

Report No.SET2020-08991Modert Name:Dash CamFCC 10:NCI-M360-D700-1Model No.:Mobile360 D700Applicane:VIA Technologies,IncAddress:8F, 535 Zhongzheng Rd. Xindian Dist. New Taipei City, TaiwanDates of Testing:08/01/2020 --08/11/2020Issued bi:CiC Southern Testing Co., Ltd.Lab Location:Electronic Testing Building, No. 43 Shahe Road, Xili Street, Nanshah
District, Shenzhen, Guangdong, China.Tet:86 755 26627338Fax:86 755 26627238

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	Test Report		
Product Name	Dash Cam		
Brand Name	VIA		
Trade Name	VIA		
Applicant	VIA Technologies, Inc		
Applicant Address	8F, 535 Zhongzheng Rd. Taiwan.	I. Xindian Dist. New Taipei City,	
Manufacturer	VIA Technologies,Inc		
Manufacturer Address	8F, 535 Zhongzheng Rd. Taiwan.	I. Xindian Dist. New Taipei City,	
Test Standards:	47 CFR FCC Part 2/22/24/2	27	
Test Result:	PASS		
Tested by:	Vincent	2020.08.11	
	Vincent, Test Engineer		
Reviewed by:	Chris You	2020.08.11	
	Chris You, Senior Engineer	r	
Approved by:	Shuangwan Zhannag	2020.08.11	
	Shuangwen Zhang, Man	ager	



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	(Change History	
Issue	Date	Reason for change	
1.0	2020.08.11	First edition	



1. GENERAL INFORMATION

1.1 EUT Description

EUT Type	Dash Cam
EUT supports Radios application	WCDMA/HSPA
	WCDMA 850MHz
	Tx: 826.4 - 846.6MHz (at intervals of 200kHz);
	Rx: 871.4 - 891.6MHz (at intervals of 200kHz)
	WCDMA 1900MHz
Frequency Range	Tx: 1852.4 - 1907.6MHz (at intervals of 200kHz);
	Rx: 1932.4 - 1987.6MHz (at intervals of 200kHz)
	WCDMA 1700MHz
	Tx: 1712.4 - 1752.6MHz (at intervals of 200kHz);
	Rx: 2112.4 - 2152.6MHz (at intervals of 200kHz)
Maximum Qutnut Douron to	WCDMA 850: 22.46dBm
Maximum Output Power to Antenna	WCDMA 1900: 23.65dBm
Antenna	WCDMA 1700: 23.64dBm
	WCDMA: QPSK(Uplink)
Type of Modulation	HSDPA:QPSK(Uplink)
	HSUPA:QPSK(Uplink)
Antenna Type	Internal Antenna



1.2	2 Maximum Designator	ERP/EIRP	Power, Freq	quency Tolerance	e, and Emissio	DN
	System	Type of Modulation	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP(W)	
	WCDMA 850 RMC 12.2Kbps	QPSK	4M16F9W	0.0064	0.182	
	WCDMA 1900 RMC 12.2Kbps	QPSK	4M15F9W	0.0083	0.213	
	WCDMA 1700 RMC 12.2Kbps	QPSK	4M14F9W	0.0069	0.209	





1.3 Test Standards and Results

1. 47 CFR Part 2, 22(H), 24(E), 27(L)

2. ANSI C63.26:2015

3. FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.

2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

Test detailed items/section required by FCC rules and results are as below:

No. Section		Description	Limit	Result
INO.	FCC	Description	Liiiit	Result
1	2.1046	Conducted Output Power	Reporting Only	PASS
2	24.232(d)	Peak to Average Radio	<13dBm	PASS
2	27.50(d)	Teak to Average Radio	<15 dD III	IASS
	2.1049			
3	22.917(b)	Occupied Bandwidth	Donostino Only	PASS
5	24.238(b)	Occupied Bandwidth	Reporting Only	FASS
	27.53(g)			
	2.1055			
4	22.355	Enguanay, Stability	$\leq \pm 2.5$ ppm	PASS
4	24.235	Frequency Stability		FASS
	27.54			
	2.1051			
5	22.917	Conducted Out of Band	< 43+10log10 (P[Watts])	PASS
3	24.238	Emissions		
	27.53			
	2.1051			
6	22.917	Dand Edga	< 43+10log10	PASS
0	24.238	Band Edge	(P[Watts])	FASS
	27.53			
	22.913	Effective Radiated Power	<7Watts	PASS
7	24.232	Equivalent Isotropic Radiated Power	<2Watts	PASS
	27.50(d)	Effective Radiated Power	<1Watts	PASS





8	2.1053 22.917 24.238	Radiated Spurious	< 43+10log10 (P[Watts1)	PASS
	24.238 27.53	Emissions	(P[Watts])	

1.4 Test Configuration of Equipment under Test

Antenna port conducted and radiated test items were performed according to KDB 971168

D01 Power Meas. License Digital Systems v03r01 with maximum output power.

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

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for WCDMA Band V.

2. 30 MHz to 20000 MHz for WCDMA Band II.

3. 30 MHz to 18000 MHz for WCDMA Band IV.

All modes and data rates and positions were investigated.

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

Test Modes						
Band	Conducted TCs					
WCDMA Band V	RMC 12.2Kbps Link	RMC 12.2Kbps Link				
WCDMA Band II	RMC 12.2Kbps Link	RMC 12.2Kbps Link				
WCDMA Band IV	RMC 12.2Kbps Link	RMC 12.2Kbps Link				

Note: The maximum power levels are chosen to test as the worst case configuration as follows:

RMC 12.2Kbps mode for WCDMA band V,

RMC 12.2Kbps mode for WCDMA band II,

RMC 12.2Kbps mode for WCDMA band IV, only these modes were used for all tests.

1.5 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 EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.





Following shows an offset computation example with cable loss 6B and 10dB attenuator. Example:

Offset (dB) = RF cable loss(dB) + attenuator factor(dB). = 7.5+10 = 17.5(dB)

1.6 Facilities and Accreditations

1.6.1 Test Facilities

NVLAP Lab Code: 201008-0

CCIC-SET is a third party testing organization accredited by NVLAP according to ISO/IEC 17025. The accreditation certificate number is 201008-0.

FCC- Designation Number: CN5031

CCIC-SET. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN5031, valid time is until December 31, 2020.

ISED Registration: 11185A

CAB identifier: CN0064

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until Dec. 31, 2020

1.6.2 Test Environment Conditions

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

Temperature (°C):	15°C-35°C
Relative Humidity (%):	30% -60%
Atmospheric Pressure (kPa):	86KPa-106KPa





2. 47 CFR PART 2, PART 22H & 24E 27L REQUIREMENTS

2.1 Conducted RF Output Power

2.1.1 Definition

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

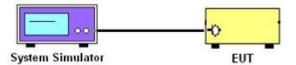
2.1.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.1.3 Test Procedures

- 1. The transmitter output port was connected to the system simulator.
- 2. Set EUT at maximum power through system simulator.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure and record the power level from the system simulator.

