V	٧	٧	٧	-	-	v	v	v	v	v	٧	V	٧
26dB and 99% Bandwidth	12	V	٧	٧	٧	-	-	v	v	v	v	v	٧	٧	٧
Danawa	13	-	-	V	٧	-	-	v	· v		:				
	66	V	٧	٧	٧	٧	v	v	V	v	V	v	V	٧	٧
	2	V	٧	٧	٧	V	V	V	V	V	V	V	V	, <b>-</b> ,/	V
	5	V	٧	٧	٧	-	-	V	v	V	V	V	٧.	7	V
Conducted Band Edge	12	V	٧	٧	٧	-	-	V	V	V	V	v	v	٧	٧
Lago	13					***************************************		V	v			17.			
	66	V	٧	٧	V	٧.,	٧	V	v	٧	٧	v	V	-	V
	2	V	٧	٧	٧	ν	٧	ν	V	٧		-	٧	V	٧
Conducted	5	V	V	V	V	****	-	V	V	V	-	•	V	V	V
Spurious	12	V	V	V	٧.	• • • • • • • • • • • • • • • • • • •		ν	V	٧	<b>v</b>	ν	V	ν	V
Emission	13			•			********	ν	V						
	66	V	V	V	٧	ν	V	<b>V</b>	<b>V</b>	v	-	-	<b>V</b>	<b>v</b>	<b>V</b>
	2	V	-	-		-	<del>-</del>	V	V	V	-	-	٧	V	٧٠٠٠
	5	V	-	-	-		_	V	v	V		-	V	V	V
Frequency tability	12	v	-		-		-	V	v	V	-	-	٧	V	V
Cability	13							V	<b>v</b> //						
	66	V	-	-	-	-		V	ý	V	-	-	V	V	V

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	2	٧	٧	٧	٧	٧	٧	V	٧	٧	٧	٧	٧	٧	٧
	5	v	v	v	v	-	-	v	v	v	v	v	v	٧	٧
E.R.P./ E.I.R.P.	12	v	v	٧	٧	-	-	v	v	٧	v	v	v	٧	٧
	13	-	-	v	v	-	-	v	V						
	66	V	V	٧	٧	v	٧	v	V	٧	V	v	٧	٧	٧
	2	٧	-	-	-	-	-	V	V	٧	-	-	٧	٧	٧
Radiated	5	V	-	-	-	-	-	v	V	v	-	-	V	٧	٧
Spurious	12	v	-	-	-	-	-	v	v	v	-	-	v	٧	٧
Emission	13							v	v						
	66	v	-	-	-	-	-	v	V	v	-	-	v	٧	٧
Note		1.The mark "v " means that this configuration is chosen for testing 2.The mark "-" means that this bandwidth is not supported.													



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## 4.5 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Smart PTZ Battery Camera	N/A	S1	N/A	EUT
E-2	Adapter	N/A	N/A	N/A	Auxiliary

Item Shielded Type		Ferrite Core	Length	Note	
C-1	N/A	N/A	1M	DC cable unshielded	

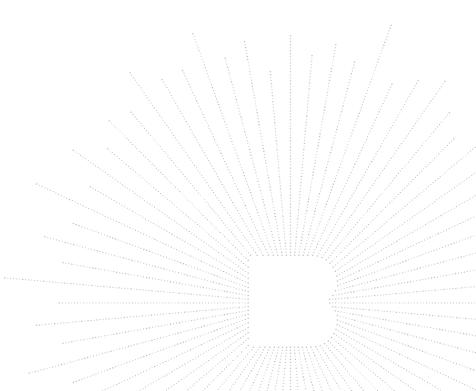
### Notes:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

# 4.6 Measurement Results Explanation Example

### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level. The spectrum analyzer offset is derived from RF cable loss and attenuator factor. Offset = RF cable loss + attenuator factor.



