TEST REPORT

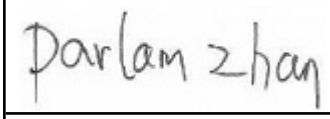
Application No.:	SHCR2308001541AT
FCC ID:	2AEJ4R2220708
Applicant:	Sunwave Communications Co., Ltd.
Address of Applicant:	581 Huoju Avenue, Binjiang District, Hangzhou, China
Manufacturer:	Sunwave Communications Co., Ltd.
Address of Manufacturer:	581 Huoju Avenue, Binjiang District, Hangzhou, China
Equipment Under Test (EUT):	
EUT Name:	Remote Unit
Model No.:	PS-R222030708
Trade mark:	SUNWAVE
Standard(s) :	FCC Part 2 FCC Part 20 FCC Part 90
Date of Receipt:	2023-07-11
Date of Test:	2023-07-11 to 2023-07-31
Date of Issue:	2023-07-31
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

*This case changed the antenna gain from 0dBi to 0.1dBi based on the original report SZCR210302000603, and no changes were made to the rest of the product. So we recalculated the ERP based on the conducted power of the original report SZCR210302000603, and re evaluated and tested the Radiated Spurious Emissions, with the remaining data referenced from the original report unchanged.

Parlam Zhan
Laboratory Manager

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2023-07-31	/

Authorized for issue by:				
				
		Micheal Niu /Project Engineer		
				
		Parlam Zhan /Reviewer		

2 Test Summary

2.1 758MHz-775MHz for FCC Part 90 subpart R

Test Item	Reference	Result
RF Output Power, Amplifier Gain and Peak to Average Ratio	§2.1046; §90.541	PASS
Radiated Spurious Emissions	§2.1053; §90.543	PASS

Remark:
EUT: In this whole report EUT means Equipment Under Test.
Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
This case changed the antenna gain from 0dBi to 0.1dBi based on the original report SZCR210302000603, and no changes were made to the rest of the product. So we recalculated the ERP based on the conducted power of the original report SZCR210302000603, and re evaluated and tested the Radiated Spurious Emissions, with the remaining data referenced from the original report unchanged.

Test method standard:
ANSI C63.26-2015
KDB 935210 D05 Indus Booster Basic Meas v01r04
KDB 935210 D02 Signal Booster Certification v04r02

851MHz-869MHz for FCC Part 90 subpart S

Test Item	Reference	Result
RF Output Power, Amplifier Gain and Peak to Average Ratio	§2.1046,§90.635,§90.637	PASS
Radiated Spurious Emissions	§2.1051, §90.691	PASS

Remark:
EUT: In this whole report EUT means Equipment Under Test.
Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
This case changed the antenna gain from 0dBi to 0.1dBi based on the original report SZCR210302000603, and no changes were made to the rest of the product. So we recalculated the ERP based on the conducted power of the original report SZCR210302000603, and re evaluated and tested the Radiated Spurious Emissions, with the remaining data referenced from the original report unchanged.

Test method standard:
ANSI C63.26-2015
KDB 935210 D05 Indus Booster Basic Meas v01r04
KDB 935210 D02 Signal Booster Certification v04r02

3 Contents

4 General Information

4.1 Details of E.U.T.

Product Name:	Remote Unit
Device type	Fixed production
Model No.:	PS-R222030708
Antenna Type:	External
Antenna Gain:	0.1 dBi for 758MHz to 775MHz (Provided by manufacturer) 0.1 dBi for 851MHz to 869MHz (Provided by manufacturer)
Power Supply:	AC 120V 60Hz
Type of Modulation	CQPSK/12.5kHz FM/TETRA in 758MHz to 775MHz CQPSK/12.5kHz FM/TETRA in 851MHz to 869MHz
Frequency Band:	Downlink 758MHz to 775MHz (The frequency bands 768MHz-775MHz for public safety services) Downlink 851MHz to 869MHz
Power Control Method:	ALC
Temperature Range:	-40℃ to 50℃
Antenna Delivery:	SISO
Normal Output Power:	37dBm (downlink)
System Gain:	47dB

NO.588 West Jindu Road,Songjiang District, ShanghaiChina 201612 t (86-21) 61915666 f (86-21) 61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t (86-21) 61915666 f (86-21) 61915678 sgs.china@sgs.com

4.2 Description of Support Units

Description	Manufacture	Model No.	S/N
Notebook	ThinkPad	K27	/

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

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

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab
588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China
Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.

