

## CFR 47 FCC PART 22 H CFR 47 FCC PART 24 E RSS-132, RSS-133

#### **TEST REPORT**

For

WisePOS Pro, 7MD

FCC ID: 2AB7X-WSP7V1 IC: 28493-WSP7V1

MODEL NUMBER: WSP74, WSP75, WSP76

REPORT NUMBER: 4791364876-1-RF-1

**ISSUE DATE: August 15, 2024** 

Prepared for

BBPOS Limited 15/F, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, HK China

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

> Tel: +86 769 22038881 Fax: +86 769 33244054 Website: www.ul.com



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## **Revision History**

Rev.	Issue Date	Revisions	Revised By
V0	Aug 30, 2024	Initial Issue	

#### Note:

- 1. This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
- 2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 22 H >< CFR 47 FCC PART 24 E>< RSS-132, RSS-133 > when <Simple Acceptance> decision rule is applied.



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## 1. ATTESTATION OF TEST RESULTS

**Applicant Information** 

Company Name: BBPOS Limited

Address: 15/F, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT,

**HK China** 

**Manufacturer Information** 

Company Name: BBPOS Limited

Address: 15/F, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT,

**HK China** 

**EUT Information** 

EUT Name: WisePOS Pro, 7MD

Model: WSP74 Brand: 7-Eleven

Sample Received Date: June 21, 2024

Sample Status: Normal Sample ID: 7342890

Date of Tested: July 5, 2024 ~ July 9, 2024

APPLICABLE STANDARDS							
STANDARD	TEST RESULTS						
CFR 47 FCC PART 22 H	PASS						
CFR 47 FCC PART 24 E	PASS						
RSS-132, RSS-133	PASS						

kelo. zhurz.

Prepared By: Checked By:

James Qin Kebo Zhang

Project Engineer Senior Project Engineer

Approved By:

Stephen Guo Operations Manager

SephenGuo



## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.26-2015, 971168 D01 Power Meas License Digital Systems v03r01, 971168 D02 Misc Rev Approv License Devices v02r01, 412172 D01 v01r01 Determining ERP and EIRP, CFR 47 FCC Part 2, Part 22 H, Part 24 E, RSS-132, RSS-133.

## 3. FACILITIES AND ACCREDITATION

	A2LA (Certificate No.: 4102.01)				
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.				
	has been assessed and proved to be in compliance with A2LA.				
	FCC (FCC Designation No.: CN1187)				
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.				
	Has been recognized to perform compliance testing on equipment subject				
	to the Commission's Delcaration of Conformity (DoC) and Certification				
	rules				
	ISED (Company No.: 21320)				
Accreditation	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.				
Certificate	has been registered and fully described in a report filed with ISED.				
	The Company Number is 21320 and the test lab Conformity Assessment				
	Body Identifier (CABID) is CN0046.				
	VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202)				
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.				
	has been assessed and proved to be in compliance with VCCI, the				
	Membership No. is 3793.				
	Facility Name:				
	Chamber D, the VCCI registration No. is G-20192 and R-20202.				
	Shielding Room B, the VCCI registration No. is C-20153 and T-20155.				

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.



## 4. CALIBRATION AND UNCERTAINTY

## 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

# 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty			
Conduction emission	3.62 dB			
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB			
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB			
D #	5.78 dB (1 GHz-18 GHz)			
Radiated Emission (Included Fundamental Emission) (1 GHz to 40 GHz)	5.23dB (18 GHz-26 GHz)			
(	5.64 dB (26 GHz-40 GHz)			
Bandwidth	1.1 %			

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



# 5. EQUIPMENT UNDER TEST

# 5.1. DESCRIPTION OF EUT

EUT Name:	WisePOS Pro, 7MD
Model:	WSP74
Series Model:	WSP75, WSP76
Model Difference:	WSP74 is the product without accessory, WSP75 is the product with hand strap, WSP76 is the product with pistol grip

# 5.2. TEST CHANNEL CONFIGURATION

Band	Mode	Low	Middle	High
CSMSEO	GRPS/EGPRS	128	190	251
GSM850	GRP3/EGPR3	824.2 MHz	836.6 MHz	848.8 MHz
CSM1000	CDDC/ECDDC	512	661	810
GSM1900	GRPS/EGPRS	1850.2 MHz	1880.0 MHz	1909.8 MHz