2.1.4 Test Setup





2.1.5 Test Results of Conducted Output Power

WCDMA Model Test Verdict:

UM	UMTS1900		Average Power (dBm)			
(В	and II)	9262CH	9400CH	9538cH		
WCDMA	12.2kbps RMC	22.02	22.01	22.11		
	Subtest 1	21.34	21.33	21.43		
Церра	Subtest 2	20.93	20.92	21.02		
HSDPA	Subtest 3	20.54	20.53	20.63		
	Subtest 4	20.33	20.32	20.42		
	Subtest 1	21.57	21.89	22.00		
	Subtest 2	21.12	21.09	21.88		
HSUPA	Subtest 3	20.73	20.70	21.49		
	Subtest 4	20.45	20.42	21.21		
	Subtest 5	20.26	20.23	21.02		
UM	TS1700	Av	erage Power (d	Bm)		
(Ba	and IV)	1313CH	1413CH	1513CH		
WCDMA	12.2kbps RMC	22.12	22.52	22.48		
	Subtest 1	22.04	21.84	21.82		
HSDPA	Subtest 2	21.63	21.43	21.39		
ISDFA	Subtest 3	21.24	21.04	21.10		
	Subtest 4	21.03	20.83	20.79		
	Subtest 1	21.94	22.34	22.03		
	Subtest 2	21.49	21.89	21.58		
HSUPA	Subtest 3	21.10	21.50	21.19		
	Subtest 4	20.82	21.22	20.91		
	Subtest 5	20.63	21.03	20.72		
UN	1TS850	Average Power (dBm)				
(B	and V)	4132CH	4183CH	4233CH		
WCDMA	12.2kbps RMC	22.30	22.32	22.58		
	Subtest 1	21.62	21.64	21.90		
HSDPA	Subtest 2	21.21	21.23	21.49		
TISDE A	Subtest 3	20.82	20.84	21.10		
	Subtest 4	20.61	20.63	20.89		
	Subtest 1	22.19	22.24	22.32		
	Subtest 2	22.07	22.17	22.40		
HSUPA	Subtest 3	21.68	21.78	22.01		
	Subtest 4	21.40	21.50	21.73		
	Subtest 5	21.21	21.31	21.54		



2.2 Peak to Average Radio

2.2.1 Definition

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. 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.

2.2.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.7.1.

2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.

3. For WCDMA operating modes:

a. Set EUT in maximum power output.

b. Set the RBW = 1MHz, VBW = 3MHz, Peak detector on spectrum analyzer for first trace.

c. Set the RBW = 1MHz, VBW = 3MHz, RMS detector on spectrum analyzer for second

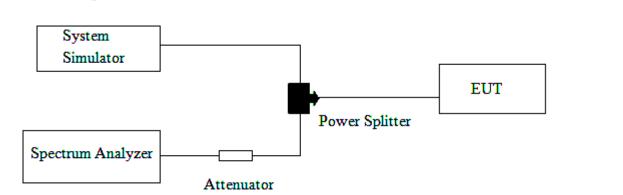
trace.

d. The wanted burst signal is triggered by spectrum analyzer, and measured respectively the peak level and Mean level without burst-off time, after system simulator has synchronized with the spectrum analyzer.

5. Record the deviation as Peak to Average Ratio.



2.2.4 Test Setup



2.2.5 Test Results of Peak-to-Average Ratio

Dond	Channel	Frequency	Peak to Average radio	Limit	Vardiat
Band	Channel	(MHz)	dB	dB	Verdict
WCDMA	9262	1852.4	3.48		PASS
WCDMA 1900MHz	9400	1880.0	3.13	13	PASS
1900/01/12	9538	1907.6	3.49		PASS
WCDMA	1312	1712.4	3.16		PASS
WCDMA	1412	1732.4	3.04	13	PASS
1700MHz	1513	1752.6	3.41		PASS



2.3 99% Occupied Bandwidth and 26dB Bandwidth Measurement

2.3.1 Definition

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The emission bandwidth is defined as the width of the signal between two points, located at

the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

2.3.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03r01 Section 4.2.

2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.

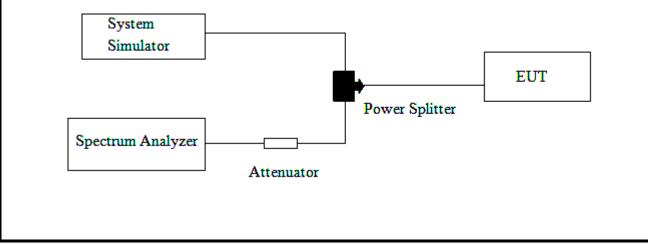
3. The RF output of the EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

4. The 99% occupied bandwidth were measured, set RBW= 1% of span, 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.

2.3.4 Test Setup





3.5 Test Results of 99% Occupied Bandwidth and 26dB Bandwidth						
Band	Channel	Frequency (MHz)	26dB bandwidth (KHz)	99% Occupied Bandwidth (KHz)	Refer to Plot	
	4132	826.4	4673	4156	Plot A1	
WCDMA 850MHz	4183	836.6	4665	4160.5	Plot A2	
	4233	846.6	4674	4154.2	Plot A3	
	9262	1852.4	4696	4129.4	Plot B1	
WCDMA 1900MHz	9400	1880	4711	4145	Plot B2	
	9538	1907.6	4714	4128.7	Plot B3	
WCDMA 1700MHz	1312	1712.4	4707	4137.8	Plot C1	
	1412	1732.4	4666	4136.5	Plot C2	
	1513	1752.6	4706	4129.1	Plot C3	

ad D 4 264D D . £000/ 0 ___ - .141 . . _ .



Test Results (Plots) of 99% Occupied Bandwidth and 26dB Bandwidth 2.3.6 08:08:38 AM Aug 1 Radio Std: None Center Freq: 826.400 Trig: Free Run Ref Offset 14.5 dB Ref 40.00 dBm Center Fre 826.400000 Mi 826.4 MHz Span 10 MH Sweep 5 m 300 kH 32.5 dBn otal P 4.1560 MHz Freq O 585 Hz % of OBW P 99.00 % dB Bandwidth 4.673 MHz x dB -26.00 dB WCDMA 850MHz Channel = 4132 Occupied bandwidth) (Plot A1: 08:09:00 AM Aug 11 Radio Std: None er Freg 836.600000 MHz Center Freq: 836.600 Trig: Free Run 000 MHz Avg|Hol Freque i:>10/10 Radio Device: BTS Ref Offset 14.5 dB Ref 40.00 dBm Center Fr 836.6 MH Span 10 MHz Sweep 5 ms CF St #VBW 300 kHz Total Pow 32.2 dBm 4.1605 MHz Freq Offs -1.807 kHz 99.00 % % of OE Freg E 4 665 MHz x dB -26.00 dB WCDMA 850MHz Channel = 4183 Occupied bandwidth) (Plot A2: 08:09:26 AM Aug 11 adio Std: None d:>10/10 Ref Offset 14.5 dB Ref 40.00 dBm Center Fre 846.6 MH Span 10 MHz Sweep 5 ms CF S #VBW 300 kHz 32.6 4.1542 MHz Freq Offs Fransmit Freg Error -229 Hz % of OBW Power 99.00 % x dE (Plot A3: WCDMA 850MHz Channel = 4233 Occupied bandwidth)

