

Test Report for FCC & IC

Report N	Number	EST	RGC2304-0	01(1)		
	Company name		ecure LLC			
Applicant	Address	10 0	Crooked Hill	Oakland New Jersey	United States 07436	
	Telephone	+82-	+82-031-607-7537			
	Product name	Rug	ged Biometri	ic Device		
Product	Model No.	EID1	0 ALPHA	Manufacturer	Gen2wave	
	Serial No.	N	IONE	Country of origin	KOREA	
Test date	20-Mar-23	~ 22-Ma	r-23	Date of issue	15-Jun-23	
Testing location	140-16, Eongmalli	140-16, Eongmalli-ro, Majang-myeon, Icheon-si, Gyeonggi-do, Rep. of Korea				
FCC ID	2BA25-EID10ALI	PHA				
ISED ID	30760-EID10ALP	HA				
FCC Rule Part(s)	Part 15.225, Part 1	15.209, F	Part 15.207			
ISED Rule Part(s)	RSS-210 Issue 10	(April 20	020)			
	Tes	st result			Complied	
Measurement fa	cility registration nur	mber	659627			
MRA Registration number			KR0019		0	
Tested by	Engineer H.G. Lee				(Signature)	
Reviewed by	Engineering Manager I.K. Hong (Signature)			(Signature)		
Abbreviation	OK, Pass =	Complie	ed, Fail = I	Failed, N/A = not appl	icable	
* Note						

- This test report is not permitted to copy partly without our permission
- This test result is dependent on only equipment to be used
- This test report is not related to KOLAS accreditation
- This product is tested in a single channel at the request of the company.
 This is the reissue report due to the change of the applicant



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1. Laboratory Information

1.1 General

This EUT (Equipment Under Test) has been shown to be capable of compliance with the applicable technical standards and is tested in accordance with the measurement procedures as indicated in this report.ESTECH Lab attests to accuracy of test data. All measurement reported herein were performed by ESTECH Co., Ltd.

ESTECH Lab assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

1.2 Test Lab.

Corporation Name: ESTECH Co., Ltd.

Head Office: Suite 1015 World Meridian II, 123 Gasan Digital 2-ro, Geumcheon-gu,

Seoul 153-759, R. O. Korea

EMC/Telecom/Safety Test Lab : 140-16, Eongmalli-ro, Majang-myeon, Icheon-si, Gyeonggi-do, Rep. of Korea

1.3 Official Qualification(s)

MSIP: Granted Accreditation from Ministry of Information & Communication for EMC, Safety and Telecommunication

KOLAS: Accredited Lab By Korea Laboratory Accreditation Schema base on CENELEC

FCC: Filed Laboratory at Federal Communications Commission

VCCI: Granted Accreditation from Voluntary Control Council for Interference from ITE

ISED: Accredited Lab By Canada Laboratory Accreditation



2. Description of EUT

2.1 Summary of Equipment Under Test Product: Rugged Biometric Device Model Number: EID10 ALPHA

Serial Number : NONE Manufacturer : Gen2wave Country of origin : KOREA

Operating Frequency :13.56 MHz(HF),125 kHz(LF)

Antenna Type : PCB Antenna

Modulation Type : ASK Channel Spacing : 1

Power Rating: INPUT: AC(100 - 240) V, (50-60)Hz, 0.58 A

OUTPUT: DC 5 V, 4.0 A

Supply Voltage to product:3.7 V Battery

Receipt Date: 2023-Mar-13

X-tal list(s) or Frequencies generated: 13.56 MHz

Software version: V0.1 Hardware version: V0.1

2.2 General descriptions of EUT

	Dimensions	78mm/3.07inch(W) x 112mm/4.41inch(H) x 30mm/1.18inch(D)
General Characteristics	Weight	164g
	Communication	C Type USB Host : USB2.0 High Speed / 18PIN (USB Client/Host)
DATA CAPTURE	Fingerprint Reader	IB DANNO FAP 30 TFT PIV Certified Sensor Type: Light-emitting sensor (LES) TFT camera Resolution: 500 ppi Gray Scale: 256 grayscale dynamic range Image Size: 400W x 500H pixels Supported Image Formats: RAW, JPEG2000, BMP, PNG, WSQ FBI Certification / Image Certifications: PIV 071006, FIPS 201, FAP 30 Speed: Minimum frame rate > 10FPS Capture Types: Single-finger flat
HID RFID Read	HID RFID Reader	HID OMNYKEY 5127CK-MINI 13.56 HF / 125K LF RFID ISO14443A/B ISO15693, FeliCa™ (IDm), CEPAS (CSN) Broad Credential Support NFC support for Mobile devices Dual frequency allowingsimultaneous support or HF and LF credentials HID Prox, Indala® and EM Prox,iCLASS, iCLASS SE®, iCLASS Seos®, MIFARE Classic®, MIFARE DESFire EV1®iCLASS SE Processor Provides support for processing of PACS data and secure keystorage and communication
	Operating Temp	-0°C ~ 50°C (-32°F ~ 122°F)
User Environment	Storage Temp	-20°C ~ 60°C (-4°F ~ 140°F)
	Humidity	Non-condensing, 93%
	Drop	1.5m (5ft.)
Compat	ible Device	RP1500, RP1600, RP1600X