# 5.3. MAXIMUM AVERAGE OUTPUT POWER

GSM 850						
Part 22H/RSS-132						
ERP Limit(W)	7					
Antenna Gain (dBi)	1.5					
Mode		Frequency Range (MHz)	Conducted Average power (dBm)	ERP (W)	99% OBW (MHz)	Emission Designator
GRPS(GMSK)		824.2 ~ 848.8	26.32	0.261	0.246	246KGXW
EGPRS(8PSK)		824.2 ~ 848.8	26.72	0.286	0.251	251KG7W

GSM 1900						
Part 24/RSS-13	3					
EIRP Limit(W)	2.0					
Antenna Gain (dBi)	2.2					
Mode		Frequency Range (MHz)	Conducted Average power (dBm)	EIRP (W)	99% OBW (MHz)	Emission Designator
GRPS(GMSK)		1850.2 ~ 1909.8	21.74	0.248	0.246	246KGXW
EGPRS(8PSK)		1850.2 ~ 1909.8	24.88	0.511	0.251	251KG7W



#### 5.4. WORST-CASE CONFIGURATION AND MODE

The radiated spurious emissions measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT was investigated in three orthogonal orientations X, Y and Z. It was determined that X orientation was the worst-case orientation.

Radiated spurious emissions were investigated below 30 MHz, 30 MHz - 1 GHz and above 1 GHz. There were no emissions found on below 1GHz and above 18 GHz, the emissions between 1 GHz – 18 GHz were tested at the low, mid, high channel and the worst configuration.

For GSM850/1900, GPRS worst results are shown in test report.



# 5.5. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Band	Antenna Type	MAX Antenna Gain (dBi)
Ant0	GSM850	FPC Antenna	1.5
Ant0	GSM1900	FPC Antenna	2.2

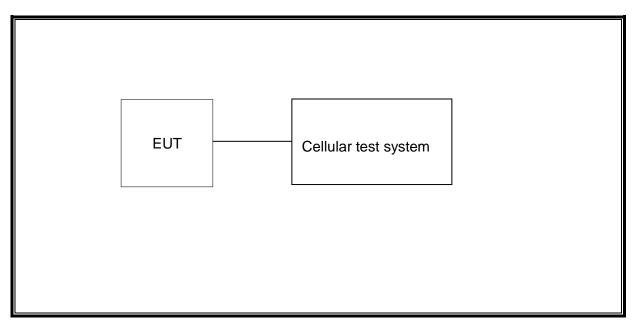
Band	Transmit and Receive Mode	Description		
GSM850 ⊠1TX, 2R		Ant0 antenna can be used as transmitting/receiving antenna, DIV antenna can be used as receiving antenna		
GSM1900	⊠1TX, 2RX	Ant0 antenna can be used as transmitting/receiving antenna, DIV antenna can be used as receiving antenna		

Note: The value of the antenna gain was declared by customer.