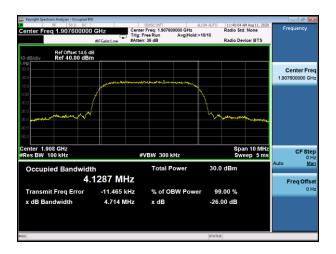


RF	Nyzer - Occupied BV 50 Ω DC			ENSE:INT		LIGN AUTO		M Aug 11, 2020		uency
Center Freq 1.	852400000	GHz	Trig: Fr	Freq: 1.85240 ee Run	0000 GHz Avg Hold::	>10/10	Radio Std		Freq	uency
		#IFGain:Low	#Atten:	36 dB			Radio Dev	ice: BTS		
10 dB/div Re	f Offset 14.5 d f 40.00 dBn									
30.0									Ce	nter Fr
20.0										00000 G
10.0		mone	and the second second	manhar	mon					-
0.00						\setminus				
10.0		\square								
20.0	1 . 1					h.				
0.0 <mark>Hereselvel</mark>	and the						And the state of t	- service		
40.0										
50.0										
Center 1.852 G							Spa	n 10 MHz		CF St
#Res BW 100 k	HZ		#V	BW 300 k	HZ		Swe	ep 5ms	Auto	0 M
Occupied	Bandwidt	h		Total P	ower	29.8	dBm		Auto	IM
	4.	1294 M	Hz						E.	eq Offs
Transmit Fr			2 Hz	% of OF	3W Powe	- 00	.00 %			0
x dB Bandw	idth	4.696	инг	x dB		-26.	00 dB			

(Plot B1: WCDMA 1900MHz Channel = 9262 Occupied bandwidth)

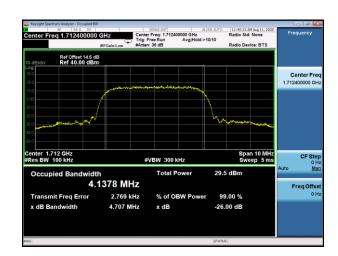
Keysight Spectrum Analyzer - Occupied I	SW					
Center Freq 1.88000000	Trig:	sense:INT er Freq: 1.880000000 GHz Free Run Avg Hold en: 36 dB	ALIGN AUTO	11:39:46 AM A Radio Std: N Radio Device	one	Frequency
Ref Offset 14.5 10 dB/div Ref 40.00 dB						
20.0						Center Freq 1.880000000 GHz
10.0	mannaharas	Alle and a galance and and				
.10.0	1		\mathbb{N}			
20.0			1			
30.0	×		~	a berlevise of the	Newswistow	
-40.0						
-50.0						
Center 1.88 GHz #Res BW 100 kHz		#VBW 300 kHz		Span Sweej	10 MHz p 5 ms	CF Step 0 Hz
Occupied Bandwid	lth	Total Power	29.8	dBm	A	uto <u>Man</u>
4	.1450 MHz					Freq Offset
Transmit Freq Error	-3.028 kHz	% of OBW Pow	er 99	.00 %		0 Hz
x dB Bandwidth	4.711 MHz	x dB	-26.	00 dB		
MSG			STATUS	2		

⁽Plot B2: WCDMA 1900MHz Channel = 9400 Occupied bandwidth)



(Plot B3: WCDMA 1900MHz Channel = 9538 Occupied bandwidth)

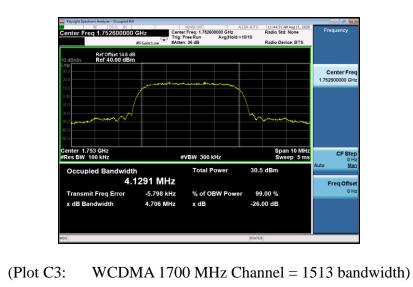




(Plot C1: WCDMA 1700MHz Channel = 1312 bandwidth)









2.4 Frequency Stability

2.4.1 Requirement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

2.4.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3 Test Procedures for Temperature Variation

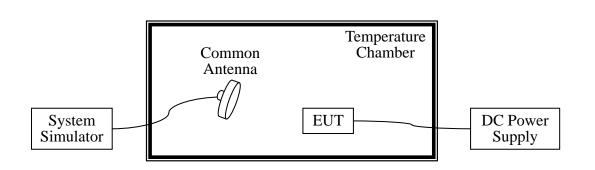
- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.
- 2. The EUT was set up in the thermal chamber and connected with the system simulator.
- 3. With power OFF, the temperature was decreased to -30 °C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
- 4. With power OFF, the temperature was raised in 10 ℃ steps up to 50 ℃. 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.

2.4.4 Test Procedures for Voltage Variation

- 1. The testing follows FCC KDB 971168 D01 v03r01 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.



2.4.5 Test Setup



2.4.6 Test Results of Frequency Stability

WCDMA 850MHz Band

Band:	WCDMA Ba	nd V Channel:	4183
Limit(ppm)): 2.5	Frequency:	836.6MHz
Power (VDC)	Temperature (℃)	RMC 12.2Kbps Deviation	Result
	-30	(ppm) 0.0035	
	-20	0.0048	
	-10	0.0026	
	0	0.0038	
12	+10	0.0062	
	+20	0.0064	PASS
	+30	0.0059	
	+40	0.0047	
	+50	0.0038	
9	+25	0.0019	
36	+25	0.0028	



CDMA 19001	MHz Bar	ıd			
Band:		WCDMA	Band II	Channel:	9400
Limit(ppm):		2.5		Frequency:	1880.0MHz
Daman	Т		RN	IC 12.2Kbps	
Power (VDC)	-	perature]	Deviation	Result
(VDC)		(°C)		(ppm)	
		-30		0.0072	
		-20		0.0045	
		-10		0.0035	
		0		0.0038	
12	-	+10		0.0047	
	-	+20		0.0028	PASS
	-	+30		0.0083	
	-	+40		0.0029	
	-	+50		0.0037	
9	-	+25		0.0059	
36	-	+25		0.0027	

WCDMA 1700MHz Band

Band:		WCDMA	Band IV	Channel:	1412
Limit(ppm):		2.5		Frequency:	1732.4MHz
Power (VDC)		perature (°C)		IC 12.2Kbps Deviation (ppm)	Result
		-30 -20		0.0069 0.0025	
		-10		0.0035	
12	-	0 +10		0.0042	
	-	+20		0.0038	PASS
	-	+30		0.0047	
		+40		0.0052	
	-	+50		0.0062	
9	-	+25		0.0028	
36	-	+25		0.0058	



2.5 Conducted Out of Band Emissions

2.5.1 Requirement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P) dB$.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

