FCC PART 22/24 TEST REPORT

FCC Part 22 /Part 24

Report Reference No.:	HUAK180803683E	
FCC ID:	SRMT11012820	
Compiled by (position+printed name+signature) :	File administrators Gary Qian	Gary Qian
Supervised by (position+printed name+signature) :	Technique principal Eden Hu	Eden Hu
Approved by (position+printed name+signature) :	Manager Jason Zhou	Jason Zhou
Date of issue :	Aug. 23, 2018	
Testing Laboratory Name :	Shenzhen HUAK Testing Technology Co., Ltd.	
Address :	1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, China	
Applicant's name :	SENSITECH INC.	
Address :	800 Cummings Center, Beverly, MA 01915, USA	
Test specification :		
Standard :	FCC Part 22: PUBLIC MOBILE SERVICES FCC Part 24: PERSONAL COMMUNICATIONS SERVICES	

Test item description :	3G, 2G Tracking Device
Brand Name :	TBD
Model	T11012850
Ratings :	DC 3.7V From Battery
Modulation :	GSM / GPRS :GMSK; EGPRS: GMSK/8PSK HSDPA:QPSK/16QAM; HSUPA:BPSK; WCDMA:QPSK
GPRS/EGPRS	Supported
Hardware version :	T14003070
Software version :	N/A
Frequency	GSM 850MHz; PCS 1900MHz; UMTS Band II;UMTS Band V
Result :	PASS

TEST REPORT

Test Report No. :	**HUAK180803683E**	Aug. 27, 2018 Date of issue

Equipment under Test	:	3G, 2G Tracking Device
Model /Type	:	T11012850
Applicant	:	SENSITECH INC.
Address	:	800 Cummings Center, Beverly, MA 01915, USA
Manufacturer	:	JDI Electronic Factory
Address	:	Sime Village, Chang Ping Town, Dong Guan, Guang Dong, China

Test Result:	**PASS**

The test report merely corresponds to the test sample.

Revision	Issue Date	Revisions	Revised By
V1.0	Aug. 27, 2018	Class II Permissive Change	Jason Zhou

Note: The original test report Ref. No.(AGC01662180503FE02), (2018-08-13), was modified on 2018-08-27 to include the following changes and additions for:

- Remove GPS module

-Change the battery

The test data of the OUTPUT POWR and RADIATED SPURIOUS EMISSION are updated into this report.

TABLE OF CONTENTS

1.TEST STANDARDS

The tests were performed according to following standards:

FCC Part 22 (10-1-12 Edition): PRIVATE LAND MOBILE RADIO SERVICES.

FCC Part 24(10-1-12 Edition): PUBLIC MOBILE SERVICES

TIA/EIA 603 D June 2010: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

2. SUMMARY

2.1 General Remarks

Date of receipt of test sample	:	July 25, 2018
Testing commenced on	:	July 25, 2018
Testing concluded on	:	Aug. 22, 2018

2.2 General Remarks

Product Designation:	3G, 2G Tracking Device
Hardware version:	T14003070
Software version:	N/A
Frequency Bands:	☒GSM 850 ☒PCS1900 (U.S. Bands) ☒GSM 900 ☒DCS 1800 (Non-U.S. Bands) ☒UMTS FDD Band II ☐UMTS FDD Band IV ☒UMTS FDD Band V (U.S. Bands) ☒UMTS FDD Band I ☒UMTS FDD Band VIII (Non-U.S. Bands)
Antenna Type	PIFA Antenna
Type of Modulation	GSM / GPRS :GMSK EGPRS: GMSK/8PSK WCDMA : QPSK
Antenna gain	0dBi
Power Supply:	DC 3.7V by battery
Battery parameter:	DC3.7V/20800mAh
Single Card:	GSM /WCDMA Card Slot
GPRS Class	12
Extreme Vol. Limits:	DC3.4 V to 4.2 V (Normal: DC3.7 V)
Extreme Temp. Tolerance	-15℃ to +55℃
*** Note: 1. The High Voltage DC4.2V and Low Voltage DC3.4V were declared by manufacturer 2. The EUT couldn't be operating normally with higher or lower voltage.	

***** Note:**1.The maximum power levels are GSM for MCS-4：GMSK link, and RMC 12.2kbps mode for WCDMA band II, WCDMA band V, only these modes were used for all tests.

2. We found out the test mode with the highest power level after we analyze all the data rates. So we chose worst caseas a representative.

