RF TEST REPORT

Report No.: DDT-B21111105-1E01

Applicant	**:**	GREAT TALENT TECHNOLOGY LIMITED
Applicant Address	**:**	RM602,T3 Software Park, Hi-Tech Park South, Nanshan, Shenzhen, China
Equipment Under Test	**:**	Smartphone
Model No.	**:**	L51
Trade Mark	**:**	ANS
FCC ID	**:**	2ALZM-L51
Manufacturer	**:**	GREAT TALENT TECHNOLOGY LIMITED
Manufacturer Address	**:**	RM602,T3 Software Park, Hi-Tech Park South, Nanshan, Shenzhen, China

Issued By: Tianjin Dongdian Testing Service Co., Ltd.

Address: Building D-1, No. 19, Weisi Road, Microelectronics Industrial Park, Development Area, Tianjin, China.

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REPORT

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Test Report Declare

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Address	:	RM602,T3 Software Park, Hi-Tech Park South, Nanshan, Shenzhen, China

Test Standard Used:
FCC Rules and Regulations: 47 CFR Part2, Part22, Part24, Part27, Part90
Test Procedure Used:
ANSI C63.26:2015, KDB 971168 D01 v03r01

We Declare:
The equipment described above is tested by Tianjin Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Tianjin Dongdian Testing Service Co., Ltd is assument of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No:	DDT-B21111105-1E01		
Date of Receipt:	Nov. 16, 2021	**Date of Test:**	Nov. 16, 2021 ~ Nov. 22, 2021

Prepared By: ***Approved By:***

Leon Li Aaron Zhang

Leon Li/Engineer ***Aaron Zhang/EMC Manager***

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Tianjin Dongdian Testing Service Co., Ltd.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Nov. 22, 2021	

1. Summary of Test Results

1.1. CDMA BC0 & LTE Band26 partial(824-849MHz)

Summary of Test Results			
Test Item	**Standard**	**Requirements**	**Result**
Effective (Isotropic) Radiated Power	FCC §2.1046, §22.913	ERP: ≤ 7W	Pass[1]
Peak-to-Average Ratio	FCC §2.1046	Limit: ≤13dB	Pass[1]
Modulation Characteristics	FCC §2.1047	Digital modulation	Pass[1]
Occupied Bandwidth	FCC §2.1049	No limit	Pass[1]
Band Edges Compliance	FCC §2.1051, §22.917	Limit: 1)≤ P(dBm)- [43 + 10 log(P (w))] dBm/100kHz(Below 1GHz) 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm/1MHz(Above 1GHz)	Pass[1]
Spurious Emission at Antenna Terminals	FCC §2.1051, §22.917	Limit: 1)≤ P(dBm)- [43 + 10 log(P (w))] dBm/100kHz(Below 1GHz) 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm/1MHz(Above 1GHz)	Pass[1]
Field Strength of Spurious Radiation	FCC §2.1053, §22.917	Limit: 1)≤ P(dBm)- [43 + 10 log(P (w))] dBm/100kHz(Below 1GHz) 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm/1MHz(Above 1GHz)	Pass[2]
Frequency Stability	FCC §2.1055, §22.355	△: <±2.5ppm	Pass[1]
Note 1: The above items data are refer from the original report issued by SGS-CSTC Standards Technical Services,Co.,Ltd.Shenzhen Branch. (Date of Test: 2019/3/4 ~2019/3/15) The detailed data can refer to Appendix B.1 - CDMA & EVDO and Appendix B.5 - LTE BAND 26 (824-849). Note2: The above “pass2” item is tested by Tianjin Dongdian Testing Service Co., Ltd.			

1.2. CDMA BC1 & LTE Band25

Summary of Test Results			
Test Item	**Standard**	**Requirements**	**Result**
Effective (Isotropic) Radiated Power	FCC §2.1046, §24.232	EIRP: ≤2W	Pass[1]
Peak-to-Average Ratio	FCC §2.1046, §24.232	Limit: ≤13dB	Pass[1]
Modulation Characteristics	FCC §2.1047	Digital modulation	Pass[1]
Occupied Bandwidth	§2.1049	No limit	Pass[1]
Band Edges Compliance	FCC §2.1051, §24.238	Limit: ≤ P(dBm)- [43 + 10 log(P (w))] dBm/1Mhz	Pass[1]
Spurious Emission at Antenna Terminals	FCC §2.1051, §24.238	Limit: ≤ P(dBm)- [43 + 10 log(P (w))] dBm/1Mhz	Pass[1]
Field Strength of Spurious Radiation	FCC §2.1053, §24.238	Limit: ≤ P(dBm)- [43 + 10 log(P (w))] dBm/1Mhz	Pass[2]

Frequency Stability	FCC §2.1055, §24.235	Emission must remain in band	Pass[1]

Note 1:
The above items data are refer from the original report issued by SGS-CSTC Standards Technical Services,Co.,Ltd.Shenzhen Branch. (Date of Test: 2019/3/4 ~2019/3/15) The detailed data can refer to Appendix B.1 - CDMA & EVDO and Appendix B.3 - LTE BAND 25
Note2:
The above “pass2” item is tested by Tianjin Dongdian Testing Service Co., Ltd.

1.3. CDMA BC10 & LTE Band26 partial(814-824MHz)

Summary of Test Results			
Test Item	**Standard.**	**Requirements**	**Result**
Conducted Output Power	FCC §2.1046, §90.635	Limit: ≤100W	Pass[1]
Peak-to-Average Ratio	FCC §2.1046	Limit: ≤13dB	Pass[1]
Modulation Characteristics	FCC §2.1047	Digital modulation	Pass[1]
Occupied Bandwidth	FCC §2.1049	No limit	Pass[1]
Band Edges Compliance / Emission mask	FCC §2.1051, §90.691	Limit: 1)≤ P(dBm)- [50 + 10 log(P (w))] dBm for any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz. 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm for any frequency removed from the EA licensee's frequency block greater than 37.5 kHz.	Pass[1]
Spurious Emission at Antenna Terminals	FCC §2.1051, §90.691	Limit: 1)≤ P(dBm)- [50 + 10 log(P (w))] dBm for any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz. 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm for any frequency removed from the EA licensee's frequency block greater than 37.5 kHz.	Pass[1]
Field Strength of Spurious Radiation	FCC §2.1053, §90.691	Limit: 1)≤ P(dBm)- [50 + 10 log(P (w))] dBm for any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz. 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm for any frequency removed from the EA licensee's frequency block greater than 37.5 kHz.	Pass[2]
Frequency Stability	FCC §2.1055, §90.213	△: <±2.5ppm	Pass[1]

Note 1:
The above items data are refer from the original report issued by SGS-CSTC Standards Technical Services,Co.,Ltd.Shenzhen Branch. (Date of Test: 2019/3/4 ~2019/3/15) The detailed data can refer to Appendix B.1 - CDMA & EVDO and Appendix B.4 - LTE BAND 26 (814-824).
Note2:
The above “pass2” item is tested by Tianjin Dongdian Testing Service Co., Ltd.

1.4. LTE Band13

Summary of Test Results			
Test Item	**Standard**	**Requirements**	**Result**

Effective (Isotropic) Radiated Power	FCC §2.1046, §27.50	ERP: ≤3W	Pass[1]
Peak-to-Average Ratio	FCC §2.1046, §27.50	Limit: ≤13dB	Pass[1]
Modulation Characteristics	FCC §2.1047	Digital modulation	Pass[1]
Occupied Bandwidth	FCC §2.1049	No limit	Pass[1]
Band Edges Compliance	FCC§2.1051, §27.53	Limit: 1)≤ P(dBm)- [43 + 10 log(P (w))] dBm/100kHz on any frequency outside the 776-788 MHz band. 2)≤ P(dBm)- [65 + 10 log(P (w))] dBm/6.25kHz on all frequencies between 763-775 MHz and 793-805 MHz 3)EIRP: ≤-70dBW/MHz (wideband) on1559-1610MHz. 4)EIRP:≤-80dBW(narrowband <700Hz) on1559-1610MHz.	Pass[1]
Spurious Emission at Antenna Terminals	FCC §2.1051, §27.53	Limit: 1)≤ P(dBm)- [43 + 10 log(P (w))] dBm/100kHz on any frequency outside the 776-788 MHz band. 2)≤ P(dBm)- [65 + 10 log(P (w))] dBm/6.25kHz on all frequencies between 763-775 MHz and 793-805 MHz 3)EIRP: ≤-70dBW/MHz (wideband) on1559-1610MHz. 4)EIRP:≤-80dBW(narrowband <700Hz) on1559-1610MHz.	Pass[1]
Field Strength of Spurious Radiation	FCC §2.1053, §27.53	Limit: 1)≤ P(dBm)- [43 + 10 log(P (w))] dBm/100kHz on any frequency outside the 776-788 MHz band. 2)≤ P(dBm)- [65 + 10 log(P (w))] dBm/6.25kHz on all frequencies between 763-775 MHz and 793-805 MHz 3)EIRP: ≤-70dBW/MHz (wideband) on1559-1610MHz. 4)EIRP:≤-80dBW(narrowband <700Hz) on1559-1610MHz.	Pass[2]
Frequency Stability	FCC §2.1055, §27.54	Emission must remain in band	Pass[1]

Note 1:
The above items data are refer from the original report issued by SGS-CSTC Standards Technical Services,Co.,Ltd.Shenzhen Branch. (Date of Test: 2019/3/4 ~2019/3/15) The detailed data can refer to Appendix B.2 - LTE BAND 13.
Note2:
The above “pass2” item is tested by Tianjin Dongdian Testing Service Co., Ltd.