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### 5. Test Facility And Test Instrument Used

## 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850 A2LA certificate registration number is: CN1212

ISED Registered No.: 23583 ISED CAB identifier: CN0017

# 5.2 Test Instrument Used

Radiated Emissions Test (966 Chamber02)								
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.			
966 chamber	SKET	966 Room	966	Oct. 31. 2024	Oct. 30. 2027			
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025			
Receiver	R&S	ESRI7	100010	Oct. 31. 2024	Oct. 30. 2025			
Amplifier	SKET	LNPA-30M01 G-30	SK2021082004	Oct. 31. 2024	Oct. 30. 2025			
TRILOG Broadband Antenna	Schwarzbeck	VULB9168	1323	May 21, 2024	May 20, 2025			
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025			
Amplifier	SKET	LAPA_01G1 8G-45dB	SK202104090 1	May 16, 2024	May 15, 2025			
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025			
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 16, 2024	May 15, 2025			
Horn Antenn(18GH z-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025			
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025			
Software	Frad	EZ-EMC	FA-03A2 RE	\				

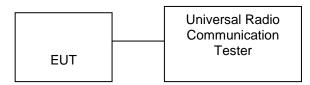
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# 6. RF Output Power

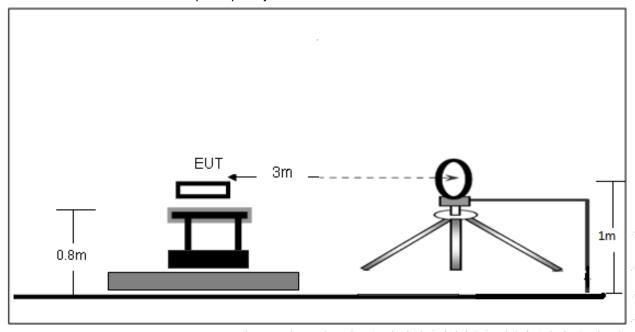
# 6.1 Block Diagram Of Test Setup

Conducted output power test method:



# Radiated power test method:

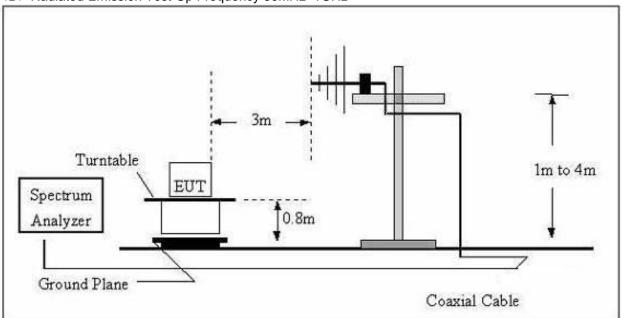
(A) Radiated Emission Test-Up Frequency Below 30MHz



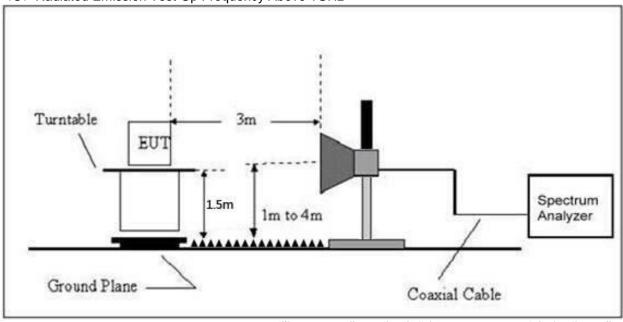
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(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



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### 6.2 Limit

According to §22.913(a)(2),The ERP of mobileand portable stations transmitters and auxiliary test transmitters must not exceed 7 Watts.

According to §24.232 (c), Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to §27.50(d)(4), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

### 6.3 Test procedure

Radiated power test method:

- 1.The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
- 2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
- 3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
- 4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.