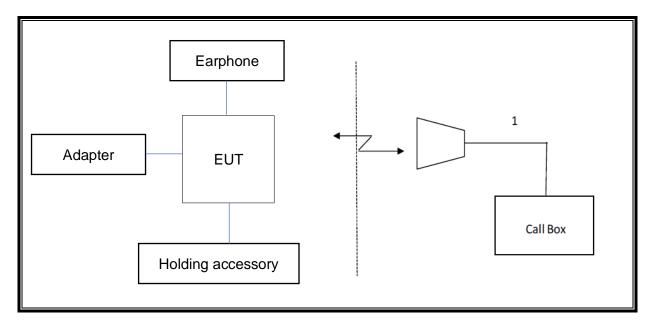


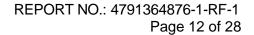
# 5.6. DESCRIPTION OF TEST SETUP

## Conducted



## Radiated







6. MEASURING INSTRUMENT AND SOFTWARE USED

<u>6. M</u>	6. MEASURING INSTRUMENT AND SOFTWARE USED								
Antenna Terminal Test									
Instrument									
Used	Equipment	Manufacturer	Mod	lel No.	Serial No.		Last Cal.	Next Cal.	
<b>V</b>	Spectrum Analyzer	R&S	FS	SV40	S422	2060001	Oct.12, 2023	Oct.11, 2024	
V	Wideband Radio Communication Tester	R&S	СМ	MW500 155523		Oct.12, 2023	Oct.11, 2024		
			So	ftware					
Used	Descript	tion	Mar	nufactu	rer	ı	Name	Version	
V	Tonsend Cellular	Test System	Т	onsen	t		RF Auto Test system	3.1.46	
		F	Radia	ated Te	est				
			Inst	rument	t				
Used	Equipment	Manufacturer	Mod	Model No. Serial No.		ial No.	Last Cal.	Next Cal.	
<b>V</b>	MXE EMI Receiver	KESIGHT	N9038A		MY56400036		Oct.12, 2023	Oct.11, 2024	
V	Hybrid Log Periodic Antenna	TDK	HLP- 3003C		130960		Jun. 28, 2024	Jun. 27, 2027	
V	Preamplifier	HP	84	8447D		A09099	Oct.12, 2023	Oct.11, 2024	
V	EMI Measurement Receiver	R&S	ESR26		101377		Oct.12, 2023	Oct.11, 2024	
<b>V</b>	Horn Antenna	TDK	HRN	V-0118	130939		April 29, 2022	April 30, 2025	
V	Horn Antenna	Schwarzbeck	ввн	A9170	856		Feb 28, 2022	Feb 28, 2025	
V	Preamplifier	TDK		\-02- 118	TRS-305- 00067		Oct.12, 2023	Oct.11, 2024	
V	Preamplifier	TDK	PA	-02-2	TRS-307- 00003		Oct.12, 2023	Oct.11, 2024	
V	Loop antenna	Schwarzbeck	15	19B	00	8000	Dec.14, 2021	Dec.13, 2024	
<b>V</b>	High Pass Filter	Wi	WHKX10- 2700- 3000- 18000- 40SS			23	Oct.12, 2023	Oct.11, 2024	
			So	ftware					
Used	Desci	ription		Manuf	acture	er	Name	Version	
V	Test Software for Radiated disturbance Fa					d EZ-EMC Ver. UL-3A1			

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## 7. ANTENNA TERMINAL TEST RESULTS

# 7.1. EFFECTIVE (ISOTROPIC) RADIATED POWER OF TRANSMITTER

#### **RULE PART(S)**

FCC: §2.1046, §22.913, §24.232

RSS-132, RSS-133

#### **LIMITS**

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50(c) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP. 27.50(d) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watts EIRP.

27.50(h) Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

#### **TEST PROCEDURE**

Refer to ANSI C63.26:2015 and KDB 971168 D01 Section 5.6

ERP/ EIRP = PMeas + GT - LC

where:

ERP or EIRP = effective or equivalent isotropically radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

PMeas = measured transmitter output power or PSD, in dBm or dBW;

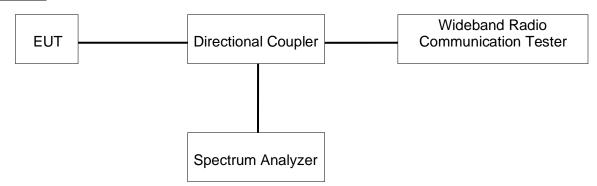
GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

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

The transmitter has a maximum output powers as follows and maximum ERP/EIRP is tabulated in section 5.3.



## **TEST SETUP**



## **TEST ENVIRONMENT**

Temperature	perature 23.8°C		63.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

## **Test Result**

GSM850		Channel	Channel	Channel
		128	190	251
	1 TimeSlot	26.22	26.30	26.32
GPRS/EGPRS	2 TimeSlots	25.99	26.07	26.06
(GMSK)	3 TimeSlots	25.28	25.33	25.27
	4 TimeSlots	24.77	24.77	24.74
	1 TimeSlot	26.72	26.60	26.59
EGPRS	2 TimeSlots	25.65	25.66	25.57
(8PSK)	3 TimeSlots	23.63	23.61	23.65
	4 TimeSlots	22.36	22.47	22.40

