ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CLASS II PC REPORT

FCC Applicant:	Acer Incorporated 8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi, New Taipei City 22181, Taiwan (R.O.C)
Product Name:	7c Modular Platform
Brand Name:	acer
Model No.:	QSIP7180
Model Difference:	N/A
Report Number:	ER/2021/70042
FCC ID	HLZQSIP7180
Issue Date:	Sep. 07, 2021
Date of Test:	Aug. 02, 2021 ~ Aug. 20, 2021
Date of EUT Received:	Jul. 09, 2021

Approved By CHUN-CHIEH, CHEN

Chun Chieh Chen

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI ANSI C63.26-2015 and the energy emitted by the sample EUT comply with FCC rule part 2, 22H & 24E.

The results of this report relate only to the sample identified in this report.

Revision History

Report Number	Revision	Description	Issue Date	Revised By
ER/2021/70042	Rev.00	Original.	Sep. 07, 2021	Yi-Shan Tsai

Contents

1 GENERAL PRODUCT INFORMATION

1.1 Product Description

Product Name:	7c Modular Platform
Brand Name:	acer
Model No.:	QSIP7180
Model No. of Host:	N20Q7
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	N8DAISY005117007F37600 (Conducted) N8A4DWW0031241CABC7600 (Radiated)
Power Supply:	11.4Vdc from Rechargeable Li-polymer Battery Pack 19Vdc from AC/DC Adapter

1.2 Operation Frequency Range

Operating Frequency (MHz)			
WCDMA / HSPA+ Band II	1852.4	-	1907.6
WCDMA / HSPA+ Band V	826.4	-	846.6

1.3 Antenna Designation

Antenna Type	Antenna Model No.
PIFA	Main
	Aux
Note: Transmission in frequencies in this test report are only available by the above antenna(s).	

Modulation	Frequency (MHz)	Peak Antenna Gain (dBi)	
		Main	Aux
WCDMA / HSPA+ Band II	1852.4 - 1907.6	**0.92**	-2.46
WCDMA / HSPA+ Band V	826.4 - 846.6	**3.44**	-2.89

Note: Antenna information is provided by the applicant.

1.4 Test Methodology of Applied Standards

FCC 47 CFR Part 2, 22H, 24E
ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System v03r01

KDB941225 D01 SAR test for 3G devices v03r01 (SAR Measurement Procedures for 3G Devices, WCDMA / HSPA) was used for EUT and Base station setting.

KDB412172 D01 Determining ERP and EIRP v01r01

TS 151 010-1 is used to set, and measure the output power.

1.5 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan.	SAC 1	TW0027	TW3702
		SAC 3		
		Conduction 1		
		Conducted 1		
		Conducted 2		
		Conducted 3		
		Conducted 4		
		Conducted 5		
		Conducted 6		
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C	TW0028	
		SAC C		
		SAC D		
		SAC G		
		Conducted A		
		Conducted B		
		Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		
Note: Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.				

1.6 Special Accessories

No special accessories were used during testing.

1.7 Equipment Modifications

There was no modifications incorporated into the EUT.

1.8 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m*9m*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.
There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

2 SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT (Transmitter) was operated in the continuous transmission mode employed with the simulator of the Base Station that fixates at test default channels to fix the Tx frequency which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Measurement at Antenna Port

The EUT is placed on a table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

2.3.2 Radiated Emissions (ERP/EIRP)

The EUT is placed on a turn table, for emission measurements below 1 GHz is 0.8 m above ground plane, for emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.

2.4 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 attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.
Following shows an offset computation in physical test.

2.5 Test Configuration

2.5.1 Conducted Emission at the Antenna Port

2.5.2 Radiated Emission

2.5.3 Equipment used for test

Equipment	Mfr/Brand	Model/Type No.	Series No.
Test Software	N/A	N/A	N/A

3 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a)	RF Power Output	Compliant
§22.913(a)(5) §24.232(c)	ERP/ EIRP measurement	Compliant
§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	Compliant

4 DESCRIPTION OF TEST MODES

4.1 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X(E1)Y(E2)Z(H) axis and antenna ports. The worst case was found as listed below. Following channel(s) was (were) selected for the final test as listed below:

BAND	H Plane	E1 Plane	E2 Plane	NB Plane
WCDMA/HSPA Band II				V
WCDMA/HSPA Band V				V

4.2 Measurement Configuration

Test Items	WCDMA / HSPA Bands	Test Channel		
		L	M	H
RADIATED EMISSION	Bnad II	v	v	v
	Band V	v	v	v

5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty		
RF Power Output	+/-	1	dB
ERP/ EIRP measurement	+/-	3	dB
	+/-	3	dB
Temperature	+/-	0.4	°C
Humidity	+/-	3.5	%
DC / AC Power Source	+/-	1	%

Radiated Spurious Emission Measurement Uncertainty				
Polarization: Vertical	**+/-**	**2.64**	**dB**	9kHz~30MHz
	+/-	**4.93**	**dB**	30MHz - 1000MHz
	+/-	**4.81**	**dB**	1GHz - 18GHz
	+/-	**4.52**	**dB**	18GHz - 40GHz
Polarization: Horizontal	**+/-**	**2.64**	**dB**	9kHz~30MHz
	+/-	**4.45**	**dB**	30MHz - 1000MHz
	+/-	**4.81**	**dB**	1GHz - 18GHz
	+/-	**4.52**	**dB**	18GHz - 40GHz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

6 MAXMUM OUTPUT POWER

6.1 Standard Applicable

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals.

According to FCC §2.1046

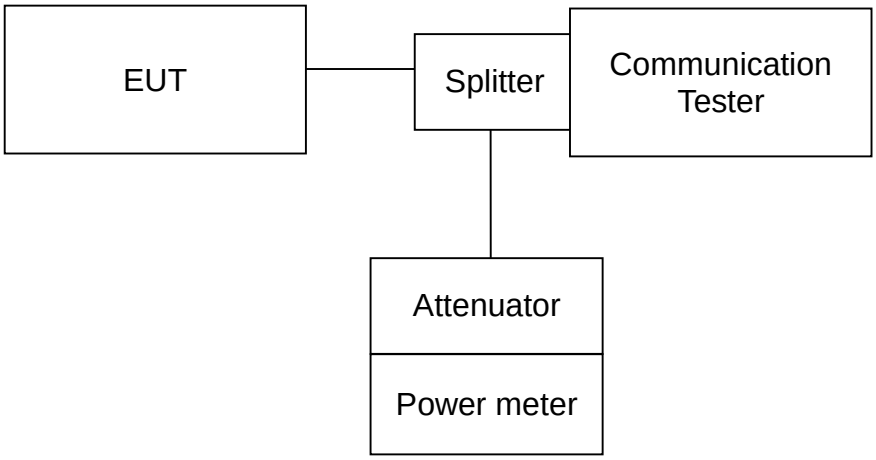
FCC 22.913(a)

(5) mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

FCC 24.232(c)

Mobile and portable stations are limited to 2 W EIRP.