2.5.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

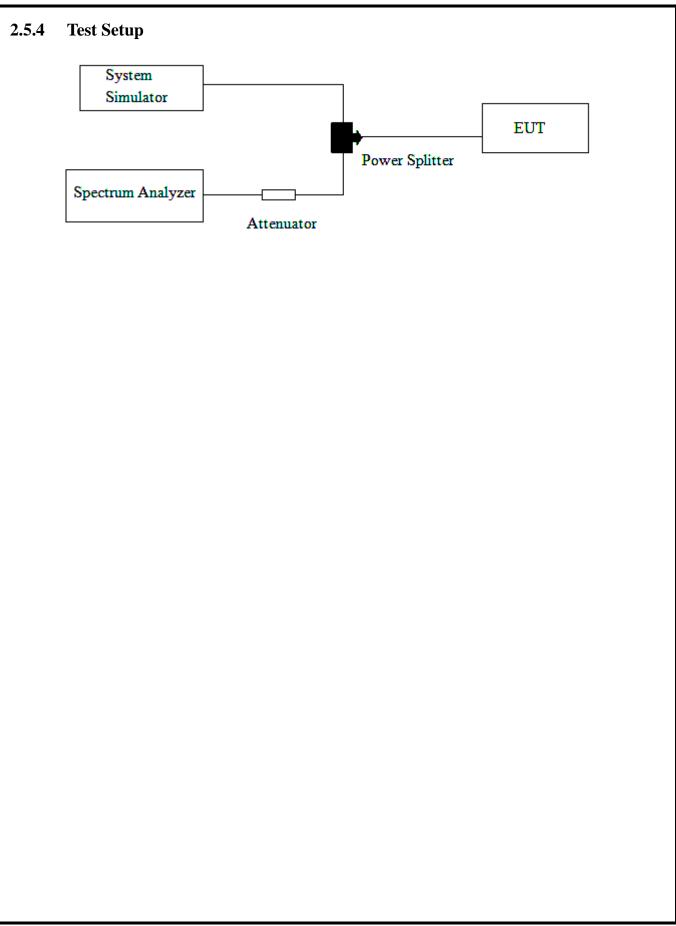
2.5.3 Test Procedures

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 6.0.
- 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- 3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 4. The middle channel for the highest RF power within the transmitting frequency was measured.
- 5. The conducted spurious emission for the whole frequency range was taken.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 7. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

= P(W) - [43 + 10log(P)] (dB)

- $= [30 + 10\log(P)] (dBm) [43 + 10\log(P)] (dB)$
- = -13dBm.
- For 9KHz to 30MHz: the amplitude of spurious emissions are attenuated by more than 20dB below the permissible value has no need to be reported.







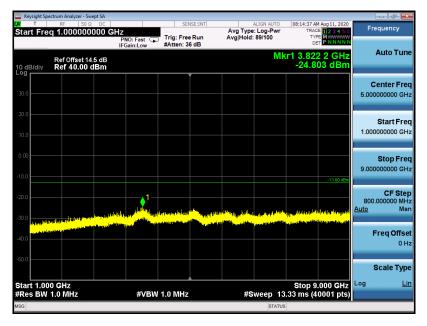


2.5.5 Test Result (Plots) of Conducted Spurious Emission

Note: For 9 KHz to 30MHz: the amplitude of spurious emissions is attenuated by more than 20dB below the permissible value, so we not provide the test result here.

⊤ tart Fre	RF 50 cq 30.0000	DO MHZ	D:Fast 🖵	SENSE:I Trig: Free Ru #Atten: 36 dE	Avg n Avg	ALIGN AUTO Type: Log-Pwr Hold:>100/100	08:15:58 AM Aug 11, 2020 TRACE 1 2 3 4 5 TYPE M	Frequency
0 dB/div	Ref Offset 1 Ref 40.00	4.5 dB	am:Low	WAREN. OO GE	,	М	kr2 922.16 MHz -40.844 dBm	
.og 30.0 20.0 10.0							↓ ¹	Center Fre 515.000000 MH
								Start Fre 30.000000 MH
\$0.0 \$0.0 \$0.0	awethy front to state of		-type-to-server to Parent	lanaditi-dagaana,aya		مرور و المروم المروم و المروم و المروم و المروم و الم	2- 	Stop Fre 1.000000000 GH
	300 GHz 100 kHz	X	#VBW	100 kHz	FUNCTION	#Sweep 3	Stop 1.0000 GHz 200 ms (1001 pts)	
1 N 2 2 N 3 3 4 5 6	1 f 1 f	825.158 922.158		21.249 dBm -40.844 dBm				Freq Offs 0 F
7 8 9								Scale Typ

WCDMA850MHz Channel = 4132, 30MHz to 1GHz



WCDMA850MHz Channel = 4132, 1GHz to 9GHz



.	RF	50 Ω DC		SENSE		ALIGN AUTO	08:16:16 AM		English
Start Fre	q 30.00	0000 MHz	PNO: Fast IFGain:Low	Trig: Free R #Atten: 36 d	un Avg	g Type: Log-Pwr Hold:>100/100	TYPE	123456 M PNNNNN	Frequency
10 dB/div		et 14.5 dB .00 dBm				MI	kr2 934.0 -41.53	04 MHz 0 dBm	Auto Tu
Log 30.0 20.0							1		Center Fr 515.000000 M
0.00 -10.0 -20.0								-13.00 dDm	Start Fr 30.000000 M
-30.0 -40.0 -50.0	- Curportalisation	يەر ، ، ، ، ، وا ^ل طارار الار ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ،	ahaya (numusikuniku)	Level and the second states of the second states of the second states of the second states of the second states	elleginane frees-strated	hand the second s	America	2 /w/p/Nadmaer110-ros	Stop Fr 1.000000000 G
Start 0.0 #Res BW	100 kHz	x	#VE	W 100 kHz	FUNCTION	#Sweep 3	Stop 1.00 .200 ms (1	001 pts)	CF St 97.000000 M <u>Auto</u> M
1 N	1 f 1 f	83	7.04 MHz 4.04 MHz	20.054 dBm -41.530 dBm					Freq Offs 0
6 7 8 9									Scale Ty
10									Log .

WCDMA850MHz Channel = 4183, 30MHz to 1GHz

Keysight Spe	ectrum Analyzer - Swept SA								
Start Fre	RF 50 Ω DC q 1.000000000 G	iHz		ISE:INT		ALIGN AUTO	TRAC	M Aug 11, 2020 E 1 2 3 4 5 6 E M WWWWW	Frequency
10 dB/div	Ref Offset 14.5 dB Ref 40.00 dBm	PNO: Fast G	#Atten: 3		Avginoid.		DE kr1 8.32		Auto Tur
30.0									Center Fre 5.000000000 GH
20.0									Start Fre 1.000000000 G⊦
-10.0								-13.00 dBm	Stop Fre 9.000000000 GH
-20.0		antes productions	e a charlestan (kan pa	uriulata province	u <mark>lut na pra sasting</mark>	فليوتقلين	han an da kan ka sa fa	1 Lifesender	CF Ste 800.000000 MH <u>Auto</u> Ma
-40.0 1998/1497	en blev statisk for som en statisk for som en statisk for som en statisk for som en som en som en som en som en Register og som en s Register og som en s	And the second	<mark>, ng kang tinung atap kita kini</mark>	alain _{an sa} ata	n Dinte _{l sol d} entes	Marilfood Marin	^{na l} ina iy <mark>a tukuli</mark> li	i le fit de al fitte de la la secon	Freq Offs 0 H
-50.0	0 GHz						Stop 9	.000 GHz	Scale Typ
#Res BW		#VBW	1.0 MHz		#S	weep 1	3.33 ms (4		
MSG						STAT	US		