3. Test Standards

Test Standard: FCC PART 15

This Standard sets out the regulations under which an intentional, unintentional, or incidental radiator may be operated without an individual license. It also contains the technical specifications, administrative requirements and other conditions relating to the marketing of Part 15 devices.

Test Standard: RSS-Gen

RSS-Gen must be used in conjunction with other RSSs, as applicable to the specific type of radio apparatus, for assessing its compliance with ISED requirements.

Test Method: ANSI C 63.10 (2013)

This standard sets forth uniform methods of measurement of radio-frequency (RF) signals and noise emitted from both unintentional and intentional emitters of RF energy in the frequency range 9 kHz to 40 GHz. Methods for the measurement of radiated and AC power-line conducted radio noise are covered and may be applied to any such equipment unless otherwise specified by individual equipment requirements. These methods cover measurement of certain decides that deliberately radiate energy, such as intentional emitters, but does not cover licensed transmitters. This standard is not intended for certification/approval of avionic equipment or for industrial, scientific, and medical (ISM) equipment These method apply to the measurement of individual units or systems comprised of multiple units

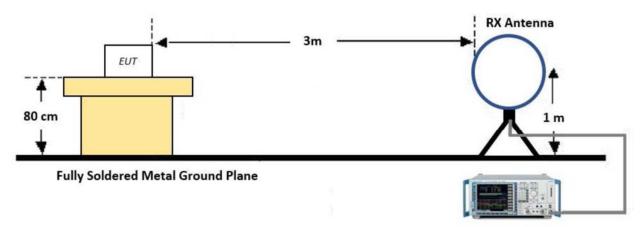
Test Description	FCC Part Section(s)	ISED Part Section(s)	Test Limit	Test Condition	Test Result
Occupied Bandwidth	-	Section 6.7 RSS-GEN	N/A		PASS
20 dB Bandwidth	§15.215 (c)	-	N/A		PASS
Radiated E-Field Emissions 13.553 MHz - 13.567 MHz	§15.225 (a)	Annex B.6 (a)(i) RSS-210	cf. Section 7.3		N/A 1)
Radiated E-Field Emissions 13.410 MHz ≤ f ≤ 13.553 MHz 13.567 MHz ≤ f ≤ 13.710 MHz	§15.225 (b)	Annex B.6 (a)(ii) RSS-210	cf. Section 7.3	Radiated	N/A 1)
Radiated E-Field Emissions 13.110 MHz ≤ f ≤ 13.410 MHz 13.710 MHz ≤ f ≤ 14.010 MHz	§15.225 (c)	Annex B.6(a)(iii) RSS-210	cf. Section 7.3		N/A 1)
Radiated Spurious Emissions	15.209	Section 8.9 RSS-GEN	cf. Section 7.3		PASS
Frequency Stability	§15.225 (e)	RSS-210, B.6	cf. Section 7.2		PASS
AC Power line Conducted Emissions	§15.207	RSS-GEN, 8.8	cf. Section 7.4	Conducted	PASS

Notes:

1. No tests were applied because the fundamental level did not exceed the spurious limit per part 15.209.



Test Configuration Below 30 MHz



Spectrum Analyzer / Receiver

Test Procedure of Radiated spurious emissions (Below 30 MHz)

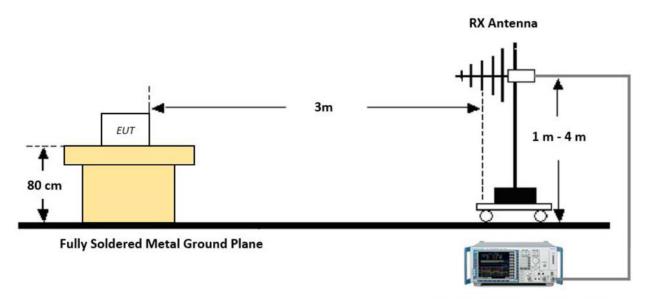
- 1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
- 2. The loop antenna was placed at a location 3m from the EUT
- 3. The EUT is placed on a turntable, which is 0.8m above ground plane.
- 4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
- 5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 6. Distance Correction Factor $(0.009 \text{ MHz} 0.490 \text{ MHz}) = 40*\log(3 \text{ m}/300 \text{ m}) = -80 \text{ dB}$ Measurement Distance: 3 m
- 7. Distance Correction Factor (0.490 MHz 30 MHz) = 40*log(3 m/30 m) = 40 dB

