



RF TEST REPORT

Report No.: SHATBL2607033W05

Applicant : Shenzhen DOOGEE Hengtong Technology CO.,LTD

Product Name : Smart Phone

Brand Name : DOOGEE

Model Name : Blade30 Pro

Series Model : Blade30、Blade30 Ultra、Blade30 Turbo、Blade30 Plus、
Blade30 Max、Blade30 Play、Blade30 Power、Blade30
Energy、Blade30 SE、Blade30 Lite、Blade30 X、Blade30 Pro
Max、Blade30 Pro Energy、Blade30 Ultra Energy

FCC ID : 2AX4Y-BLADE30PRO

Test Standard : 47 CFR Part 2, Part 24E, Part 22H

Date of Sample Arrival : Jul.21, 2026

Date of Test : Jul.21, 2026~Aug.05, 2026

Issue Date : Aug.05, 2026

Report Prepared by :

Emily

(Emily)



Report Approved by :

Guozheng Li

(Guozheng Li)

Authorized Signatory :

Terry Yang

(Terry Yang)

"Shanghai ATBL Technology Co., Ltd." hereby certifies that according to actual testing conditions. The test results or observations are provided in accordance with measured value, without taking risks caused by uncertainty into account. Without explicit stipulation in special agreements, standards or regulations, ATBL shall not assume any responsibility. The test results or observations are applicable only to tested sample. Client shall be responsible for representativeness of the sample and authenticity of the material. This report will be void without authorized signature or special seal for testing report. Do not copied without authorization.

Tel:+86(0)21-51298625

Web:www.atbl-lab.com

Email:atbl@atbl-lab.com

TABLE OF CONTENTS

REVISION HISTORY	3
DECLARATION OF REPORT	4
1. GENERAL DESCRIPTION	5
1.1. Applicant	5
1.2. Manufacturer	5
1.3. Factory	5
1.4. General Information of EUT	6
1.5. Environmental conditions	7
1.6. Modification of EUT	7
1.7. Laboratory Information	7
1.8. Applicable Standards	7
2. TEST CONFIGURATION OF EQUIPMENT UNDER TEST	8
2.1. Test Mode	8
2.2. Summary of Test Results	8
2.3. Connection Diagram of Test System	9
2.4. Support Unit used in test configuration and system	9
2.5. Equipment List	10
2.6. Measurement Uncertainty	12
3. TEST RESULT	13
3.1. Conducted Output Power	13
3.2. Effective Radiated Power and Effective Isotropic Radiated Power	14
3.3. Peak-to-Average Ratio	15
3.4. Occupied Bandwidth	16
3.5. Conducted Band Edge	18
3.6. Conducted Spurious Emission	19
3.7. Frequency Stability	20
3.8. Radiated Spurious Emission	21
4. TEST SETUP PHOTOGRAPHS	23
5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	23

REVISION HISTORY

Rev.	Issue Date	Report No.	Effect Page	Contents
00	Aug.05, 2026	SHATBL2607033W05	ALL	Initial Release

DECLARATION OF REPORT

- 1.The device has been tested by ATBL, and the test results show that the equipment under test (EUT) is in compliance with the requirements of 47 CFR Part 2, Part 24E, Part 22H. And it is applicable only to the tested sample identified in the report.
- 2.This report shall not be reproduced except in full, without the written approval of ATBL, this document only be altered or revised by ATBL, personal only, and shall be noted in the revision of the document.
- 3.The general information of EUT in this report is provided by the customer or manufacture, ATBL is only responsible for the test data but not for the information provided by the customer or manufacture.
- 4.The results in this report is only apply to the sample as tested under conditions. The customer or manufacturer is responsible for ensuring that the additional production units of this model have the same electrical and mechanical components.