Note:

1.SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 6332.01)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

• FCC (Designation Number: CN1301)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

• ISED (CAB Identifier: CN0020)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 8617A

• VCCI (Member No.: 3061)

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

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5 Equipment List

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RF Conducted Test					
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2022-12-20	2023-12-19
Spectrum Analyzer	Keysight	N9020B	SHEM241-1	2022-12-20	2023-12-19
Spectrum Analyzer	Agilent	N9020A	SHEM181-1	2022-08-02	2023-08-01
Signal Generator	R&S	SMR20	SHEM006-1	2022-08-02	2023-08-01
Signal Generator	Agilent	N5182A	SHEM182-1	2022-08-02	2023-08-01
Communication Tester	R&S	CMW270	SHEM183-1	2023-06-01	2024-05-31
Communication Tester	R&S	CMW500	SHEM268-1	2023-06-01	2024-05-31
Power Sensor	Keysight	U2021XA * 4	SHEM184-1	2022-08-02	2023-08-01
Splitter	Anritsu	MA1612A	SHEM185-1	/	/
Coupler	e-meca	803-S-1	SHEM186-1	/	/
High-low Temp Cabinet	Suzhou Zhihe	TL-40	SHEM087-1	2022-11-08	2024-11-07
AC Power Stabilizer	APC	KDF-31020T-V0-F0	SHEM216-1	2022-12-20	2023-12-19
DC Power Supply	MCH	MCH-303A	SHEM210-1	2022-12-20	2023-12-19
Conducted test Cable	/	RF01~RF04	/	2022-12-20	2023-12-19
Switcher	Tonscend	JS0806	SHEM184-1	2022-08-02	2023-08-01
Test software	Tonscend	JS Tonscend BT/WIFI System	Version: 2.6	/	/
Coaxial Cable	TST		SHEM263-1	2022-08-02	2023-08-01
Test software	TST	TST PASS	Version: 2.0	/	/
RF Radiated Test					
EMI test Receiver	R&S	ESU40	SHEM051-1	2022-12-20	2023-12-19
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2022-12-20	2023-12-19
Communication Tester	R&S	CMW500	SHEM268-1	2023-06-01	2024-05-31
Loop Antenna (9kHz-30MHz)	Schwarzbeck	FMZB1519	SHEM135-1	2022-12-20	2023-12-19
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM048-1	2021-09-11	2023-09-10
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM202-1	2022-05-07	2024-05-06
Horn Antenna (1-18GHz)	Schwarzbeck	HF906	SHEM009-1	2022-08-11	2024-08-10
Horn Antenna (1-18GHz)	Schwarzbeck	BBHA9120D	SHEM050-1	2021-09-18	2023-09-17
Horn Antenna (14-40GHz)	Schwarzbeck	BBHA 9170	SHEM049-1	2021-09-18	2023-09-17
Pre-Amplifier	HP	8447D	SHEM236-1	2022-08-02	2023-08-01
High-amplifier (14-40GHz)	Schwarzbeck	10001	SHEM049-2	2022-12-20	2023-12-19
Band Filter	LORCH	9BRX-875/X150	SHEM156-1	/	/
Band Filter	LORCH	13BRX-1950/X500	SHEM083-2	/	/
Band Filter	LORCH	5BRX-2400/X200	SHEM155-1	/	/
Band Filter	LORCH	5BRX-5500/X1000	SHEM157-2	/	/
High pass Filter	Wainwright	WHK3.0/18G	SHEM157-1	/	/
High pass Filter	Wainwright	WHKS1700	SHEM157-3	/	/
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2021-05-25	2024-05-24
RE test Cable	/	RE01, RE02, RE06	/	2023-01-07	2024-01-06
Test software	ESE	E3	Version: 6.111221a	/	/

6 Test Results

6.1 Test conditions

Input voltage:	AC 120V/60Hz	
Test voltage	Normal	AC 120V/60Hz
	Extreme	AC 102V-AC138V
Operating Environment:		
Test Temperature:	Normal	22°C~26°C
	Extreme	-40~50° C
Humidity:	46%~56% RH	
Atmospheric Pressure:	990~1005mbar	
Test Requirement:	The RF output power of the EUT was measured at the antenna port, by adjusting the input power of signal generator to drive the EUT to get to maximum output power point and keep the EUT at maximum gain setting for all tests. The device should be tested on downlink.	
	For detail test Modulation and Frequency, please refer to 7.2.	