Measurement Distance: 3 m

- 8. Spectrum Setting
- Frequency Range = 9 kHz ~ 30 MHz
- Detector = Peak
- Trace = Max hold
- RBW = 9 kHz
- VBW ≥ 3*RBW
- 9. Total = Reading Value + Antenna Factor (A.F) + Cable Loss (C.L) + Distance Factor (D.F) Adequate comparison measurements were confirmed against an open field site since the test was performed at alternative site (3m SAC) other than the open area test site. Sufficient test was made to demonstrate that the alternative site produces result that correlate with the one of test made at the open field site based on KDB 414788.



30 MHz - 1 GHz



Spectrum Analyzer / Receiver

Test Procedure of Radiated spurious emissions (Below 1GHz)

- 1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
- 2. The EUT is placed on a turntable, which is 0.8m above ground plane.
- 3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
- 4. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 5. Spectrum Setting
- (1) Measurement Type (Peak):
- Measured Frequency Range: 30 MHz 1 GHz
- Detector = Peak
- Trace = Max hold
- RBW = 100 kHz
- VBW ≥ 3*RBW
- (2) Measurement Type(Quasi-peak):
- Measured Frequency Range: 30 MHz 1 GHz
- Detector = Quasi-Peak
- RBW = 120 kHz

In general, the method (1) is mainly used

6. Total = Reading Value + Antenna Factor (A.F) + Cable Loss (C.L)

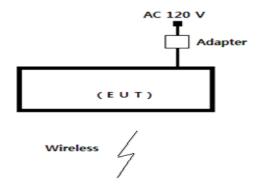


4. Measurement Condition

4.1 EUT Operation.

'The EUT was tested, under transmission / receiving

- 1. Normal communication with RF OUT Frequeny13.56 MHz(HF),125 kHz(LF).
- 2. Monitoring the operation status of frequency by using RF CARD.
- 4.2 Configuration and Peripherals



4.3 EUT and Support equipment

Equipment Name	Model Name	S/N	Manufacturer	Remark
Rugged Biometric Device	EID10 ALPHA	NONE	Gen2wave Co., Ltd.	EUT
Portable Data Collection Terminal	RP1600X	NONE	Gen2wave Co., Ltd.	
Cradle	RP1000 CRADLE	NONE	Gen2wave Co., Ltd.	
Adapter	ATS024T-A050	NONE	Adapter Technology Co.,Ltd.	



4.4 Measurement equipments (Conducted)

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E440A	US42041291	28-Nov-23
Spectrum Analyzer	FSV40	100939	28-Nov-23
RF Cable	Length: 100 cm	-	

4.5 Measurement equipments (Radiated)

Equipment Name	Туре	Manufacturer	Serial No.	Next Calibration date
TEST Receiver	ESCI7	ROHDE & SCHWARZ	100916	29-Jun-23
LOOP Antenna	HFH2-Z2	ROHDE & SCHWARZ	100188	29-Aug-24
Logbicon Antenna	VULB 9168	SCHWARZBECK	193	9-Dec-23
Turn Table	DT3000-2t	Innco System GmbH	N/A	-
Antenna Mast	MA4000-EP	Innco System GmbH	N/A	-
PREAMPLIFIER	8449B	HP	3008A00581	29-Jun-23
Horn Antenna	LB-42-15-C-SF	A-INFOMF	J2020079000055	11-Nov-23
Horn Antenna	BBHA9120D	SCHWARZBECK	469	08-Nov-23
TEST Receiver	ESU	ROHDE & SCHWARZ	100529	29-Jun-23
Turn Table	DT1500-S	Innco System GmbH	N/A	-
Antenna Mast	MA4000-EP	Innco System GmbH	N/A	-
Antenna Master & Turn table controller	CO2000-P	Innco System GmbH	CO2000/642 /28051111/L	-

4.6 AC Power line Conducted Emissions Measurement equipments

Equipment Name	Туре	Manufacturer	Serial No.	Next Calibration date
TEST Receiver	ESHS 30	Rohde & Schwarz	828765/002	29-Jun-23
LISN	ESH2-Z5	Rohde & Schwarz	836679/025	29-Jun-23
Pulse Limiter	ESH3-Z2	Rohde & Schwarz	NONE	29-Jun-23



5. 20dB Bandwidth / 99% Bandwidth

5.1 Test settings

The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

- The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.
- The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW.