1. GENERAL DESCRIPTION

1.1. Applicant

Name : Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address : B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua
New District Shenzhen, China

1.2. Manufacturer

Name : Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address : B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua
New District Shenzhen, China

1.3. Factory

Name : Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address : B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua
New District Shenzhen, China

1.4. General Information of EUT

Test Sample	2607044007	
Product Name:	Smart Phone	
Brand Name	DOOGEE	
Model Name	Blade30 Pro	
Series Model	Blade30、Blade30 Ultra、Blade30 Turbo、Blade30 Plus、Blade30 Max、Blade30 Play、Blade30 Power、Blade30 Energy、Blade30 SE、Blade30 Lite、Blade30 X、Blade30 Pro Max、Blade30 Pro Energy、Blade30 Ultra Energy	
Model Difference	They differ only in appearance color, memory size, and model naming; all other aspects are identical.	
Hardware Version:	SC7301U_MB_V1.0.0_20260206	
Software Version:	DOOGEE-Blade30 Pro-EEA-Android16.0-20260814	
Support Networks:	GSM, GPRS, EDGE	
Frequency Bands:	☒ GPRS 850 ☒ PCS1900 (U.S. Bands) ☐ GSM 900 ☐ DCS 1800 (Non-U.S. Bands)	
Type of Modulation:	GMSK,8PSK Modulation For GSM/GPRS/EDGE	
Frequency Range:	GSM/GPRS/EDGE 850: 824.2MHz-848.8 MHz	
	GSM/GPRS/EDGE 1900:1850.2MHz-1909.8 MHz	
Emission Designator:	GSM/GPRS 850:	243KGXW
	EDGE 850:	243KG7W
	GSM/GPRS 1900:	243KGXW
	EDGE 1900:	243KG7W
Antenna Type:	PIFA Antenna	
Antenna gain:	GSM850:-5.16	PCS1900:-2.23
Power supply	DC 3.83V by Battery	
Adapter	Input:AC100-240V 50/60Hz 0.6A Max Output: 5.0V= 3.0A 15.0W 9.0V= 2.0A 18.0W 12.0V= 1.5.0A 18.0W	
Battery	DC 3.83V 8000mAh	
SIM Card Description:	Support dual SIM cards	
Connecting I/O Port(s)	Refer to the remark below.	

Remark:

The above information of EUT was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.5. Environmental conditions

Temperature	Normal Temperature(NT):	25°C
	High Temperature(HT):	55°C
	Low Temperature(LT):	-20°C
Voltage	Normal Voltage(NV):	3.83V
	High Voltage(HV):	4.21V
	Low Voltage(LV):	3.45V
Other	Relative Humidity	55 %
	Air Pressure	101 kPa

1.6. Modification of EUT

No modifications are made to the EUT during all test items.

1.7. Laboratory Information

Company Name	:	Shanghai ATBL Technology Co., Ltd.
Address	:	5-6/F., Unit 1, No 8, Free Trade One Life Science No. 160, Basheng Road, Pudong New District, Shanghai, China
Telephone	:	+86(0)21-51298625
FCC-Registration Number	:	485917
Designation Number	:	CN1306
A2LA Number	:	6184.01
CNAS Number	:	CNAS L14531
ISED Designation Number	:	27371
CAB identifier	:	CN0116

1.8. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

47 CFR Part 2, 22(H), 24(E)

ANSI C63.26-2015

FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

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

2. TEST CONFIGURATION OF EQUIPMENT UNDER TEST

2.1. Test Mode

Bands	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS// EDGE 850	TX (824 MHz ~ 849 MHz)	Channel 128	Channel 190	Channel 251
		824.2 MHz	836.6 MHz	848.8 MHz

Bands	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS/ EDGE1900	TX (1850 MHz-1910 MHz)	Channel 512	Channel 661	Channel 810
		1850.2 MHz	1880.0 MHz	1909.8 MHz

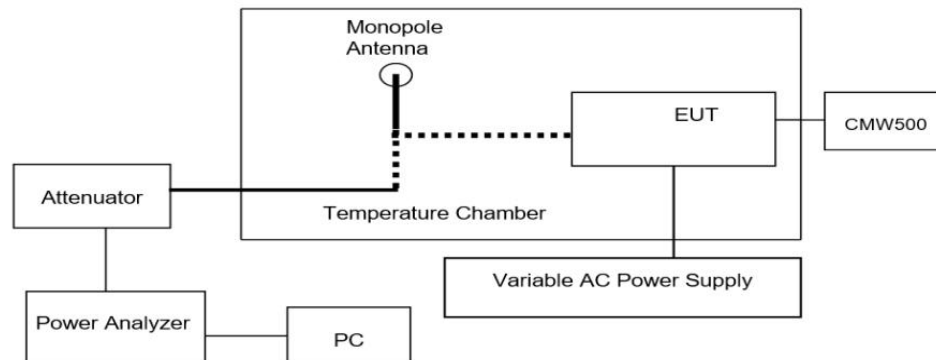
Pre-scan all bandwidth and RB, find worse case mode are chosen to the report, the worse mode applicability and tested channel detail as below:

Band	Radiatd	Conducted
GSM/GPRS/ EDGE850/1900	GSM (GMSK, 1Tx-slot) Link GPRS (GMSK, 1Tx-slot) Link EDGE (8PSK, 1Tx-slot) Link	GSM (GMSK, 1Tx-slot) Link GPRS (GMSK, 1Tx-slot) Link EDGE (8PSK, 1Tx-slot) Link

2.2. Summary of Test Results

Item	Test Description	FCC Rules	Result
1	Occupied Bandwidth	§2.1049	Pass
2	Band Edge / Spurious and Harmonic Emissions at Antenna Terminal	§2.1051, §22.917(a), §24.238(a)	Pass
5	Conducted Output Power	§2.1046	Pass
6	Frequency stability / variation of ambient temperature	§2.1055, § 22.355, §24.235	Pass
7	Peak- to- Average Ratio	§24.232(d)	Pass
8	Effective Radiated Power	§22.913(a)(5)	Pass
9	Equivalent Isotropic Radiated Power	§24.232(c)	Pass
10	Radiated Spurious and Harmonic Emissions	§2.1053, §22.917(a), §24.238(a),	Pass

2.3. Connection Diagram of Test System



Remarks:

The Signal Analyzer could be connected to a Monopole antenna or directly connected to the EUT, if the EUT has already employing an antenna connector.

2.4. Support Unit used in test configuration and system

NO.	Unit	Brand	Model	Description
1	--	--	--	--
2	--	--	--	--

2.5. Equipment List

2.5.1. For Conducted Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	Calibrated due until	Cal. Interval
Power sensor-Card reader	Cesheng	smu 1003	16I00054SN016	2026.06.27	2027.06.26	1 year
Adjustable Attenuator	Agilent	8494B	MY42144015	2026.06.27	2027.06.26	1 year
Adjustable Attenuator	Agilent	8496B	MY42143776	2026.06.27	2027.06.26	1 year
Environmental Test Chamber	KSON	THS-B6C-150	9159K	2026.03.31	2027.03.30	1 year
Signal analyzer	Keysight	N9020A	MY50510136	2026.06.27	2027.06.26	1 year
Vector signal generator	Agilent	N5182A	MY48180764	2026.06.27	2027.06.26	1 year
Analog signal generator	Keysight	N5182B	MY57300196	2026.06.27	2027.06.26	1 year
Wideband radio communication tester	R&S	CMW500	101331	2026.06.27	2027.06.26	1 year
Switch Box	Cesheng	smu 1003	WCS20221215	2026.03.31	2027.03.30	1 year
Thermometer	DeLi	N/A	N/A	2026.06.30	2027.06.29	1 year
Test Software	Cesheng	WCS-WC N	N/A	N/A	N/A	N/A

2.5.2. For Radiated Spurious Emission

Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	Calibrated due until	Cal. Interval
Signal analyzer	Agilent	N9020A	MY50200811	2026.03.31	2027.03.30	1 year
Amplifier	JPT	JPA0118-5 5-303A	1910001800055 000	2026.03.31	2027.03.30	1 year
Amplifier	JPT	JPA-10M1 G32	2101010003500 1	2026.03.31	2027.03.30	1 year
Antenna/Turn table Controller	Brilliant	N/A	N/A	N/A	N/A	N/A
Loop Antenna(9kHz-30MHz)	Daze	ZN30900C	20077	2026.05.20	2027.05.19	1 year
Bilog Antenna	SCHWAR ZBECK	VULB 9168	01174	2026.05.20	2027.05.19	1 year
Broad-band Horn Antenna	SCHWAR ZBECK	BBHA 9120D	02334	2026.05.20	2027.05.19	1 year
Horn Antenna	COM-PO WER	AH-1840	10100008	2026.06.26	2027.06.25	1 year
Thermometer	DeLi	N/A	N/A	2026.06.30	2027.06.29	1 year
Test Software	FALA	EMC-RI(V er.4A2)	N/A	N/A	N/A	N/A
Wideband radio communication tester	R&S	CMW500	101331	2026.06.27	2027.06.26	1 year
Spectrum analyzer	R&S	FSV40-N	101761	2026.06.27	2027.06.26	1 year
Vector signal generator	Keysight	N5182B	MY50200811	2026.06.27	2027.06.26	1 year
Alternative Horn Antenna	Schwarzbeck	BBHA 9120D	2802	2026.06.27	2027.06.26	1 year
Filter Box	XingBo	EZSVFU1 &EZSVFU 2	N/A	2026.06.27	2027.06.26	1 year