GSM/WCDMA Card Slot :

	Maximum ERP/EIRP (dBm)	Max. Average Burst Power (dBm)
GSM 850	30.61	32.52
PCS 1900	27.02	28.20
UMTS BAND II	19.79	21.59
UMTS BAND V	19.63	21.11

2.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID:SRMT11012820**, filing to comply with the FCC Part 22H&24E requirements.

2.3 TEST METHODOLOGY

The radiated emission testing was performed according to the procedures of ANSI/TIA-603-E-2016, and KDB 971168 D01 Power Means License Digital Systems V03R01.

2.4 TEST FACILITY

ALL TEST EQUIPMENT LIST

Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
LISN	ENV216	R&S	HKE-059	2017/12/28	2018/12/27
LISN	R&S	ENV216	HKE-002	2017/12/28	2018/12/27
Broadband antenna	Schwarzbeck	VULB 9163	HKE-012	2017/12/28	2019/12/26
Receiver	R&S	ESCI 7	HKE-010	2017/12/28	2018/12/27
Spectrum analyzer	Agilent	N9020A	HKE-048	2017/12/28	2018/12/27
RF automatic control unit	Tonscend	JS0806-2	HKE-060	2017/12/28	2018/12/27
Horn antenna	Schwarzbeck	9120D	HKE-013	2017/12/28	2019/12/26
Loop antenna	Schwarzbeck	FMZB 1519 B	HKE-014	2017/12/28	2019/12/26
Preamplifier	EMCI	EMC051845SE	HKE-015	2017/12/28	2018/12/27
Preamplifier	Agilent	83051A	HKE-016	2017/12/28	2018/12/27
Temperature and humidity meter	Boyang	HTC-1	HKE-075	2017/12/28	2018/12/27
High pass filter unit	Tonscend	JS0806-F	HKE-055	2017/12/28	2018/12/27
RF cable	Times	1-40G	HKE-034	2017/12/28	2018/12/27
Power meter	Agilent	E4419B	HKE-085	2017/12/28	2018/12/27
Power Sensor	Agilent	E9300A	HKE-086	2017/12/28	2018/12/27
Wireless Communication Test Set	R&S	CMU200	HKE-026	2017/12/28	2018/12/27

2.5 SPECIAL ACCESSORIES

The battery wassupplied by the applicant were used as accessories and being tested with EUT intended for FCC grant together.

2.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. SYSTEM TEST CONFIGURATION

3.1 EUT CONFIGURATION

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

3.2 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

3.3 CONFIGURATION OF EUT SYSTEM

Fig. 2-1 Configuration of EUT System

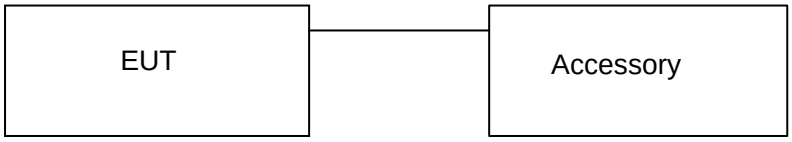


Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Remark
1	Gerylock	T11012820	SRMT11012820	EUT
2	Battery	/	DC 3.7V/20800mAh	Accessory

***Note: All the accessories have been used during the test. The following "EUT" in setup diagram means EUT system.

4. SUMMARY OF TEST RESULTS

Item Number	Item Description		FCC Rules	Result
1	Output Power	Radiated Output Power	22.913(a) (2) / 24.232 (c)	Pass
2	Spurious Emission	Radiated Spurious Emission	2.1051/22.917/24.238	Pass

5. DESCRIPTION OF TEST MODES

During the testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication Tester (CMU 200)to ensure max power transmission and proper modulation. Three channels (The top channel, the middle channel and the bottom channel) were chosen for testing on both GSMand PCS frequency band.

*****Note:** GSM/GPRS/EGPRS 850, GSM/GPRS/EGPRS 1900, WCDMA/HSPA band II, WCDMA/HSPA band V, mode have been tested during the test.

The worst condition was recorded in the test report if no other modes test data.

6. OUTPUT POWER

6.1 CONDUCTED OUTPUT POWER

6.1.1 MEASUREMENT METHOD

The transmitter output port was connected to base station.

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

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

Measure the maximum burst average power and average power for othermodulation signal.

The EUT was setup for the max output power with pseudo random data modulation. Power was measured with Spectrum Analyzer. The measurements were performed on all modes(GSM/GPRS/EGPRS 850, GSM/GPRS/EGPRS1900, WCDMA/HSPA band II,WCDMA/HSPA band V)at 3 typical channels(the Top Channel, the Middle Channel and the Bottom Channel) for each band.