WCDMA850MHz Channel = 4183, 1GHz to 9GHz



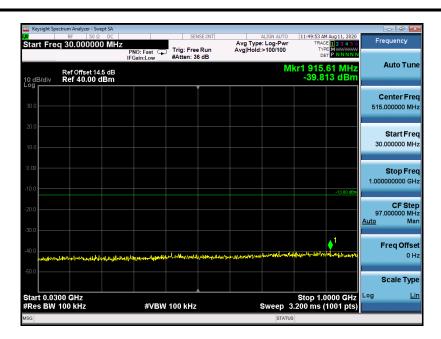
···· Keysigl	nt Spec		Analyzer - Sv																
Start F	rec	RF 30	.00000		PN	0: Fast		SEI Trig: Free #Atten: 3				ype:	LIGN AUTO Log-Pw 100/100		TRAI TY	M Aug 11, 2 DE 1 2 3 4 PE M WWW ET P N N N	5 6	Fr	requency
10 dB/d	iv		Offset 1 f 40.00										N			77 M 74 dB			Auto Tu
Log 30.0 20.0 10.0															0 ¹				Center Fr 5.000000 M
0.00 -10.0 -20.0																-13.00	dBn	30	Start Fr 0.000000 M
-30.0		traj konsel	the transfer for	Not-ved	hitera	and the state of the	ya 4a	entra anta anta a	a boundary	manula	F. ac. / p. a. / Apr	معادر	lifere and the fact has the		Luna	2	ult-	1.00	Stop Fr 0000000 G
Start 0 #Res E	BW 1	00		×		#VE	SW 1	00 kHz		EUNCT	LION		weep	3.200) ms (0000 G 1001 p	ts)	97 <u>Auto</u>	CF St 7.000000 M M
1 N 2 N 3 4 5 6	1	f			845.77 942.77			19.545 di 10.274 di		1 JNC					Tower	ON VALUE	m		Freq Offs 0
7 8 9 10																		Log	Scale Ty
11																	Ŧ		
MSG	_	-										_	STAT						

WCDMA850MHz Channel = 4233, 30MHz to 1GHz

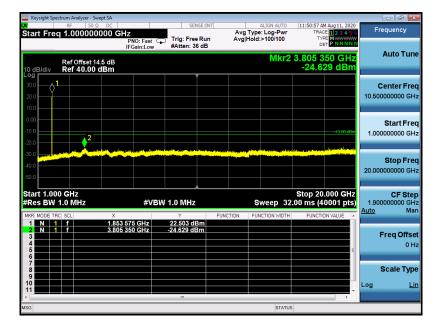


WCDMA850MHz Channel = 4233, 1GHz to 9GHz



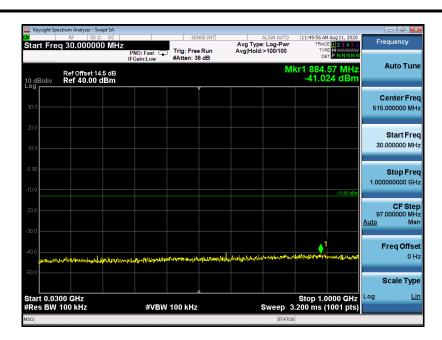


WCDMA1900MHz Channel = 9262, 30MHz to 1GHz



WCDMA1900MHz Channel = 9262, 1GHz to 20GHz



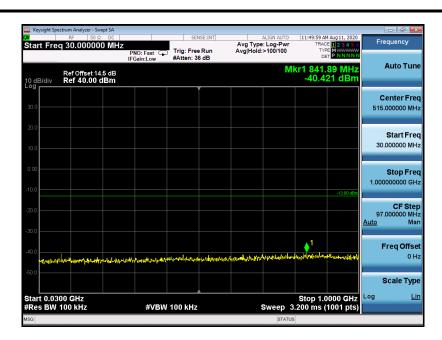


WCDMA1900MHz Channel = 9400, 30MHz to 1GHz

	RF	50 Ω DC		S	ENSE:INT		ALIGN AUTO		M Aug 11, 2020	Ero	quency
tart Fre	q 1.000	000000 GI	Z PNO: Fast	Trig: Fr			ype: Log-Pwr old: 38/100	TY	CE 1 2 3 4 5 6 PE MWWWW FT P NNNN	Fie	quency
			IFGain:Low	#Atten:	36 dB						Auto Tui
0 dB/div		et 14.5 dB .00 dBm			_		MKr2	3.826 /	25 GHz 06 dBm		
30.0	1									C	enter Fr
20.0										10.5000	000000 G
10.0											
10.00									10.00.00.		Start Fr
20.0		2							-13.80 dDm	1.0000	000000 G
30.0 250 10 10	and a star	and the stre	de la la la								
40.0											Stop Fr
40.0										20 0000	00000 G
										20.000	000000 G
50.0 Start 1.00									.000 GHz		CF St
50.0 Start 1.00 Res BW	1.0 MHz		#V	BW 1.0 MH:			Sweep 32	.00 ms (4	0001 pts)		CF St 000000 G
50.0 Start 1.00 Res BW MKR MODE TR 1 N 1	1.0 MHz	× 1.881	125 GHz	Y 22.089 c	FUI	NCTION	Sweep 32	.00 ms (4		1.9000	CF St 000000 G
50.0 Start 1.00 Res BW MKR MODE TR 1 N 1 2 N 1 3	1.0 MHz	× 1.881		Y	FUI	NCTION		.00 ms (4	0001 pts)	1.9000 <u>Auto</u>	CF Str 000000 G M req Offs
50.0 Start 1.00 Res BW MKR MODE TR 1 N 1 2 N 1 3 4 5	1.0 MHz	× 1.881	125 GHz	Y 22.089 c	FUI	NCTION		.00 ms (4	0001 pts)	1.9000 <u>Auto</u>	CF St 000000 G M req Offs
50.0 Start 1.00 \$Res BW MKR MODE TR 1 N 1 2 N 1 3 4 5 6 7	1.0 MHz	× 1.881	125 GHz	Y 22.089 c	FUI	NCTION		.00 ms (4	0001 pts)	1.9000 <u>Auto</u> F	CF Sto 000000 G M req Offs 0
Start 1.00 Res BW MKR MODE TR 1 N 1 2 N 1 3 4 5 6 6 7 8 9	1.0 MHz	× 1.881	125 GHz	Y 22.089 c	FUI	NCTION		.00 ms (4	0001 pts)	1.9000 <u>Auto</u> F	CF St 000000 G N req Offs 0 scale Ty
50.0	1.0 MHz	× 1.881	125 GHz	Y 22.089 c	FUI	NCTION		.00 ms (4	0001 pts)	1.9000 <u>Auto</u> F	CF St 000000 G M req Offs 0 cale Ty