2.5.3. For AC Power-Line Conducted Emission

Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	Calibrated due until	Cal. Interval
EMI Test Receiver	R&S	ESPI	100679	2026.03.31	2027.03.30	1 year
LISN	R&S	ENV216	101300	2026.03.31	2027.03.30	1 year
LISN	R&S	ENV216	100333	2026.03.31	2027.03.30	1 year
CE Cable	Chuangce xing	2M	EMI0014	N/A	N/A	N/A
Temperature & Humidity	Deli	Deli	EMI0015	2026.06.30	2027.06.29	1 year
Testing Software	FALA	EZ-EMC(Ver. EMC-CON 3A1.1)	EMI0044	N/A	N/A	N/A
Wideband radio communication tester	R&S	CMW500	101331	2026.06.28	2027.06.27	1 year

2.6. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Occupied Channel Bandwidth	$\pm 4\%$
2	Transmitter power conducted	$\pm 0.56 \text{ dB}$
3	Transmitter power Radiated	$\pm 2.20 \text{ dB}$
4	Conducted spurious emission	$\pm 1.60 \text{ dB}$
5	Radiated spurious emission	$\pm 2.20 \text{ dB}$
6	Temperature	$\pm 0.6^\circ\text{C}$
7	Humidity	$\pm 2\%$
8	DC and low frequency voltages	$\pm 0.05\%$
9	Radio frequency error	$\pm 3 \times 10^{-8}$

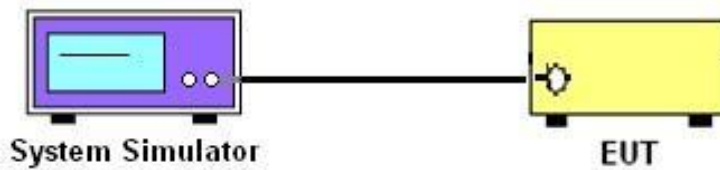
3. TEST RESULT

3.1. Conducted Output Power

3.1.1. Limit

No specific conduct power requirements in part 2.1046.

3.1.2. Test Setup



3.1.3. Test Procedures

- 1.After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value.
- 2.Then the test data can be read at the tester screen. the loss between RF output port of the EUT and the input port of the tester will be taken into consideration.
- 3.The measurement will be conducted at three channels (Low, Middle and High channels)

3.1.4. Test Result

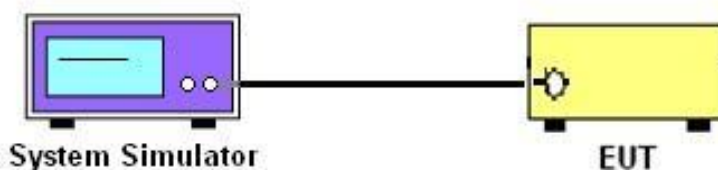
Please refer to the Appendix A_Conduction Test data for GSM

3.2. Effective Radiated Power and Effective Isotropic Radiated Power

3.2.1. Test Limit

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).

3.2.2. Test Setup



3.2.3. Test Procedures

1.The measurements procedures specified in KDB 971168 D01 -Section 5.6 were applied.

Test Settings as follows:

Subclause 5.2.5.5 of ANSI C63.26-2015 is applicable, along with the following provisions.

For personal/portable radios utilizing an integral antenna, the factor LC is typically negligible.

However, in a fixed station transmit system that utilizes a long cable run between the transmitter and the transmitting antenna, this factor can be significant. The minimum cable loss should be used in this equation.

