

TEST REPORT

65, Sir Suwon-si,	fins KCTL Co.,Ltd. won-ro, Yeongtong-gu, Gyeonggi-do, 16677, Korea 8-1021 FAX: 82-505-299-8311 www.kctl.co.kr	Repor KR23-S Page (1)	RF0137	💸 eurofins				
1. Client								
∘ Name	: Samsung Electr	onics Co., L	td.					
 Addres 	s : 129, Samsung-ro	, Yeongtong	gu, Suwon	-si, Gyeonggi-do, 16677,				
	Rep. of Korea							
 Date of 	Receipt : 2023-03-23							
2. Use of Re	port : Certification							
3. Name of F	Product / Model : Sn	hart we <mark>arab</mark> l	e / SM-R94	40				
4. Manufactu	u <mark>rer / Country of Origin</mark> : Sa	msung <mark>Elec</mark>	tronics Co.	, Ltd. / Vietnam				
5. FCC ID	: A3LSMR940							
6. IC Certific	ate No. : 649E-SMR940							
7. Date of Te	st : 2023-04-04 to 2	023-05-17						
8. Location of	of Test : ■ Permanent Testi							
0. To a forma the				n-si, Gyeonggi-do, 16677, Korea)				
9. Test meth	od used : FCC Part 15 Su							
	RSS-247 Issue							
10. Test Res	RSS-Gen Issue ult : Refer to the test			t				
	Tested by	-	echnical M	anager				
Affirmation								
	Name : Kwonse Kim (S	ignature) I	lame : Hari	m Lee (Signatury)				
				10				
				2023-05-19				
	Eurofins	KCTL C	o.,Ltd.					
ntee the who	As a test result of the sample which was submitted from the client, this report does not guara ntee the whole product quality. This test report should not be used and copied without a written agreement by Eurofins KCTL Co.,Ltd.							

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REPORT REVISION HISTORY

Date	Revision	Page No
2023-05-19	Originally issued	-

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General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

Statement not required by the standard or client used for type testing

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1. General information

Client	: Samsung Electronics Co., Ltd.
Address	: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677,
	Rep. of Korea
Manufacturer	: Samsung Electronics Co., Ltd.
Address	: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677,
	Rep. of Korea
Factory 1	: AG TECH CO.,LTD
Address	: Lot G3, Que Vo Industrial Park(Expanded Area), Nam son Ward, Bac Ninh Province,
	Vietnam
Factory 2	: ALMUS VINA
Address	: Lot CN07A, Phu Ha Industrial Park, Ha Thach Commune, Phu Tho Town, Phu Tho
	Province, Vietnam
Laboratory	: Eurofins KCTL Co.,Ltd.
Address	: 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
Accreditations	: FCC Site Designation No: KR0040, FCC Site Registration No: 687132
	VCCI Registration No. : R-20080, G-20078, C-20059, T-20056
	CAB Identifier: KR0040
	ISED Number: 8035A
	KOLAS No.: KT231

2. Device information

Equipment under test	:	Smart wearable
Model	:	SM-R940
Modulation technique	:	GFSK, π/4DQPSK, 8DPSK [Bluetooth(<mark>BDR/ED</mark> R)]
Number of channels	:	79 ch
Power source	:	DC 3.88 V
Antenna specification	:	LDS Antenna
Antenna gain	:	-7.40 dBi
Frequency range	:	2 402 Młz ~ 2 480 Młz
Software version	:	R940.001
Hardware version	:	REV1.0
Test device serial No.	:	Conducted : R3AW300C9VP
		Radiated : R3AW403LVLW, R3AW403LW2P
Operation temperature	:	-20 °C ~50 °C

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2.1. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source	FCC ID & IC
Wireless charger	Samsung Electronics Co., Ltd.	EP-OR900	-	5.0 V, 2.0 A	FCC ID : A3LEPOR900 IC : 649E-EPOR900

2.2. Frequency/channel operations

This device contains the following capabilities: WLAN (11a/b/g/n), Bluetooth (BDR/EDR/BLE)

Ch.	Frequency (Mb)			
00	2 402			
· .				
39	2 441			
:				
78	<mark>2 4</mark> 80			