5.2 Test results

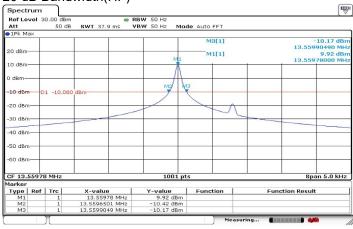
		HF		
Frequency(MHz)	Modulation	20 ^{dB} Bandwidth(kHz)	99% Bandwidth (kHz)	Limit
13.56	ASK	0.253	0.924	N/A

		LF	
Frequency(MHz)	Modulation	99% Bandwidth (kHz)	Limit
0.125	ASK	0.079	N/A

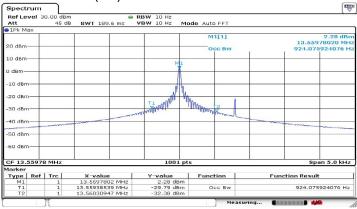


5.3 Test Plots

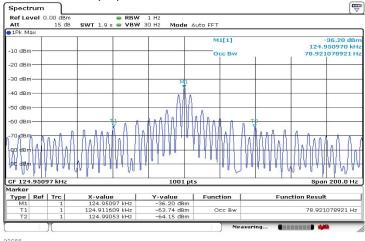
20 dB Bandwidth(HF)



99% Bandwidth(HF)



99% Bandwidth(LF)





6. Frequency Tolerance

6.1 Frequency stability Data (Adapter)

Operting Frequency :13,560,000 HzReference Voltage :3.70 Vd.c.Deviatin Limit :± 0.01 %

Voltage	Power	Temperature	Frequency	Deviation
(%)	(Vdc)	(℃)	(Hz)	(%)
100		+20 ℃(Ref)	13,560,008	0.000059
100		-20	13,560,110	0.000811
100		-10	13,560,024	0.000177
100		0	13,560,110	0.000811
100	3.70	10	13,559,856	-0.001062
100		20	13,559,862	-0.001018
100		30	13,559,812	-0.001386
100		40	13,559,866	-0.000988
100		50	13,559,983	-0.000125
85	3.145	20	13,560,129	0.000951
115	4.255	20	13,560,012	0.000088



7. Measurement of radiated disturbance

7.1 Radiated emission limits, general requirements

FCC : 47 CFR § 15.209					
Frequency (MHz)	Distance(Meters)	Field strength (uV/m)			
0.009 to 0.490	300	2400/F(kHz)			
0.490 to 1.705	30	24000/F(kHz)			
1.705 to 30	30	30			
30 to 88	3	100			
88 to 216	3	150			
216 to 960	3	200			
> 960	3	500			

ISED : RSS-GEN Section 8.9								
Frequency (MHz)	Distance(Meters)	Field strength (uA/m)						
0.009 to 0.490	300	6.37/F(kHz)						
0.490 to 1.705	30	63.7/F(kHz)						
1.705 to 30	30	0.08						
30 to 88	3	100						
88 to 216	3	150						
216 to 960	3	200						
> 960	3	500						

Operation within the band 13.110 MHz - 14.010 MHz

FCC: 47 CFR § 15.225 (a), (b), (c), (d) / ISED: RSS-210 ANNEX B.6								
Frequency (MHz) Distance(Meters) Field strength (uV/n								
13.553 – 13.567	30	15,848						
13.410 ≤ f ≤ 13.553 13.567 ≤ f ≤ 13.71	30	334						
13.110 ≤ f ≤ 13.410 13.710 ≤ f ≤ 14.010	30	106						



7.2 13.56 MHz(HF)Test data(9 kHz ~ 30 MHz)

_	5 "	Vertical	EUT Position	Height (m)	Correction	n Factor	Result Value(Quasi-Peak)		
Frequency (MHz)	Reading (dB / ^⅓)	Position [Angle]			Ant Factor (dB)	Cable (dB)	Limit (dB ¼V/m)	Result (dB ⊬V/m)	Margin (dB)
				Below 1	3.110 MHz				
Noise Floor	-	-	-	-	19.48	0.5	69.5	-	-
			13.	110 MHz	to 13.410 MI	Hz			
Noise Floor	-	-	ı	ı	19.46	0.5	80.5	-	-
			13.	410 MHz	to 13.552 MI	Hz			
Noise Floor	-	-	-	-	19.46	0.5	90.5	-	-
			13.	553 MHz	to 13.567 MI	Hz			
13.5600	38.48	0.0	X	0.8	19.56	0.5	124.0	58.55	-65.45
·		-	13.	567 MHz	to 13.710 MI	Hz			
Noise Floor	-	-	-	-	19.45	0.5	90.5	-	-
			13.	710 MHz	to 14.010 MI	Hz			
Noise Floor	-	-	-	-	19.44	0.6	80.5	-	-
			1	4.010 MF	Hz to 30 MHz				
Noise Floor	-	-	-	-	19.44	0.6	69.5	-	-