Remark:

FIBER-OPTIC AND OTHER SIMILAR RF DISTRIBUTION SYSTEMS

Fiber-optic distribution systems are a type of in-building radiation system that receives RF signals from an antenna, distributes the signal over fiber-optic cable, and then retransmits at another location for example within a building or tunnel. Most fiber-optic systems are signal boosters; however, some may be boosters. These systems generally have two enclosures typically called host (or local or donor unit) and remote. Some systems may also have an optional expander box for fan-out to multiple remotes. The system transmits downlink signals from the remote unit to handsets, portables, or clients, and transmits uplink signals via from the host unit. Usually but not always the uplink goes through an intermediate amplifier to a “donor” antenna. Therefore both uplink and downlink must be tested, unless filing effectively documents how connection of uplink to donor antenna with or without an intermediate amplifier will be prevented, such as for always only a cabled connection to a base station. Fiber-optic systems are not amplifiers (AMP equipment class) – they are equipment class TNB or PCB. The same approval procedures also apply for multiple-enclosure systems connected by coax cable.

Synonyms and related terms: in-building radiation system, coverage enhancer, distributed antenna system, fiber-optic distribution system, converter, donor antenna

Typical in-building or distributed antenna systems can consist of five different components (enclosures), not counting antennas:

1) host unit

a) transmits uplink to base station via antenna thru coax, ***passive interface unit***, or ***active interface unit*** (amplifier)

b) sends base-station downlink via fiber-optic or coax to ***remote***

c) receives handset uplink via fiber-optic or coax from ***remote***

d) optional connection to ***expansion unit*** via fiber-optic
e) separate FCC ID from ***remote***, unless electrically identical
f) ***non-transmitting host unit***
i) connects directly to a base station via coax cable but does not connect to antenna or amplifier
ii) Part 15 digital device subject to Verification, no FCC ID

2) remote unit

a) receives base-station downlink via fiber-optic or coax from ***host***, transmits via antenna to handsets
b) returns handset uplink via fiber-optic or coax to ***host***
c) separate FCC ID from ***remote***, unless electrically identical

3) fiber-optic expansion unit

a) fiber-optic or coax from ***host***
b) fiber-optic or coax fan-out to ***remote(s)***
c) Part 15 digital device subject to Verification, no FCC ID

4) RF expansion unit

a) internal or external device used to add band(s) and/or transmit mode(s) to a ***remote***
b) operates only when connected to a ***remote unit*** as part of a booster system
c) contains signal-processing functions to convert baseband signal into modulated RF signal
d) use equipment class PCB or TNB for an ***RF expansion unit*** (the associated ***remote*** uses an equipment class Bxx per **Table C.1** of this document, e.g., B2I)

5) *passive interface unit*

a) contains attenuators, splitters, combiners
b) coax cable connection between ***host*** and base-station
c) passive device, no FCC ID

6) *active interface unit*

a) amplifies uplink signal from ***host unit*** for transmit by donor antenna
b) attenuates downlink from donor antenna
c) coax cable connection between ***host*** and ***active interface unit***
d) usually has separate FCC ID; in some cases could be combined/included with ***host*** as one enclosure

GENERAL DEFINITIONS FOR CERTIFICATION PURPOSES:

The following three general definitions follow from those stated in the Part 22, 24, 27 and 90 rule sections as listed above. Two of the definitions replace previous EAB internal definitions given for booster, booster and extender. The general term “extender” is the same as booster, but booster should be used rather than extender. The general term “translator” is the same as booster, but booster should be used rather than translator.

External radio frequency power amplifier (ERFPA) - any device which, (1) when used in conjunction with a radio transmitter signal source, is capable of amplification of that signal, and (2) is not an integral part of a radio transmitter as manufactured. The EAS equipment class AMP is used only for an ERFPA device inserted between a transmitter (TNB/PCB) and an antenna (has only one antenna port) ***Booster*** is a device that automatically reradiates signals from base transmitters without channel translation, for the purpose of improving the reliability of existing service by increasing the signal strength in dead spots. An

"in-building radiation system" is a signal booster. These devices are not intended to extend the size of coverage from the originating base station. A booster can be either single or multiple channels.

Booster is a device that retransmits the signals of other stations. Boosters are different from boosters in that they can include frequency translation and can extend coverage beyond the design of the original base station. A booster is typically single channel but can also be multiple channels.

ERFPA (AMP) and boosters/boosters (TNB/PCB) can generally be authorized for all rule parts except 15 and 18.

Tests should be done with each typical signal. e.g., for F3E emissions use 2500 Hz with 2.5 or 5 kHz deviation. Use of CW signal for some tests is acceptable in lieu of actual emission, in some cases when CW signal gives worst case.