6.2 Test Set-up



Note: *Measurement setup for testing on Antenna connector*

6.3 Output Power Measurement Applicable Guideance

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter.

Transmitter output was read off the power meter in dBm.

The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading.

The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, (WCDMA/HSPA) was used for EUT and RMC 12.2kps is used for Base station setting.

KDB 971168 D01 Power Meas License Digital System as the supplemental test methodology to adjust the proper setting obtaining the measurement results.

Conducted average power is obtained from the simulator telecommunication test set.

6.4 Determining ERP and/or EIRP from conducted RF output power measurements

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$,

$ERP = EIRP - 2.15$,

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power (expressed in the same units as PT, typically dBW, dBm, or power spectral density (PSD)2), relative to either a dipole antenna (ERP) or an isotropic antenna (EIRP);

P_T = transmitter output power, expressed in dBW, dBm, or PSD;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

6.5 Measurement Equipment Used

Conducted Emission Test Site: Conducted 4					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUM-BER**	**LAST CAL.**	**CAL DUE.**
Radio Communication Analyer	Anritsu	MT8815B	6200711454	04/07/2021	04/06/2022
Attenuator	Mini-Circuit	BW-S10W2+	4	12/16/2020	12/15/2021

6.6 WCDMA & HSPA Measurement Results:

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm. RMC 12.2kps is used for this testing.

WCDMA/HSUPA/HSDPA Band II Result:

EUT Mode	Freq. (MHz)	CH	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
WCDMA	1852.4	**9262**	24.56	0.92	23.33	**25.48**	33.00	-7.52
	1880.0	**9400**	24.38	0.92	23.15	25.30	33.00	-7.70
	1907.6	**9538**	24.21	0.92	22.98	25.13	33.00	-7.87
HSDPA	1852.4	**9262**	23.92	0.92	22.69	**24.84**	33.00	-8.16
	1880.0	**9400**	23.81	0.92	22.58	24.73	33.00	-8.27
	1907.6	**9538**	23.74	0.92	22.51	24.66	33.00	-8.34
HSUPA	1852.4	**9262**	23.31	0.92	22.08	24.23	33.00	-8.77
	1880.0	**9400**	23.21	0.92	21.98	24.13	33.00	-8.87
	1907.6	**9538**	23.59	0.92	22.36	**24.51**	33.00	-8.49

WCDMA/HSUPA/HSDPA Band V Result:

EUT Mode	Freq. (MHz)	CH	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
WCDMA	826.4	4132	24.22	3.44	25.51	**27.66**	38.50	-10.84
	836.6	4183	24.16	3.44	25.45	27.60	38.50	-10.90
	846.6	4233	24.21	3.44	25.50	27.65	38.50	-10.85
HSDPA	826.4	4132	22.83	3.44	24.12	26.27	38.50	-12.23
	836.6	4183	22.67	3.44	23.96	26.11	38.50	-12.39
	846.6	4233	23.11	3.44	24.40	**26.55**	38.50	-11.95
HSUPA	826.4	4132	22.91	3.44	24.20	26.35	38.50	-12.15
	836.6	4183	22.67	3.44	23.96	26.11	38.50	-12.39
	846.6	4233	23.18	3.44	24.47	**26.62**	38.50	-11.88

6.6.1 HSPA (HSDPA & HSUPA) Release 6:

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1. RMC 12.2kps is used for this testing.

6.6.2 HSDPA SUB-TEST Setting

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

Sub-test	β_c	β_d	β_d *(SF)*	β_c/β_d	β_{HS} (*Note1, Note 2*)	CM (dB) *(Note 3)*	MPR (dB) *(Note 3)*	RMC (Kbps)
1	2/15	15/15	64	2/15	4/15	0.0	0.0	12.2
2	12/15 *(Note 4)*	15/15 *(Note 4)*	64	12/15 *(Note 4)*	24/15	1.0	0.0	12.2
3	15/15	8/15	64	15/8	30/15	1.5	0.5	12.2
4	15/15	4/15	64	15/4	30/15	1.5	0.5	12.2

Note: *The recommended HSDPA MPRs are implemented as per following sub-tests.*

Mode	Sub test	Avg. Power (dBm) Channel		
		9262.00	9400.00	9538.00
HSDPA II	1	23.92	23.81	23.74
	2	23.78	23.93	23.95
	3	22.83	22.63	23.11
	4	22.81	22.67	23.09
Mode	**Sub test**	**Avg. Power (dBm) Channel**		
		4132.00	**4183.00**	**4233.00**
HSDPA V	1	22.83	22.67	23.11
	2	22.91	22.71	23.15
	3	22.33	22.17	22.62
	4	22.38	22.20	22.60

6.6.3 HSPA SUB-TEST Setting

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS}	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (Codes)	CM (dB)	MPR (dB)	AG Index	E-TFCI	RMC (Kbps)
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

Note: *The recommended HSUPA MPRs are implemented as per following sub-tests.*

Mode	Sub test	Avg. Power (dBm) Channel		
		9262.00	9400.00	9538.00
HSUPA II	1	23.31	23.21	23.59
	2	21.39	21.14	21.61
	3	22.36	22.18	22.59
	4	21.33	21.17	21.59
	5	23.40	23.20	23.60
Mode	**Sub test**	**Avg. Power (dBm) Channel**		
		4132.00	**4183.00**	**4233.00**
HSUPA V	1	22.91	22.67	23.18
	2	20.87	20.74	21.09
	3	21.83	21.76	22.10
	4	20.90	20.71	21.15
	5	22.89	22.68	23.12

6.6.4 WCDMA/HSDPA/HSUPA band II, IV, V

The EUT output power was controlled by simulator and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm then record the read. The min. power was measures by a function key “minimum power” then record the read. It is -52.3dBm. The power variation can be 0.1dB step by setting.