*The 30 m limit was converted to 3 m Limit using square factor(x) as it was found by measurements as follows;

Remark

^{*3} m Limit(dBuV/m) = 20log(X)+40log(30/3)=20log(15848)+40log(30/3)=124 dBuV

^{*3} m Limit(dBuV/m) = $20\log(X)+40\log(30/3)=20\log(30)+40\log(30/3)=69.5$ dBuV

^{*} The EUT was measured for the worst case by rotating of antenna angle.

^{*} The EUT performed at X,Y,Z and recorded the worst data in the report.



7.3 125 kHz(LF)Test data(9 kHz ~ 30 MHz)

,		Booding Horizontal		Correction	on Factor	Result \	Value(Qeas-P	eak)
	Reading (dB ሥ)	Position [Angle]	Height (m)	Ant Factor (dB)	Cable (dB)	Limit (dB ﷺ)	Result (dB ሥ/m)	Margin (dB)
125.00	49.23	180.0	0.8	19.80	0.03	105.67	69.06	-36.61

H : Horizontal, V : Vertical

Remark

There did not measure any radiated spurious emission in the range 9 kHz to 30 MHz

*There is no found Restricted bands.

*The 300 m limit was converted to 3 m Limit using square factor(x) as it was found by measurements as follows;

3 m Limit(dBuV/m) = 20log(2400/F(KHz))+40log(300/10)= 20log(2400/125.0)+40log(300/3)



7.4 13.56 MHz(HF)Test data(30 MHz ~ 1 000 MHz)

Frequency Reading				Correction	on Factor	Result Value(Quasi-peak)			
Frequency (MHz)	, ,	Position (V/H)	Height (m)	Ant Factor (dB)	Cable (dB)	Limit (dB /⊅/m)	Result (dB / ^ル /m)	Margin (dB)	
250.00	18.74	V	1.0	11.80	2.33	46.00	32.87	-13.13	
302.60	16.49	V	1.1	13.57	2.63	46.00	32.69	-13.31	
500.00	10.88	Н	1.4	17.90	3.54	46.00	32.32	-13.68	
625.00	7.62	V	1.3	20.35	3.96	46.00	31.93	-14.07	
875.00	12.29	Н	1.0	23.10	4.70	46.00	40.09	-5.91	
1000.00	7.08	Н	1.0	24.20	5.08	54.00	36.36	-17.64	
	H · Horizontal	V · Vertica	al						

H: Horizontal, V : Vertical

*Result Value = Reading + Antenna + Cable loss *Correction Factor = Ant Factor + Cable Remark

7.5 125 kHz(LF)Test data(30 MHz ~ 1 000 MHz)

Frequency Reading (MHz) (dB \(\psi \))			Correction	n Factor	Result Value(Quasi-peak)			
	Position (V/H)	Height (m)	Ant Factor (dB)	Cable (dB)	Limit (dB ⊬V/m)	Result (dB /△/m)	Margin (dB)	
18.33	Н	1.4	11.80	2.33	46.00	32.46	-13.54	
16.73	V	1.3	15.50	1.87	46.00	34.10	-11.90	
10.60	V	1.2	17.90	3.54	46.00	32.04	-13.96	
8.83	V	1.3	20.35	3.96	46.00	33.14	-12.86	
11.97	Н	1.3	23.10	4.70	46.00	39.77	-6.23	
7.45	Н	1.3	24.20	5.08	54.00	36.73	-17.27	
	(dB AV) 18.33 16.73 10.60 8.83 11.97	(dB //V) (V/H) 18.33 H 16.73 V 10.60 V 8.83 V 11.97 H	(dB /) (V/H) (m) 18.33 H 1.4 16.73 V 1.3 10.60 V 1.2 8.83 V 1.3 11.97 H 1.3	(dB //V) (V/H) (m) Ant Factor (dB) 18.33 H 1.4 11.80 16.73 V 1.3 15.50 10.60 V 1.2 17.90 8.83 V 1.3 20.35 11.97 H 1.3 23.10	(dB //V) (V/H) (m) Ant Factor (dB) Cable (dB) 18.33 H 1.4 11.80 2.33 16.73 V 1.3 15.50 1.87 10.60 V 1.2 17.90 3.54 8.83 V 1.3 20.35 3.96 11.97 H 1.3 23.10 4.70	(dB //V) (V/H) (m) Ant Factor (dB) Cable (dB) Limit (dB //V/m) 18.33 H 1.4 11.80 2.33 46.00 16.73 V 1.3 15.50 1.87 46.00 10.60 V 1.2 17.90 3.54 46.00 8.83 V 1.3 20.35 3.96 46.00 11.97 H 1.3 23.10 4.70 46.00	(dB M) (V/H) (m) Ant Factor (dB) Cable (dB) Limit (dB M/m) Result (dB M/m) 18.33 H 1.4 11.80 2.33 46.00 32.46 16.73 V 1.3 15.50 1.87 46.00 34.10 10.60 V 1.2 17.90 3.54 46.00 32.04 8.83 V 1.3 20.35 3.96 46.00 33.14 11.97 H 1.3 23.10 4.70 46.00 39.77	