6.2 Test Procedure & Measurement Data

6.2.1 RF Output Power and Amplifier Gain

Test Requirement: 47 CFR Part 90.219(e)(1), 47 CFR Part 90.635

Test Method: KDB 935210 D05 Indus Booster Basic Meas v01r04

EUT Operation:

Status: Drive the EUT to maximum output power.

Conditions: Normal conditions

Application: Cellular Band RF output ports

Test Configuration:

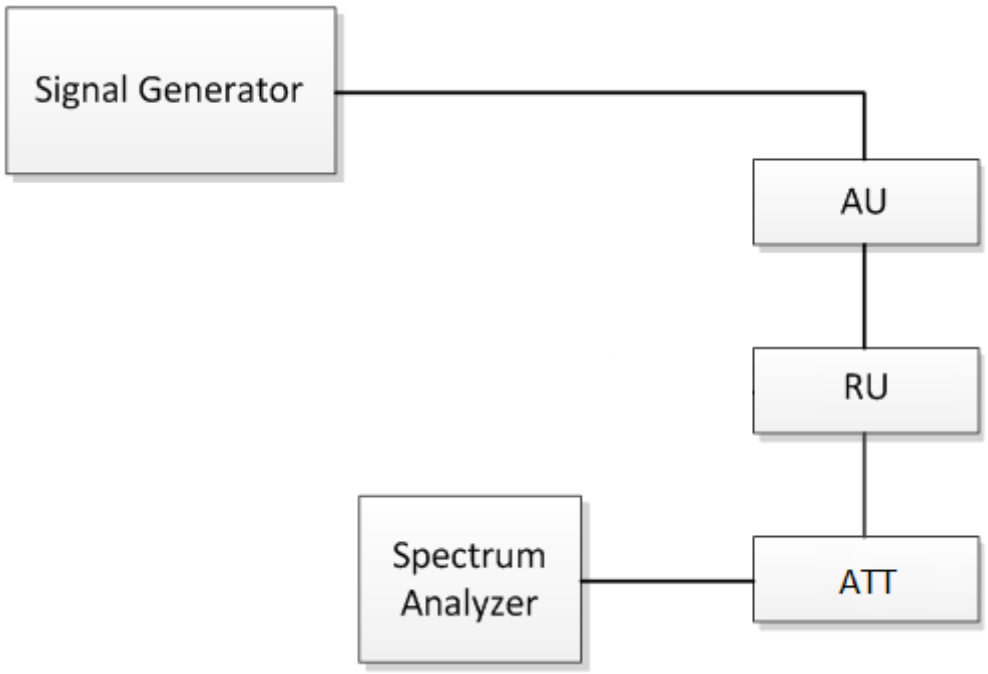


Fig.1 RF Output Power test configuration

Test Procedure:

RF output power test procedure:
a) Connect a signal generator to the input of the EUT.
b) Configure to generate the AWGN (broadband) test signal.
c) The frequency of the signal generator shall be set to the frequency f0 as determined from 3.3.
d) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation as necessary.
e) Set the signal generator output power to a level that produces an EUT output level that is just below the AGC threshold (see 3.2), but not more than 0.5 dB below.
f) Measure and record the output power of the EUT; use 3.5.3 or 3.5.4 for power measurement.
g) Remove the EUT from the measurement setup. Using the same signal generator settings, repeat the power measurement at the signal generator port, which was used as the input signal to the EUT, and record as the input power. EUT gain may be calculated as described in 3.5.5.
h) Repeat steps f) and g) with input signal amplitude set to 3 dB above the AGC threshold level.
i) Repeat steps e) to h) with the narrowband test signal.
j) Repeat steps e) to i) for all frequency bands authorized for use by the EUT.

Amplifier gain test procedure:
After the mean input and output power levels have been measured as described in the preceding subclauses, the mean gain of the EUT can be determined from:
Gain (dB) = output power (dBm) - input power (dBm).

Peak to Average Ratio:
Please according to KDB 971168 D01 clause 5.7.

Remark:

The system continuously monitors the input power.

6.2.1.1 Measurement Record:

Mode	Operation Band	Frequency (MHz)	Signal Type	Signal Level (dBm)	Input Power (dBm)	Output Power (dBm)	Original ERP (dBm)	Current ERP (dBm)	Gain (dB)
Downlink	758MHz to 775MHz	758.0125	CW	Pre-AGC	-10	36.91	34.76	34.86	46.91
				3dB Above AGC	-7	36.92	34.77	34.87	/
Downlink	758MHz to 775MHz	766.5000	CW	Pre-AGC	-10	36.95	34.80	34.90	46.95
				3dB Above AGC	-7	37.01	34.86	34.96	/
Downlink	758MHz to 775MHz	774.9875	CW	Pre-AGC	-10	36.83	34.68	34.78	46.83
				3dB Above AGC	-7	36.85	34.7	34.80	/