7 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

7.1 Standard Applicable

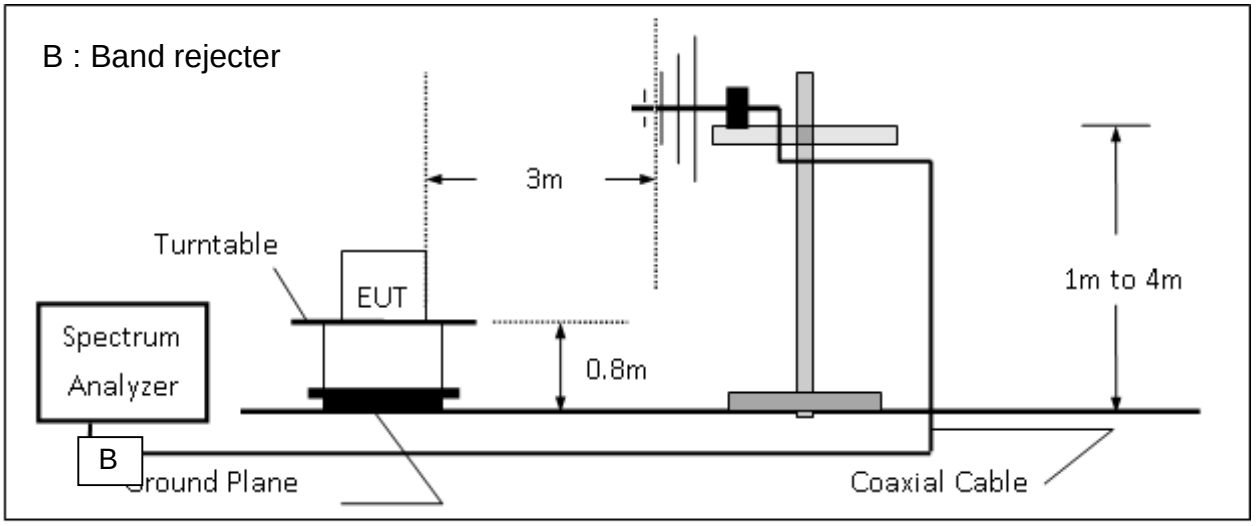
According to FCC §2.1053,

FCC §22.917(a), §24.238(a)

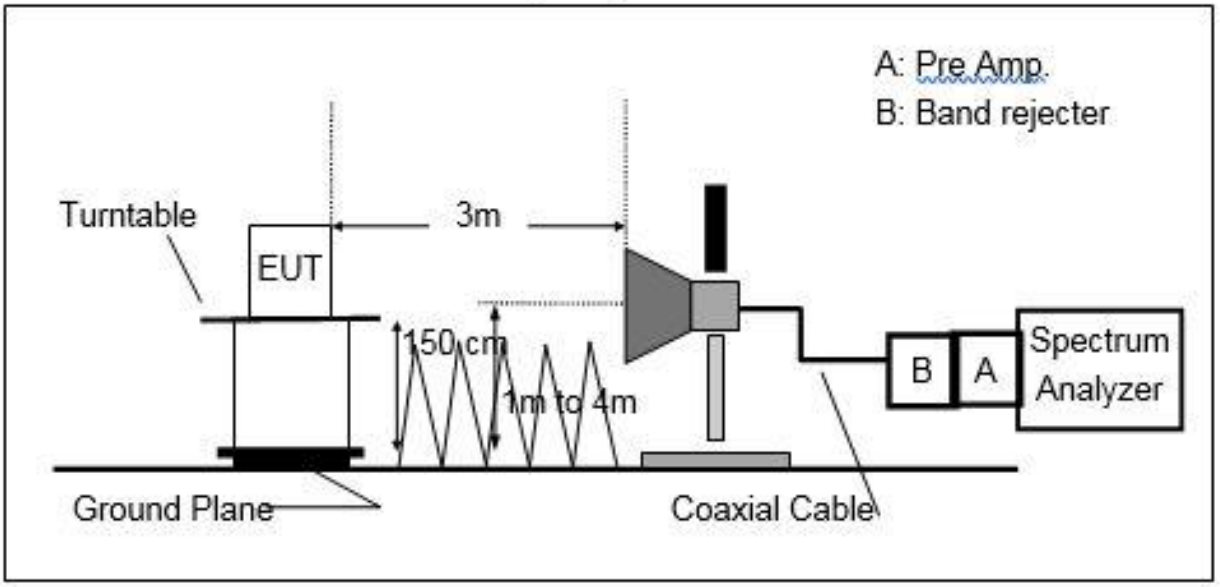
Out of band emissions.The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

7.2 EUT Setup

Radiated Emission Test Set-Up, Frequency Below 1000MHz



Radiated Emission Test Set-UP Frequency Over 1 GHz



7.3 Measurement Procedure:

The EUT was placed on a non-conductive; the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP (dBm) = SG Level(dBm) + Antenna Gain(dBd) + Cable Loss(dB)

EIRP (dBm) = SG Level(dBm) + Antenna Gain(dBi) + Cable Loss(dB)

7.4 Measurement Equipment Used:

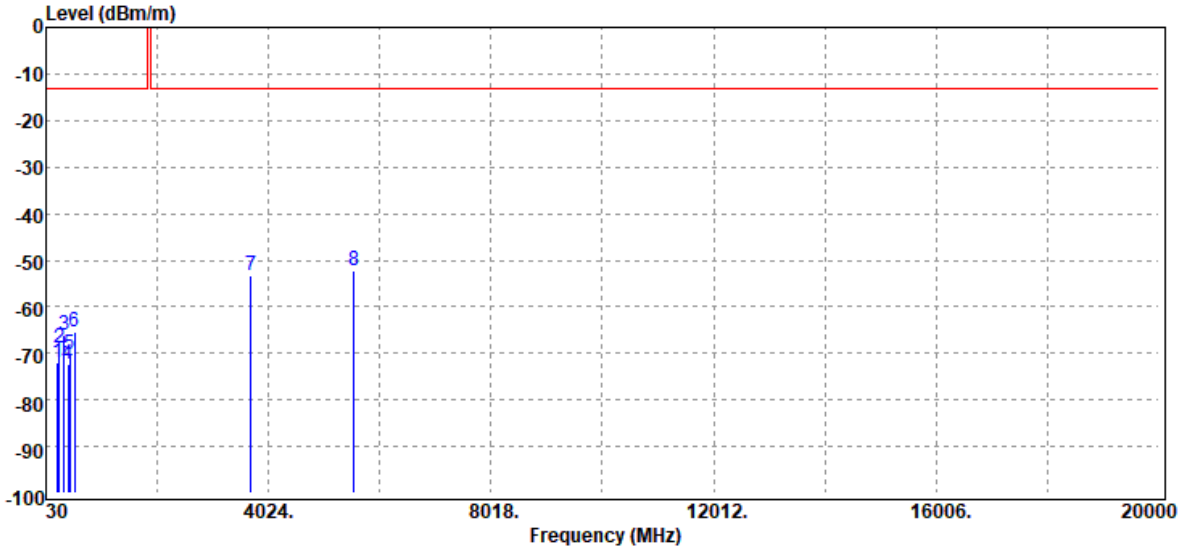
Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/20/2021	08/19/2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1441	10/16/2020	10/15/2021
Horn Antenna	SCHWARZBECK	BBHA9170	184	12/11/2020	12/10/2021
Bi-log Antenna	SCHWARZBECK	VULB9168	300	11/18/2020	11/17/2021
Horn Antenna	SCHWARZBECK	BBHA9120D	603	05/18/2021	05/17/2022
Horn Antenna	SCHWARZBECK	BBHA9170	185	07/30/2020	07/29/2021
PXA Spectrum Analyzer	Agilent	N9030A	MY53120760	04/27/2021	04/26/2022
Signal Generator	Agilent	N5183A	MY50140591	12/27/2020	12/26/2021
Pre-Amplifier	HP	8449B	3008A00578	12/16/2020	12/15/2021
Pre-Amplifier	HP	8447D	2944A07676	12/16/2020	12/15/2021
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2020	10/26/2021
Filter 635-920	Micro-Tronics	WI	4	12/16/2020	12/15/2021
Filter 800-1000	Micro-Tronics	EWT	M1	12/16/2020	12/15/2021
Filter 1700-2000	Micro-Tronics	EWT	M3	12/16/2020	12/15/2021
Filter 2240-2700	Micro-Tronics	WI	2	12/16/2020	12/15/2021
1GHz High Pass Filter	Micro-Tronics	HPM50108	32	12/16/2020	12/15/2021
2GHz High Pass Filter	Micro-Tronics	HPM50110	36	12/16/2020	12/15/2021
High Pass Filter	WI	WHKX4.0/18G-10SS	22	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2636/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104	340057/4	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104PEA	800052/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2621/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2617/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104	160125	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 106	76096/6	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2630/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY22962/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	SN 520430/2	12/16/2020	12/15/2021