Table 2.2.1. Bluetoot	h(BDR/EDR) mode
-----------------------	-----------------

15.247 Requirements for Bluetooth transmitter:

- This Bluetooth module has been tested by a Bluetooth Qualification Lab, and we confirm the following:
 - 1) This system is hopping pseudo-randomly.
 - 2) Each frequency is used equally on the average by each transmitter.
 - 3) The receiver input bandwidths that match the hopping channel bandwidths of their corresponding transmitters
 - 4) The receiver shifts frequencies in synchronization with the transmitted signals.
- 15.247(g): The system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this Section 15.247 should the transmitter be presented with a continuous data (or information) stream.
- 15.247(h): The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

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3. Antenna requirement

Requirement of FCC part section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Requirement of RSS-Gen Section 6.8:

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

- The transmitter has permanently attached LDS Antenna (Internal antenna) on board.

- The EUT Complies with the requirement of §15.203, §15.247.

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4. Introduction

This report referenced from the FCC ID : A3LSMR945 and IC : 649E-SMR945.

Based on their similarity, the FCC Part 15C and RSS-247 (equipment class: DSS) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01.

And the applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID and IC.

4.1 Difference

The FCC ID : A3LSMR940 and IC : 649E-SMR940 share the same enclosure and circuit board as FCC ID : A3LSMR945 and IC : 649E-SMR945. The WIFI/BT/BLE antenna and surrounding circuitry and layout are identical between these two units.

As for all bands, they have been verified and the parent model test results under FCC ID : A3LSMR945 and IC : 649E-SMR945 shall remain representative of FCC ID : A3LSMR940 and IC : 649E-SMR940.

Note. The difference between the parent and variant is that the RF circuit for WCDMA/LTE bands in the parent model SM-R945U is removed from the variant model SM-R940.

4.2 Spot check verification data (Band-edge & Spurious emission)

Test band	Test Test item mode		Channel	Measured frequency	SM-R945U (dBµV)		SM-R940 (dB _µ V)		Deviation (dB)	
Danu	item	mode		(MHz)	Avg.	Peak	Avg.	Peak	Avg.	Peak
	Band edge	DH-1	78	2 483.5 ~ 2 500	29.14	53.43	28.31	51.84	-0.83	-1.59
BT	RSE		0	7 260.33	-	48.28	-	47.31	-	-0.97
BI	Band edge	3DH-1	78	2 483.5 ~ 2 500	-	46.85	-	49.55	-	2.70
	RSE	501-1	39	7 258.40	-	47.88	-	47.08	-	-0.80

Notes:

1. FCC ID : A3LSMR940 and IC : 649E-SMR940 have been verified the performance as for Bluetooth identical with the FCC ID : A3LSMR945 and IC : 649E-SMR945.

2. Comparison of two models, the variant model emissions are less than 3 dB higher than the parent model, and all test results are under FCC/ISED technical limits.

3. The test procedure(s) in this report were performed in accordance as following.

• KDB 484596 D01 v01

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4.3 Reference Detail

Reference application that contains the reused reference data in the individual test reports.

Equipment Class	Reference FCC ID & IC	Application Type	Reference Test report Number	Exhibit Type	Variant Test Report Number	Data Re-used
DTO	A3LSMR945	Original	KR23-SRF0131 (802.11b/g/n)	Test report	KR23-SRF0139	All
DTS	649E-SMR945	Original	KR23-SRF0130 (Bluetooth LE)	Test report	KR23-SRF0138	All
DSS	A3LSMR945 649E-SMR945	Original	KR23-SRF0129 (Bluetooth)	Test report	KR23-SRF0137	All
NII	A3LSMR945 649E-SMR945	Original	KR23-SRF0132 (802.11a/n)	Test report	KR23-SRF0140	All



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5. Summary of tests

FCC Part section(s)	IC Rule reference	Parameter	Test Condition	Test results
15.205(a),	RSS-Gen	Spurious emission	Dedicted	Pass
15.209(a)	(8.9), (8.10)	Band-edge, restricted band	Radiated	Pass

Notes:

- 1. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2. According to exploratory test no any obvious emission were detected from 9 kl/z to 30 Ml/z. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
- 3. The maximum production power and tolerance are not impacted by the change. So only spotcheck test was done against the worst case from the original model.

Band	Strop	With charger	Without charger			
Ballu	Strap	X-axis	X-axis	Y-axis	Z-axis	
Blueteeth	With strap	-	-	-	-	
Bluetooth	Without strap	-	-	0	-	

- 4. The worst-case data rate were: BDR Packet type DH-1
 - EDR Packet type 3DH-1
- 5. The test procedure(s) in this report were performed in accordance as following.
 - ANSI C63.10-2013
 - KDB 558074 D01 v05r02

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6. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.