1.5. LTE Band41

Summary of Test Results			
Test Item	**Standard**	**Requirements**	**Result**

Effective (Isotropic) Radiated Power	FCC §2.1046, §27.50	EIRP: ≤2W	Pass[1]
Peak-to-Average Ratio	FCC §2.1046, §27.50	Limit: ≤13dB	Pass[1]
Modulation Characteristics	FCC §2.1047	Digital modulation	Pass[1]
Occupied Bandwidth	FCC §2.1049	FCC: No limit	Pass[1]
Band Edges Compliance	FCC §2.1051, §27.53	Limit: 1)≤ P(dBm)- [40 + 10 log(P (w))] dBm/1MHz between the channel edge and 5 megahertz from the channel edge, 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm/1MHz between 5 megahertz and X megahertz from the channel edge and between 2490.5 MHz and 2496 MHz, X=Max {6Mhz, EBW} 3)≤ P(dBm)- [55 + 10 log(P (w))] dBm/1MHz on all frequencies more than X megahertz from the channel edge and or below 2490.5 MHz.	Pass[1]
Spurious Emission at Antenna Terminals	FCC §2.1051, §27.53	Limit: 1)≤ P(dBm)- [40 + 10 log(P (w))] dBm/1MHz between the channel edge and 5 megahertz from the channel edge, 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm/1MHz between 5 megahertz and X megahertz from the channel edge and between 2490.5 MHz and 2496 MHz, X=Max {6Mhz, EBW} 3)≤ P(dBm)- [55 + 10 log(P (w))] dBm/1MHz on all frequencies more than X megahertz from the channel edge and or below 2490.5 MHz.	Pass[1]
Field Strength of Spurious Radiation	FCC §2.1053, §27.53	Limit: 1)≤ P(dBm)- [40 + 10 log(P (w))] dBm/1MHz between the channel edge and 5 megahertz from the channel edge, 2)≤ P(dBm)- [43 + 10 log(P (w))] dBm/1MHz between 5 megahertz and X megahertz from the channel edge and between 2490.5 MHz and 2496 MHz, X=Max {6Mhz, EBW} 3)≤ P(dBm)- [55 + 10 log(P (w))] dBm/1MHz on all frequencies more than X megahertz from the channel edge and or below 2490.5 MHz.	Pass[2]
Frequency Stability	FCC §2.1055, §27.54	Emission must remain in band	Pass[1]

Note 1:
The above items data are refer from the original report issued by SGS-CSTC Standards Technical Services,Co.,Ltd.Shenzhen Branch. (Date of Test: 2019/3/4 ~2019/3/15) The detailed data can refer to Appendix B.6 - LTE BAND 41
Note2:
The above “pass2” item is tested by Tianjin Dongdian Testing Service Co., Ltd.

2. General Test Information

2.1. Description of EUT

EUT Description	:	Smartphone
Model Number	:	L51
Trade Mark	:	ANS
IMEI	:	990013174806476
Serial Number	:	N/A
Hardware Version	:	N/A
Software Version	:	N/A

Frequency band :

UMTS	Tx (MHz)	Rx (MHz)	Supported Channel Bandwidth
CDMA BC0 1xRRT/EVDO	824-849	869-894	1.23MHz
CDMA BC1 1xRRT/EVDO	1850-1910	1930-1990	1.23MHz
CDMA BC10 1xRRT/EVDO	817-824	862-869	1.23MHz

E-UTRA	Duplex Mode	Tx (MHz)	Rx (MHz)	Supported Channel Bandwidth					
				1.4	3	5	10	15	20
Band 13	FDD	777-787	746-756	---	---	☒	☒	---	---
Band 25	FDD	1850-1915	1930-1995	☒	☒	☒	☒	☒	☒
Band 26	FDD	814-824	859-869	☒	☒	☒	☒	---	---
Band 26	FDD	824-849	869-894	☒	☒	☒	☒	☒	---
Band 41	TDD	2496-2690	2496-2690	---	---	☒	☒	☒	☒

E-UTRA Release	:	Release 10
E-UTRA UE Category	:	Category 4
Target Power & Power Class	:	CDMA 1xRTT BC0: 24.5dBm CDMA 1xRTT BC1: 23dBm CDMA 1xRTT BC10: 24.5dBm EVDO BC0: 24.5dBm EVDO BC1: 23dBm EVDO BC10: 24.5dBm LTE BAND 13(PC3): 25dBm LTE BAND 25(PC3): 24.5dBm LTE BAND 26(PC3): 25dBm LTE BAND 41(HPUE): 26.2dBm
Type of modulation	:	CDMA: 1xRRT: OQPSK; EVDO: OQPSK E-UTRA: UL: QPSK&16QAM; DL: QPSK&16QAM
Antenna Type	:	Fixed Internal Antenna
Antenna Gain	:	CDMA 1xRRT/EVDO BC0: 1.81dBi CDMA 1xRRT/EVDO BC1: 2.83dBi CDMA 1xRRT/EVDO BC10: 1.77dBi E-UTRA LTE Band 13: -0.13dBi E-UTRA LTE Band 25: 2.91dBi E-UTRA LTE Band 26: 1.78dBi E-UTRA LTE Band 41: 2.93dBi
Power Supply	:	Internal battery

Note：EUT is the abbreviation of equipment under test.

2.2. RF Channel Information

CDMA Band	Transmitter / Receiver	Channel Bandwidth	Lowest range(L)	Middle range(M)	Highest range(H)
BC0 1xRRT/ EVDO	Transmitter	1.23MHz	Channel 1013 (824.7.4MHz)	Channel 384 (836.52MHz)	Channel 777 (848.31MHz)
	Receiver		Channel 1013 (869.7MHz)	Channel 384 (881.52MHz)	Channel 777 (893.31MHz)
BC1 1xRRT/ EVDO	Transmitter	1.23MHz	Channel 25 (1851.25MHz)	Channel 600 (1880.0MHz)	Channel 1175 (1908.75MHz)
	Receiver		Channel 25 (1931.25MHz)	Channel 600 (1960.0MHz)	Channel 1175 (1988.75MHz)
BC10 1xRRT/ EVDO	Transmitter	1.23MHz	Channel 476 (817.9MHz)	Channel 580 (820.5MHz)	Channel 684 (823.1MHz)
	Receiver		Channel 476 (862.9MHz)	Channel 580 (865.5MHz)	Channel 684 (868.1MHz)

E-UTRA Band	Transmitter/ Receiver	Channel Bandwidth	Frequencies Under Test		
			Lowest range(L)	Middle range(M)	Highest range(H)
Band 13	Transmitter	5MHz	Channel 23205 (779.5MHz)	Channel 23230 (782MHz)	Channel 23255 (784.5MHz)
		10MHz	Channel 23230 (782MHz)	Channel 23230 (782MHz)	Channel 23230 (782MHz)
	Receiver	5MHz	Channel 5205 (748.5MHz)	Channel 5230 (751MHz)	Channel 5255 (753.5MHz)
		10MHz	Channel 5230 (751MHz)	Channel 5230 (751MHz)	Channel 5230 (751MHz)
Band 25	Transmitter	1.4MHz	Channel 26047 (1850.7MHz)	Channel 26365 (1882.5MHz)	Channel 26683 (1914.3MHz)
		3MHz	Channel 26055 (1851.5MHz)	Channel 26365 (1882.5MHz)	Channel 26675 (1913.5MHz)
		5MHz	Channel 26065 (1852.5MHz)	Channel 26365 (1882.5MHz)	Channel 26665 (1912.5MHz)
		10MHz	Channel 26090 (1855MHz)	Channel 26365 (1882.5MHz)	Channel 26640 (1910MHz)
		15MHz	Channel 26115 (1857.5MHz)	Channel 26365 (1882.5MHz)	Channel 26615 (1907.5MHz)
		20MHz	Channel 26140 (1860MHz)	Channel 26365 (1882.5MHz)	Channel 26590 (1905MHz)
	Receiver	1.4MHz	Channel 8047 (1930.7MHz)	Channel 8365 (1962.5MHz)	Channel 8683 (1994.3MHz)
		3MHz	Channel 8055 (1931.5MHz)	Channel 8365 (1962.5MHz)	Channel 8675 (1993.5MHz)
		5MHz	Channel 8065 (1932.5MHz)	Channel 8365 (1962.5MHz)	Channel 8665 (1992.5MHz)
		10MHz	Channel 8090 (1935MHz)	Channel 8365 (1962.5MHz)	Channel 8640 (1990MHz)
		15MHz	Channel 8115	Channel 8365	Channel 8615