Radio Communication Analyer	Anritsu	MT8820C	6200995019	03/28/2021	03/27/2022
Radio Communication Analyer	Anritsu	MT8821C	6262044670	08/18/2021	08/17/2022
Radio Communication Analyer	Anritsu	MT8815B	6200711454	04/07/2021	04/06/2022
Site Cal	SGS	SAC 3	N/A	01/01/2021	12/31/2021
Test Software	audix	e3	Ver. 6.11812c	N.C.R	N.C.R

NOTE: N.C.R refers to Not Calibrated Required.

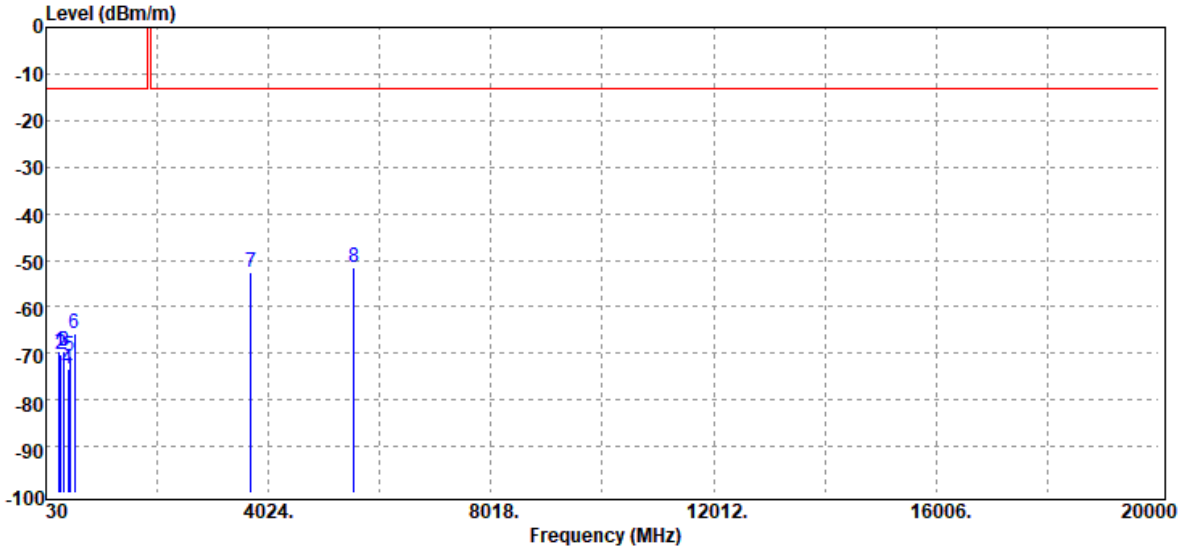
7.5 Measurement Result:

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B2	Test Date	:2021-08-03
Test Mode	:Tx CH Low	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1852.4 MHz	Engineer	:Ricky Chen



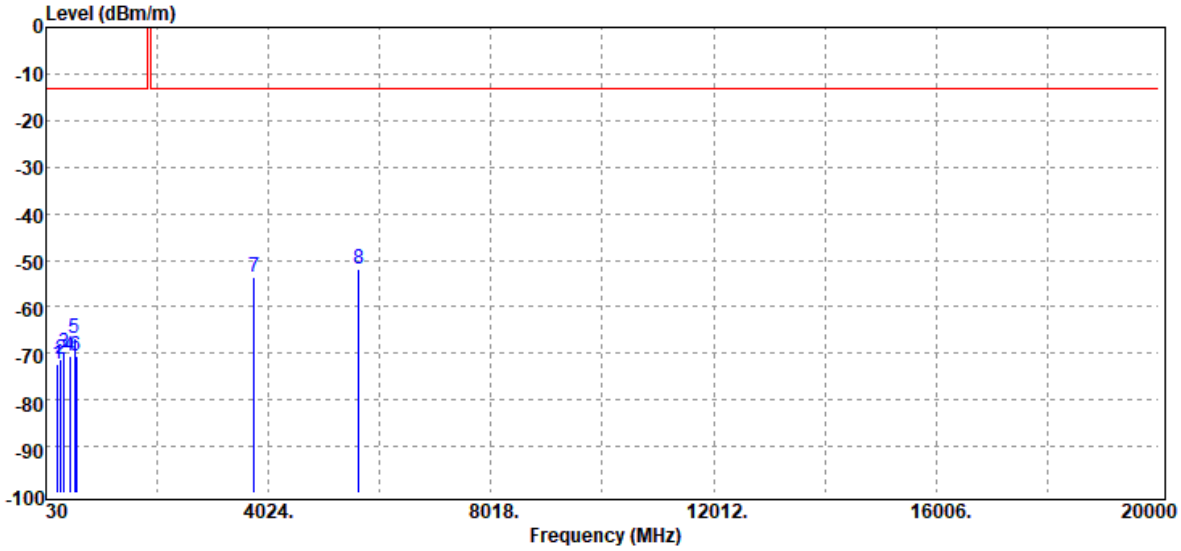
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
241.46	-71.88	-74.65	4.38	-1.61	-13.00	-58.88
270.56	-68.98	-71.42	4.09	-1.65	-13.00	-55.98
361.74	-65.98	-68.51	4.48	-1.95	-13.00	-52.98
420.91	-72.35	-74.66	4.21	-1.90	-13.00	-59.35
451.95	-70.40	-72.32	4.14	-2.22	-13.00	-57.40
542.16	-65.24	-67.23	4.33	-2.34	-13.00	-52.24
3704.80	-53.31	-58.09	12.31	-7.53	-13.00	-40.31
5557.20	-52.26	-55.62	12.91	-9.55	-13.00	-39.26

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B2	Test Date	:2021-08-03
Test Mode	:Tx CH Low	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1852.4 MHz	Engineer	:Ricky Chen