GSM1900		Channel	Channel	Channel
		512	661	810
	1 TimeSlot	21.74	21.54	21.31
GPRS/EGPRS	2 TimeSlots	21.01	20.77	20.59
(GMSK)	3 TimeSlots	19.76	19.49	19.32
	4 TimeSlots	19.20	18.94	18.65
	1 TimeSlot	24.88	24.31	23.81
EGPRS	2 TimeSlots	23.73	23.00	22.69
(8PSK)	3 TimeSlots	21.58	21.02	20.67
	4 TimeSlots	20.40	19.63	19.43



## 7.2. PEAK TO AVERAGE RADIO

## **LIMITS**

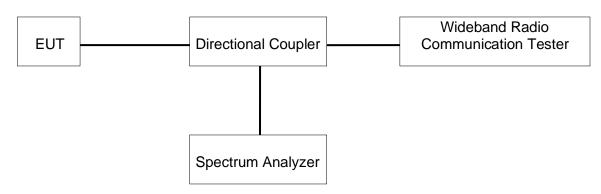
In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

#### **TEST PROCEDURE**

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01;

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The PAR was measured on the Spectrum Analyzer.

## **TEST SETUP**



#### **TEST ENVIRONMENT**

Temperature	23.8°C	Relative Humidity	63.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

#### **Test Result**

Middle was used to measure as the worst case. The results from all CCDF plots are passed with 13dB peak-to-average power ratio criteria.

Please refer to Appendix GSM.



7.3. OCCUPIED BANDWIDTH

#### **RULE PART(S)**

FCC: §2.1049 RSS-132, RSS-133

#### **LIMITS**

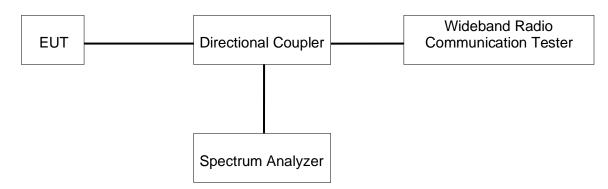
For reporting purposes only.

## **TEST PROCEDURE**

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

(Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01)

#### **TEST SETUP**



#### **TEST ENVIRONMENT**

Temperature	23.8°C	Relative Humidity	63.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

#### **Test Result**

There is no limit required and power is the same for low, middle and high channel, therefore, only middle channel was tested.

Please refer to Appendix GSM.



#### 7.4. BAND EDGE EMISSIONS

## **RULE PART(S)**

FCC §2.1051, §22.917, §24.238 RSS-132, RSS-133

#### **LIMITS**

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

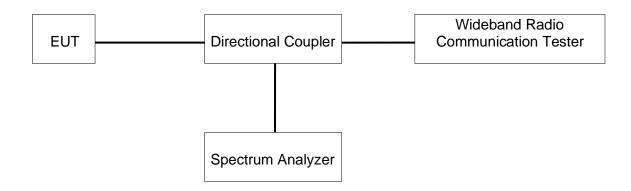
#### **TEST PROCEDURE**

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01 The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

- a) Set the RBW = 1 ~ 5 % of OBW (Typically limited to a minimum RBW of 1% of the OBW)
- b) Set VBW ≥ 3 × RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = Auto;
- e) Detector = RMS;
- f) Ensure that the number of measurement points ≥ 2\*Span/RBW;
- g) Trace mode = Average (100);



## **TEST SETUP**



#### **TEST ENVIRONMENT**

Temperature	23.8°C	Relative Humidity	63.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

## **Test Result**

Please refer to Appendix GSM.