# 6.4 Test Result

## **Max Radiated Power:**

## FDD-LTE Band 2

	Channel Band	width: 1.4MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	21.96	PASS
QPSK	MCK	22.31	PASS
·	HCH	22.79	PASS
	LCH	22.52	PASS
16QAM	MCK	22.45	PASS
	HCH	21.98	PASS
	Channel Band		
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.87	PASS
QPSK	MCK	22.23	PASS
1	HCH	22.59	PASS
	LCH	21.97	PASS
16QAM	MCK	21.9	PASS
T	HCH	22.33	PASS
	Channel Band		
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	21.91	PASS
QPSK	MCK	22.57	PASS
	HCH	22.47	PASS
	LCH	22.24	PASS
16QAM	MCK	22.87	PASS /
	HCH	22.34	PASS
	Channel Band		
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.53	PASS
QPSK	MCK	22.05	PASS
QPSK			
[	HCH	22.71	/PASS /
	HCH LCH		PASS PASS
16QAM	*	22.71	
16QAM	LCH	22.71 22.89	PASS
16QAM	LCH MCK	22.71 22.89 21.91 22.28	PASS PASS
16QAM  Modulation	LCH MCK HCH Channel Band Channel	22.71 22.89 21.91 22.28	PASS PASS
	LCH MCK HCH Channel Band Channel LCH	22.71 22.89 21.91 22.28 width: 15MHz	PASS PASS PASS  Verdict PASS
	LCH MCK HCH Channel Band Channel LCH MCK	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03	PASS PASS  Verdict PASS PASS PASS
Modulation	LCH MCK HCH Channel Band Channel LCH	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76	PASS PASS PASS  Verdict PASS
Modulation	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS
Modulation	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH MCK HCH LCH MCK	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4	PASS PASS  Verdict PASS PASS PASS PASS
Modulation  QPSK	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS
Modulation  QPSK  16QAM	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH MCK HCH LCH MCK HCH CH MCK	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55 22.09 22.53	PASS PASS  Verdict PASS PASS PASS PASS PASS PASS PASS PAS
Modulation  QPSK	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH MCK HCH LCH MCK HCH Channel Band Channel	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55 22.09 22.53	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS PASS PASS PAS
Modulation  QPSK  16QAM  Modulation	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH Channel Band Channel	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55 22.09 22.53 width: 20MHz	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS PASS PASS PAS
Modulation  QPSK  16QAM	LCH MCK HCH Channel Band Channel LCH MCK HCH Channel Band Channel LCH MCK	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55 22.09 22.53 width: 20MHz E.R.P(dBm)	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS PASS PASS PAS
Modulation  QPSK  16QAM  Modulation	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH MCK HCH LCH MCK HCH LCH MCK HCH Channel Band Channel LCH MCK HCH	22.71 22.89 21.91 22.28  width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55 22.09 22.53  width: 20MHz E.R.P(dBm) 22.83	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS PASS PASS PAS
Modulation  QPSK  16QAM  Modulation	LCH MCK HCH Channel Band Channel LCH MCK HCH Channel Band Channel LCH MCK	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55 22.09 22.53 width: 20MHz E.R.P(dBm) 22.83 21.91	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS PASS PASS PAS
Modulation  QPSK  16QAM  Modulation	LCH MCK HCH Channel Band Channel LCH MCK HCH LCH MCK HCH LCH MCK HCH LCH MCK HCH Channel Band Channel LCH MCK HCH	22.71 22.89 21.91 22.28 width: 15MHz E.R.P(dBm) 22.76 22.03 22.4 22.55 22.09 22.53 width: 20MHz E.R.P(dBm) 22.83 21.91 22.08	PASS PASS PASS  Verdict PASS PASS PASS PASS PASS PASS PASS PAS

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### FDD-LTE Band 4

	Channel Band	lwidth: 1.4MHz	
Modulation	Channel	E.I.R.P(dBm)	Verdict
	LCH	22.87	PASS
QPSK	MCK	22.39	PASS
	HCH	22.62	PASS
	LCH	22.52	PASS
16QAM	MCK	22.79	PASS
	HCH	22.26	PASS
,	Channel Ban	dwidth: 3MHz	
Modulation	Channel	E.I.R.P(dBm)	Verdict
	LCH	22.12	PASS
QPSK	MCK	22.51	PASS
	HCH	22.34	PASS
	LCH	22.79	PASS
16QAM	MCK	22.18	PASS
	HCH 22.48		PASS
		dwidth: 5MHz	
Modulation	Channel	E.I.R.P(dBm)	Verdict
	LCH	22.75	PASS
QPSK	MCK	22.58	PASS
	HCH	22.64	PASS
	LCH	22.48	PASS
16QAM	MCK	22.09	PASS
	HCH	22.68	PASS
		dwidth: 10MHz	17.00
Modulation	Channel	E.I.R.P(dBm)	Verdict
	LCH	22.89	PASS
QPSK	MCK	22.34	PASS
	HCH	22.33	PASS
	LCH	22.14	PASS
16QAM	MCK	22.01	PASS
. • 🛴	HCH	22.47	PASS
	-	dwidth: 15MHz	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Modulation	Channel	E.I.R.P(dBm)	Verdict
oualaio	LCH	22.15	PASS
QPSK	MCK	22.94	PASS
Qi Oit	HCH	22.38	PASS
	LCH	22.42	PASS
16QAM	MCK	22.73	PASS
IOQAW	HCH	22.63	PASS
		dwidth: 20MHz	hiii i i i i i i i i i i i i i i i i i
Modulation	Channel	E.I.R.P(dBm)	Verdict
Modulation	LCH	22.58	PASS
QPSK	MCK	22.37	PASS
<b>U</b> F <b>SN</b>	HCH	22.31	PASS
			PASS
16044	LCH	22.16	
16QAM	MCK	22.31	PASS
	HCH	22.61	PASS