2.The relevant equation for determining the ERP or EIRP from the conducted RF output power measured is:

$$\text{EIRP} = P_{\text{Meas}} - \text{LC} + \text{GT}; \quad \text{ERP} = \text{EIRP} - 2.15$$

Where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm).

P_{Meas} = measured transmitter output power or PSD, in dBW or dBm.

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

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

3.2.4. Test Result

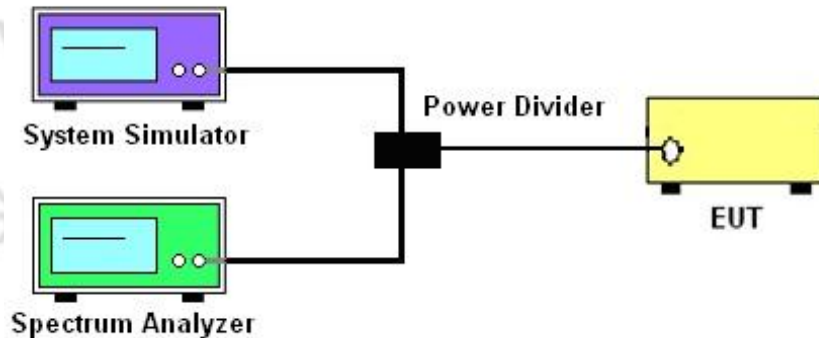
Please refer to the Appendix A_Conduction Test data for GSM

3.3. Peak-to-Average Ratio

3.3.1. Limit

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.3.2. Test Setup



3.3.3. Test Procedures

1. The measurements procedures specified in KDB 971168 D01 -Section 5.7.1 were applied.

Test Settings as follows:

2. The signal analyzer's CCDF measurement profile is enabled .
3. Frequency = carrier center frequency .
4. Measurement BW > Emission bandwidth of signal
5. The signal analyzer was set to collect one million samples to generate the CCDF curve.
6. The measurement interval was set depending on the type of signal analyzed.

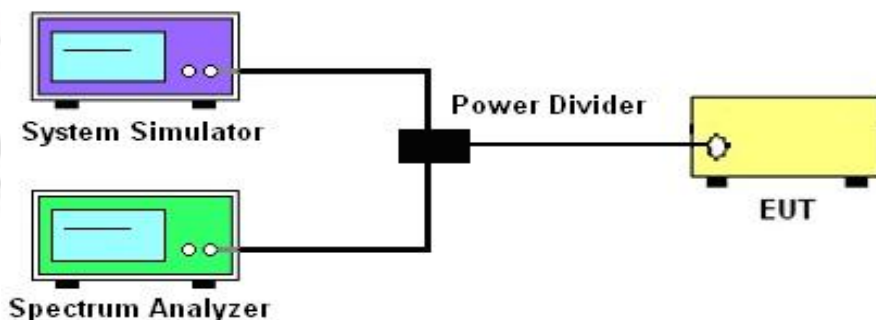
For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power.

3.3.4. Test Result

Please refer to the Appendix A_Conduction Test data for GSM

3.4. Occupied Bandwidth

3.4.1. Test Setup



3.4.2. Description

- 1.The 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.
- 2.The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.4.3. Test Procedures

- 1.The measurements procedures specified in KDB 971168 D01 -Section 4.2 were applied. The testing follows ANSI C63.26 Section 5.4. Settings as follows:
- 2.The EUT was connected to spectrum analyzer and system simulator via a power divider.
- 3.The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
- 4.The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- 5.Set the detection mode to peak, and the trace mode to max hold.
- 6.Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.(this is the reference value)
- 7.Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
- 8.Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.