6.1.2 MEASUREMENT RESULT

GSM 850:

Mode	Channel	Frequency (MHz)	Avg.Burst Power
GSM850	128	824.2	32.15
	190	836.6	32.25
	251	848.8	32.52
GPRS850 (1 Slot)	128	824.2	32.34
	190	836.6	32.41
	251	848.8	32.42
GPRS850 (2 Slot)	128	824.2	31.22
	190	836.6	30.86
	251	848.8	31.36
GPRS850 (3 Slot)	128	824.2	29.47
	190	836.6	29.08
	251	848.8	29.50
GPRS850 (4 Slot)	128	824.2	27.60
	190	836.6	27.82
	251	848.8	27.95

Mode	Channel	Frequency (MHz)	Avg.Burst Power (dBm)
EDGE (1 Slot)	128	824.2	25.22
	190	836.6	24.81
	251	848.8	25.00
EDGE (2 Slot)	128	824.2	25.08
	190	836.6	24.60
	251	848.8	25.27
EDGE (3 Slot)	128	824.2	25.11
	190	836.6	24.59
	251	848.8	24.95
EDGE (4 Slot)	128	824.2	24.91
	190	836.6	24.46
	251	848.8	25.17

PCS 1900:

Mode	Channel	Frequency (MHz)	Avg.Burst Power
GSM1900	512	1850.2	28.00
	661	1880	27.90
	810	1909.8	27.92
GPRS1900 (1 Slot)	512	1850.2	28.02
	661	1880	28.17
	810	1909.8	28.20
GPRS1900 (2 Slot)	512	1850.2	27.83
	661	1880	27.80
	810	1909.8	27.74
GPRS1900 (3 Slot)	512	1850.2	27.69
	661	1880	27.69
	810	1909.8	27.88
GPRS1900 (4 Slot)	512	1850.2	27.86
	661	1880	27.80
	810	1909.8	27.76

Mode	Channel	Frequency (MHz)	Avg.Burst Power (dBm)
EDGE (1 Slot)	512	1850.2	24.38
	661	1880	24.25
	810	1909.8	24.26
EDGE (2 Slot)	512	1850.2	24.15
	661	1880	24.09
	810	1909.8	24.10
EDGE (3 Slot)	512	1850.2	24.06
	661	1880	24.00
	810	1909.8	23.95
EDGE (4 Slot)	512	1850.2	23.93
	661	1880	23.83
	810	1909.8	24.01

UMTS BAND II

Mode	Channel	Frequency (MHz)	Avg.Burst Power
WCDMA1900 RMC	9262	1852.4	21.12
	9400	1880	21.49
	9538	1907.6	21.59
WCDMA1900 AMR	9262	1852.4	21.08
	9400	1880	21.37
	9538	1907.6	21.55
HSDPA Subtest 1	9262	1852.4	20.10
	9400	1880	20.40
	9538	1907.6	20.43
HSDPA Subtest 2	9262	1852.4	19.34
	9400	1880	19.72
	9538	1907.6	19.73
HSDPA Subtest 3	9262	1852.4	19.35
	9400	1880	19.63
	9538	1907.6	19.56
HSDPA Subtest 4	9262	1852.4	19.40
	9400	1880	19.52
	9538	1907.6	19.53
HSUPA Subtest 1	9262	1852.4	19.26
	9400	1880	19.85
	9538	1907.6	19.84
HSUPA Subtest 2	9262	1852.4	18.92
	9400	1880	19.07
	9538	1907.6	18.99
HSUPA Subtest 3	9262	1852.4	18.19
	9400	1880	18.30
	9538	1907.6	18.49
HSUPA Subtest 4	9262	1852.4	18.53
	9400	1880	18.46
	9538	1907.6	18.57
HSUPA Subtest 5	9262	1852.4	18.74
	9400	1880	18.72
	9538	1907.6	18.68