			(1937.5MHz)	(1962.5MHz)	(1987.5MHz)
		20MHz	Channel 8140 (1940MHz)	Channel 8365 (1962.5MHz)	Channel 8590 (1985MHz)
Band 26 (814-824)	Transmitter	1.4MHz	Channel 26697 (814.7 MHz)	Channel 26740 (819 MHz)	Channel 26783 (823.3 MHz)
		3MHz	Channel 26705 (815.5 MHz)	Channel 26740 (819 MHz)	Channel 26775 (822.5 MHz)
		5MHz	Channel 26715 (816.5 MHz)	Channel 26740 (819 MHz)	Channel 26765 (821.5 MHz)
		10MHz	Channel 26740 (819 MHz)	Channel 26740 (819 MHz)	Channel 26740 (819 MHz)
	Receiver	1.4MHz	Channel 8697 (859.7 MHz)	Channel 8740 (864MHz)	Channel 8783 (868.3 MHz)
		3MHz	Channel 8705 (860.5 MHz)	Channel 8740 (864MHz)	Channel 8775 (867.5 MHz)
		5MHz	Channel 8715 (861.5 MHz)	Channel 8740 (864MHz)	Channel 8755 (866.5 MHz)
		10MHz	Channel 8740 (864MHz)	Channel 8740 (864MHz)	Channel 8740 (864MHz)
Band 26 (824-849)	Transmitter	1.4MHz	Channel 26797 (824.7MHz)	Channel 26915 (836.5MHz)	Channel 27033 (848.3MHz)
		3MHz	Channel 26805 (825.5MHz)	Channel 26915 (836.5MHz)	Channel 27025 (847.5MHz)
		5MHz	Channel 26815 (826.5MHz)	Channel 26915 (836.5MHz)	Channel 27015 (846.5MHz)
		10MHz	Channel 26840 (829MHz)	Channel 26915 (836.5MHz)	Channel 26990 (844MHz)
		15MHz	Channel 26865 (831.5MHz)	Channel 26915 (836.5MHz)	Channel 26965 (841.5MHz)
	Receiver	1.4MHz	Channel 8697 (859.7MHz)	Channel 8915 (881.5MHz)	Channel 9033 (893.3MHz)
		3MHz	Channel 8805 (860.5MHz)	Channel 8915 (881.5MHz)	Channel 9025 (892.5MHz)
		5MHz	Channel 8815 (871.5MHz)	Channel 8915 (881.5MHz)	Channel 9015 (891.5MHz)
		10MHz	Channel 8840 (874MHz)	Channel 8915 (881.5MHz)	Channel 8990 (889MHz)
		15MHz	Channel 8865 (876.5MHz)	Channel 8915 (881.5MHz)	Channel 8965 (886.5MHz)
Band 41	Transmitter& Receiver	5MHz	Channel 39675 (2498.5MHz)	Channel 40620 (2593MHz)	Channel 41565 (2687.5MHz)
		10MHz	Channel 39700 (2501MHz)	Channel 40620 (2593MHz)	Channel 41540 (2685MHz)
		15MHz	Channel 39725 (2503.5MHz)	Channel 40620 (2593MHz)	Channel 41515 (2682.5MHz)
		20MHz	Channel 39750 (2506MHz)	Channel 40620 (2593MHz)	Channel 41490 (2680MHz)

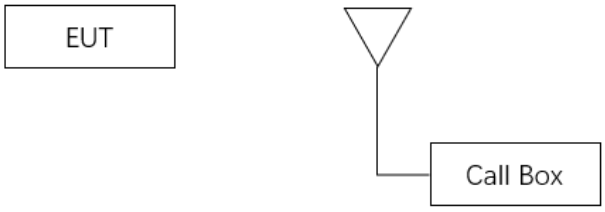
2.3. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Remark
N/A	N/A	N/A	N/A	N/A

2.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
N/A	N/A	N/A	N/A	N/A

2.5. Block diagram of EUT configuration for test



2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Condition	Normal Condition	Extreme Condition
Pressure range	86-106KPa	N/A
Relative Humidity	30-75%	N/A
Temperature(℃)	NT: 25℃	N/A
Voltage(V)	NV: 3.85V	N/A
Note: N/A: Not Apply NV: Normal Voltage LV: Low Extreme Test Voltage HV: High Extreme Test Voltage		NT: Normal Temperature LT: Low Extreme Test Temperature HT: High Extreme Test Temperature

2.7. Worst-case Configuration and Test Mode

2.7.1. Worst-case Radiated test

-The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.

-All modes of operation were investigated and the worst-case configuration results are reports. In the case of radiated spurious emissions, only B.W result that confirmed the maximum radiated power was reported

-The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data.

-All modes of operation were tested and the worst case results are reported.

-Below table show the worst case details:

Test Item	Test Mode	Band	Channel	Modulation	Bandwidth	RB
Field Strength of Spurious Radiation	Mode1	CDMA 1xRRT BC0	L	OQPSK	1.23MHz	--
			M	OQPSK	1.23MHz	--
			H	OQPSK	1.23MHz	--
	Mode2	CDMA 1xRRT BC1	L	OQPSK	1.23MHz	--
			M	OQPSK	1.23MHz	--
			H	OQPSK	1.23MHz	--
	Mode3	CDMA 1xRRT BC10	L	OQPSK	1.23MHz	--
			M	OQPSK	1.23MHz	--
			H	OQPSK	1.23MHz	--
	Mode4	CDMA EVDO BC0	L	OQPSK	1.23MHz	--
			M	OQPSK	1.23MHz	--
			H	OQPSK	1.23MHz	--
	Mode5	CDMA EVDO BC1	L	OQPSK	1.23MHz	--
			M	OQPSK	1.23MHz	--
			H	OQPSK	1.23MHz	--
	Mode6	CDMA EVDO BC10	L	OQPSK	1.23MHz	--
			M	OQPSK	1.23MHz	--
			H	OQPSK	1.23MHz	--
	Mode7	LTE13	M	QPSK	10MHz	1@0
	Mode8	LTE25	L	QPSK	20MHz	1@0
			M	QPSK	20MHz	1@0
			H	QPSK	20MHz	1@0
	Mode9	LTE26 (814-824MHz)	M	QPSK	10MHz	1@0
	Mode10	LTE26 (824-849MHz)	L	QPSK	15MHz	1@0
			M	QPSK	15MHz	1@0
			H	QPSK	15MHz	1@0
	Mode11	LTE41	L	QPSK	20MHz	1@0
			M	QPSK	20MHz	1@0
			H	QPSK	20MHz	1@0

2.8. Test laboratory

Tianjin Dongdian Testing Service Co., Ltd.

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NVLAP (National Voluntary Laboratory Accreditation Program) CODE: 500036-0

CNAS (China National Accreditation Service for Conformity Assessment) CODE: L13402

FCC Designation Number: CN5004; FCC Test Firm Registration Number: 368676

ISED (Innovation, Science and Economic Development Canada) Company Number: 27768

Conformity Assessment Body Identifier: CN0125

VCCI Facility Registration Number: C-20089, T-20093, R-20125, G-20122

3. Description of Tests

3.1. Radiated Power (ERP/EIRP)

Test Procedure: FCC KDB 971168 D01 V03r01.

Note: Refer test setup 1.

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are calculated by adding highest antenna gain to maximum measured conducted output power. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

a) The transmitter antenna port was connected to a Base Station Simulator through the calibrated coaxial cable.

b) Setup the Base Station Simulator to force the transmitter to the maximum power setting.

3) The tests were performed at three channels (low channel, middle channel and high channel) and on the highest power levels, which can be setup on the transmitters.

Calculate power in dBm by the following formula:

ERP (dBm) = Conducted Power (dBm) + antenna gain (dBd)

EIRP (dBm) = Conducted Power (dBm) + antenna gain (dBi)

EIRP=ERP+2.15dB

3.2. Field Strength of Spurious Radiation

Test Procedure: FCC KDB 971168 D01 V03r01

Note: Refer test setup 2.

a) Place the EUT in the center of the turntable. The EUT shall be configured to transmit into the standard non-radiating load (for measuring radiated spurious emissions), connected with cables of minimal length unless specified otherwise. If the EUT uses an adjustable antenna, the antenna shall be positioned to the length that produces the worst case emission at the fundamental

operating frequency.

b) Each emission under consideration shall be evaluated:

1) Raise and lower the measurement antenna, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.

2) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.

3) Return the turntable to the azimuth where the highest emission amplitude level was observed.

4) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.

c) Repeat step b) for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.

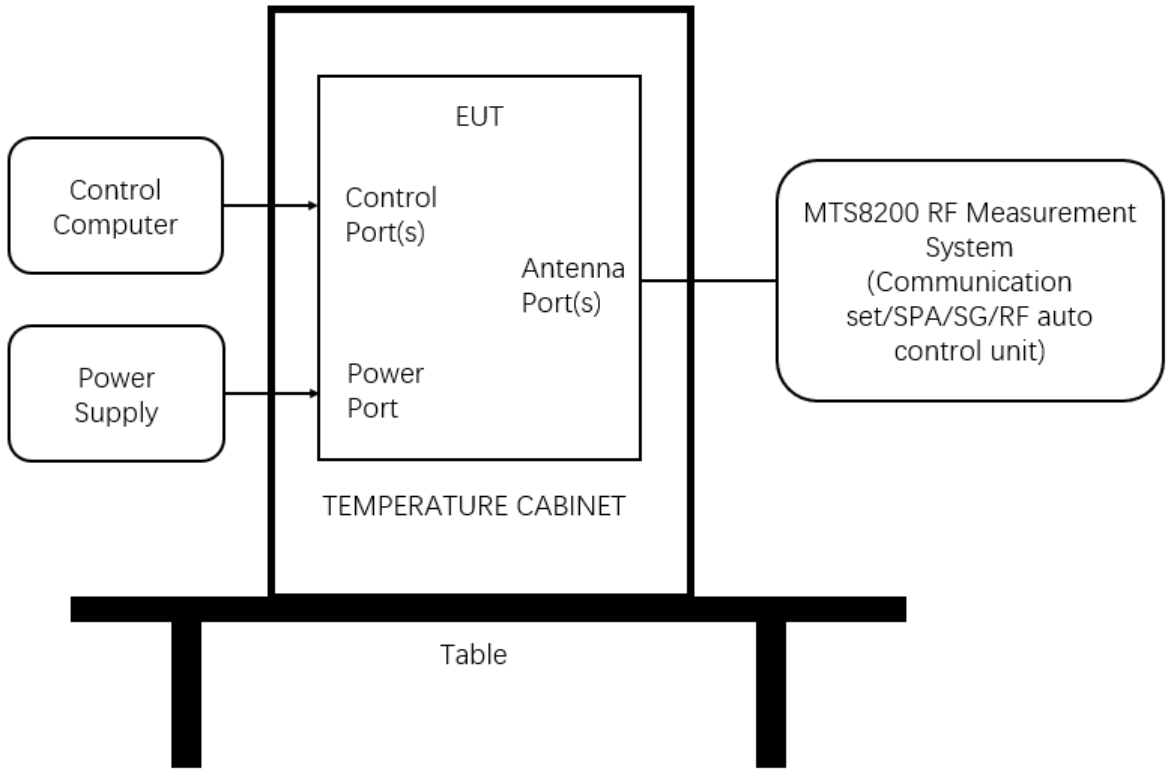
d) EIRP (dBm) = E (dBμV/m) + 20 log D − 104.8; where D is the measurement distance in meters.

e) Test the EUT in the lowest channel, the middle channel the Highest channel

f) The radiation measurements are performed in X, Y, Z axis positioning. Only the test worst case mode is recorded in the report.