9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.4.4. Test Result

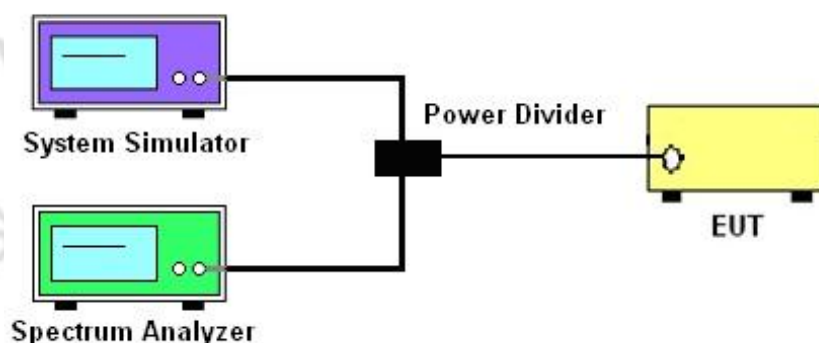
Please refer to the Appendix A_Conduction Test data for GSM

3.5. Conducted Band Edge

3.5.1. Limit

The minimum permissible attenuation level of any spurious emission is $43 + \log_{10}(P)$ (P [Watts]), where P is the transmitter power in Watts.

3.5.2. Test Setup



3.5.3. Test Procedures

- 1.The measurements procedures specified in KDB 971168 D01 -Section 6.0 were applied. The testing follows ANSI C63.26 Section 5.7. Settings as follows:
- 2.The EUT was connected to spectrum analyzer and system simulator via a power divider.
- 3.The band edges of low and high channels for the highest RF powers were measured.
- 4.Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
- 5.Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used and the measured power was integrated over the full required measurement bandwidth of 1 MHz.
- 6.Set spectrum analyzer with RMS detector.
- 7.The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 8.Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}$$

- 9.When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.5.4. Test Result

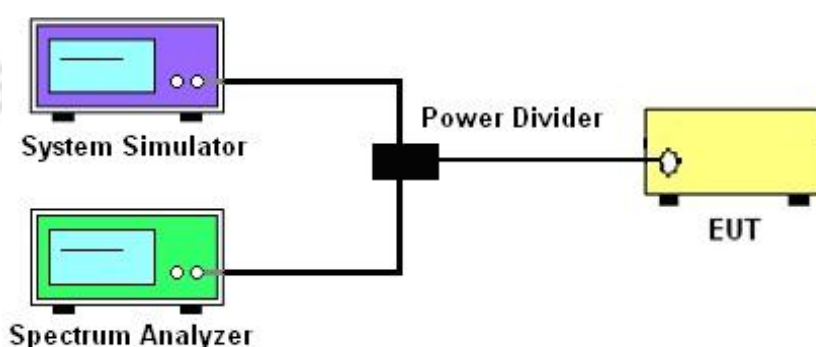
Please refer to the Appendix A_Conduction Test data for GSM

3.6. Conducted Spurious Emission

3.6.1. Limit

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

3.6.2. Test Setup



3.6.3. Test Procedures

- 1.The measurements procedures specified in KDB 971168 D01 -Section 6.0 were applied. The testing follows ANSI C63.26 Section 5.7. Settings as follows:
- 2.The EUT was connected to spectrum analyzer and system simulator via a power divider.
- 3.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.
- 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.Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
- 7.Set spectrum analyzer with RMS detector.
- 8.Taking the record of maximum spurious emission.
- 9.The RF fundamental frequency should be excluded against the limit line in the operating frequency band
- 10The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)} = [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$

3.6.4. Test Result

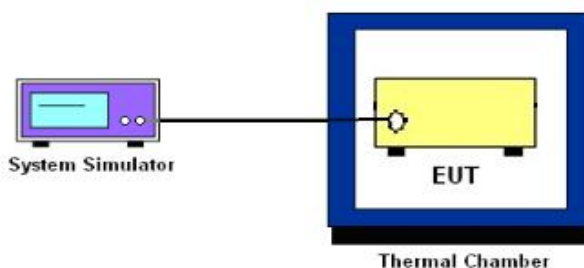
Please refer to the Appendix A_Conduction Test data for GSM

3.7. Frequency Stability

3.7.1. Limit

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 $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.7.2. Test Setup



3.7.3. Test Procedures

The testing follows ANSI C63.26 section 5.6 as follows:

Frequency Stability Under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply /DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