UMTS BAND V

Mode	Channel	Frequency (MHz)	Avg.Burst Power
WCDMA850 RMC	4132	826.4	21.06
	4182	836.4	21.09
	4233	846.6	20.49
WCDMA850 AMR	4132	826.4	21.11
	4182	836.4	21.05
	4233	846.6	20.72
HSDPA Subtest 1	4132	826.4	20.19
	4182	836.4	20.37
	4233	846.6	20.02
HSDPA Subtest 2	4132	826.4	19.41
	4182	836.4	19.35
	4233	846.6	19.32
HSDPA Subtest 3	4132	826.4	19.47
	4182	836.4	19.34
	4233	846.6	19.11
HSDPA Subtest 4	4132	826.4	19.33
	4182	836.4	19.23
	4233	846.6	19.04
HSUPA Subtest 1	4132	826.4	19.02
	4182	836.4	19.61
	4233	846.6	18.38
HSUPA Subtest 2	4132	826.4	18.64
	4182	836.4	18.69
	4233	846.6	18.37
HSUPA Subtest 3	4132	826.4	18.36
	4182	836.4	18.29
	4233	846.6	17.84
HSUPA Subtest 4	4132	826.4	19.02
	4182	836.4	19.29
	4233	846.6	19.07
HSUPA Subtest 5	4132	826.4	19.68
	4182	836.4	19.84
	4233	846.6	19.61

6.2 RADIATED OUTPUT POWER

6.2.1 MEASUREMENT METHOD

The measurements procedures specified in ANSI/TIA-603-E-2016 were applied.

1. Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signal operating below 1GHz are performed using dipole antennas. Measurements on signals operating above 1GHz are performed using broadband horn antennas. All measurements are performed as RMS average measurements while the EUT operating at its maximum duty cycle, at maximum power, and at the approximate frequencies.
2. In an anechoic antenna test chamber, a half-wave dipole antenna for the frequency band of interest is placed at the reference centre of the chamber. An RF Signal source for the frequency band of interest is connected to the dipole with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A known (measured) power (Pin) is applied to the input of the dipole, and the power received (Pr) at the chamber's probe antenna is recorded.
3. The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established as ARpl=Pin + 2.15 - Pr. TheARpl is the attenuation of “reference path loss”, and including the gain of receive antenna, the cable loss and the air loss. The measurement results are obtained as described below: Power=PMea+ARpl
4. The EUT is substituted for the dipole at the reference centre of the chamber and a scan is performed to obtain the radiation pattern.
5. From the radiation pattern, the co-ordinates where the maximum antenna gain occurs are identified.
6. The EUT is then put into continuously transmitting mode at its maximum power level.
7. Power mode measurements are performed with the receiving antenna placed at the coordinates determined in Step 3 to determine the output power as defined in Rule 24.232 (b) and (c). The "reference path loss" from Step1 is added to this result.
8. This value is EIRP since the measurement is calibrated using a half-wave dipole antenna of known gain (2.15 dBi) and known input power (Pin).
9. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi...

6.2.2 PROVISIONS APPLICABLE

Mode	FCC Part Section(s)	Nominal Peak Power
GSM/EDGE 850	22.913(a)(2)	<=38.45dBm (7W). ERP
GSM/EDGE 1900	24.232(c)	<=33dBm (2W). EIRP
UMTS BAND II	24.232(c)	<=33dBm (2W),EIRP
UMTS BANDV	22.913(a)(2)	<=38.45dBm (7W).ERP

6.2.3 MEASUREMENT RESULT

Radiated Power (ERP) for GSM/EDGE 850				
Mode	Frequency	Result		Conclusion
		Max. Peak ERP (dBm)	Polarization Of Max. ERP	
GSM	824.2	30.32	Horizontal	Pass
	836.6	30.41	Horizontal	Pass
	848.8	30.22	Horizontal	Pass
	824.2	28.94	Vertical	Pass
	836.6	29.05	Vertical	Pass
	848.8	28.74	Vertical	Pass
GPRS	824.2	30.27	Horizontal	Pass
	836.6	30.33	Horizontal	Pass
	848.8	30.61	Horizontal	Pass
	824.2	29.13	Vertical	Pass
	836.6	28.83	Vertical	Pass
	848.8	29.20	Vertical	Pass
EDGE	824.2	22.85	Horizontal	Pass
	836.6	22.48	Horizontal	Pass
	848.8	22.61	Horizontal	Pass
	824.2	21.25	Vertical	Pass
	836.6	20.96	Vertical	Pass
	848.8	21.78	Vertical	Pass