H : Horizontal, V : Vertical

*Result Value = Reading + Antenna + Cable loss *Correction Factor = Ant Factor + Cable

Remark

^{*}The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection

^{*}The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection



8. Measurement of conducted disturbance

According to RSS-Gen(8.8), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 kHz, shall not exceed the limits in the following table, as measured using a 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

8.1 Test data (13.56 MHz HF)

F	Correction Factor			Quasi-peak Value			Average Value		
Frequency (MHz)	Lisn (dB)	Cable (dB)	Line (H/N)	Limit (dB ሥ)	Reading (dB ሥ)	Result (dB ሥ)	Limit (dB ሥ)	Reading (dB ♯୬)	Result (dB)
0.15	0.06	0.15	N	59.83	53.22	53.43	49.83	33.84	34.05
0.16	0.06	0.15	Н	58.93	50.84	51.05	48.93	32.86	33.07
0.70	0.04	0.18	N	58.00	51.50	51.72	48.00	34.41	34.63
0.18	0.05	0.14	Н	57.93	46.93	47.13	47.93	31.49	31.69
0.20	0.05	0.14	N	56.81	45.71	45.90	46.81	28.31	28.50
0.24	0.05	0.14	N	56.76	38.09	38.28	46.76	24.23	24.42
		1	I	I		1	I		

Remark

H: Hot Line, N: Neutral Line
*Correction Factor = Lisn + Cable
*Result = Correction Factor + Reading



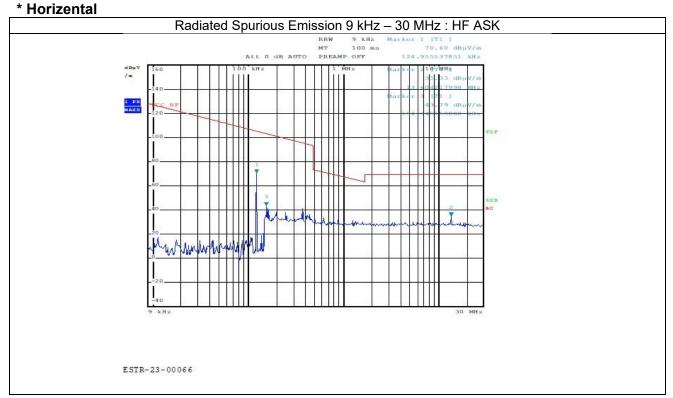
(125 kHz LF)

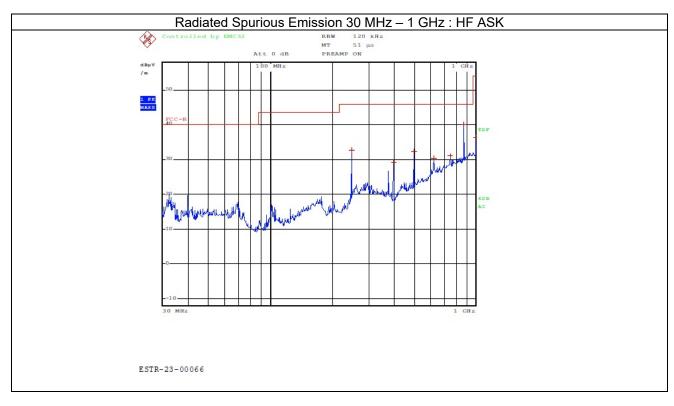
_	Correction	on Factor		Quasi-peak Value			Average Value		
Frequency (MHz)	Lisn (dB)	Cable (dB)	Line (H/N)	Limit (dB ሥ)	Reading (dB μ /)	Result (dB ሥ)	Limit (dB ሥ)	Reading (dB ♯V)	Result (dB)
0.15	0.06	0.15	Н	59.83	52.20	52.41	49.83	32.68	32.89
0.16	0.06	0.15	N	58.93	52.18	52.39	48.93	34.11	34.32
0.17	0.06	0.15	N	58.00	48.57	48.77	48.00	31.23	31.43
0.19	0.05	0.14	N	57.93	46.56	46.75	47.93	29.63	29.82
0.20	0.05	0.14	N	56.81	45.55	45.74	46.81	30.18	30.37
0.22	0.05	0.14	N	56.76	41.52	41.71	46.76	24.79	24.98
Remark	*Correction Fa	N : Neutral Lir actor = Lisn + C rection Factor +	able						