## 7.5. SPURIOUS EMISSION AT ANTENNA TERMINAL

#### **RULE PART(S)**

FCC: §2.1051, §22.901, §22.917, §24.238

RSS-132, RSS-133

#### **LIMITS**

FCC: §22.901, §22.917, §24.238

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

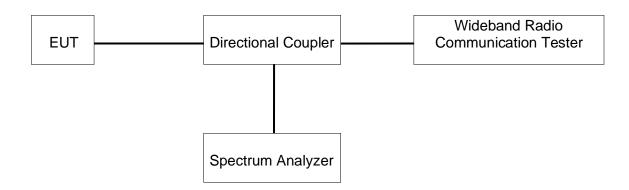
#### **TEST PROCEDURE**

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

- a) Set the RBW = 100 kHz for emission below 1GHz and 1MHz for emissions above 1GHz (Tests were performed 1 MHz [Worst case], to sweep 1 time for all frequency range)
- b) Set VBW ≥ 3 × RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = rms;
- f) Ensure that the number of measurement points = Max (40001);
- g) Trace mode = trace average for continuous emissions, max hold for pulse emissions;

#### **TEST SETUP**





## **TEST ENVIRONMENT**

Temperature	23.8°C	Relative Humidity	63.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

## **Test Result**

Please refer to Appendix GSM.

## 7.6. FREQUENCY STABILITY

## Rule Part:

FCC: §2.1055, §22.355, §24.235

RSS-132, RSS-133

## **LIMITS**

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

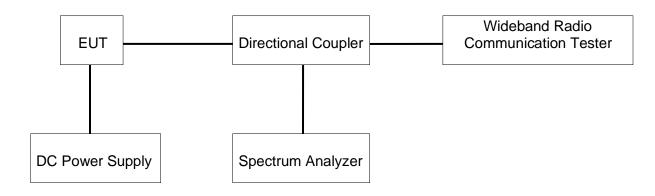
§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

## **TEST PROCEDURE**

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

<u> </u>						
	Normal Test Conditions	Extreme Test Conditions				
Relative Humidity	45 % - 75 %	/				
Atmospheric Pressure	100 kPa ~102 kPa	/				
Temperature	T <sub>N</sub> (Normal Temperature):	T <sub>L</sub> (Low Temperature): -30 °C				
	24.5 °C	T <sub>H</sub> (High Temperature): 50 °C				
Supply Voltage	V <sub>N</sub> (Normal Voltage): DC 3.8 V	V <sub>L</sub> (Low Voltage): DC 3.2 V				
	VN (Normal Voltage). DC 3.6 V	V <sub>H</sub> (High Voltage): DC 4.4 V				

#### **TEST SETUP**



## **TEST ENVIRONMENT**

Temperature	nperature 23.8°C		63.8%
Atmosphere Pressure	101kPa	Test Voltage	/



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## **Test Result**

The peak frequency error is recorded (worst-case).

Please refer to Appendix GSM.



## 8. RADIATED SPURIOUS EMISSIONS

#### LIMIT

FCC: §24.238(a), RSS-133 (GSM1900)

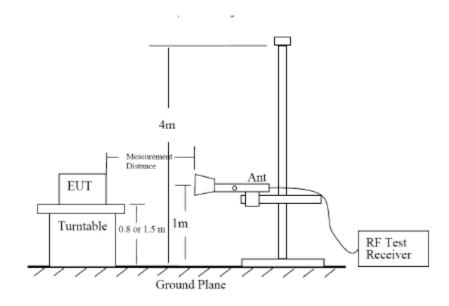
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

FCC: §22.917(a), RSS-132 (GSM850)

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

#### **TEST PROCEDURE**

Following the test configuration shown below, radiated emissions measured directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in section 5.5.1 of ANSI C63.26-2015. The field strength measurement method by using a test site validated to the requirement of ANSI C63.4 is an alternative method to the substitution measurement.





#### Radiated Power Measurement Calculation According to ANSI C63.26-2015

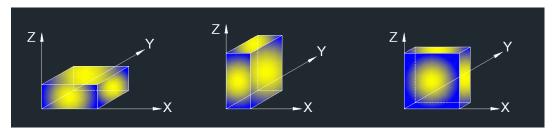
- a) E  $(dB\mu V/m)$  = Measured amplitude level  $(dB\mu V)$  + Cable Loss (dB)+ Antenna Factor (dB/m).
- b)  $\dot{E}$  (dB $\mu$ V/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m).
- c) E (dB $\mu$ V/m) = EIRP (dBm) -- 20l0g(D) + 104.8, where D is the measurement distance (in the far field region) in m.
- d) EIRP (dBm) = E (dB $\mu$ V/m) + 20l0g(D) 104.8, where D is the measurement distance (in the far field region) in m.