Radiated Power (E.I.R.P) for GSM/EDGE 1900				
Mode	Frequency	Result		Conclusion
		Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
GSM	1850.2	26.33	Horizontal	Pass
	1880.0	26.14	Horizontal	Pass
	1909.8	26.22	Horizontal	Pass
	1850.2	25.34	Vertical	Pass
	1880.0	24.85	Vertical	Pass
	1909.8	24.44	Vertical	Pass
GPRS	1850.2	26.83	Horizontal	Pass
	1880.0	27.02	Horizontal	Pass
	1909.8	26.99	Horizontal	Pass
	1850.2	25.66	Vertical	Pass
	1880.0	25.78	Vertical	Pass
	1909.8	24.36	Vertical	Pass
EDGE	1850.2	22.34	Horizontal	Pass
	1880.0	22.74	Horizontal	Pass
	1909.8	22.61	Horizontal	Pass
	1850.2	20.48	Vertical	Pass
	1880.0	20.37	Vertical	Pass
	1909.8	20.24	Vertical	Pass

Radiated Power (E.I.R.P) for UMTS band II				
Mode	Frequency	Result		Conclusion
		Max. Peak E.I.R.P (dBm)	Polarization Of Max. E.I.R.P	
UMTS	1852.4	19.47	Horizontal	Pass
	1880	19.69	Horizontal	Pass
	1907.6	19.79	Horizontal	Pass
	1852.4	17.75	Vertical	Pass
	1880	18.36	Vertical	Pass
	1907.6	17.95	Vertical	Pass

Radiated Power (ERP) for UMTS band V				
Mode	Frequency	Result		Conclusion
		Max. Peak ERP (dBm)	Polarization Of Max. ERP	
UMTS	826.4	19.42	Horizontal	Pass
	836.4	19.63	Horizontal	Pass
	846.6	19.21	Horizontal	Pass
	826.4	17.62	Vertical	Pass
	836.4	18.05	Vertical	Pass
	846.6	17.96	Vertical	Pass

Note: Above is the worst mode data.

7. SPURIOUS EMISSION

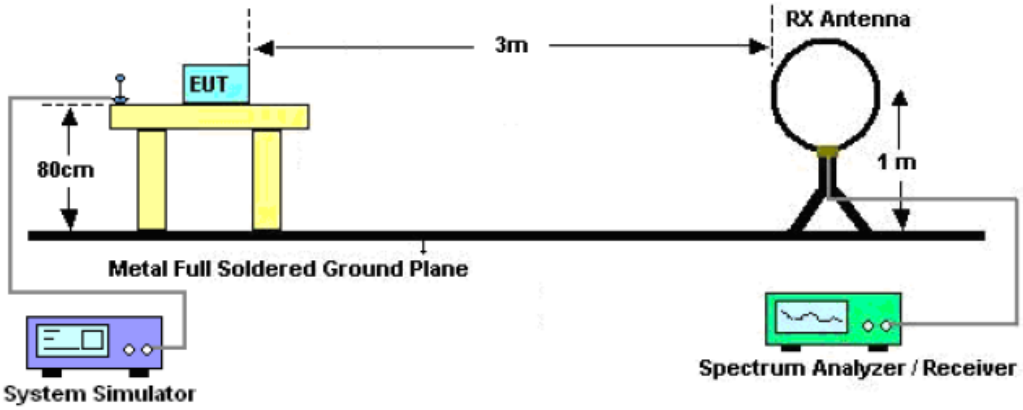
7.1 RADIATED SPURIOUS EMISSION

7.1.1MEASUREMENT METHOD

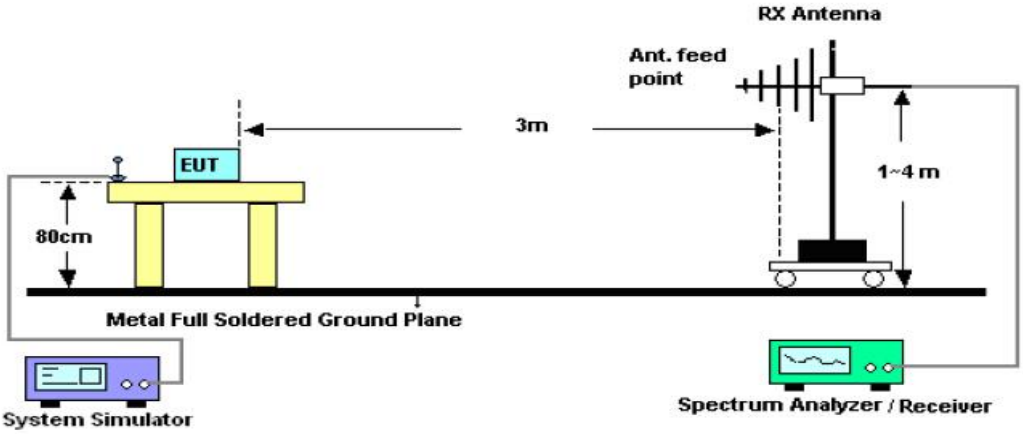
1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