WCDMA1900MHz Channel = 9400, 1GHz to 20GHz



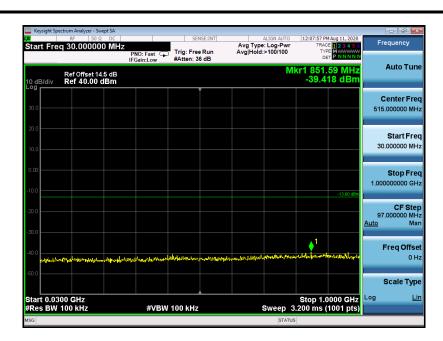


WCDMA1900MHz Channel = 9538, 30MHz to 1GHz

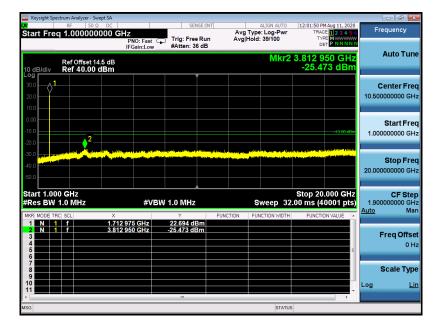
Start Fre	RF 1.0000	50Ω DC 000000 G			SENSE			ALIGN AUTO e: Log-Pwr I: 41/100	TRA	M Aug 11, 202 CE 1 2 3 4 5 PE M	6	Frequency
10 dB/div	Ref Offse Ref 40.0		PNO: Fast IFGain:Lov		rig: Free R Atten: 36 d		vginoid		D 3.851 9			Auto Tur
- og 30.0 20.0	1										10	Center Fr .500000000 Gl
0.00 10.0 20.0		2								-19.00 dB	1	Start Fr .000000000 G
30.0	in the state					line is believe a			ations, distinct			
											20	
itart 1.00 Res BW	1.0 MHz	x		/BW 1.(Y	FUNCTIO		Weep 32	.00 ms (4		2	.000000000 G CF St .900000000 G
40.0 50.0 51.0	1.0 MHz	1.90	#V 7 250 GHz 1 900 GHz	21		1			.00 ms (4	0001 pts	2) 1 Aut	.000000000 G CF Sto .90000000 G o M Freq Offs
50.0 Start 1.00 Res BW MKR MODE TR 1 N 1 2 N 1 3 4 5	1.0 MHz	1.90	7 250 GHz	21	Y 1.979 dBm	1			.00 ms (4	0001 pts	2) 1 Aut	Freq Offs 0 Scale Ty

WCDMA1900MHz Channel = 9538 1GHz to 20GHz



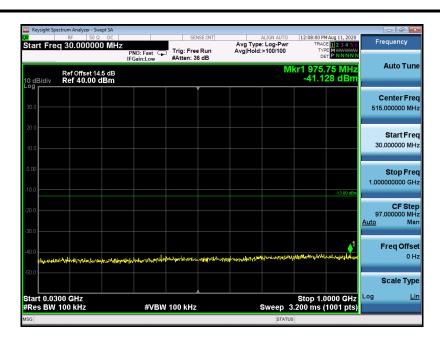


WCDMA1700MHz Channel = 1312, 30MHz to 1GHz

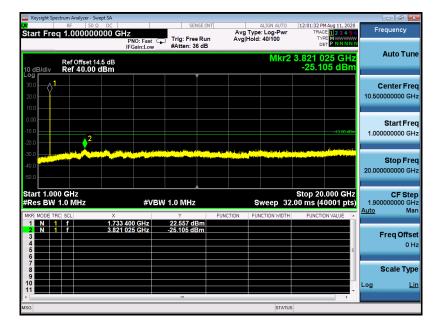


WCDMA1700MHz Channel = 1312, 1GHz to 18GHz



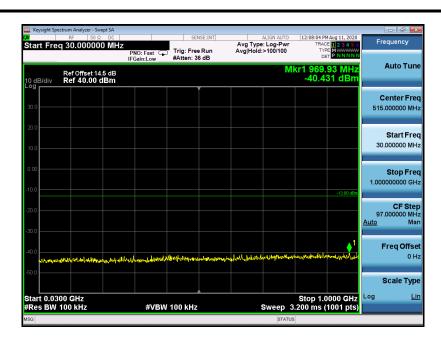


WCDMA1700MHz Channel = 1414, 30MHz to 1GHz

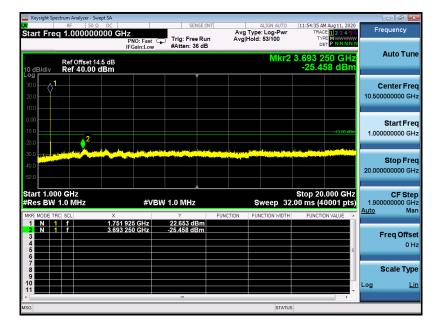


WCDMA1700MHz Channel = 1414, 1GHz to 18GHz





WCDMA1700MHz Channel = 1513, 30MHz to 1GHz



WCDMA1700MHz Channel = 1513, 1GHz to 18GHz



2.6 Bandedge

2.6.1 Requirement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P) dB$.

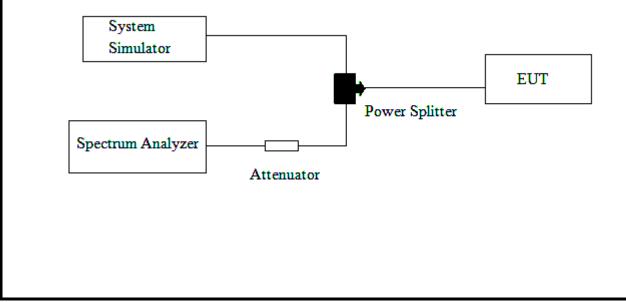
2.6.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.6.3 Test Procedures

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 6.0.
- 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- 3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 4. The band GPRSs of low and high channels for the highest RF powers were measured.
- 5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
 - $= [30 + 10\log(P)] (dBm) [43 + 10\log(P)] (dB)$
 - = -13dBm.

2.6.4 Test Setup











(Plot C: WCDMA 1900 Channel = 9262)



(Plot D: WCDMA 1900 Channel = 9538)





(Plot E: WCDMA 1700 Channel = 1312)



(Plot F: WCDMA 1700 Channel = 1513)



2.7 Transmitter Radiated Power (EIRP/ERP)

2.7.1 Requirement

The substitution method, in ANSI C63.26:2015, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v03r01. The ERP of mobile transmitters must not exceed 7 Watts (Cellular Band) and the EIRP of mobile transmitters are limited to 2 Watts (PCS Band) and 1 Watts (AWS Band).

2.7.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3 Test Procedures

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GSM/GPRS) and ANSI / TIA-603-D-2010 Section 2.2.17.
- 2. The EUT was placed on a turntable 1.5 meters high in a fully anechoic chamber.
- 3. The EUT was placed 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 4. GSM operating modes: Set RBW= 1MHz, VBW= 3MHz, RMS detector over burst;
 UMTS operating modes: Set RBW= 100 kHz, VBW= 300 kHz, RMS detector over frame,

and use channel power option with bandwidth=5MHz, per KDB 971168 D01 v03r01.

- 5. The table was rotated 360 degrees to determine the position of the highest radiated power.
- 6. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
- 7. Taking the record of maximum ERP/EIRP.
- 8. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
- 9. The conducted power at the terminal of the dipole antenna is measured.



10. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.

11. ERP/EIRP = Ps + Et - Es + Gs = Ps + Rt - Rs + Gs

Ps (dBm): Input power to substitution antenna.

Gs (dBi or dBd): Substitution antenna Gain.