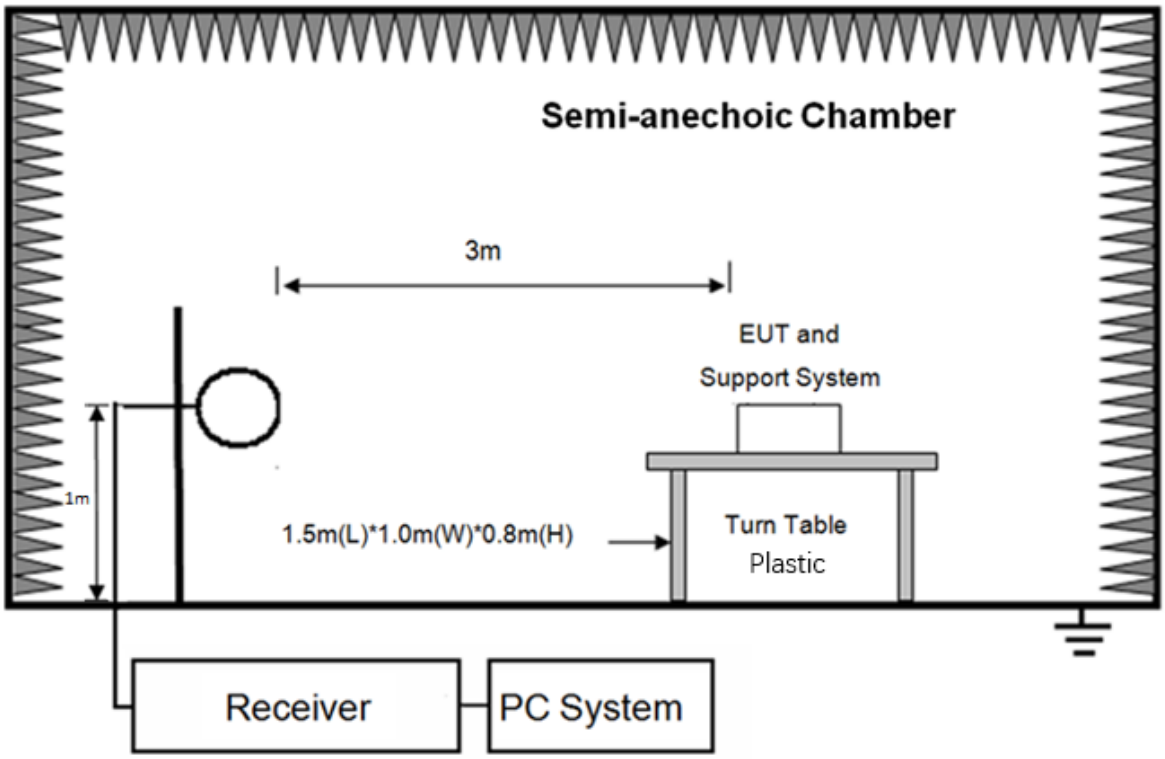
3.3. Test Setups

3.3.1. Test Setup 1

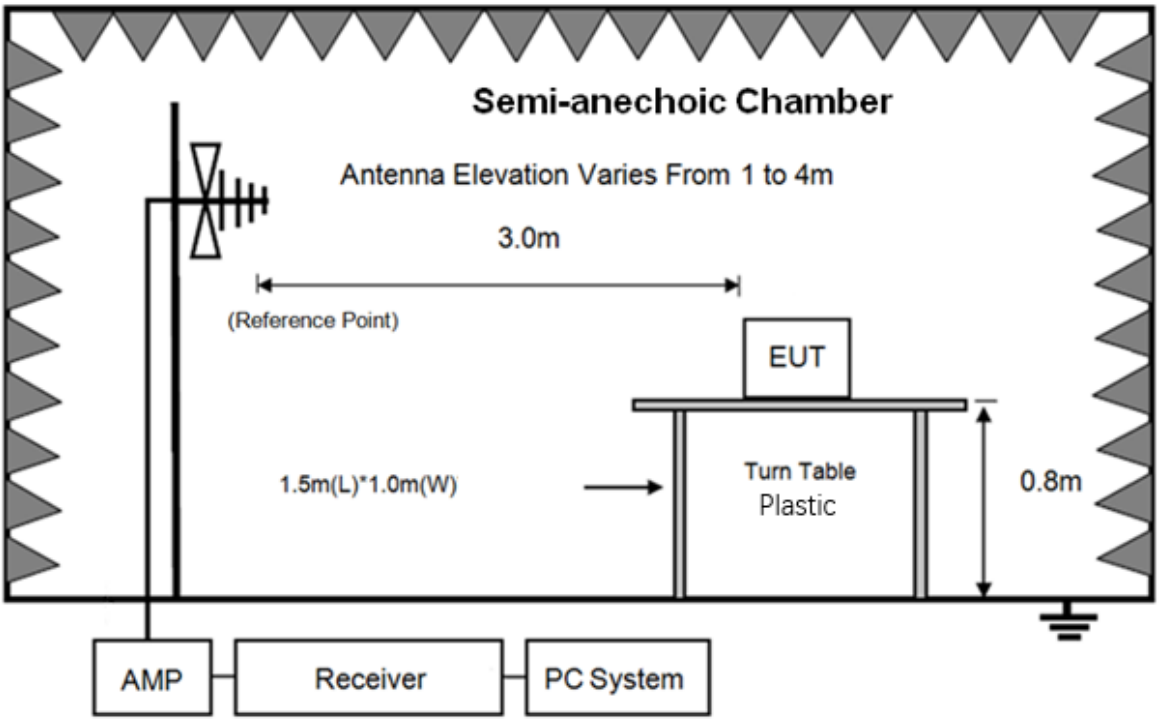


3.3.2. Test Setup 2

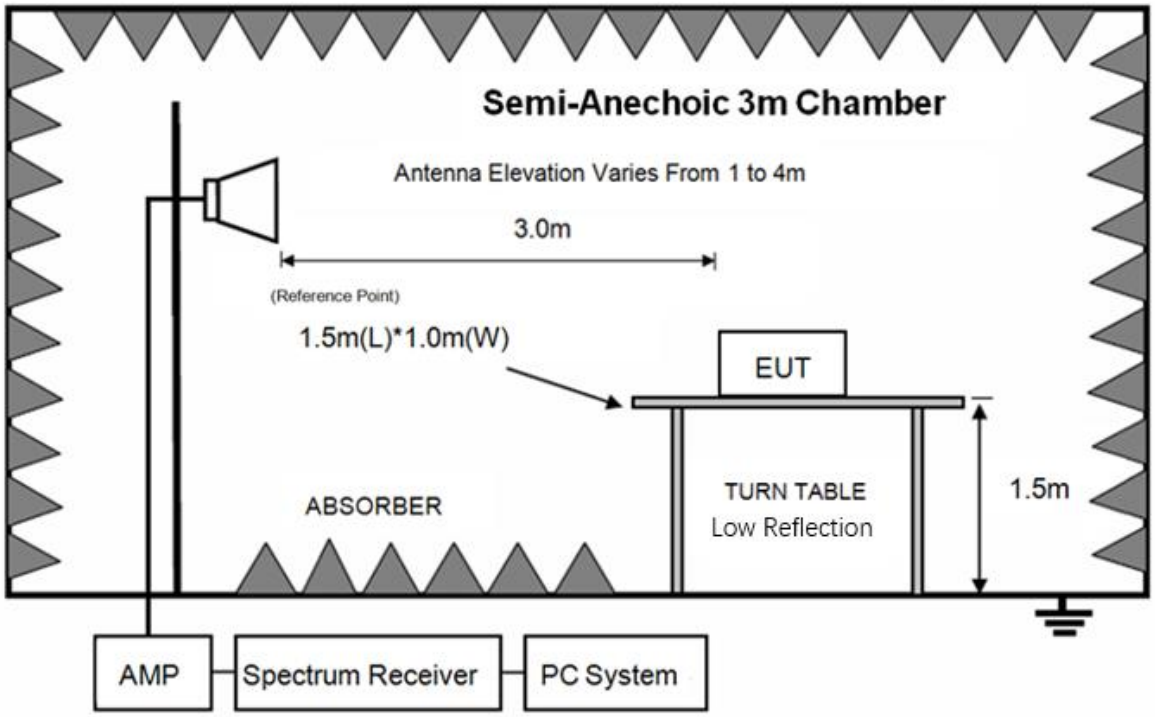
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz – 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