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### FDD-LTE Band 5

	Channel Bar	ndwidth: 1.4MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.83	PASS
QPSK	MCK	22.84	PASS
	HCH	22.51	PASS
	LCH	22.62	PASS
16QAM	MCK	22.31	PASS
	HCH	22.62	PASS
	Channel Ba	ndwidth: 3MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.41	PASS
QPSK	MCK	22.72	PASS
	HCH	22.35	PASS
	LCH	22.1	PASS
16QAM	MCK	22.77	PASS
	HCH	22.05	PASS
		ndwidth: 5MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.37	PASS
QPSK	MCK	22.25	PASS
	HCH	21.99	PASS
	LCH	22.44	PASS
16QAM	MCK	22.82	PASS
	HCH	22.41	PASS
	Channel Bar	ndwidth: 10MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.82	PASS
QPSK	MCK	22.12	PASS ;
	HCH	21.96	PASS
	LCH	22.26	PASS
16QAM	MCK	22.52	PASS
	HCH	22.79	PASS

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### FDD-LTE Band 12

	Channel Band	dwidth: 1.4MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.75	PASS
QPSK	MCK	22.29	PASS
	HCH	22.02	PASS
	LCH	22.88	PASS
16QAM	MCK	21.91	PASS
	HCH	21.95	PASS
	Channel Ban	dwidth: 3MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.49	PASS
QPSK	MCK	22.38	PASS
	HCH	22.24	PASS
	LCH	22.46	PASS
16QAM	MCK	22.04	PASS
	HCH	22.21	PASS
	Channel Ban	dwidth: 5MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.84	PASS
QPSK	MCK	22.29	PASS
	HCH	22.07	PASS
	LCH	22.81	PASS
16QAM	MCK	22.42	PASS
	HCH	22.61	PASS
	Channel Ban	dwidth: 10MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.46	PASS
QPSK	MCK	22.83	PASS :
	HCH	22.63	PASS
	LCH	21.9	PASS
16QAM	MCK	22.48	PASS
	HCH	22.72	PASS
DD-LTE Band 13	Α.		
DD-LIE DallU 13	Channel Ben	dwidth: 5MHz	1111111111
	Channel Ban	uwidth: SWITZ	

## FDD-LTE Band 13

Channel Bandwidth: 5MHz						
Modulation	Channel	E.R.P(dBm)	Verdict			
	LCH	22.32	PASS			
QPSK	MCK	22.48	PASS			
	HCH	22.32	PASS			
	LCH	22.86	PASS			
16QAM	MCK	22.28	PASS			
	HCH ····	22.79	PASS			
	Channel Band	lwidth: 10MHz				
Modulation	Channel	E.R.P(dBm)	Verdict			
	1		PASS			
QPSK	MCK	22.72	PASS			
			PASS			
	1		PASS			
16QAM	MCK	21.9	PASS			
	Ţ.	$\mathcal{A}/\mathcal{A}/\mathcal{A}/\mathcal{A}/\mathcal{A}$	PASS			

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### FDD-LTE Band 66

1 DD-L1L Band 00	Channel Ban	dwidth: 1.4MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.86	PASS
QPSK	MCK	22.83	PASS
	HCH	22.6	PASS
	LCH	22.85	PASS
16QAM	MCK	22.88	PASS
	HCH	22.73	PASS
	Channel Bai	ndwidth: 3MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	21.92	PASS
QPSK	MCK	22.62	PASS
	HCH	22.01	PASS
	LCH	22.6	PASS
16QAM	16QAM MCK 22.53		PASS
·	HCH	22.32	PASS
		ndwidth: 5MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.5	PASS
QPSK	MCK	22	PASS
· ·	HCH	22.5	PASS
	LCH	22.73	PASS
16QAM	MCK	22.41	PASS
	HCH	22.34	PASS
		dwidth: 10MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.14	PASS
QPSK	MCK	22.29	PASS :
	HCH	22.61	PASS
	LCH	22.38	PASS
16QAM	MCK	22.49	PASS
	HCH	22.44	PASS
	Channel Ban	dwidth: 15MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH	22.06	PASS
QPSK	MCK	22.48	PASS
·	HCH	22.58	PASS
	LCH	22.26	PASS
16QAM	MCK	22.32	PASS
-	HCH	22.07	PASS
		dwidth: 20MHz	
Modulation	Channel	E.R.P(dBm)	Verdict
	LCH ·····	22.74	PASS
QPSK	MCK	22.17	PASS
	HCH	22.07	PASS
			*******************************
	LCH	22 45	PASS
16QAM	LCH MCK	22.45 22.21	PASS PASS