EST-QP17-R-I01-F04 (2023.01.17)



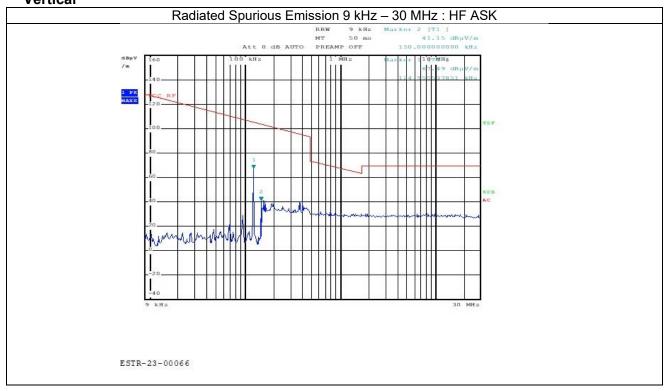
TEST PLOT

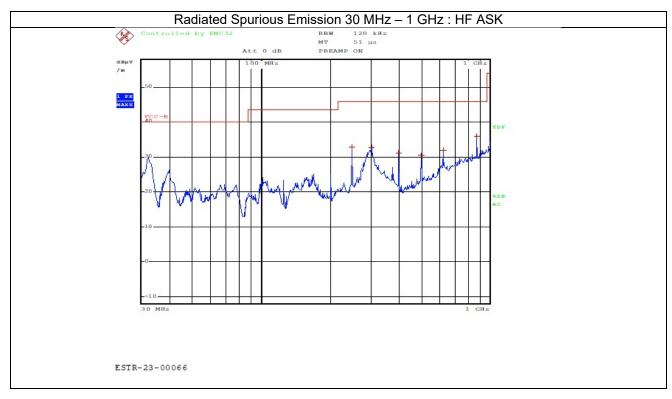






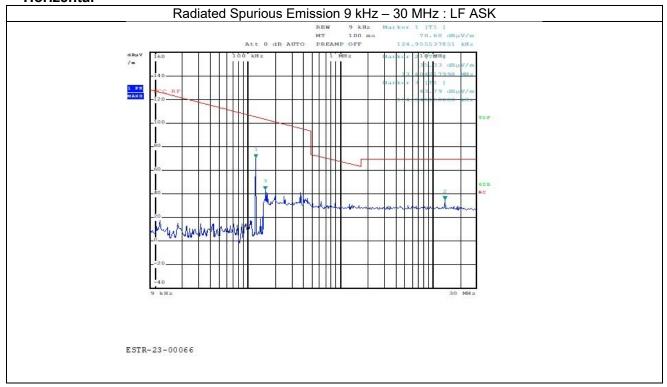
* Vertical

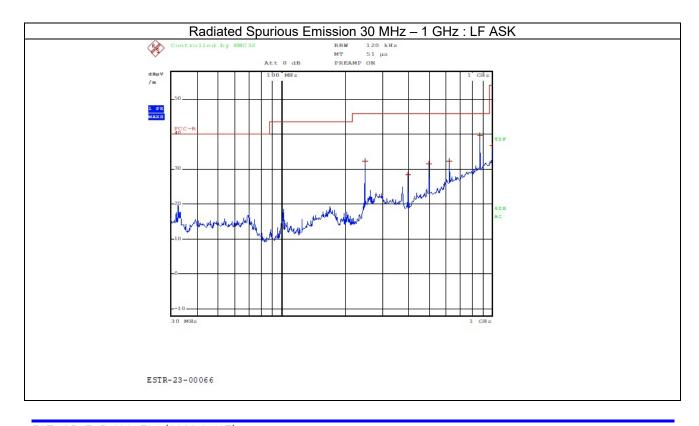






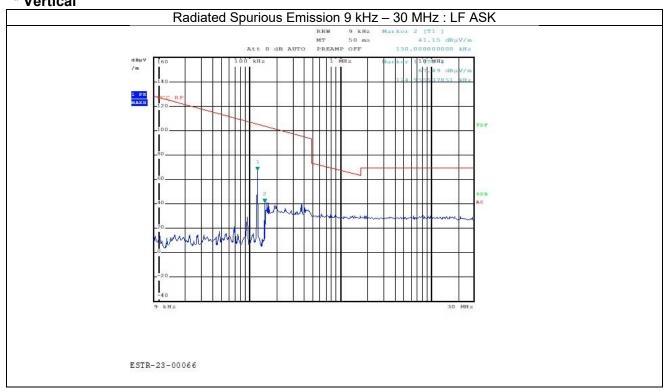