Note:
1) The nominal power is 37dBm and the measured output power which show in above table is within ± 1.0 dB tolerance
2) The ERP limit is 5W, the product satisfied with the limit.
3) ERP=Output power + Antenna Gain-2.15, Original Antenna Gain is 0, Current Antenna Gain is 0.1

Mode	Operation Band	Frequency (MHz)	Signal Type	Signal Level (dBm)	Input Power (dBm)	Output Power (dBm)	Original ERP (dBm)	Current ERP (dBm)	Gain (dB)
Downlink	851MHz to 869MHz	851.0125	CW	Pre-AGC	-10	36.98	34.83	34.93	46.98
				3dB Above AGC	-7	37.32	35.17	35.27	/
Downlink	851MHz to 869MHz	860.0000	CW	Pre-AGC	-10	36.94	34.79	34.89	46.94
				3dB Above AGC	-7	37.19	35.04	35.14	/
Downlink	851MHz to 869MHz	868.9875	CW	Pre-AGC	-10	37.22	35.07	35.17	47.22
				3dB Above AGC	-7	36.98	34.83	34.93	/

Note:
1) The nominal power is 37dBm and the measured output power which show in above table is within ± 1.0 dB tolerance
2) The ERP limit is 1000W, the product satisfied with the limit.
3) ERP=Output power + Antenna Gain-2.15, Original Antenna Gain is 0, Current Antenna Gain is 0.1

6.2.2 Radiated Spurious Emissions

Test Requirement: §2.1051, §22.917, §24.238, §27.53, §90.543, §90.691

Test Method: KDB 935210 D05 Indus Booster Basic Meas v01r04

EUT Operation:

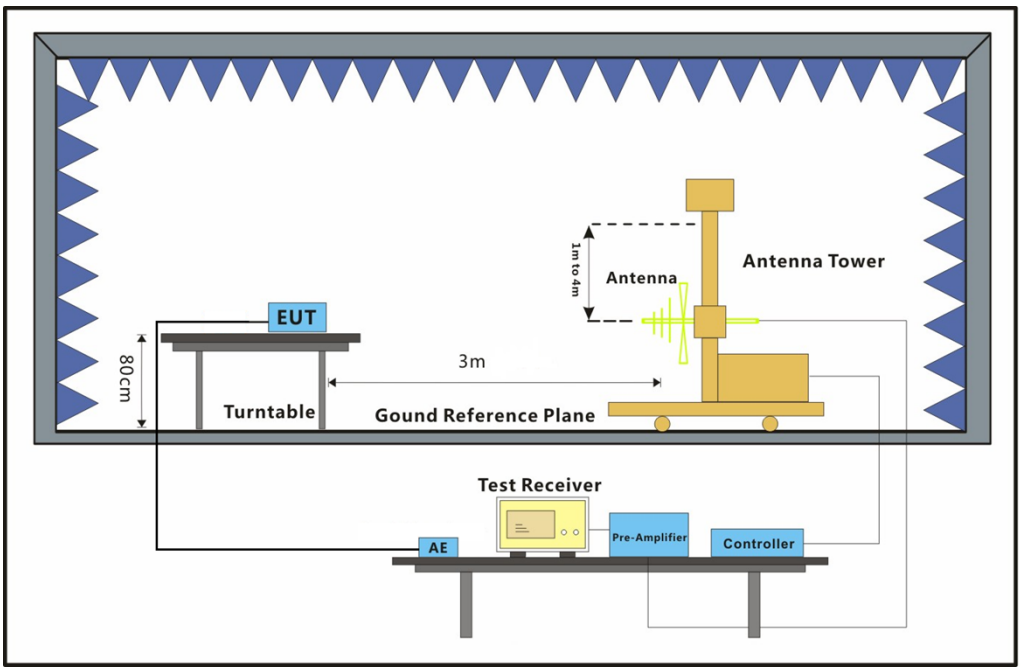
Status: Drive the EUT to maximum output power.