Max Conducted output Power:
Please refer to appendix A: Conducted Output Power

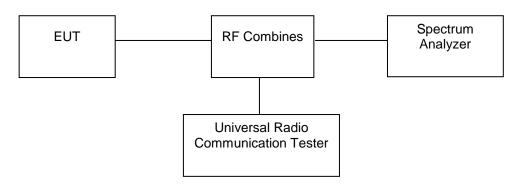
Test Result: Pass

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### 7. Peak-To-Average Ratio(PAR) Of Transmitter

### 7.1 Block Diagram Of Test Setup



### 7.2 Limit

According to §24.232(d), Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

According to §27.50(B), the peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

### 7.3 Test procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 30kHz and the peak-to-average ratio (PAR) of the transmission was recorded. Record the maximum PAPR level associated with a probability of 0.1%.

### 7.4 Test Result

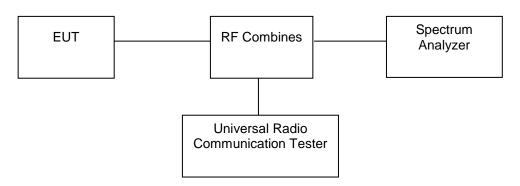
Please refer to Appendix 3: Peak-to-Average Ratio Test Result: Pass

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### 8. Emission Bandwidth

### 8.1 Block Diagram Of Test Setup



### 8.2 Standard Applicable

According to §22.917(b), The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

According to §24.238(b), The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

According to §27.53, The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

### 8.3 Test procedure

- 1. The testing follows FCC KDB 971168 D01v03 Section 4.2.
- 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- 3. The RF output of the EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 4. The 99% occupied bandwidth were measured, set RBW= 1% of OBW, VBW= 3\*RBW, sample detector, trace maximum hold.
- 5. The 26dB bandwidth were measured, set RBW= 1% of EBW, VBW= 3\*RBW, peak detector, trace maximum hold.

### 8.4 Test Result

Please refer to Appendix 4: Occupied BandWidth Test Result: Pass

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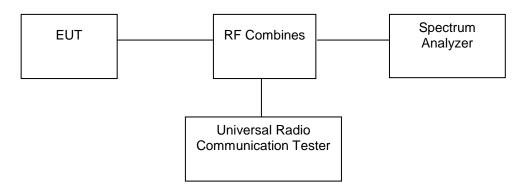
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### 9. Out of Band Emissions at Antenna Terminal

### 9.1 Block Diagram Of Test Setup



### 9.2 Limit

According to §22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §27.53 (h), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.

### 9.3 Test procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 100kHz and 1MHz for the scan frequency from 30MHz to 1GHz and the scan frequency from 1GHz to up to 10<sup>th</sup> harmonic.

### 9.4 Test Result

Please refer to Appendix 5: Band Edge & Appendix 6: Out-of-band Emissions Test Result: Pass

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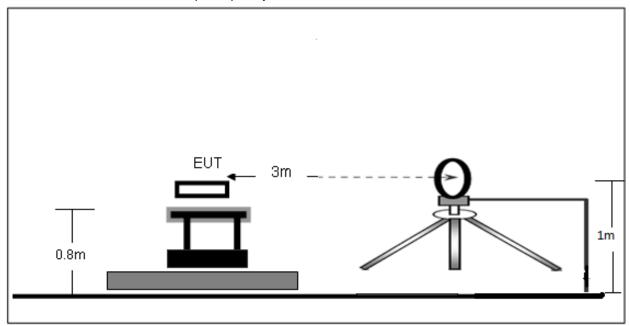