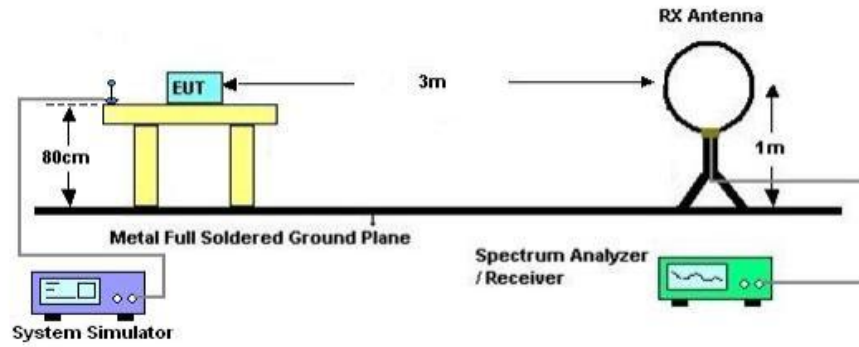
3.7.4. Test Result

Please refer to the Appendix A_Conduction Test data for GSM

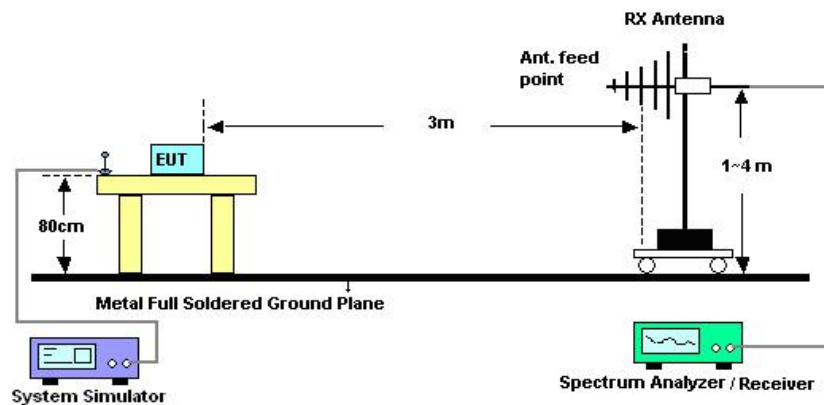
3.8. Radiated Spurious Emission

3.8.1. Test Setup

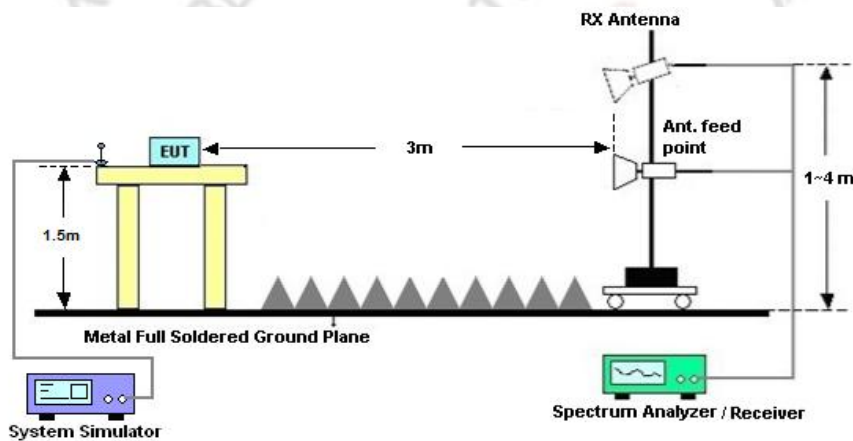
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.8.2. Description of Radiated Spurious Emission

- 1.The radiated spurious emission was measured by substitution method according to ANSI C63.26.
- 2.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.
- 3.The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.3. Test Procedures

- 1.The testing follows ANSI C63.26 Section 5.5
- 2.The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
- 3.The EUT was set 3 meters from the receiving antenna 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 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
- 6.During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
- 7.Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
- 8.A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- 9.Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- 10.EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
- 11.ERP (dBm) = EIRP - 2.15
- 12.The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [43 + 10\log(P)]$ (dB)
= $[30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
= -13dBm.

3.8.4. Test Result of Radiated Spurious Emission

- 1).The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.
- 2).The low frequency, which started from 18GHz above, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Test Results

Radiated spurious emissions - MS allocated a channel

Please refer to the Appendix B-Radiated Spurious Emission for GSM.

4. TEST SETUP PHOTOGRAPHS

Please refer to the Appendix C.

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Please refer to the Appendix D.

*****END OF THE REPORT*****