4. Measurement uncertainty

No.	Test Item	Uncertainty
1	Radiated spurious emissions / Radiated emissions	±2.72 dB (9KHz-1GHz) ±2.74 dB (1 - 6 GHz) ±2.72 dB (6 GHz - 18 GHz) ±3.54 dB (18 GHz - 26 GHz) ±4.30 dB (26 GHz - 40 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

5. Equipment Used During Test

Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
PSA Series Spectrum Analyzer	Agilent(Keysight)	E4440A	MY48251036	2021/03/04	1 Year
EXA Signal Analyzer	Keysight	N9010A	MY53281492	2021/03/31	1 Year
RF SELECTOR	TOYO	NS4900	N/A	N/A	N/A
Band SELECTOR	TOYO	NS5800	N/A	N/A	N/A
BiLog Antenna	TESEQ	CBL 6143A	26683	2021/03/18	1 Year
Broadband Amplifier	SONOMA	317	292953	2021/03/03	1 Year
Low noise amplifier	MITEQ	TPA0118-36	0914	2021/02/03	1 Year
Double-Ridged Guide Horn Antenna	ETS-LINDGREN	3115	00102808	2021/03/16	1 Year
Test software	TOYO	EP5/RSE	Ver 1.9.1	N/A	N/A
Test software	Audix	E3	V 6.11111b	N/A	N/A
Active Loop Antenna	R&S	HFH2-Z2	100269	2021/05/08	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	2021/04/21	1 Year
Broadband Horn Antenna	TESEQ	BHA 9118	31754	2021/10/12	1 Year
Low noise amplifier	MITEQ	TPA0118-36	0914	2021/02/03	1 Year
EMI Test Receiver	R&S	ESCI	101024	2021/03/03	1 Year
EMI Test Receiver	R&S	ESCI	101030	2021/05/15	1 Year
Bilog Antenna	TESEQ	CBL6112D	29068	2020/10/12	2 Year
Bilog Antenna	TESEQ	CBL6112D	29069	2020/10/12	2 Year
Amplifier	Sonoma	310N	300913	2021/03/03	1 Year
Amplifier	Sonoma	310N	300914	2021/03/03	1 Year
Ant Mast	Innco	MA4000	N/A	N/A	N/A
Ant Mast	Innco	MA4000	N/A	N/A	N/A
Mast Controller	Innco	CO2000	N/A	N/A	N/A
Mast Controller	Innco	CO2000	N/A	N/A	N/A
RF Selector 4CH	TOYO	NS4904N	Selector1	N/A	N/A
RF Selector 4CH	TOYO	NS4904N	Selector2	N/A	N/A
PSG Analog Signal Generator	Agilent(Keysight)	E8257D	MY49060493	2021/03/08	1 Year
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	158800	2021/05/14	1 Year

8960 Series 10 Wireless Communications Test Set	Agilent(Keysight)	E5515C	MY48280272	2021/05/25	1 Year
Radio Communication Test Station	Anritsu	MT8000A	6262302490	2021/03/26	1 Year
Radio Communication Analyzer	Anritsu	MT8821C	6262257930	2021/03/22	1 Year
Coupler-Antenna	European Antenna	PSA-7501R/170	406310-0001	N/A	N/A
tunable notch-filter 820/860Mhz	Wainwright	WRCT 820/860-0.4/40-5SSK	SN8	N/A	N/A
tunable notch-filter 840/920Mhz	Wainwright	WRCT 840/920-0.4/40-5SSK	SN9	N/A	N/A
tunable notch-filter 1700/1800Mhz	Wainwright	WRCD 1700/1800-0.2/40-5SSK	SN41	N/A	N/A
tunable notch-filter 1800/2000Mhz	Wainwright	WRCD 1800/2000-0.2/40-5SSK	SN31	N/A	N/A
band reject filter 1870/1890Mhz	Wainwright	WRCG 1877/1883-1870/1890-40/6EE	SN20	N/A	N/A
band reject filter 1940/1960Mhz	Wainwright	WRCG 1947/1953-1940/1960-40/6SS	SN28	N/A	N/A
band reject filter 2400/2483.5Mhz	Wainwright	WRCTF 2402/2480-2400/2483.5-35/12+9SS	SN42	N/A	N/A
Low pass filter 1.5Ghz	Wainwright	WLK1.5/18G-10SS	SN5	N/A	N/A
High pass filter 1.5G	Wainwright	WHKX1.5/15G-10SS	SN50	N/A	N/A
High pass filter 2.5G	Wainwright	WHKX 2.5/18G-12SS	SN5	N/A	N/A
High pass filter 3G	Kangmaiwei	ZHPF6-M3000-18000-996	03210746	N/A	N/A
High pass filter 6.5G	Kangmaiwei	ZHPF6-M6500-18000-547	03210747	N/A	N/A
High pass filter 1.0G	Kangmaiwei	ZHPF6-C1000-3000-548	11210354	N/A	N/A

6. Details Test Result

6.1. Re-Test statement

The EUT is operating at the same power level with the original testing of SGS-CSTC Standards Technical Services, Co., Ltd. Shenzhen Branch.

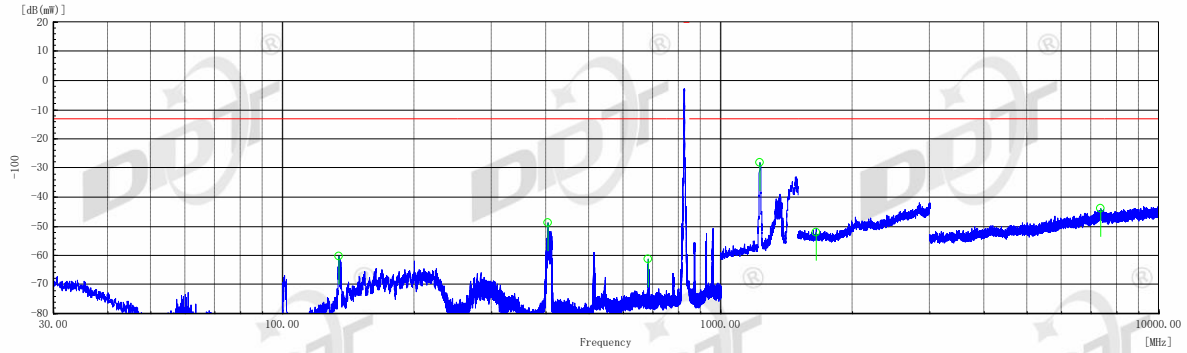
Item	The Original Reports	Re-Test Reports
File name:	test report RF	RF test report
Test location:	SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch	Tianjin Dongdian Testing Service Co., Ltd.

BAND	Modulation	Channel	Test Original Reports Level(dBm)	Re-Test Reports Level(dBm)
CDMA BC1	1xRRT / OQPSK	LCH	22.31	22.68
CDMA BC1	1xRRT / OQPSK	MCH	22.28	22.53
CDMA BC1	1xRRT / OQPSK	HCH	22.48	22.34
CDMA BC0	1xRRT / OQPSK	LCH	23.89	23.77
CDMA BC0	1xRRT / OQPSK	MCH	23.94	23.79
CDMA BC0	1xRRT / OQPSK	HCH	23.78	23.80
CDMA BC10	1xRRT / OQPSK	LCH	23.89	23.88
CDMA BC10	1xRRT / OQPSK	MCH	23.79	23.65
CDMA BC10	1xRRT / OQPSK	HCH	23.73	23.71
EVDO BC1	EVDO / OQPSK	LCH	22.41	22.54
EVDO BC1	EVDO / OQPSK	MCH	22.38	22.29
EVDO BC1	EVDO / OQPSK	HCH	22.49	22.51
EVDO BC0	EVDO / OQPSK	LCH	23.92	23.86
EVDO BC0	EVDO / OQPSK	MCH	24.01	23.87
EVDO BC0	EVDO / OQPSK	HCH	23.89	23.74
EVDO BC10	EVDO / OQPSK	LCH	24.09	23.97
EVDO BC10	EVDO / OQPSK	MCH	23.99	23.89
EVDO BC10	EVDO / OQPSK	HCH	23.92	23.95

BAND	Bandwidth	Modulation	Channel	RB Configuration	Test Original Reports Level(dBm)	Re-Test Reports Level(dBm)
Band13	10MHz	QPSK	23230	1RB#0	23.95	23.97
Band25	20MHz	QPSK	26140	1RB#0	23.83	23.92
Band25	20MHz	QPSK	26365	1RB#0	23.85	23.90
Band25	20MHz	QPSK	26590	1RB#0	23.90	23.87
Band26 (814-824)	10MHz	QPSK	26740	1RB#0	24.31	24.27
Band26 (824-849)	15MHz	QPSK	26865	1RB#0	24.51	23.48
Band26 (824-849)	15MHz	QPSK	26915	1RB#0	24.49	23.39
Band26 (824-849)	15MHz	QPSK	26965	1RB#0	24.63	24.51
Band41	20MHz	QPSK	39750	1RB#0	25.50	25.48
Band41	20MHz	QPSK	40620	1RB#0	25.60	25.72
Band41	20MHz	QPSK	41490	1RB#0	25.72	25.66