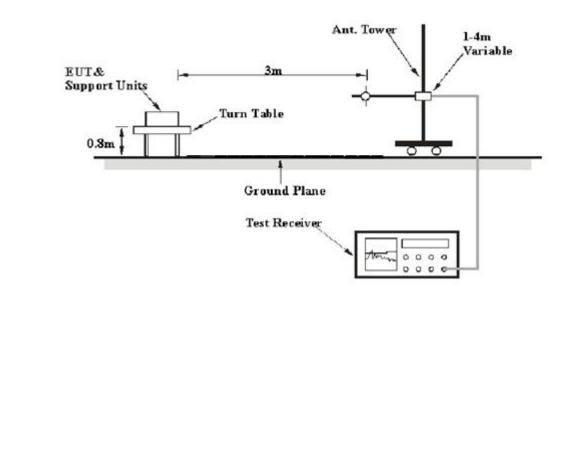
Et = Rt + AF Es = Rs + AF

AF (dB/m): Receive antenna factor

Rt: The highest received signal in spectrum analyzer for EUT.

Rs: The highest received signal in spectrum analyzer for substitution antenna.

2.7.4 Test Setup





2.7.5 Test Result of Transmitter Radiated Power

Test Notes:

1. This device employs UMTS technology with WCDMA (AMR/RMC), HSDPA, HSUPA capabilities. All configurations were investigated and the worst case UMTS emissions were found in RMC WCDMA mode at 12.2Kbps.

3. This unit was tested with its standard battery.

4. The worst case test configuration was found in the vertical positioning where the EUT is laying on its side. The data reported in the tables below were measured in this test setup.



Band	Band Channel		Antenna Pol	Measured ERP	Limit	Verdict
Danu	Channel	(MHz)	(H/V)	dBm	dBm	veruici
	4122	976.4	Н	22.09		DACC
	4132	826.4	V	22.17		PASS
WCDMA	4175	025	Н	22.12	20 5	DACC
850MHz	4175	835	V	22.59	38.5	PASS
	4022	9166	Н	22.27		DASS
	4233	846.6	V	22.54		PASS

Dond	Channal	Frequency	Antenna Pol	Measured EIRP	Limit	Vardiat
Band	Channel	(MHz)	(H/V)	dBm	dBm	Verdict
	0262	1852.4	Н	23.18		DACC
	9262	1632.4	V	22.74		PASS
WCDMA	0400	1000	Н	23.09	22	DACC
1900MHz	9400	1880	V	22.57	33	PASS
	0529	1007 6	Н	23.29		DACC
	9538	1907.6	V	22.37		PASS

Band	Channel	Frequency (MHz)	Antenna Pol (H/V)	Measured EIRP dBm	Limit dBm	Verdict	
	1212	1712 4	V	22.59		DACC	
	1312	1712.4	Н	22.37		PASS	
WCDMA	1413	1732.4	V	22.22	20	PASS	
1700MHz	1415	1752.4	Н	23.20	30	PASS	
	1512	1752.6	V	22.18		PASS	
	1513	1752.6	1/52.6	Н	22.87		rass



2.8 Radiated Spurious Emissions

2.8.1 Requirement

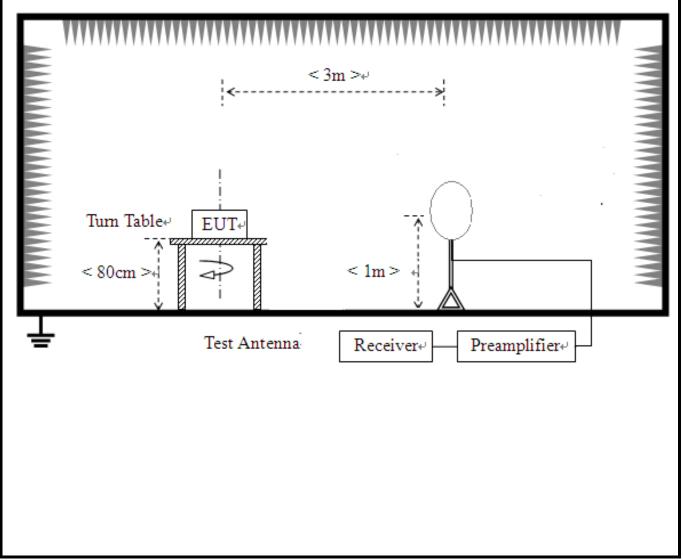
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P) dB$. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

2.8.2 Measuring Instruments

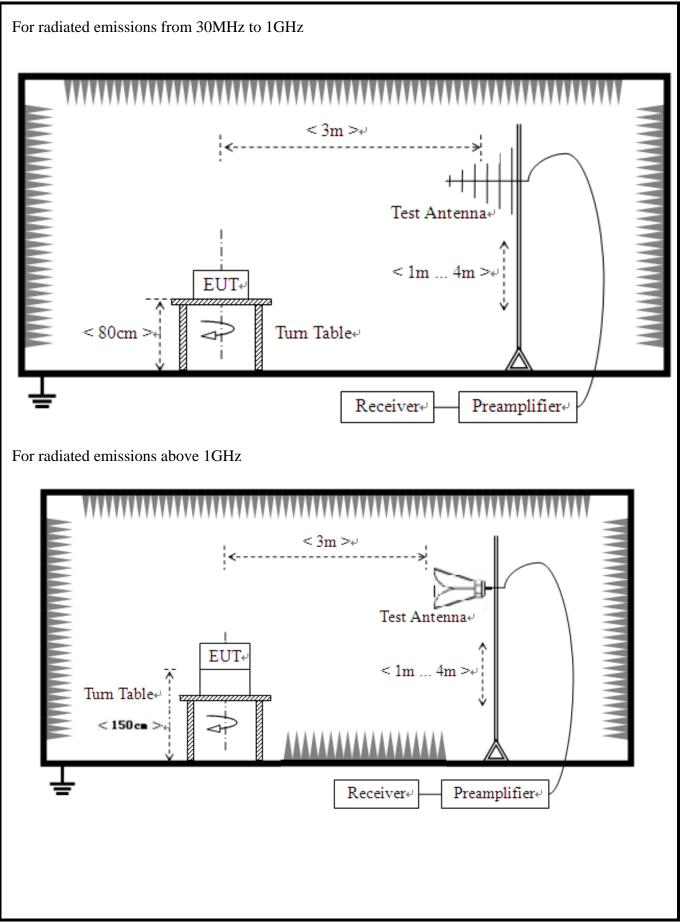
The measuring equipment is listed in the section 3 of this test report.

2.8.3 Test Setup

For radiated emissions from 9 kHz to 30MHz









2.8.4 Test Procedures

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.8.
- 2. The EUT was placed on a rotatable wooden table 0.8/1.5 meters above the ground.
- 3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
- 6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
- 7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- 8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- 9. Taking the record of output power at antenna port.
- 10. Repeat step 7 to step 8 for another polarization.
- 11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 12. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
 - $= [30 + 10\log(P)] (dBm) [43 + 10\log(P)] (dB)$
 - = -13dBm.
- 13. This device employs GMSK technology with GSM and GSM capabilities. All configurations were investigated and the worst case emissions were found in GSM mode.
- 14. This device employs UMTS technology with WCDMA (AMR/RMC), HSDPA, HSUPA capabilities. All configurations were investigated and the worst case UMTS emissions were found in RMC WCDMA mode at 12.2Kbps.
- 15. This unit was tested with its standard battery.
- 16. All Spurious Emission tests were performed in X, Y, Z axis direction and low, middle, high channel. And only the worst axis test condition was recorded in this test report.
- 17. The spectrum is measured from 9 KHz to the 10th harmonic of the fundamental frequency



of the transmitter using CISPR quasi peak detector below 1GHz. The worst case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.