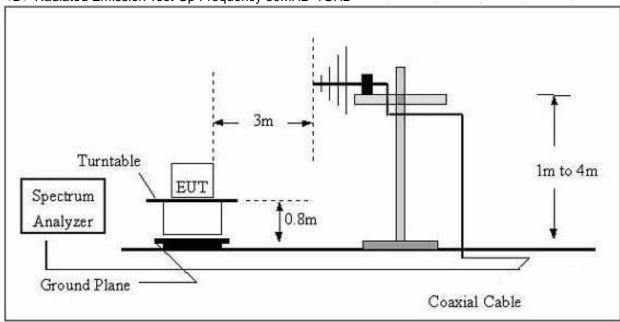
# 10. Spurious Radiated Emissions

# 10.1 Block Diagram Of Test Setup

(A) Radiated Emission Test-Up Frequency Below 30MHz



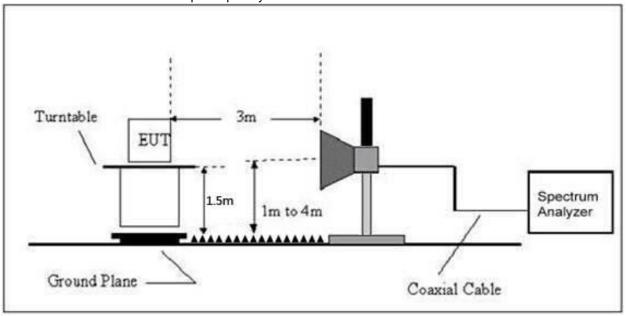
(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



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(C) Radiated Emission Test-Up Frequency Above 1GHz



### 10.2 Limit

According to §22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §27.53 (h), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.

# 10.3 Test procedure

- 1. The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
- 2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
- 3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
- 4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious attenuation limit in dB =43+10 Log<sub>10</sub> (power out in Watts)

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# 10.4 Test Result

For FDD-LTE Band 2 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar			
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V			
	Low Channel (1852.5MHz)								
61.83	-42.41	-15.60	-58.01	-13.00	-45.01	Н			
3705	-24.05	-17.43	-41.48	-13.00	-28.48	Н			
5557.5	-31.42	-11.73	-43.15	-13.00	-30.15	Н			
61.83	-44.18	-15.60	-59.77	-13.00	-46.77	V			
3705	-28.93	-17.43	-46.36	-13.00	-33.36	V			
5557.5	-30.37	-11.73	-42.10	-13.00	-29.10	V			
		Middle	Channel (1880	MHz)					
61.83	-41.06	-15.60	-56.66	-13.00	-43.66	Н			
3760	-25.26	-16.98	-42.24	-13.00	-29.24	Н			
5640	-30.14	-11.33	-41.47	-13.00	-28.47	Н			
61.83	-41.73	-15.60	-57.32	-13.00	-44.32	V			
3760	-27.88	-16.98	-44.86	-13.00	-31.86	V			
5640	-30.63	-11.33	-41.96	-13.00	-28.96	V			
		High (	Channel (1907.5	MHz)					
61.83	-43.65	-15.60	-59.25	-13.00	-46.25	Н			
3815	-24.16	-16.52	-40.68	-13.00	-27.68	Н			
5722.5	-30.51	-10.93	-41.44	-13.00	-28.44	Н			
61.83	-44.69	-15.60	-60.29	-13.00	-47.29	V			
3815	-27.88	-16.52	-44.40	-13.00	-31.40	V			
5722.5	-29.82	-10.93	-40.75	-13.00	-27.75	V			

For FDD-LTE Band 4 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar			
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V			
	Low Channel (1710.7MHz)								
61.83	-44.98	-15.60	-60.57	-13.00	-47.57	/ / H/ /			
3421.40	-24.87	-19.74	-44.61	-13.00	-31.61				
5132.10	-32.03	-13.77	-45.80	-13.00	-32.80	Η			
61.83	-41.94	-15.60	-57.54	-13.00	-44.54	V			
3421.40	-29.71	-19.74	-49.45	-13.00	-36.45	V			
5132.10	-31.11	-13.77	-44.88	-13.00	-31.88	V			
		Middle	Channel (1732	.5MHz)					
61.83	-44.00	-15.60	-59.59	-13.00	-46.59	H			
3465.00	-27.92	-19.41	-47.33	-13.00	-34.33	$\pm$			
5197.50	-30.08	-13.48	-43.56	-13.00	-30.56	Н			
61.83	-42.87	-15.60	-58.46	-13.00	-45.46	V			
3465.00	-28.21	-19.41	-47.62	-13.00	-34.62	Λ			
5197.50	-31.26	-13.48	-44.74	-13.00	-31.74	V			
		High (	Channel (1754.3	BMHz)					
61.83	-42.49	-15.60	-58.09	-13.00	-45.09	H			
3508.60	-25.93	-19.08	-45.01	-13.00	-32.01	H			
5262.90	-31.07	-13.19	-44.26	-13.00	-31.26	Н			
61.83	-41.67	-15.60	-57.27	-13.00	-44.27	V			
3508.60	-29.49	-19.08	-48.57	-13.00	-35.57	V			
5262.90	-30.88	-13.19	-44.07	-13.00	-31.07	V			