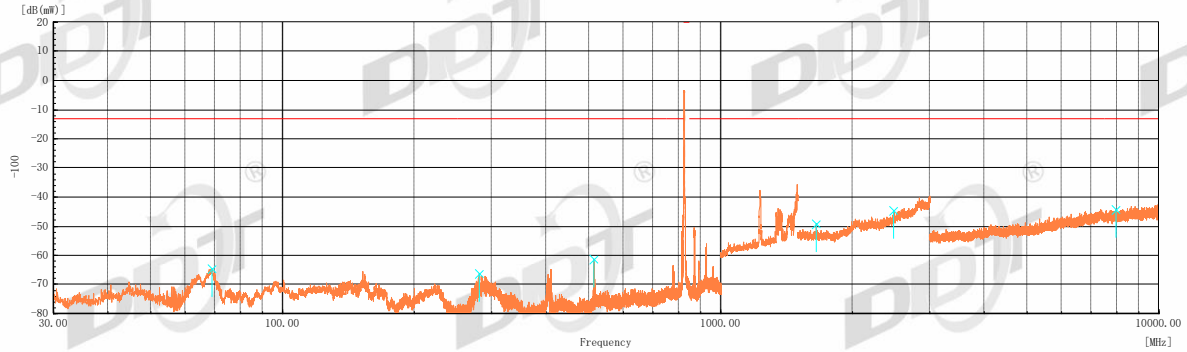
6.2. Radiated Spurious Emissions

Test Mode1：CDMA 1xRRT BC0 L channel (horizontal)



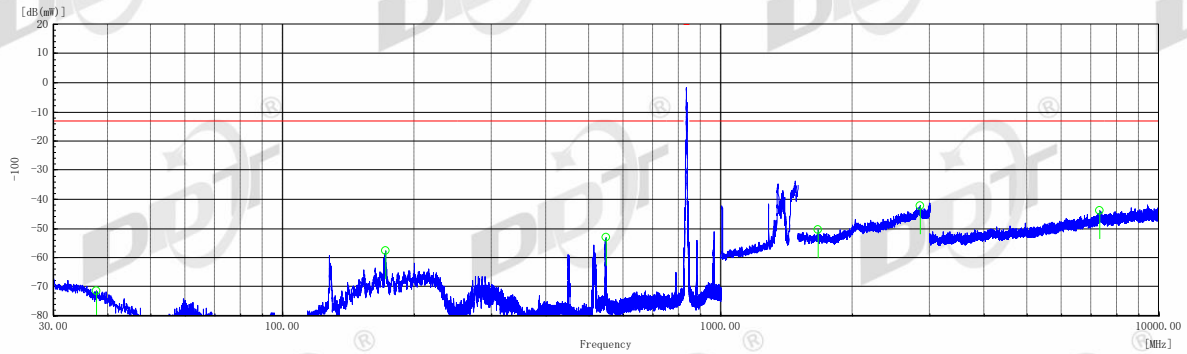
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
134.6	H	35.0	-60.3	-13	47.3	96	270.1
404.1	H	46.4	-48.9	-13	35.9	94	270.1
684.5	H	34.0	-61.3	-13	48.3	94	270.1
1229	H	67.0	-28.3	-13	15.3	171	270.1
1649	H	43.3	-52	-13	39	158	226
7364.001	H	51.5	-43.8	-13	30.8	154	270.1

Test Mode1：CDMA 1xRRT BC0 L channel (vertical)



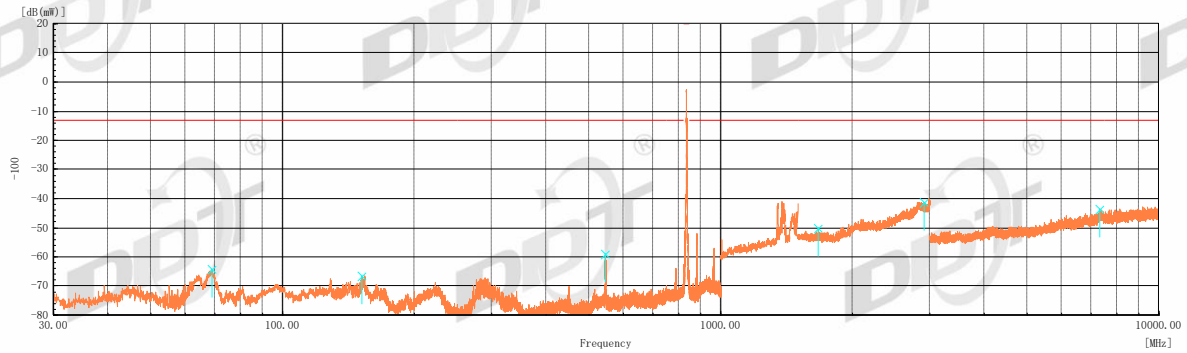
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
68.85	V	30.7	-64.6	-13	51.6	99	134.9
280.8	V	29.0	-66.3	-13	53.3	98	44.5
513.2	V	33.9	-61.4	-13	48.4	97	0
1649	V	46.2	-49.1	-13	36.1	168	179.8
2474	V	50.8	-44.5	-13	31.5	151	225.1
7962.001	V	50.9	-44.4	-13	31.4	151	269.3

Test Mode1：CDMA 1xRRT BC0 M channel (horizontal)



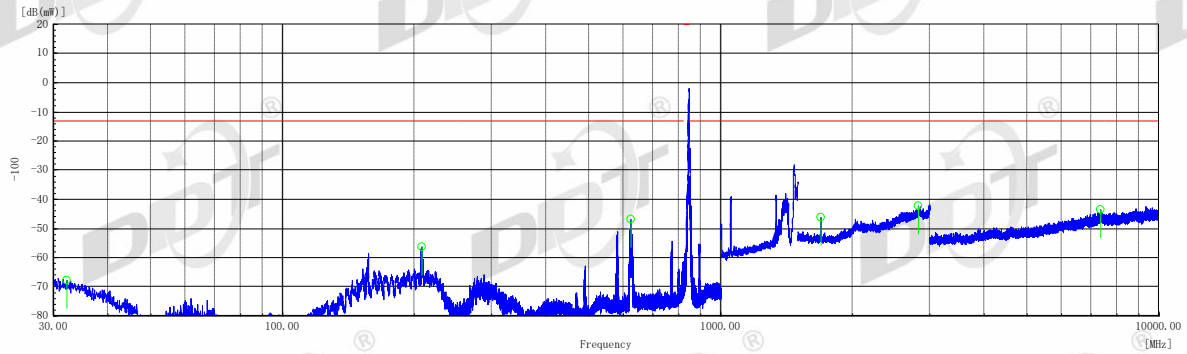
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
37.6	H	24.0	-71.3	-13	58.3	96	0
171.5	H	37.6	-57.7	-13	44.7	94	270.2
546.5	H	42.1	-53.2	-13	40.2	97	180.5
1672	H	44.9	-50.4	-13	37.4	171	225.8
2851	H	53.0	-42.3	-13	29.3	158	315.5
7331.501	H	51.3	-44	-13	31	154	270.2

Test Mode1：CDMA 1xRRT BC0 M channel (vertical)



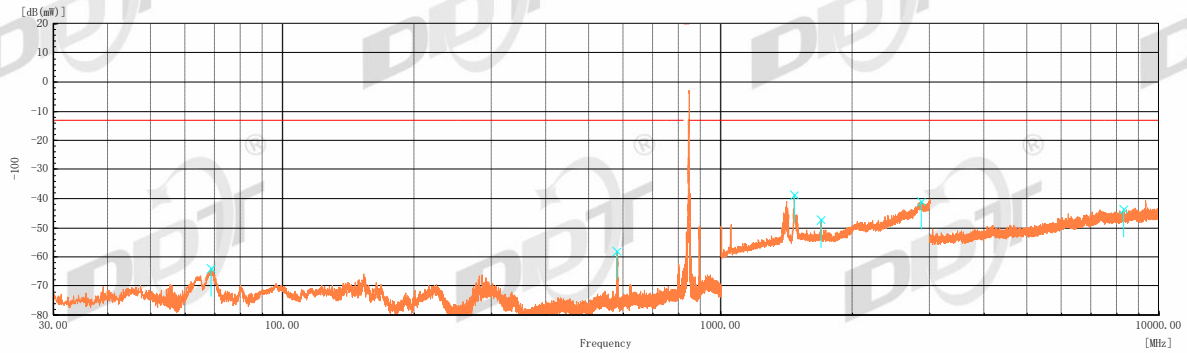
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
68.9	V	31.1	-64.2	-13	51.2	89	44.1
151.35	V	28.8	-66.5	-13	53.5	91	0
545.75	V	36.2	-59.1	-13	46.1	92	0
1672	V	45.2	-50.1	-13	37.1	168	315.5
2910.5	V	54.0	-41.3	-13	28.3	159	269.9
7327.001	V	51.6	-43.7	-13	30.7	159	269.9

Test Mode1：CDMA 1xRRT BC0 H channel (horizontal)



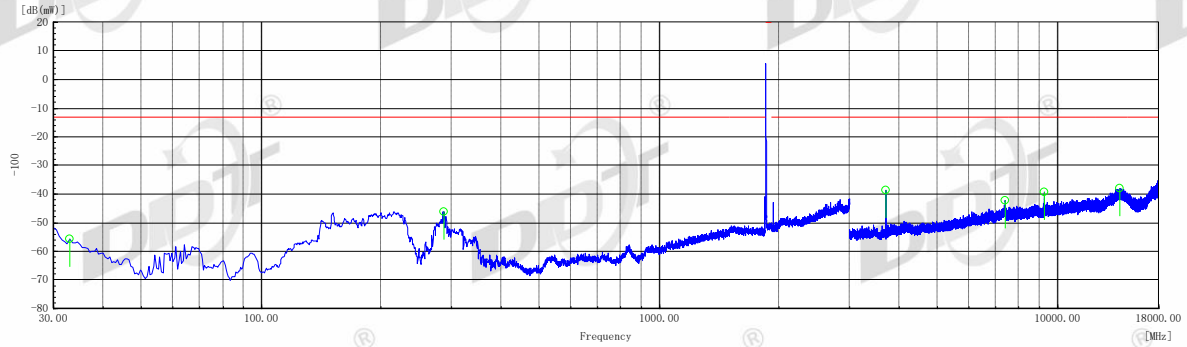
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
32.2	H	27.4	-67.9	-13	54.9	94	0
208.1	H	38.9	-56.4	-13	43.4	96	270.3
624.2	H	48.3	-47	-13	34	96	270.3
1693.5	H	49.2	-46.1	-13	33.1	178	225.4
2818.5	H	53.1	-42.2	-13	29.2	149	270.3
7346.501	H	51.5	-43.8	-13	30.8	172	45.2