All measurement uncertainty values are shown with a coverage factor of k=2 to indicated a 95 % level of confidence. The measurement data shown herein meets of exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded uncertainty (±)			
	9 kHz ~ 30 MHz:	2.3 dB		
Radiated spurious emissions	30 MHz ~ 1 000 MHz	2.5 dB		
Radiated spurious emissions	1 000 MHz ~ 18 000 MHz	4.7 dB		
	Above 18 000 Mb	4.8 dB		



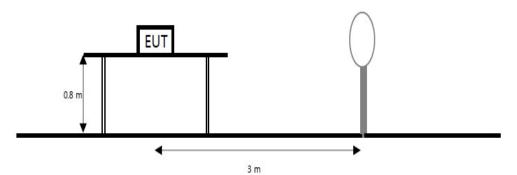
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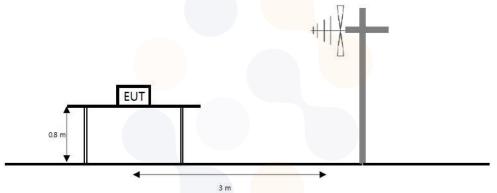
7 Test results7.1. Radiated spurious emissions & band edge

<u>Test setup</u>

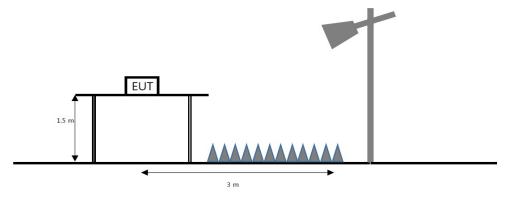
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz Emissions



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 Mz to 1 Gz emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 $\mathbb{G}_{\mathbb{Z}}$ to the tenth harmonic of the highest fundamental frequency or to 40 $\mathbb{G}_{\mathbb{Z}}$ emissions, whichever is lower.



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<u>Limit</u>

FCC

According to section 15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (Mb)	Field strength (μ V/m)	Measurement distance (m)
0.009 - 0.490	2 400/F(kHz)	300
0.490 - 1.705	24 000/F(kHz)	30
1.705 - 30	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 Mb, 76-88 Mb, 174-216 Mb or 470-806 Mb. However, operation within these frequency bands is permitted under other sections of this part, e.g., Section 15.231 and 15.241.

According to section 15.205(a) and (b), only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.009 - 0.110	16 <mark>.42 - 16</mark> .423	399. <mark>9 - 410</mark>	4.5 - 5.15
0.495 - 0.505	16.694 75 - 16.695 25	608 - 614	5.35 - 5.46
2.173 5 - 2.190 5	16.804 25 - 16.804 75	960 – 1 240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1 300 – 1 427	8.025 - 8.5
4.177 25 - 4.177 75	37.5 - 38.25	1 435 – 1 626.5	9.0 - 9.2
4.207 25 - 4.207 75	73 - 74.6	1 645.5 – 1 646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	<u> </u>	10.6 - 12.7
6.267 75 - 6.268 25	108 - 121.94	<mark>1 718</mark> .8 – 1 722.2	13.25 - 13.4
6.311 75 - 6.312 25	123 - 138	<mark>2</mark> 200 – 2 300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2 310 – 2 390	15.35 - 16.2
8.362 - 8.366	156.524 75 - 156.525	2 483.5 – 2 500	17.7 - 21.4
8.376 25 - 8.386 75	25	2 690 – 2 900	22.01 - 23.12
8.414 25 - 8.414 75	156.7 - 156.9	3 260 – 3 267	23.6 - 24.0
12.29 - 12.293	162.012 5 - 167.17	3 332 – 3 339	31.2 - 31.8
12.519 75 - 12.520 25	167.72 - 173.2	3 345.8 – 3 358	36.43 - 36.5
12.576 75 - 12.577 25	240 - 285	3 600 – 4 400	Above 38.6
13.36 - 13.41	322 - 335.4		

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in section 15.209. At frequencies equal to or less than 1 000 Mb, compliance with the limits in section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasipeak detector. Above 1 000 Mb, compliance with the emission limits in section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in section 15.35 apply to these measurements.