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For FDD-LTE Band 5 Mode

Report No.: BCTC2501698786-2E

Frequency	Reading	Correct	Result	Limit	Margin	Polar
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V
		Low	Channel (824.7l	MHz)		
61.83	-42.62	-15.60	-58.22	-13.00	-45.22	Н
1649.40	-21.99	-22.93	-44.92	-13.00	-31.92	Н
2474.10	-26.97	-22.45	-49.42	-13.00	-36.42	Н
61.83	-44.26	-15.60	-59.86	-13.00	-46.86	V
1649.40	-18.06	-22.93	-40.99	-13.00	-27.99	V
2474.10	-25.88	-22.45	-48.33	-13.00	-35.33	V
		Middle	Channel (836.	5MHz)		
61.83	-43.54	-15.60	-59.14	-13.00	-46.14	Н
1673.00	-21.31	-22.87	-44.18	-13.00	-31.18	Н
2509.50	-24.62	-22.50	-47.12	-13.00	-34.12	Н
61.83	-41.74	-15.60	-57.34	-13.00	-44.34	V
1673.00	-19.28	-22.87	-42.15	-13.00	-29.15	V
2509.50	-25.39	-22.50	-47.89	-13.00	-34.89	V
		High	Channel (848.3	MHz)		
61.83	-42.06	-15.60	-57.66	-13.00	-44.66	Н
1696.60	-20.48	-22.79	-43.27	-13.00	-30.27	Н
2544.90	-26.67	-22.56	-49.23	-13.00	-36.23	Н
61.83	-44.19	-15.60	-59.79	-13.00	-46.79	V
1696.60	-20.33	-22.79	-43.12	-13.00	-30.12	V
2544.90	-24.66	-22.56	-47.22	-13.00	-34.22	V

## For FDD-LTE Band 12 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar		
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V		
	Low Channel (699.7MHz)							
61.83	-42.51	-15.60	-58.11	-13.00	-45.11	/ H		
1399.40	-20.09	-22.93	-43.02	-13.00	-30.02	/ H		
2099.10	-26.64	-22.45	-49.09	-13.00	-36.09	/ / H/ /		
61.83	-41.30	-15.60	-56.90	-13.00	-43.90	V		
1399.40	-19.85	-22.93	-42.78	-13.00	-29.78	V		
2099.10	-26.76	-22.45	-49.21	-13.00	-36.21	V		
		Middle	Channel (707.	5MHz)				
61.83	-42.73	-15.60	-58.32	-13.00	-45.32	/ Н		
1415.00	-18.10	-22.87	-40.97	-13.00	-27.97	Н		
2122.50	-24.69	-22.50	-47.19	-13.00	-34.19	H		
61.83	-42.57	-15.60	-58.16	-13.00	-45.16	V		
1415.00	-21.66	-22.87	-44.53	-13.00	-31.53	V		
2122.50	-25.58	-22.50	-48.08	-13.00	-35.08	V		
		High	Channel (715.3	MHz)				
61.83	-43.98	-15.60	-59.58	-13.00	-46.58			
1430.60	-20.85	-22.79	-43.64	-13.00	-30.64			
2145.90	-25.90	-22.56	-48.46	-13.00	-35.46			
61.83	-42.60	-15.60	-58.19	-13.00	-45.19	· · · · · · · · · · · · · · · · · · ·		
1430.60	-20.94	-22.79	-43.73	-13.00	-30.73	V		
2145.90	-25.75	-22.56	-48.31	-13.00	-35.31	V		