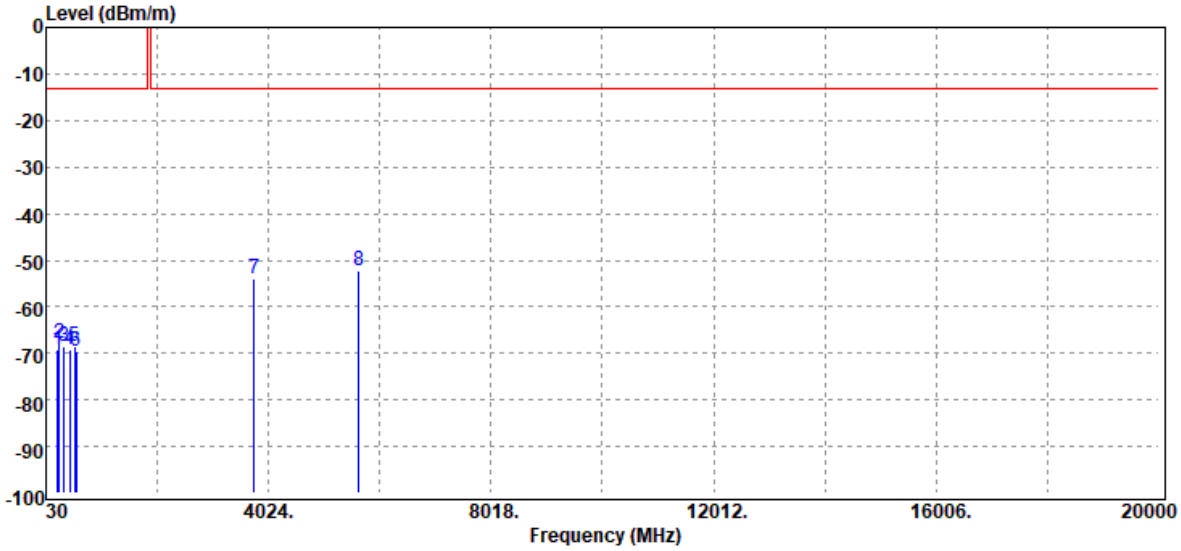
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
270.56	-69.64	-72.08	4.09	-1.65	-13.00	-56.64
301.60	-70.22	-72.68	4.24	-1.78	-13.00	-57.22
361.74	-69.69	-72.22	4.48	-1.95	-13.00	-56.69
422.85	-73.31	-75.52	4.13	-1.92	-13.00	-60.31
451.95	-70.45	-72.37	4.14	-2.22	-13.00	-57.45
542.16	-65.82	-67.81	4.33	-2.34	-13.00	-52.82
3704.80	-52.66	-57.44	12.31	-7.53	-13.00	-39.66
5557.20	-51.42	-54.78	12.91	-9.55	-13.00	-38.42

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B2	Test Date	:2021-08-03
Test Mode	:Tx CH Mid	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1880 MHz	Engineer	:Ricky Chen



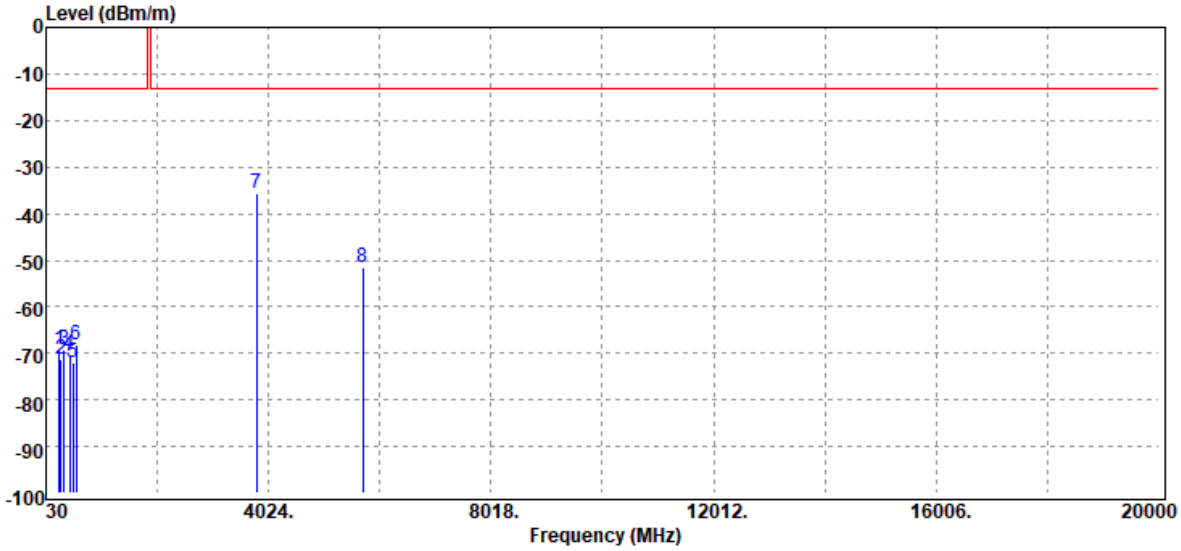
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
241.46	-72.27	-75.04	4.38	-1.61	-13.00	-59.27
301.60	-71.33	-73.79	4.24	-1.78	-13.00	-58.33
361.74	-69.76	-72.29	4.48	-1.95	-13.00	-56.76
451.95	-70.65	-72.57	4.14	-2.22	-13.00	-57.65
542.16	-66.89	-68.88	4.33	-2.34	-13.00	-53.89
573.20	-70.51	-71.88	4.02	-2.65	-13.00	-57.51
3760.00	-53.58	-58.35	12.40	-7.63	-13.00	-40.58
5640.00	-51.90	-55.67	13.00	-9.23	-13.00	-38.90

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B2	Test Date	:2021-08-03
Test Mode	:Tx CH Mid	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1880 MHz	Engineer	:Ricky Chen



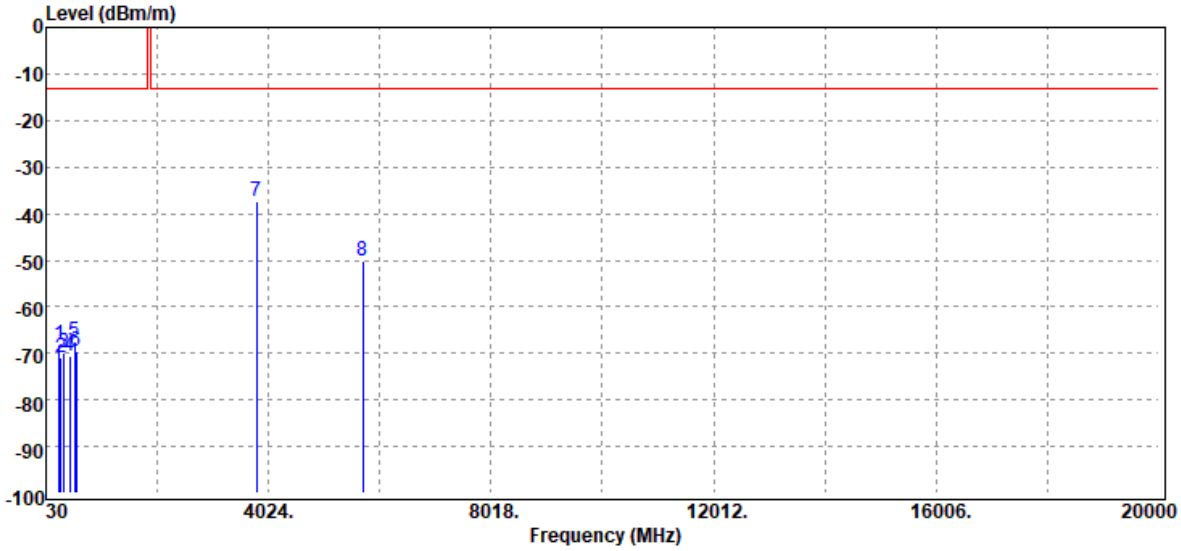
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
241.46	-69.16	-71.93	4.38	-1.61	-13.00	-56.16
270.56	-67.66	-70.10	4.09	-1.65	-13.00	-54.66
361.74	-68.55	-71.08	4.48	-1.95	-13.00	-55.55
451.95	-69.10	-71.02	4.14	-2.22	-13.00	-56.10
542.16	-68.45	-70.44	4.33	-2.34	-13.00	-55.45
573.20	-69.70	-71.07	4.02	-2.65	-13.00	-56.70
3760.00	-54.15	-58.92	12.40	-7.63	-13.00	-41.15
5640.00	-52.18	-55.95	13.00	-9.23	-13.00	-39.18