So, from d)

The measuring distance is at 3m, then 20\*Log(3) = 9.5424

Then, EIRP (dBm) = E (dB $\mu$ V/m) + 9.5424 - 104.8 = E (dB $\mu$ V/m) - 95.2576

X axis, Y axis, Z axis:



Note: The EUT was investigated in three orthogonal orientations X/Y/Z to on ANT0 to determine the worst-case orientation. X orientation is finally determined the worst.



## **TEST ENVIRONMENT**

Temperature	24.3°C	Relative Humidity	61%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.8 V

## **Test Result**

**GSM 850** 

**GPRS-Low Channel-Horizontal** 

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1666.000	52.00	-12.16	39.84	82.25	-42.41	peak
2	3349.000	48.24	-6.19	42.05	82.25	-40.20	peak
3	4186.000	49.33	-3.61	45.72	82.25	-36.53	peak
4	4933.000	43.81	-0.42	43.39	82.25	-38.86	peak
5	8029.000	39.86	5.68	45.54	82.25	-36.71	peak
6	9064.000	39.08	9.76	48.84	82.25	-33.41	peak

GPRS- Low Channel- Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1666.000	55.71	-12.16	43.55	82.25	-38.70	peak
2	2512.000	50.12	-8.45	41.67	82.25	-40.58	peak
3	4186.000	46.55	-3.61	42.94	82.25	-39.31	peak
4	5968.000	44.36	1.76	46.12	82.25	-36.13	peak
5	7660.000	39.60	5.68	45.28	82.25	-36.97	peak
6	9352.000	38.58	9.88	48.46	82.25	-33.79	peak

GPRS- Mid Channel- Horizontal

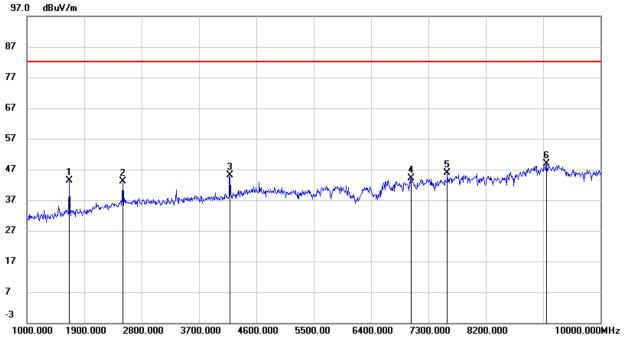
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1666.000	51.44	-12.16	39.28	82.25	-42.97	peak
2	2503.000	49.31	-8.48	40.83	82.25	-41.42	peak
3	4186.000	51.95	-3.61	48.34	82.25	-33.91	peak
4	6670.000	40.20	4.57	44.77	82.25	-37.48	peak
5	7885.000	39.56	5.66	45.22	82.25	-37.03	peak
6	9352.000	38.60	9.88	48.48	82.25	-33.77	peak

GPRS- Mid Channel- Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1666.000	52.50	-12.16	40.34	82.25	-41.91	peak
2	2503.000	51.20	-8.48	42.72	82.25	-39.53	peak
3	4186.000	47.43	-3.61	43.82	82.25	-38.43	peak
4	4996.000	43.82	-0.17	43.65	82.25	-38.60	peak
5	7291.000	38.61	5.90	44.51	82.25	-37.74	peak
6	8947.000	39.28	9.37	48.65	82.25	-33.60	peak

GPRS- High Channel- Horizontal





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1666.000	55.63	-12.16	43.47	82.25	-38.78	peak
2	2503.000	51.64	-8.48	43.16	82.25	-39.09	peak
3	4186.000	48.84	-3.61	45.23	82.25	-37.02	peak
4	7030.000	37.97	6.18	44.15	82.25	-38.10	peak
5	7597.000	40.13	5.68	45.81	82.25	-36.44	peak
6	9154.000	39.14	9.80	48.94	82.25	-33.31	peak