 For 9KHz to 30MHz: the amplitude of spurious emissions are attenuated by more than 20dB below the permissible value has no need to be reported.



2.8.5 Test Results of Radiated Spurious Emissions

Note: 1. (Absolute)Level=Reading Level + Factor

Worst-Case test data provide as below:

WCDMA 850 Middle Channel

30MHz~10GHz:

Sus	Suspected List						
	Freq.	Reading	Level	Limit	Margin	Factor	Delerity
NO.	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity
1	52.3212	-85.87	-66.52	-13.00	53.52	19.35	Vertical
2	74.1571	-86.02	-64.15	-13.00	51.15	21.87	Vertical
3	245.447	-98.54	-73.99	-13.00	60.99	24.55	Vertical
4	2160.58	-56.08	-53.20	-13.00	40.20	2.88	Vertical
5	4568.28	-59.78	-51.92	-13.00	38.92	7.86	Vertical
6	9565.78	-62.57	-42.82	-13.00	29.82	19.75	Vertical
Susp	ected List						
NO.	Freq.	Reading	Level	Limit	Margin	Factor	Delerity
NO.	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity
1	36.7934	-89.15	-66.63	-13.00	53.63	22.52	Horizontal
2	73.1866	-85.75	-66.18	-13.00	53.18	19.57	Horizontal
3	348.319	-102.18	-72.66	-13.00	59.66	29.52	Horizontal
4	2160.58	-56.17	-53.37	-13.00	40.37	2.80	Horizontal
5	3877.93	-59.50	-52.22	-13.00	39.22	7.28	Horizontal
6	7869.93	-60.59	-43.96	-13.00	30.96	16.63	Horizontal





Worst-Case test data provide as below:

WCDMA 1900 Middle Channel

30MHz~20GHz:

Sus	Suspected List						
	Freq.	Reading	Level	Limit	Margin	Factor	Delerite
NO.	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity
1	36.7934	-87.55	-65.20	-13.00	52.20	22.35	Horizontal
2	71.7309	-85.94	-66.62	-13.00	53.62	19.32	Horizontal
3	243.506	-99.01	-77.23	-13.00	64.23	21.78	Horizontal
4	520.580	-102.55	-70.29	-13.00	57.29	32.26	Horizontal
5	3825.41	-59.39	-49.12	-13.00	36.12	10.27	Horizontal
6	7187.09	-60.67	-40.36	-13.00	27.36	20.31	Horizontal
Susp	ected List						
	Freq.	Reading	Level	Limit	Margin	Factor	Delerity
NO.	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity
1	71.7309	-86.34	-64.98	-13.00	51.98	21.36	Vertical
2	248.844	-99.35	-75.01	-13.00	62.01	24.34	Vertical
3	618.114	-104.62	-71.63	-13.00	58.63	32.99	Vertical
4	2543.77	-57.34	-52.20	-13.00	39.20	5.14	Vertical
5	4965.98	-60.19	-46.17	-13.00	33.17	14.02	Vertical
6	9715.85	-62.87	-32.36	-13.00	19.36	30.51	Vertical





Worst-Case test data provide as below:

WCDMA 1700 Middle Channel

30MHz~20GHz:

Susp	Suspected List						
	Freq.	Reading	Level	Limit	Margin	Factor	Delerite
NO.	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity
1	36.7934	-87.53	-65.18	-13.00	52.18	22.35	Horizontal
2	70.7604	-86.84	-67.50	-13.00	54.50	19.34	Horizontal
3	348.319	-102.23	-73.29	-13.00	60.29	28.94	Horizontal
4	1226.11	-57.39	-59.92	-13.00	46.92	-2.53	Horizontal
5	3172.58	-59.21	-53.04	-13.00	40.04	6.17	Horizontal
6	9498.24	-62.72	-42.76	-13.00	29.76	19.96	Horizontal
Sus	pected List	:					
	Freq.	Reading	Level	Limit	Margin	Factor	Delerity
NO.	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity
1	190.210	-89.30	-70.63	-13.00	57.63	18.67	Vertical
2	1259.12	-56.87	-59.27	-13.00	46.27	-2.40	Vertical
3	2691.84	-56.93	-48.31	-13.00	35.31	8.62	Vertical
4	3855.42	-59.34	-49.83	-13.00	36.83	9.51	Vertical
5	5041.02	-59.72	-45.99	-13.00	32.99	13.73	Vertical
6	10676.3	-62.28	-37.90	-13.00	24.90	24.38	Vertical



3. LIST OF MEASURING EQUIPMENT

Description	Manufacturer	Model	Serial No.	Cal. Date	Due Date	Remark
EMI Test Receiver	R&S	ESU8	A0805559	2020.04.03	2021.04.02	Radiation
Loop Antenna	Schwarz beck	HFH2-Z2	100047	2019.04.26	2022.04.25	Radiation
Broadband antenna (30MHz~1GHz)	Schwarbeck	BBHA 9120 J	A190503537	2019.01.07	2021.01.06	Radiation
Broadband antenna (30MHz~1GHz)	R&S	HK116	A130701424	2018.01.19	2021.01.18	Radiation
Double ridge horn antenna (1GHz~18GHz)	R&S	HF906	100150	2019.04.27	2022.04.26	Radiation
Double ridge horn antenna (1GHz~18GHz)	R&S	HF906	100149	2019.04.17	2022.04.16	Radiation
Horn antenna (18GHz~26.5GHz)	AR	AT4002A	305753	2017.11.10	2020.11.09	Radiation
Horn antenna (18GHz~26.5GHz)	AR	AT4003A	0329293	2018.09.17	2020.09.16	Radiation
Amplifier 1GHz-18GHz	AR	25S1G4AM1	22018	2018.09.17	2020.09.16	Radiation
Ampilier 20M~3GHz	MILMEGA	80RF1000-250	1064573	2017.10.09	2020.10.08	Radiation
Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2020.05.18	2021.05.17	Conducted
Test Receiver	R&S	ESIB26	A0304218	2020.04.29	2021.04.28	Conducted
Temperature chamber	Tomilo	TOD-B165FXS-4K	A181003256	2019.11.21	2020.11.20	Conducted
Wideband Radio Communication tester	R&S	CMW500	A130101034	2019.07.30	2021.07.29	Conducted
Power Supply	R&S	WYJ-60100	A141102031	2020.01.16	2023.01.15	Conducted
EMI Test Receiver	R&S	ESU8	A0805559	2020.04.03	2021.04.02	Radiation



4. UNCERTAINTY OF EVALUATION

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Emission Measurement (150KHz~30MHz)

Measuring Uncertainty for a level of	2.6dB
confidence of 95%(U=2Uc(y))	2.000

Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

Measuring Uncertainty for a level of	2.4dB
confidence of 95%(U=2Uc(y))	2.4uD

Uncertainty of Radiated Emission Measurement (1GHz~40GHz)

Measuring Uncertainty for a level of	2.8dB
confidence of 95%(U=2Uc(y))	2.800

** END OF REPORT **