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IC

According to RSS-247(5.5), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

According to RSS-Gen(8.9), Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Frequency(Mb)	Field strength		
30 to 88	100		
88 to 216	150		
216 to 960	200		
Ab <mark>ove 960</mark>	500		

Table 5- General field strength limits at frequencies above 30 MHz

Table 6- General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) (µ A/m)	Measurement distance(m)	
9-490 kHz ¹⁾	6.37/F (F in 朏)	300	
490 – 1705 kHz	63.7/F (<mark>F in ⊮</mark> z)	30	
1.705 - 30 M±	0.08	30	

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

According to RSS-Gen(8.10), Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following conditions related to the restricted frequency bands apply:

- (a) The transmit frequency, including fundamental components of modulation, of licence-exempt radio apparatus shall not fall within the restricted frequency bands listed in table 7 except for apparatus compliant with RSS-287, Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD).
- (b) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.
- (c) Unwanted emissions that do not fall within the restricted frequency bands listed in table 7 shall comply either with the limits specified in the applicable RSS or with those specified in table 5 and table 6.

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MHz
0.090 - 0.110
0.495 - 0.505
2.1735 - 2.1905
3.020 - 3.026
4.125 - 4.128
4.17725 - 4.17775
4.20725 - 4.20775
5.677 - 5.683
6.215 - 6.218
6.26775 - 6.26825
6.31175 - 6.31225
8.291 - 8.294
8.362 - 8.366
8.37625 - 8.38675
8.41425 - 8.41475
12.29 - 12.293
12.51975 - 12.52025
12.57675 - 12.57725
13.36 - 13.41
16.42 - 16.423
16.69475 - 16.69525
16.80425 - 16.80475
25.5 - 25.67
37.5 - 38.25
73 - 74.6
74.8 - 75.2
108 - 138

MHz	
149.9 - 150.05	
156.52475 - 156.5252	25
156.7 - 156.9	
162.0125 - 167.17	
167.72 - 173.2	
240 - 285	
322 - 335.4	
399.9 - 410	
608 - 614	
960 - 1427	
1435 - 1626.5	
1645.5 - 1646.5	
1660 - 1710	
1718.8 - 1722.2	
2200 - 2300	
2310 - 2390	
2483.5 - 2500	
2655 - 2900	
3260 - 3267	
3332 - 3339	
3345.8 - 3358	
3500 - 4400	
4500 - 5150	
5350 - 5460	
7250 - 7750	
8025 - 8500	

8	GHz	
	9.0 - 9.2	
8	9.3 - 9.5	
	10.6 - 12.7	
1	13.25 - 13.4	
0	14.47 - 14.5	
	15.35 - 16.2	
	17.7 - 21.4	
	22.01 - 23.12	
	23.6 - 24.0	
	31.2 - 31.8	
	36.43 - 36.5	
	Above 38.6	
-		

* Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licenceexempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

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Test procedure

ANSI C63.10-2013

Test settings

Peak field strength measurements

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = as specified in table
- 3. VBW \geq (3×RBW)
- 4. Detector = peak
- 5. Sweep time = auto
- 6. Trace mode = max hold
- 7. Allow sweeps to continue until the trace stabilizes

Table. RBW as a function of frequency				
Frequency	RBW			
9 kHz to 150 kHz	200 Hz to 300 Hz			
0.15 Mt to 30 Mt	9 kHz to 10 kHz			
30 MHz to 1 000 MHz	100 k Hz to 120 kHz			
> 1 000 MHz	1 MHz			

Table. RBW as a function of frequency

Average field strength measurements

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1 MHz
- 3. VBW = 1/T ≥ 1 Hz
- 4. Averaging type was set to RMS to ensure that video filtering was applied in the power domain
- 5. Detector = peak
- 6. Sweep time = auto
- 7. Trace mode = max hold
- 8. Trace was allowed to run for at least 50 times(1/duty cycle) traces

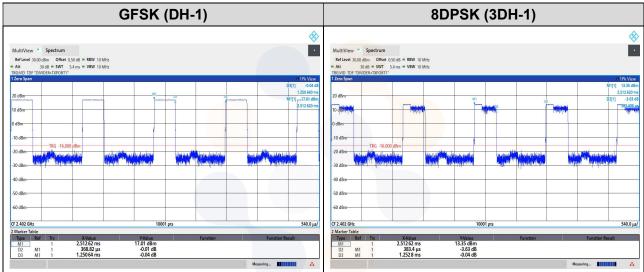
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Notes:

 The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 M for Peak detection and frequency above 1 G to The resolution bandwidth of test receiver/spectrum analyzer is 1 M and the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The resolution of the video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The video bandwidth is 3 k (≥1/T) for Average detection (AV) at frequency above 1 G to The video bandwidth (≥1/T) for Average detection (AV) at frequency above 1 G to The video bandwidth (≥1/T) for Average detection (AV) at frequency above 1 G to The video bandwidth (≥1/T) for Average detection (AV) at frequency above 1 G to The video bandwidth (≥1/T) for Average detection (≥1/T) for Average detection (≥1/T) for Average detection (≥1/T) for Average detection (≥1/T) for Average

According to ANSI C63.10-2013, for average measurement during radiation test, Reduced VBW shall be greater than [1/(minimum transmitter on time)] and no less than 1 Hz.

Test mode	Period (ms)	On time (ms)	Reduced VBW (Hz)		
GFSK	1.250 6	0.368 8	2711.349 7		
8DPSK	1.252 8	0.383 4	2608.242 0		



2. f < 30 MHz, extrapolation factor of 40 dB/decade of distance. $F_d = 40\log(D_m/Ds)$ $f \ge 30$ MHz, extrapolation factor of 20 dB/decade of distance. $F_d = 20\log(D_m/Ds)$

Where:

 F_d = Distance factor in dB

D_m= Measurement distance in meters

D_s= Specification distance in meters

- 3. Factors(dB) = Antenna factor(dB/m) + Cable loss(dB) + or Amp. gain(dB) + or $F_d(dB)$
- 4. The worst-case emissions are reported however emissions whose levels were not within 20 dB of respective limits were not reported.
- 5. Average test would be performed if the peak result were greater than the average limit.
- 6. ¹⁾ means restricted band.
- 7. Below 30 Mb frequency range, In order to search for the worst result, all orientations about parallel, perpendicular, and ground-parallel were investigated then reported. when the emission level was higher than 20 dB of the limit, then the following statement shall be made: "No spurious emissions were detected within 20 dB of the limit."
- 8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X kHz resulted in a level of Y dBµN/m, which is equivalent to Y 51.5 = Z dBµA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

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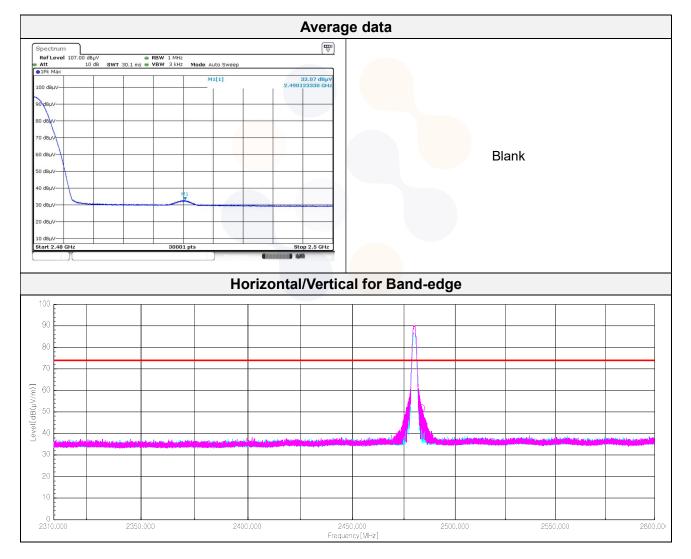
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Spot-check Test results

GFSK / Band-edge

Highest Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(µV))	(dB)	(dB)	(dB)	(dB(<i>µ</i> V/ m))	(dB(<i>µ</i> V/ m))	(dB)
	Peak data							
2 490.12 ¹⁾	н	56.60	27.80	-32.56	-	51.84	74.00	22.16
Average Data								
2 490.12 ¹⁾	Н	33.07	27.80	-32.56	-	28.31	54.00	25.69