Conditions: Normal conditions

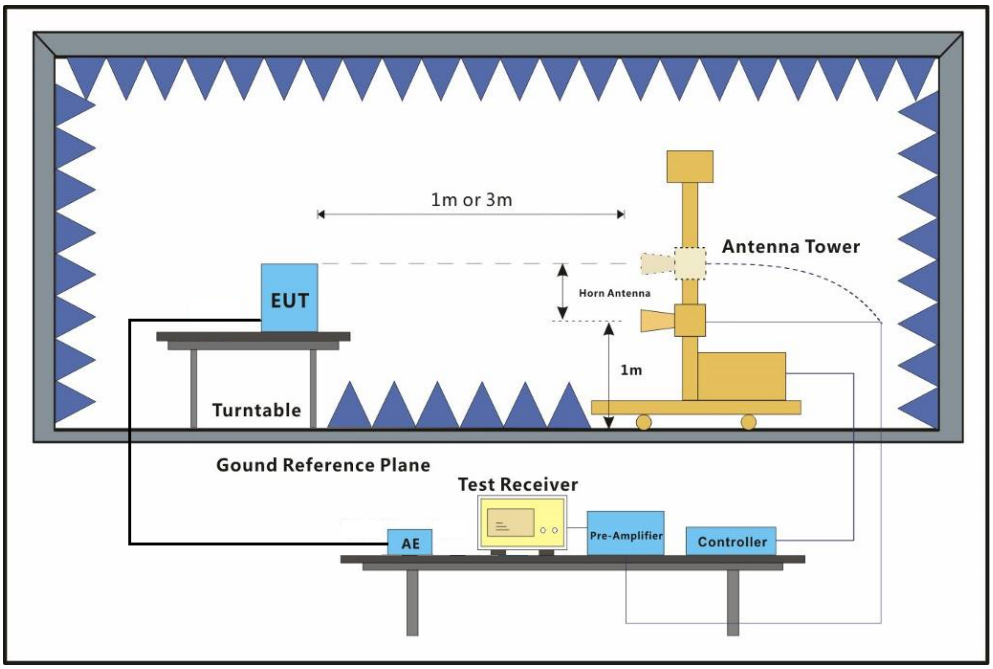
Application: Enclosure

Test Configuration:

30MHz to 1GHz emissions:



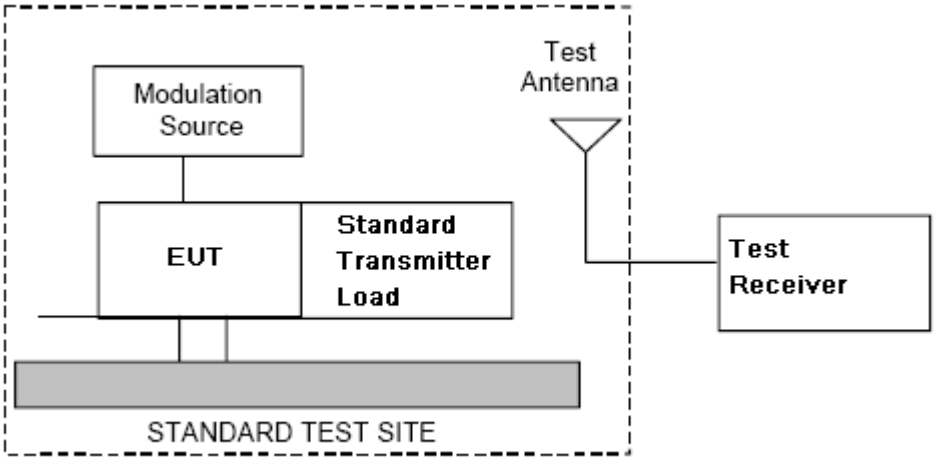
1GHz to 40GHz emissions:



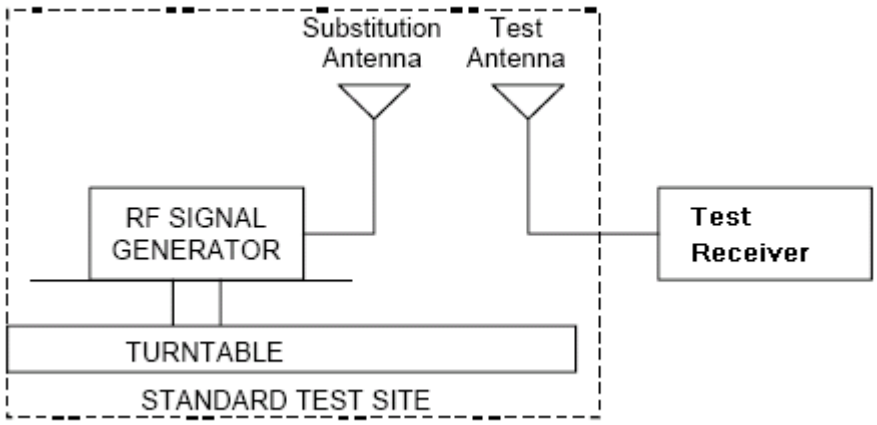
Test Procedure:

1. Test the background noise level with all the test facilities;
2. Keep one transmitting path, all other connectors shall be connected by normal power or RF leads;
3. Select the suitable RF notch filter to avoid the test receiver or spectrum analyzer produce unwanted spurious emissions;
4. Keep the EUT continuously transmitting in max power;
5. Read the radiated emissions of the EUT enclosure.