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B2	Test Date	:2021-08-03
Test Mode	:Tx CH High	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1907.6 MHz	Engineer	:Ricky Chen



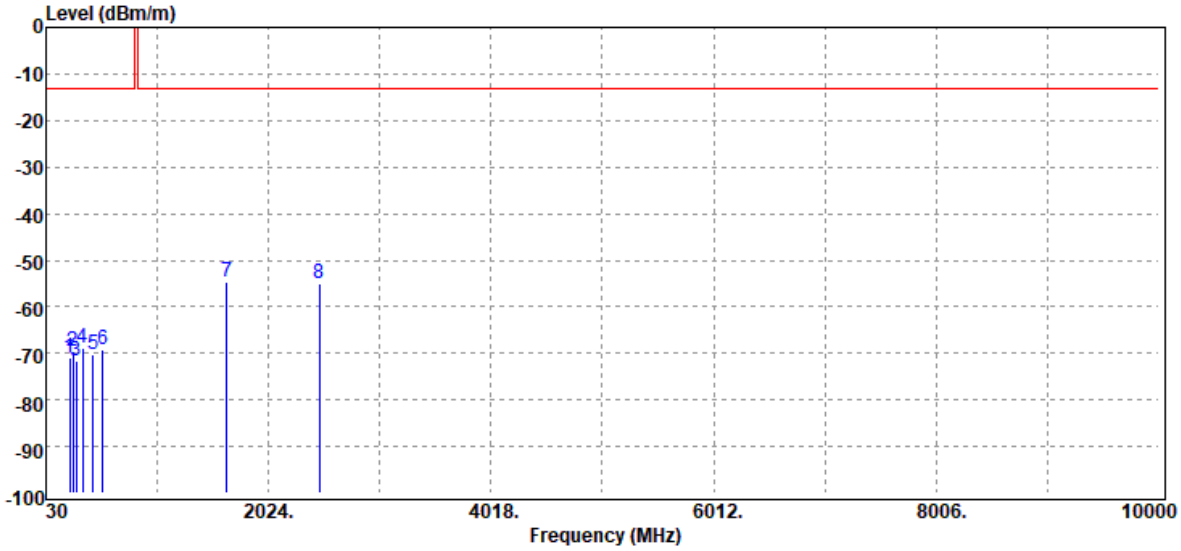
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
270.56	-69.19	-71.63	4.09	-1.65	-13.00	-56.19
301.60	-71.16	-73.62	4.24	-1.78	-13.00	-58.16
361.74	-69.37	-71.90	4.48	-1.95	-13.00	-56.37
451.95	-70.36	-72.28	4.14	-2.22	-13.00	-57.36
512.09	-71.89	-73.95	4.13	-2.07	-13.00	-58.89
573.20	-68.14	-69.51	4.02	-2.65	-13.00	-55.14
3815.20	-35.78	-40.49	12.37	-7.66	-13.00	-22.78
5722.80	-51.59	-55.34	12.80	-9.05	-13.00	-38.59

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B2	Test Date	:2021-08-03
Test Mode	:Tx CH High	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1907.6 MHz	Engineer	:Ricky Chen



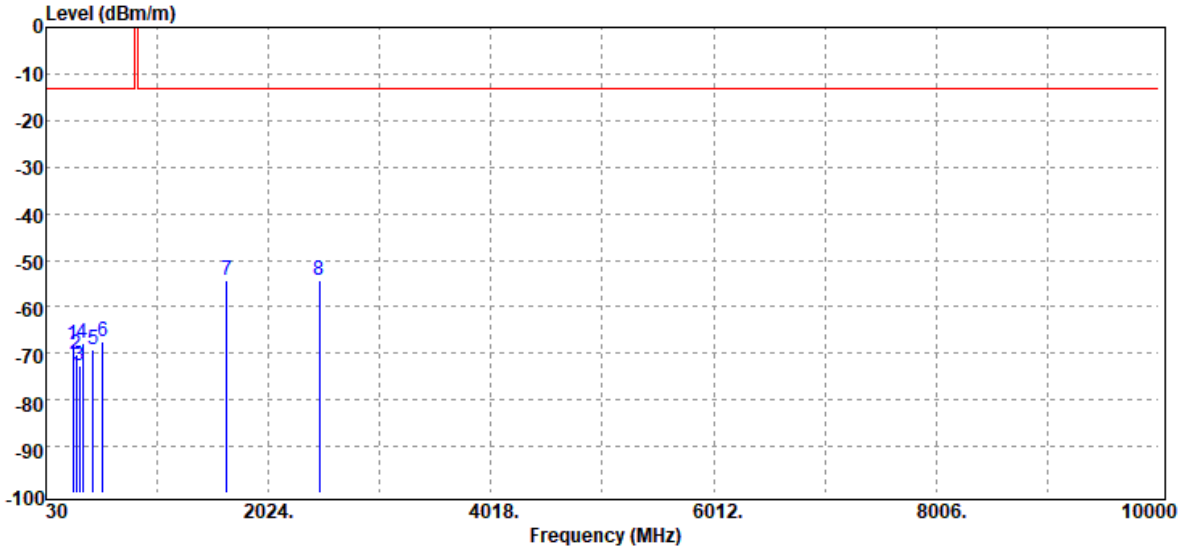
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
270.56	-68.07	-70.51	4.09	-1.65	-13.00	-55.07
301.60	-70.85	-73.31	4.24	-1.78	-13.00	-57.85
361.74	-69.78	-72.31	4.48	-1.95	-13.00	-56.78
451.95	-70.70	-72.62	4.14	-2.22	-13.00	-57.70
542.16	-67.44	-69.43	4.33	-2.34	-13.00	-54.44
573.20	-69.41	-70.78	4.02	-2.65	-13.00	-56.41
3815.20	-37.45	-42.16	12.37	-7.66	-13.00	-24.45
5722.80	-50.13	-53.88	12.80	-9.05	-13.00	-37.13