Test Mode1：CDMA 1xRRT BC0 H channel (vertical)



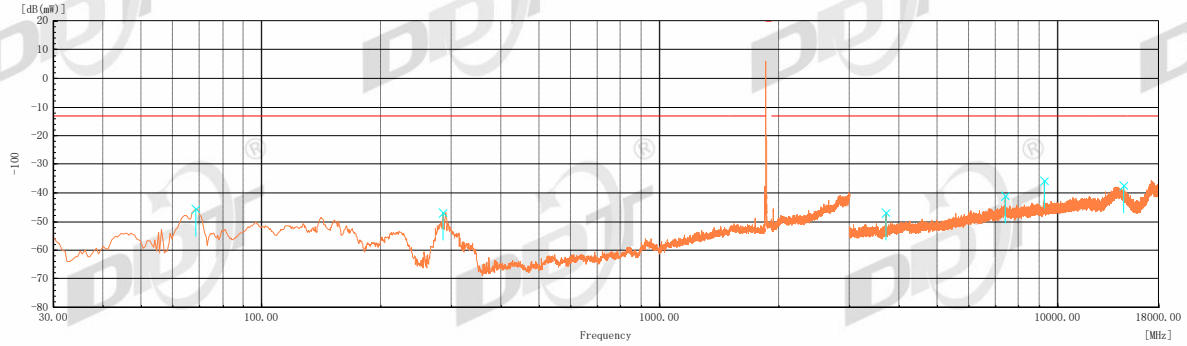
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
68.75	V	31.4	-63.9	-13	50.9	91	89.6
579.4	V	37.3	-58	-13	45	94	359.9
1471	V	56.5	-38.8	-13	25.8	167	359.9
1693	V	47.9	-47.4	-13	34.4	177	180
2862	V	54.2	-41.1	-13	28.1	134	44.8
8292.001	V	51.6	-43.7	-13	30.7	150	134.3

Test Mode2：CDMA 1xRRT BC1 L channel (horizontal)



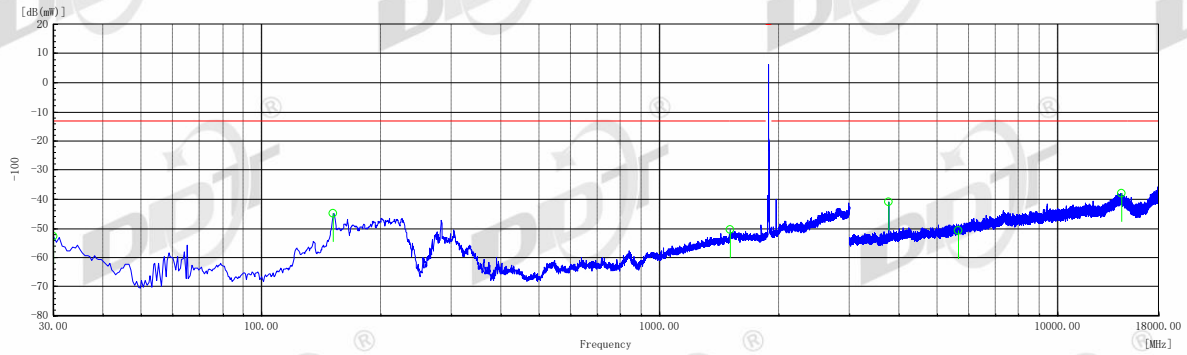
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
33	H	39.4	-55.9	-13	42.9	105	0.1
287.5	H	49.2	-46.1	-13	33.1	100	134.9
3701.5	H	56.7	-38.6	-13	25.6	174	180.2
7404.001	H	53.1	-42.2	-13	29.2	172	270.4
9254	H	55.9	-39.4	-13	26.4	165	225.5
14350	H	57.4	-37.9	-13	24.9	169	180.2

Test Mode2：CDMA 1xRRT BC1 L channel (vertical)



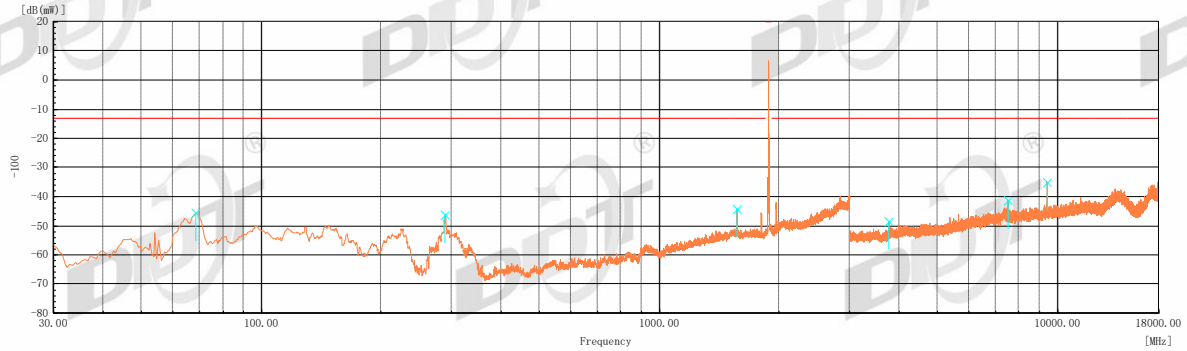
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
68.5	V	49.8	-45.5	-13	32.5	110	44.5
285.5	V	48.4	-46.9	-13	33.9	107	44.5
3701.5	V	48.3	-47	-13	34	169	134.9
7402.501	V	54.4	-40.9	-13	27.9	168	134.9
9253	V	59.5	-35.8	-13	22.8	157	134.9
14641	V	58.0	-37.3	-13	24.3	159	44.5

Test Mode2：CDMA 1xRRT BC1 M channel (horizontal)



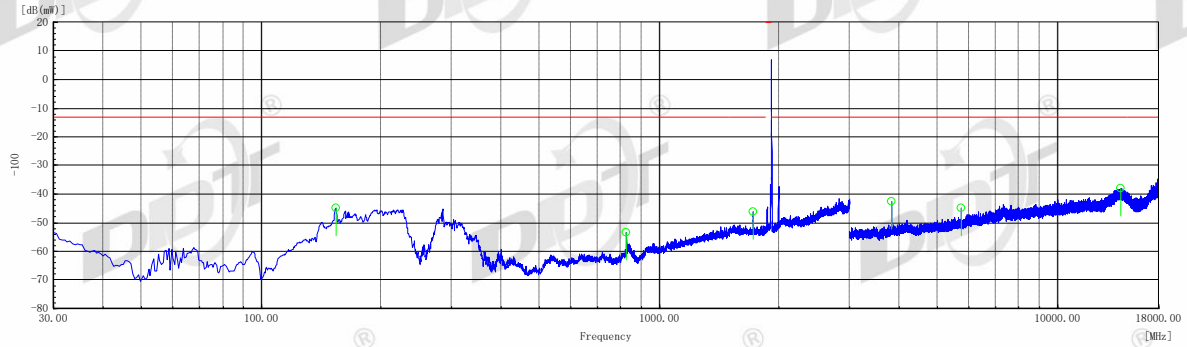
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
30	H	42.5	-52.8	-13	39.8	102	180.2
151.5	H	50.2	-45.1	-13	32.1	102	315.3
1506	H	44.9	-50.4	-13	37.4	174	270.4
3763.5	H	54.2	-41.1	-13	28.1	173	180.2
5640	H	44.6	-50.7	-13	37.7	168	0.1
14538.5	H	57.3	-38	-13	25	168	45.7

Test Mode2：CDMA 1xRRT BC1 M channel (vertical)



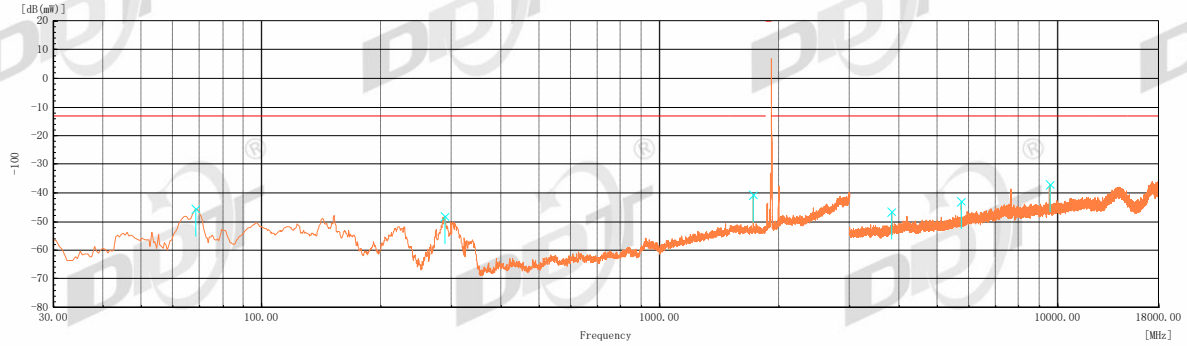
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
68.5	V	49.6	-45.7	-13	32.7	109	44.5
289.5	V	48.9	-46.4	-13	33.4	110	89.7
1565.5	V	51.2	-44.1	-13	31.1	172	0.1
3764	V	46.7	-48.6	-13	35.6	176	134.9
7527.501	V	54.1	-41.2	-13	28.2	150	134.9
9408.5	V	60.2	-35.1	-13	22.1	151	134.9