7.1.2 TEST SETUP

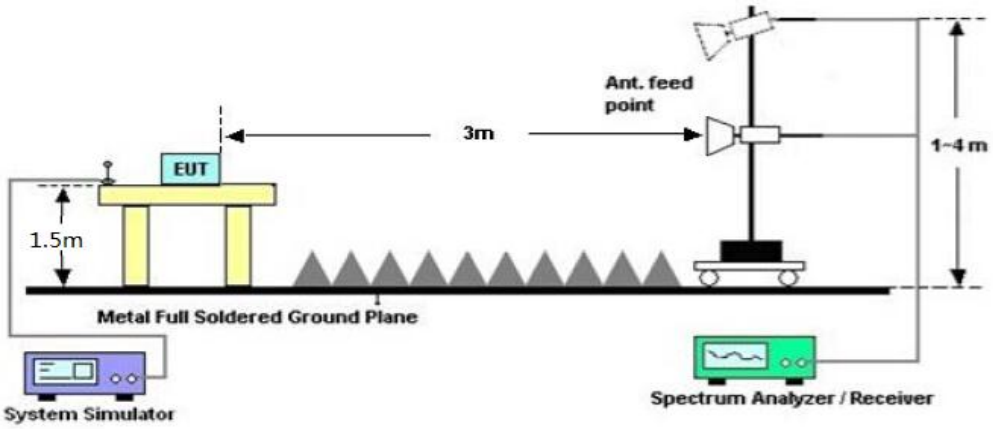
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



7.1.3 PROVISIONS APPLICABLE

(a) On any frequency outside a licensee's frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

Note: only result the worst condition of each test mode:

7.1.4 MEASUREMENT RESULT

GSM 850:

The Worst Test Results for Channel 251/848.8 MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1967.60	-49.22	-13	-36.22	Horizontal
3547.52	-32.33	-13	-19.33	Horizontal
6933.45	-45.19	-13	-32.19	Horizontal
1967.60	-39.42	-13	-26.42	Vertical
3558.66	-50.55	-13	-37.55	Vertical
6947.34	-33.19	-13	-20.19	Vertical

GSM 850(EDGE 8):

The Worst Test Results for Channel 251/848.8 MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1967.60	-52.15	-13	-39.15	Horizontal
3525.61	-39.33	-13	-26.33	Horizontal
6447.25	-50.28	-13	-37.28	Horizontal
1967.60	-36.42	-13	-23.42	Vertical
3444.52	-50.33	-13	-37.33	Vertical
6851.21	-31.17	-13	-18.17	Vertical

PCS 1900:

The Worst Test Results for Channel 810/1909.8MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1853.11	-48.32	-13	-35.32	Horizontal
3819.60	-36.25	-13	-23.25	Horizontal
7836.42	-48.22	-13	-35.22	Horizontal
1852.33	-36.17	-13	-23.17	Vertical
3819.60	-47.36	-13	-34.36	Vertical
7647.78	-33.46	-13	-20.46	Vertical

PCS 1900(EDGE 8):

The Worst Test Results for Channel 810/1909.8MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1839.41	-52.14	-13	-39.14	Horizontal
3819.60	-40.29	-13	-27.29	Horizontal
7633.56	-49.44	-13	-36.44	Horizontal
1841.55	-39.25	-13	-26.25	Vertical
3819.60	-47.52	-13	-34.52	Vertical
7639.55	-33.44	-13	-20.44	Vertical

HSPA band II:

The Worst Test Results for Channel 9538/1907.6MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1878.44	-49.66	-13	-36.66	Horizontal
3815.20	-33.25	-13	-20.25	Horizontal
7574.39	-51.44	-13	-38.44	Horizontal
1882.12	-35.66	-13	-22.66	Vertical
3815.20	-47.45	-13	-34.45	Vertical
7659.44	-32.47	-13	-19.47	Vertical

HSPA band V:

The Worst Test Results for Channel 4233/846.6MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1693.20	-52.29	-13	-39.29	Horizontal
3256.88	-35.47	-13	-22.47	Horizontal
6736.47	-48.35	-13	-35.35	Horizontal
1693.20	-35.55	-13	-22.55	Vertical
3345.21	-45.49	-13	-32.49	Vertical
6748.31	-40.55	-13	-27.55	Vertical

RESULT: PASS

Note:

1. Margin = Emission Level -Limit
2. Below 30MHZ no Spurious found and Above is the worst mode data.

----END OF REPORT----