**GPRS- High Channel- Vertical** 

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1666.000	53.83	-12.16	41.67	82.25	-40.58	peak
2	2503.000	54.94	-8.48	46.46	82.25	-35.79	peak
3	4186.000	49.69	-3.61	46.08	82.25	-36.17	peak
4	6661.000	38.67	4.52	43.19	82.25	-39.06	peak
5	7723.000	40.11	5.67	45.78	82.25	-36.47	peak
6	8992.000	38.37	9.68	48.05	82.25	-34.20	peak

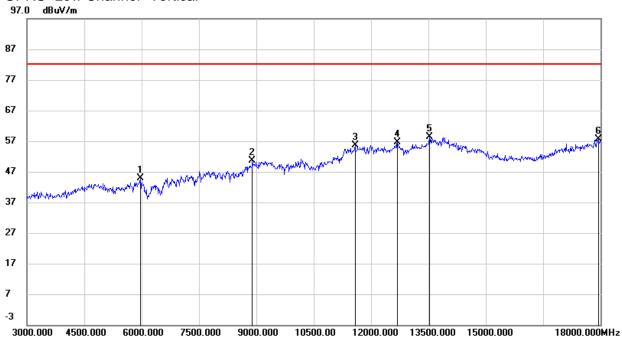


## **GSM 1900**

## GPRS- Low Channel- Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5715.000	41.13	1.46	42.59	82.25	-39.66	peak
2	7890.000	40.53	6.31	46.84	82.25	-35.41	peak
3	9135.000	39.42	10.55	49.97	82.25	-32.28	peak
4	11520.000	38.29	16.65	54.94	82.25	-27.31	peak
5	13995.000	35.18	21.95	57.13	82.25	-25.12	peak
6	17985.000	30.75	25.60	56.35	82.25	-25.90	peak

#### **GPRS-Low Channel-Vertical**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5970.000	42.67	2.17	44.84	82.25	-37.41	peak
2	8895.000	40.90	9.71	50.61	82.25	-31.64	peak
3	11580.000	38.83	16.82	55.65	82.25	-26.60	peak
4	12690.000	38.52	18.02	56.54	82.25	-25.71	peak
5	13530.000	37.39	20.96	58.35	82.25	-23.90	peak
6	17940.000	32.33	25.34	57.67	82.25	-24.58	peak

#### **GPRS- Mid Channel- Horizontal**

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4950.000	42.68	0.26	42.94	82.25	-39.31	peak
2	7305.000	39.70	6.47	46.17	82.25	-36.08	peak
3	9120.000	40.15	10.53	50.68	82.25	-31.57	peak
4	11295.000	38.76	15.85	54.61	82.25	-27.64	peak
5	13605.000	35.10	21.12	56.22	82.25	-26.03	peak
6	17865.000	30.53	24.89	55.42	82.25	-26.83	peak

## GPRS- Mid Channel- Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	



1	5715.000	42.37	1.46	43.83	82.25	-38.42	peak
2	7290.000	41.32	6.48	47.80	82.25	-34.45	peak
3	9135.000	39.88	10.55	50.43	82.25	-31.82	peak
4	11715.000	40.28	17.19	57.47	82.25	-24.78	peak
5	13620.000	37.03	21.15	58.18	82.25	-24.07	peak
6	17940.000	31.26	25.34	56.60	82.25	-25.65	peak

GPRS- High Channel- Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5685.000	41.55	1.37	42.92	82.25	-39.33	peak
2	7680.000	39.34	6.32	45.66	82.25	-36.59	peak
3	9255.000	38.89	10.59	49.48	82.25	-32.77	peak
4	11835.000	37.86	17.51	55.37	82.25	-26.88	peak
5	13605.000	36.02	21.12	57.14	82.25	-25.11	peak
6	17865.000	30.81	24.89	55.70	82.25	-26.55	peak

GPRS- High Channel- Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4830.000	43.25	-0.20	43.05	82.25	-39.20	peak
2	7515.000	42.82	6.33	49.15	82.25	-33.10	peak
3	9060.000	40.41	10.51	50.92	82.25	-31.33	peak
4	11520.000	37.45	16.65	54.10	82.25	-28.15	peak
5	13875.000	34.67	21.70	56.37	82.25	-25.88	peak
6	17955.000	30.61	25.42	56.03	82.25	-26.22	peak

**END OF REPORT**