Radiated Emissions Test Procedure:



a) Connect the equipment as illustrated.
b) Adjust the spectrum analyzer for the following settings:
   1) Resolution Bandwidth = 100 kHz for spurious emissions below 1 GHz, and 1 MHz for spurious emissions above 1GHz.
   2) Video Bandwidth = 300 kHz for spurious emissions below 1 GHz, and 3 MHz for spurious emissions above 1 GHz.
   3) Sweep Speed slow enough to maintain measurement calibration.
   4) Detector Mode = Positive Peak.
c) Place the transmitter to be tested on the turntable in the standard test site, The transmitter is transmitting into a no radiating load that is placed on the turntable. The RF cable to this load should be of minimum length.
d) Measurements shall be made from30MHz to 10 times of fundamental carrier, except for the region close to the carrier equal to ± the carrier bandwidth.
e) Key the transmitter without modulation or normal modulation base the standard.
f) For each spurious frequency, raise and lower the test antenna from 1 m to 4 m to obtain a maximum reading on the spectrum analyzer with the test antenna at horizontal polarity. Then the turntable should be rotated 360° to determine the maximum reading. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.
g) Repeat step f) for each spurious frequency with the test antenna polarized vertically.



h) Reconnect the equipment as illustrated.

i) Keep the spectrum analyzer adjusted as in step b).

j) Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At the lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground.

k) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a no radiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.

l) Repeat step k) with both antennas vertically polarized for each spurious frequency.

m) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps k) and l) by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:

Pd(dBm) = *Pg*(dBm) – *cable loss* (dB) + *antenna gain* (dB)

where:

Pd is the dipole equivalent power and

Pg is the generator output power into the substitution antenna.

NOTE:

1) It is permissible to use other antennas provided they can be referenced to a dipole.

2) For below 1GHz signal, the *antenna gain* (dB) is dBd, and for above 1GHz signal, the *antenna gain* (dB) is dBi

3) Effective radiated power (e.r.p) refers to the radiation of a half wave tuned dipole instead of an isotropic antenna. There is a constant difference of 2.15 dB between e.i.r.p. and e.r.p.
e.r.p (dBm) = e.i.r.p. (dBm) - 2.15

4) For this test, the AU and EU are put outside of the chamber; connect to the RU through the optical fiber

6.2.2.1 Measurement Record:

DownLink_758MHz to 775MHz

Low Channel					
Frequency (MHz)	Spurious Emission Polarization and Level		Limit (dBm)	Over Limit (dB)	Verdict
	Polarization	dBm			
93.194	Horizontal	-59.52	-13	-46.52	Pass
190.218	Horizontal	-60.25	-13	-47.25	Pass
710.022	Horizontal	-58.99	-13	-45.99	Pass
1333.070	Horizontal	-54.80	-13	-41.80	Pass
5918.670	Horizontal	-50.86	-13	-37.86	Pass
8594.360	Horizontal	-47.67	-13	-34.67	Pass
82.400	Vertical	-60.20	-13	-47.20	Pass
158.065	Vertical	-61.19	-13	-48.19	Pass
853.189	Vertical	-60.68	-13	-47.68	Pass
1312.830	Vertical	-51.87	-13	-38.87	Pass
5903.360	Vertical	-51.61	-13	-38.61	Pass
8615.640	Vertical	-44.63	-13	-31.63	Pass

Middle Channel					
Frequency (MHz)	Spurious Emission Polarization and Level		Limit (dBm)	Over Limit (dB)	Verdict
	Polarization	dBm			
89.630	Horizontal	-61.90	-13	-48.90	Pass
332.295	Horizontal	-61.11	-13	-48.11	Pass
745.809	Horizontal	-59.36	-13	-46.36	Pass
1354.560	Horizontal	-53.35	-13	-40.35	Pass
5579.840	Horizontal	-50.57	-13	-37.57	Pass
8568.640	Horizontal	-45.62	-13	-32.62	Pass
89.930	Vertical	-60.12	-13	-47.12	Pass
178.285	Vertical	-60.02	-13	-47.02	Pass
825.729	Vertical	-59.08	-13	-46.08	Pass
1323.620	Vertical	-54.52	-13	-41.52	Pass
5554.540	Vertical	-48.51	-13	-35.51	Pass
8565.300	Vertical	-47.53	-13	-34.53	Pass