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B5	Test Date	:2021-08-03
Test Mode	:Tx CH Low	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:826.4 MHz	Engineer	:Ricky Chen



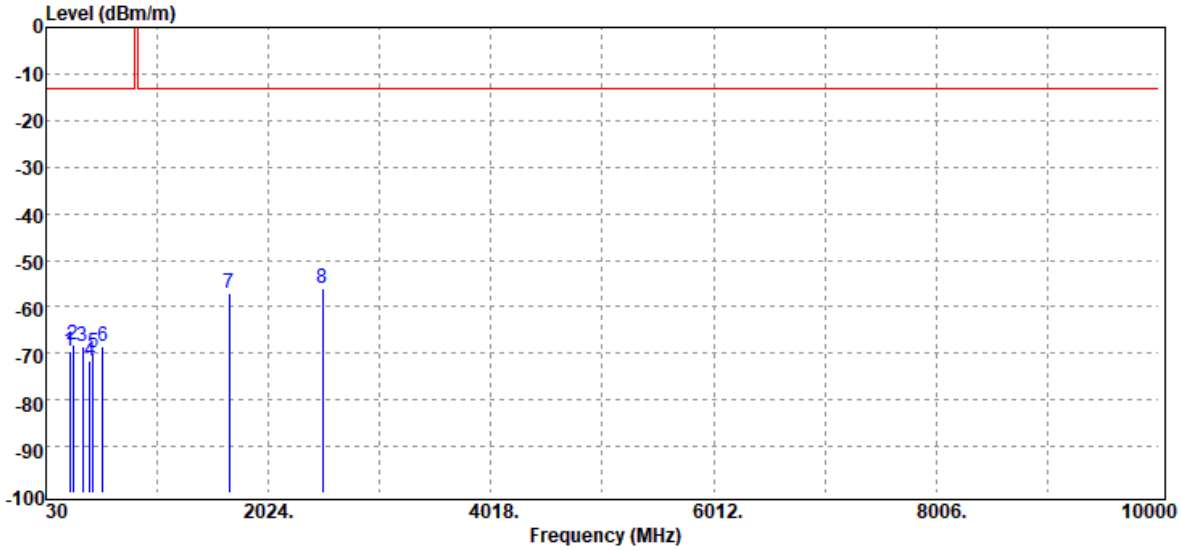
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
241.46	-71.06	-73.83	4.38	-1.61	-13.00	-58.06
270.56	-69.61	-72.05	4.09	-1.65	-13.00	-56.61
301.60	-71.79	-74.25	4.24	-1.78	-13.00	-58.79
361.74	-68.87	-71.40	4.48	-1.95	-13.00	-55.87
451.95	-70.23	-72.15	4.14	-2.22	-13.00	-57.23
542.16	-69.11	-71.10	4.33	-2.34	-13.00	-56.11
1652.80	-54.54	-59.79	9.51	-4.26	-13.00	-41.54
2479.20	-55.05	-60.44	10.56	-5.17	-13.00	-42.05

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B5	Test Date	:2021-08-03
Test Mode	:Tx CH Low	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:826.4 MHz	Engineer	:Ricky Chen



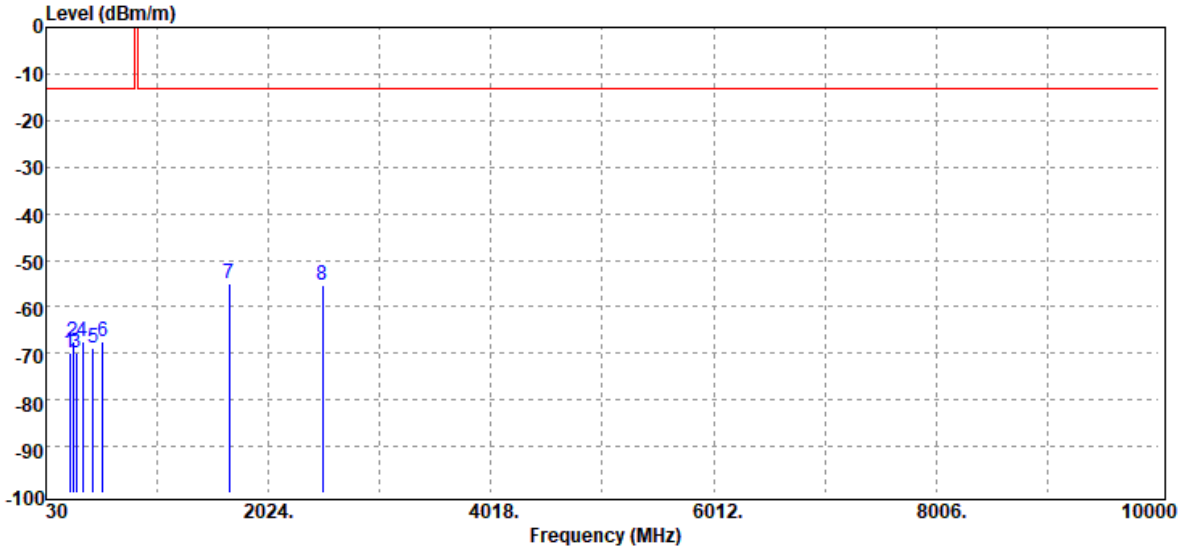
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
270.56	-68.21	-70.65	4.09	-1.65	-13.00	-55.21
301.60	-70.30	-72.76	4.24	-1.78	-13.00	-57.30
332.64	-72.54	-74.90	4.27	-1.91	-13.00	-59.54
361.74	-67.91	-70.44	4.48	-1.95	-13.00	-54.91
451.95	-69.24	-71.16	4.14	-2.22	-13.00	-56.24
542.16	-67.60	-69.59	4.33	-2.34	-13.00	-54.60
1652.80	-54.40	-59.65	9.51	-4.26	-13.00	-41.40
2479.20	-54.29	-59.68	10.56	-5.17	-13.00	-41.29

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B5	Test Date	:2021-08-03
Test Mode	:Tx CH Mid	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:836.6 MHz	Engineer	:Ricky Chen