Test Mode2：CDMA 1xRRT BC1 H channel (horizontal)



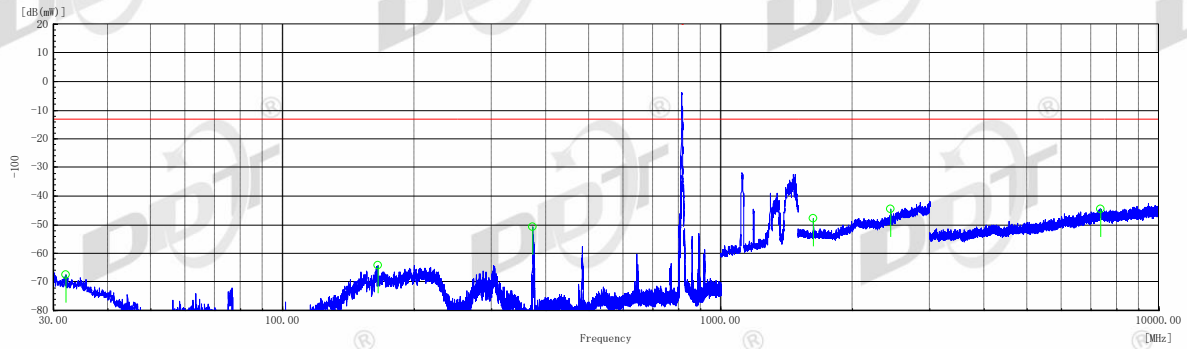
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
153.5	H	50.4	-44.9	-13	31.9	106	315.8
827	H	42.0	-53.3	-13	40.3	105	135.8
1720.5	H	49.0	-46.3	-13	33.3	168	45.4
3826	H	52.7	-42.6	-13	29.6	176	180.8
5738.5	H	50.4	-44.9	-13	31.9	183	180.8
14458.5	H	57.2	-38.1	-13	25.1	158	0.2

Test Mode2：CDMA 1xRRT BC1 H channel (vertical)



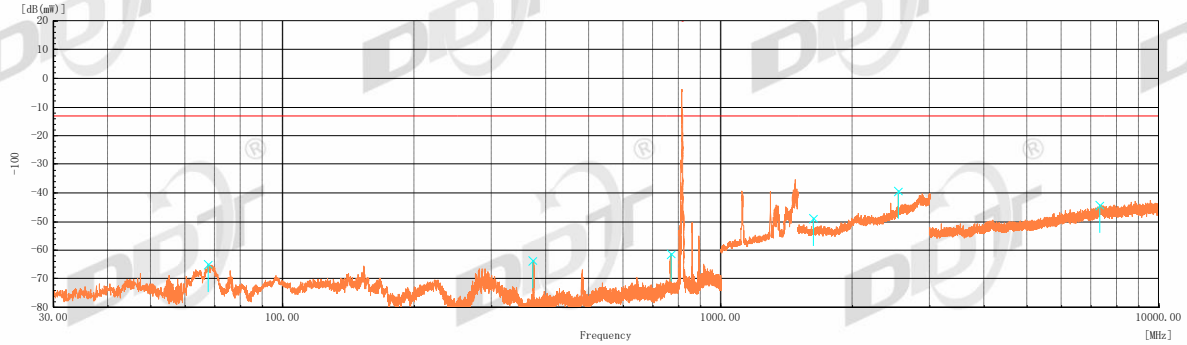
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
68.5	V	49.9	-45.4	-13	32.4	97	45
288.5	V	47.2	-48.1	-13	35.1	112	45
1720.5	V	54.8	-40.5	-13	27.5	177	0.1
3825.5	V	48.9	-46.4	-13	33.4	175	134.6
5738	V	52.4	-42.9	-13	29.9	149	269.4
9563.5	V	58.1	-37.2	-13	24.2	152	134.6

Test Mode3：CDMA 1xRRT BC10 L channel (horizontal)



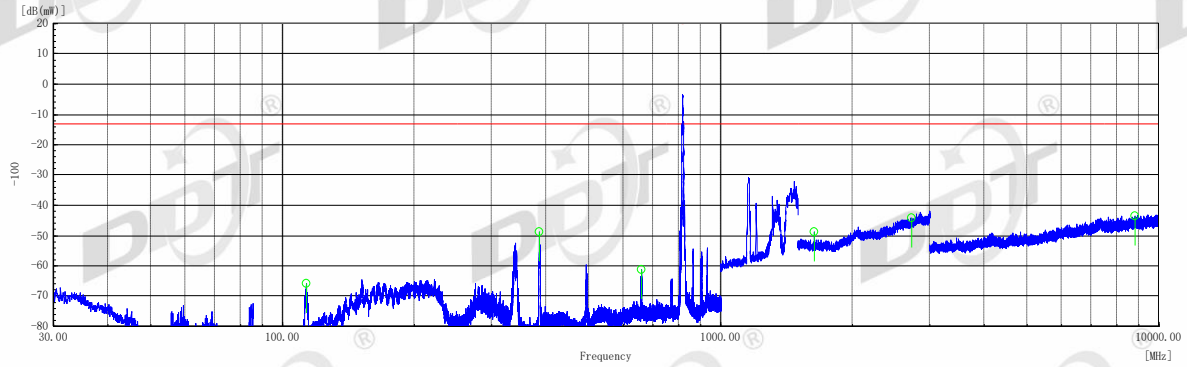
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
32	H	27.8	-67.5	-13	54.5	97	0
164.75	H	31.0	-64.3	-13	51.3	93	315.2
372.9	H	44.6	-50.7	-13	37.7	165	270.7
1629	H	47.3	-48	-13	35	170	225.1
2444	H	50.7	-44.6	-13	31.6	155	0
7376.001	H	50.8	-44.5	-13	31.5	150	90.8

Test Mode3：CDMA 1xRRT BC10 L channel (vertical)



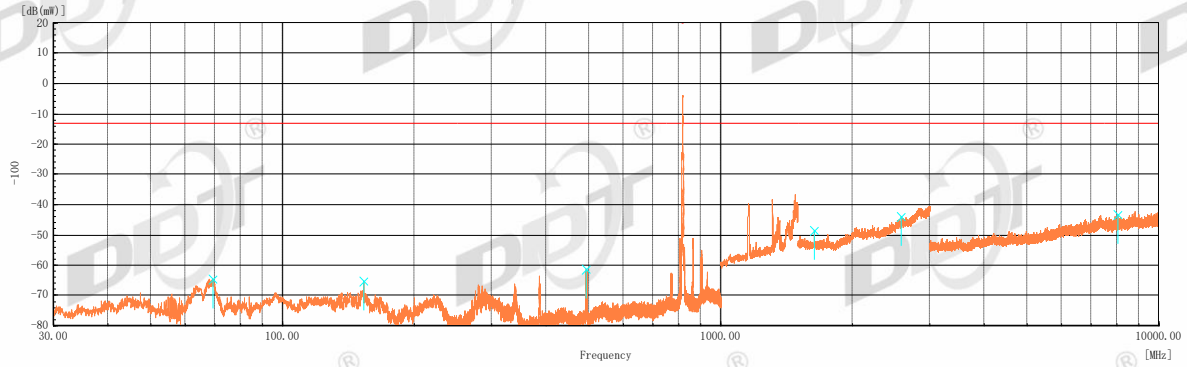
Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
67.75	V	30.5	-64.8	-13	51.8	98	44.5
372.3	V	31.7	-63.6	-13	50.6	97	0
769.85	V	33.9	-61.4	-13	48.4	155	0
1629	V	46.4	-48.9	-13	35.9	170	180.1
2539	V	55.9	-39.4	-13	26.4	152	44.5
7323.001	V	51.2	-44.1	-13	31.1	151	315.2

Test Mode3：CDMA 1xRRT BC10 M channel (horizontal)



Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
113.45	H	29.5	-65.8	-13	52.8	95	269.8
385.8	H	46.3	-49	-13	36	95	269.8
659.6	H	33.9	-61.4	-13	48.4	170	269.8
1636	H	46.5	-48.8	-13	35.8	166	225.3
2723.5	H	51.1	-44.2	-13	31.2	170	315
8818.5	H	51.6	-43.7	-13	30.7	153	0

Test Mode3：CDMA 1xRRT BC10 M channel (vertical)



Frequency [MHz]	Pol	Level [dBμV/m]	Level [dB(mW)]	Limit [dB(mW)]	Margin [dB]	Height [cm]	Azimuth [°]
69.35	V	30.7	-64.6	-13	51.6	89	134.8
153.2	V	30.1	-65.2	-13	52.2	90	44.8
493.95	V	34.0	-61.3	-13	48.3	94	359.9
1636	V	46.8	-48.5	-13	35.5	168	179.2
2585	V	51.2	-44.1	-13	31.1	157	179.2
8070.501	V	52.1	-43.2	-13	30.2	157	134.8