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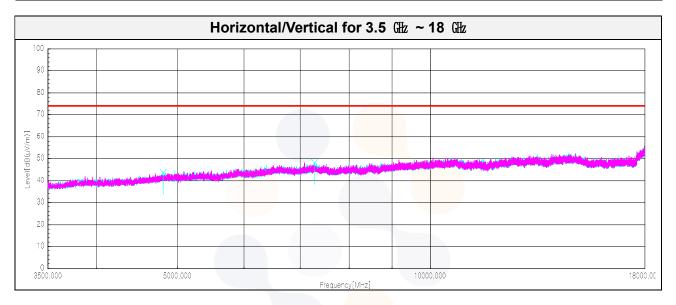


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GFSK / Harmonic

Lowest Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(µV))	(dB)	(dB)	(dB)	(dB(µV/m))	(dB(<i>µ</i> V/ m))	(dB)
	Peak data							
7 288.85 ¹⁾	V	51.50	36.98	-41.17	-	47.31	74.00	26.69
Average Data								
No spurious emissions were detected within 20 dB of the limit.								



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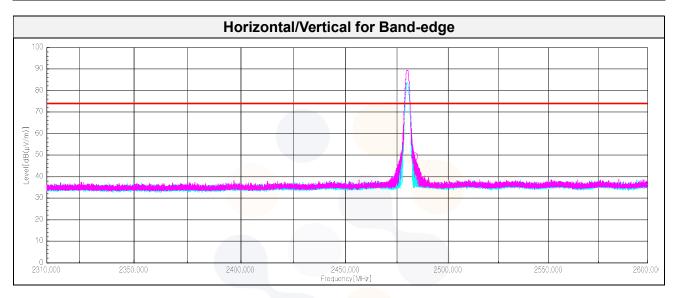


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8DPSK / Band-edge

Highest Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(µN))	(dB)	(dB)	(dB)	(dB(µV/m))	(dB(µV/m))	(dB)
Peak data								
2 483.681)	н	54.30	27.84	-32.59	-	49.55	74.00	24.45
Average Data								
No spurious emissions were detected within 20 dB of the limit.								



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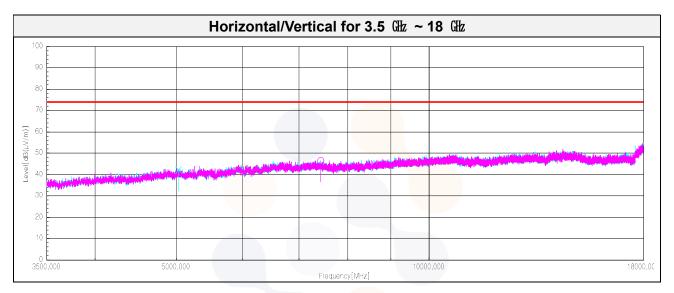


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8DPSK / Harmonic

Middle Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(µV))	(dB)	(dB)	(dB)	(dB(µV/m))	(dB(<i>µ</i> V/ m))	(dB)
Peak data								
7 316.40 ¹⁾	Н	51.50	36.77	-41.19	-	47.08	74.00	26.92
Average Data								
No spurious emissions were detected within 20 dB of the limit.								



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PSA Spectrum Analyzer

Broadband Pre Amplifier

Low Noise Amplifier

Low Noise Amplifier

Horn Antenna

Horn Antenna

High Pass Filter

Signal Generator

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E4440A

BBV9718D

TK-PA18H

TK-PA1840H

BBHA9120D

BBHA9170

WHKX12-2805-3000-

18000-40SS

SMB100A



MY46186407

53

220123-L

220133-L

2764

1267

SN59

176206

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Next Cal. Date

24.03.28 24.04.10*

24.04.27*

23.07.12

24.04.24* 23.07.11

24.03.22

24.03.17

23.12.02

23.12.02

23.12.06

23.12.05

23.12.14

24.01.19

	8. Measurem	ent equipment			
Equipment Name		Manufacturer	Model No.	Serial No.	
	Spectrum Analyzer	rum Analyzer R&S		101427	
	Attenuator	HUBER+SUHNER	6610_SK-50-1 /199_NE	ATT10	
	DC Power Supply	AGILENT	E3632A	MY40000265	
	Power Divider	Aeroflex/ Weinschel,Inc	1580-1	NX380	
	Bluetooth Tester	TESCOM	TC-3000C	3000C000427	
	Spectrum Analyzer	R&S	FSV40	100988	

Agilent

SCHWARZBECK

TESTEK

TESTEK

SCHWARZBECK

SCHWARZBECK

Wainwright

Instruments GmbH

R&S

* Tests related to this equipment were progressed after the calibration was completed.

End of test report