* Horizental

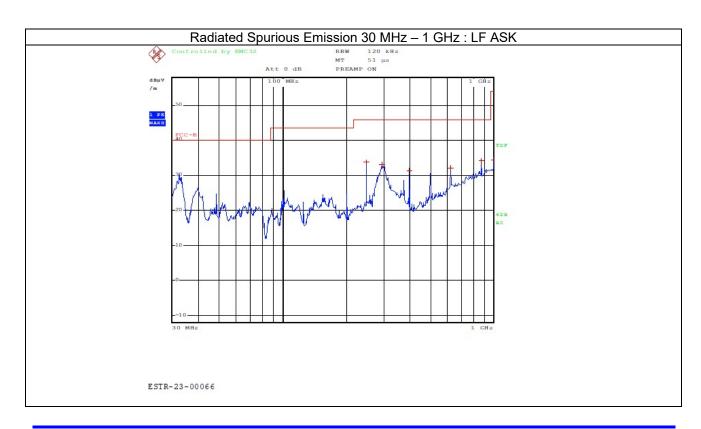






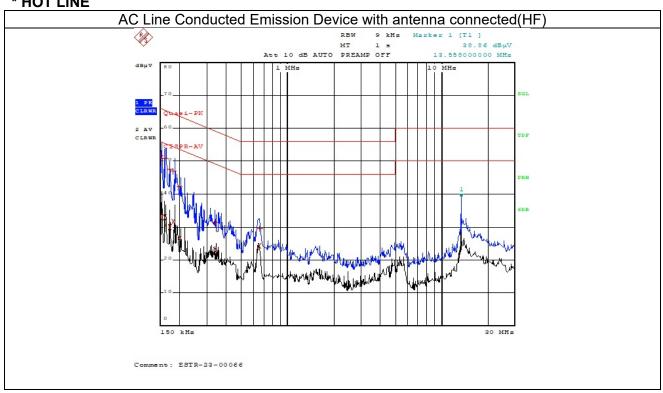
* Vertical



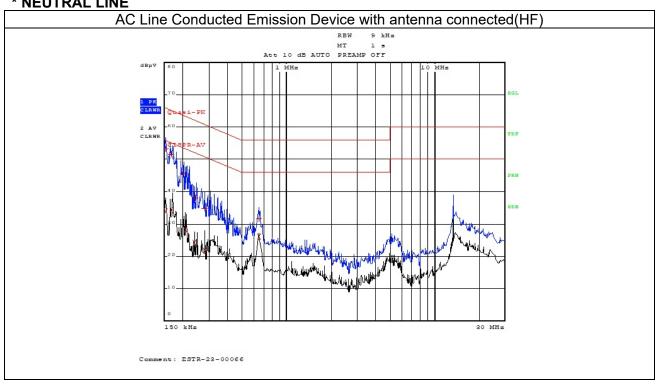




* HOT LINE

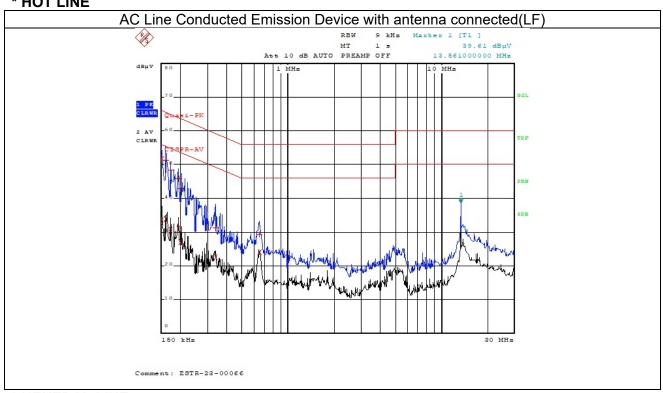


* NEUTRAL LINE





* HOT LINE



* NEUTRAL LINE