High Channel					
Frequency (MHz)	Spurious Emission Polarization and Level		Limit (dBm)	Over Limit (dB)	Verdict
	Polarization	dBm			
102.514	Horizontal	-62.15	-13	-49.15	Pass
294.968	Horizontal	-58.16	-13	-45.16	Pass
775.062	Horizontal	-59.45	-13	-46.45	Pass
1309.960	Horizontal	-53.93	-13	-40.93	Pass
5562.910	Horizontal	-50.27	-13	-37.27	Pass
8572.980	Horizontal	-47.54	-13	-34.54	Pass
83.410	Vertical	-62.85	-13	-49.85	Pass
332.555	Vertical	-59.40	-13	-46.40	Pass
745.179	Vertical	-57.55	-13	-44.55	Pass
1325.070	Vertical	-52.94	-13	-39.94	Pass
5558.840	Vertical	-50.75	-13	-37.75	Pass
8593.300	Vertical	-48.19	-13	-35.19	Pass

DownLink_851MHz to 869MHz

Low Channel					
Frequency (MHz)	Spurious Emission Polarization and Level		Limit (dBm)	Over Limit (dB)	Verdict
	Polarization	dBm			
96.930	Horizontal	-59.41	-13	-46.41	Pass
161.385	Horizontal	-58.55	-13	-45.55	Pass
772.429	Horizontal	-59.24	-13	-46.24	Pass
1825.520	Horizontal	-52.51	-13	-39.51	Pass
5692.150	Horizontal	-48.81	-13	-35.81	Pass
8884.750	Horizontal	-44.84	-13	-31.84	Pass
91.230	Vertical	-59.21	-13	-46.21	Pass
154.525	Vertical	-59.14	-13	-46.14	Pass
744.999	Vertical	-57.42	-13	-44.42	Pass
1815.190	Vertical	-52.98	-13	-39.98	Pass
5674.700	Vertical	-50.50	-13	-37.50	Pass
8911.900	Vertical	-46.25	-13	-33.25	Pass

Middle Channel					
Frequency (MHz)	Spurious Emission Polarization and Level		Limit (dBm)	Over Limit (dB)	Verdict
	Polarization	dBm			
90.724	Horizontal	-62.21	-13	-49.21	Pass
210.408	Horizontal	-58.77	-13	-45.77	Pass
803.642	Horizontal	-57.99	-13	-44.99	Pass
1814.130	Horizontal	-53.87	-13	-40.87	Pass
5672.800	Horizontal	-50.54	-13	-37.54	Pass
8876.890	Horizontal	-45.81	-13	-32.81	Pass
107.225	Vertical	-59.25	-13	-46.25	Pass
260.459	Vertical	-60.65	-13	-47.65	Pass
730.776	Vertical	-57.84	-13	-44.84	Pass
1849.780	Vertical	-54.25	-13	-41.25	Pass
5705.380	Vertical	-50.86	-13	-37.86	Pass
8906.370	Vertical	-45.17	-13	-32.17	Pass

High Channel					
Frequency (MHz)	Spurious Emission Polarization and Level		Limit (dBm)	Over Limit (dB)	Verdict
	Polarization	dBm			
87.190	Horizontal	-60.76	-13	-47.76	Pass
380.455	Horizontal	-59.51	-13	-46.51	Pass
757.869	Horizontal	-58.32	-13	-45.32	Pass
1840.000	Horizontal	-54.72	-13	-41.72	Pass
5706.610	Horizontal	-50.41	-13	-37.41	Pass
8887.500	Horizontal	-48.14	-13	-35.14	Pass
93.910	Vertical	-59.93	-13	-46.93	Pass
244.125	Vertical	-59.61	-13	-46.61	Pass
872.099	Vertical	-60.61	-13	-47.61	Pass
1837.740	Vertical	-53.15	-13	-40.15	Pass
5720.610	Vertical	-49.84	-13	-36.84	Pass
8922.290	Vertical	-46.25	-13	-33.25	Pass

NO.588 West Jindu Road,Songjiang District, ShanghaiChina 201612 t (86-21) 61915666 f (86-21) 61915678 www.sgsgroup.com.cn
中国・上海・松江区金都西路588号 邮编: 201612 t (86-21) 61915666 f (86-21) 61915678 sgs.china@sgs.com

7 Photographs - Test Setup

Please refer to test setup photo

8 Photographs - EUT Constructional Details

Please refer to external and internal photo

--The End of Report--