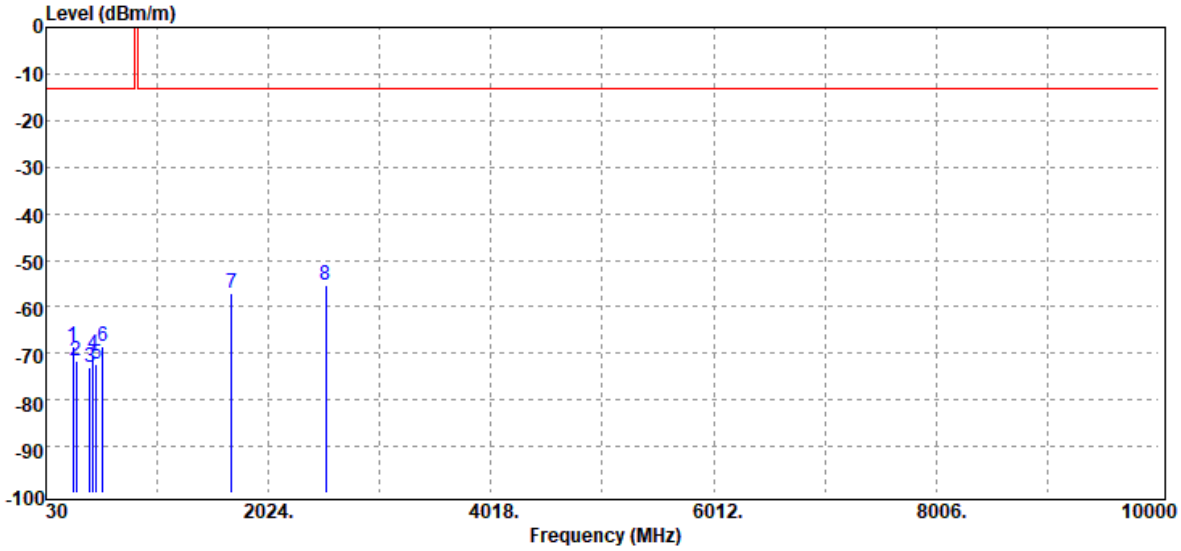
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
241.46	-69.51	-72.28	4.38	-1.61	-13.00	-56.51
270.56	-68.07	-70.51	4.09	-1.65	-13.00	-55.07
361.74	-68.44	-70.97	4.48	-1.95	-13.00	-55.44
420.91	-71.79	-74.10	4.21	-1.90	-13.00	-58.79
451.95	-69.78	-71.70	4.14	-2.22	-13.00	-56.78
542.16	-68.64	-70.63	4.33	-2.34	-13.00	-55.64
1673.20	-57.03	-62.29	9.55	-4.29	-13.00	-44.03
2509.80	-56.10	-61.52	10.62	-5.20	-13.00	-43.10

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B5	Test Date	:2021-08-03
Test Mode	:Tx CH Mid	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:836.6 MHz	Engineer	:Ricky Chen



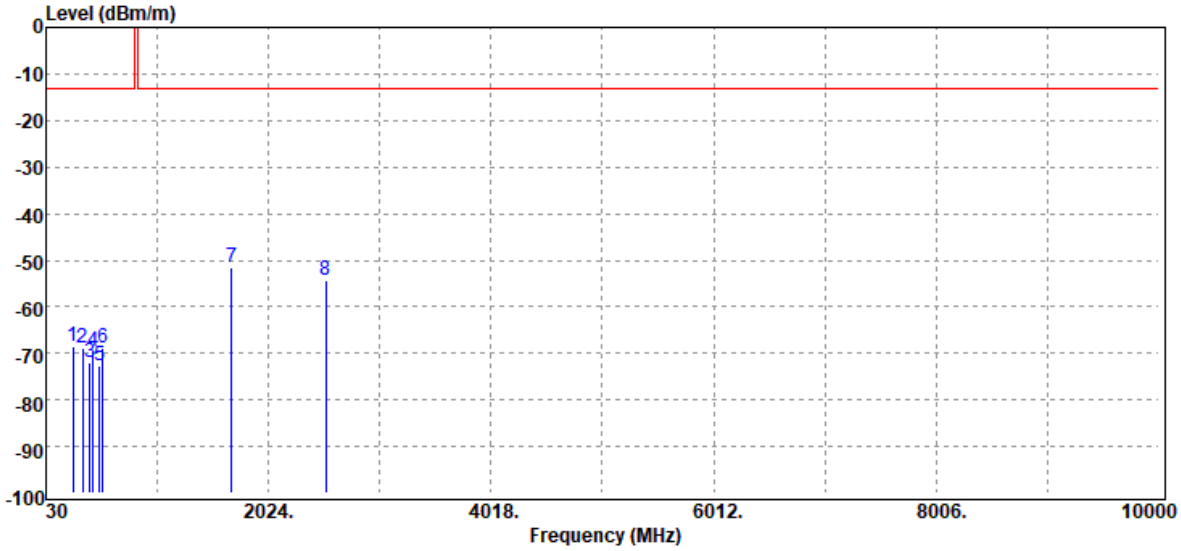
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
241.46	-69.84	-72.61	4.38	-1.61	-13.00	-56.84
270.56	-67.43	-69.87	4.09	-1.65	-13.00	-54.43
301.60	-69.72	-72.18	4.24	-1.78	-13.00	-56.72
361.74	-67.60	-70.13	4.48	-1.95	-13.00	-54.60
451.95	-68.84	-70.76	4.14	-2.22	-13.00	-55.84
542.16	-67.54	-69.53	4.33	-2.34	-13.00	-54.54
1673.20	-54.94	-60.20	9.55	-4.29	-13.00	-41.94
2509.80	-55.46	-60.88	10.62	-5.20	-13.00	-42.46

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B5	Test Date	:2021-08-03
Test Mode	:Tx CH High	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:846.6 MHz	Engineer	:Ricky Chen



Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
270.56	-68.53	-70.97	4.09	-1.65	-13.00	-55.53
301.60	-71.75	-74.21	4.24	-1.78	-13.00	-58.75
420.91	-73.12	-75.43	4.21	-1.90	-13.00	-60.12
451.95	-70.23	-72.15	4.14	-2.22	-13.00	-57.23
482.99	-72.49	-74.37	4.26	-2.38	-13.00	-59.49
542.16	-68.39	-70.38	4.33	-2.34	-13.00	-55.39
1693.20	-57.03	-62.30	9.59	-4.32	-13.00	-44.03
2539.80	-55.26	-60.71	10.68	-5.23	-13.00	-42.26

Report Number	:ER-2021-70042	Test Site	:SAC 3
Operation Mode	:WCDMA B5	Test Date	:2021-08-03
Test Mode	:Tx CH High	Temp./Humi.	:26.7/45
EUT Pol	:NB Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:846.6 MHz	Engineer	:Ricky Chen



Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
270.56	-68.37	-70.81	4.09	-1.65	-13.00	-55.37
361.74	-68.75	-71.28	4.48	-1.95	-13.00	-55.75
420.91	-71.80	-74.11	4.21	-1.90	-13.00	-58.80
451.95	-69.72	-71.64	4.14	-2.22	-13.00	-56.72
512.09	-72.74	-74.80	4.13	-2.07	-13.00	-59.74
542.16	-68.82	-70.81	4.33	-2.34	-13.00	-55.82
1693.20	-51.64	-56.91	9.59	-4.32	-13.00	-38.64
2539.80	-54.38	-59.83	10.68	-5.23	-13.00	-41.38

~ End of Report ~