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For FDD-LTE Band 13 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar			
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V			
Low Channel (779.5MHz)									
61.83	-44.86	-15.60	-60.46	-13.00	-47.46	Н			
1559.00	-19.87	-22.93	-42.80	-13.00	-29.80	Н			
2338.50	-26.41	-22.45	-48.86	-13.00	-35.86	Н			
61.83	-41.14	-15.60	-56.74	-13.00	-43.74	V			
1559.00	-21.72	-22.93	-44.65	-13.00	-31.65	V			
2338.50	-26.13	-22.45	-48.58	-13.00	-35.58	V			
Middle Channel (782MHz)									
61.83	-41.24	-15.60	-56.84	-13.00	-43.84	Н			
1564.00	-20.16	-22.87	-43.03	-13.00	-30.03	Н			
2346.00	-24.80	-22.50	-47.30	-13.00	-34.30	Н			
61.83	-44.57	-15.60	-60.17	-13.00	-47.17	V			
1564.00	-18.13	-22.87	-41.00	-13.00	-28.00	V			
2346.00	-24.01	-22.50	-46.51	-13.00	-33.51	V			
High Channel (784.5MHz)									
61.83	-42.46	-15.60	-58.05	-13.00	-45.05	Н			
1569.00	-21.78	-22.79	-44.57	-13.00	-31.57	Н			
2353.50	-23.64	-22.56	-46.20	-13.00	-33.20	Н			
61.83	-42.81	-15.60	-58.40	-13.00	-45.40	V			
1569.00	-21.99	-22.79	-44.78	-13.00	-31.78	V			
2353.50	-26.00	-22.56	-48.56	-13.00	-35.56	V			

For FDD-LTE Band 66 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar			
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V			
Low Channel (1710.7MHz)									
61.83	-44.45	-15.60	-60.05	-13.00	-47.05	/ H			
3421.40	-27.36	-19.74	-47.10	-13.00	-34.10	/ H			
5132.10	-31.35	-13.77	-45.12	-13.00	-32.12	/ H			
61.83	-42.94	-15.60	-58.54	-13.00	-45.54	/ / V /			
3421.40	-28.66	-19.74	-48.40	-13.00	-35.40	/ V			
5132.10	-29.03	-13.77	-42.80	-13.00	-29.80	V			
Middle Channel (1745MHz)									
61.83	-41.84	-15.60	-57.43	-13.00	-44.43	/ / /H/ /			
3490.00	-26.03	-19.41	-45.44	-13.00	-32.44	// H // .			
5235.00	-30.45	-13.48	-43.93	-13.00	-30.93	H			
61.83	-42.64	-15.60	-58.23	-13.00	-45.23	V			
3490.00	-26.13	-19.41	-45.54	-13.00	-32.54	V			
5235.00	-28.39	-13.48	-41.87	-13.00	-28.87	V			
High Channel (1779.3MHz)									
61.83	-44.65	-15.60	-60.25	-13.00	-47.25	H			
3558.60	-27.36	-19.08	-46.44	-13.00	-33.44	Н			
5337.90	-30.81	-13.19	-44.00	-13.00	-31.00				
61.83	-41.38	-15.60	-56.98	-13.00	-43.98	······V			
3558.60	-26.82	-19.08	-45.90	-13.00	-32.90	V			
5337.90	-30.37	-13.19	-43.56	-13.00	-30.56	V			

Note: Result=Reading+ Correct, Margin= Result- Limit

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listedin the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

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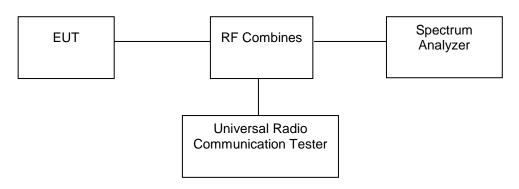
>PF





## 11. Frequency Stability

### 11.1 Block Diagram Of Test Setup



### 11.2 Limit

±2.5 ppm

# 11.3 Test procedure

Test Procedures for Temperature Variation

- 1. The testing follows FCC KDB 971168 D01v03 Section 9.0.
- 2. The EUT was set up in the thermal chamber and connected with the system simulator.
- 3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
- 4. With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

Test Procedures for Voltage Variation

- 1. The testing follows FCC KDB 971168 D01v03 Section 9.0.
- 2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
- 3. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
- 4. The variation in frequency was measured for the worst case.
- 5. The worst case(worst bandwidth) for frequency stability reported in the Test Data.

### 11.4 Test Result

Please refer to Appendix 2: Frequency Stability Test Result: Pass

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# 12. EUT Test Setup Photographs

### **Radiated Measurement Photos**





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### **STATEMENT**

- 1. The equipment lists are traceable to the national reference standards.
- 2. The test report can not be partially copied unless prior written approval is issued from our lab.
- 3. The test report is invalid without the "special seal for inspection and testing".
- 4. The test report is invalid without the signature of the approver.
- 5. The test process and test result is only related to the Unit Under Test.
- 6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
- 7. The quality system of our laboratory is in accordance with ISO/IEC17025.
- 8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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\*\*\*\* END \*\*\*\*

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