

Test report No:
85477REM.002A1

Test report

**FCC Rules and Regulations CFR 47, Part 15, Subpart B
(10-1-25 Edition) & ICES-003 Issue 7 (October 2020)**

(*) Identification of item tested	Interior radar
(*) Trademark	FICOSA
(*) Model and /or type reference	CMR01
Other identification of the product	FCC ID: 2BGVO1CMR0624 IC: 32505-1CMR0624
(*) Features	HW version: H31 SW version: 0300
(*) Manufacturer	FICOSA AUTOMOTIVE, S.L.U. Poligon Industrial Can Mitjans S/N, 08232 Viladecavalls, Spain
Test method requested, standard	FCC Rules and Regulations CFR 47, Part 15, Subpart B (10-1-25 Edition) & ICES-003 Issue 7 (October 2020)
Summary	IN COMPLIANCE
Approved by (name / position & signature)	José Manuel Gómez EMC Consumer & RF Lab. Manager 
Date of issue	2026-09-03
Report template No	FDT08_27 (*) "Data provided by the client"

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Acronyms

Acronym ID	Acronym Description
CPL	Zones / Coupling Cables
Code	EMC Test Code
Freq Rng	Frequency Range
MP	Measurement Point
OM	Operation Mode
Pol	Polarization
S/	Sample
Side	Test Side
V	Verdict

Competences and guarantees

DEKRA Testing and Certification S.A.U. is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 51/LE 147.

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DEKRA Testing and Certification S.A.U. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification S.A.U. at the time of performance of the test.

DEKRA Testing and Certification S.A.U. is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification S.A.U. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Testing and Certification S.A.U. internal document PODT000.

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 30 MHz to 1000 MHz is $I = \pm 4,9$ dB for quasi-peak measurements, $I = \pm 4,6$ dB for peak measurements ($k=2$).

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 1000 MHz to 12.75 GHz is $I = \pm 2,6$ dB for peak and average measurements ($k=2$).

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested", "Manufacturer").
2. The sample consists of a Interior radar. 60 GHz FMCW high resolution radar 4 tx & 4 rx channels.

DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of results. The laboratory is not responsible for such information and it is not covered by accreditation.

Usage of samples

Samples undergoing test have been selected by: The client.

Id	Control Number	Description	Model	Serial N°	Date of Reception	Application
S/01	85477C_7.1	Interior radar	CMR01	--	2026-05-21	Element Under Test
S/01	85477C_12.1	Harness power cable	--	--	2026-05-21	Auxiliary Element

Notes referenced to samples during the project:

Id	Note
S/01	Sample to emission.

Test sample description

Ports..... :	Port name and description	Cable					
		Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾		
	CAN-FD	3	[X]	[]	[]		
			[]	[]	[]		
			[]	[]	[]		
			[]	[]	[]		
			[]	[]	[]		
Supplementary information to the ports..... :							
Rated power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[]	AC:	[]	[]	[]	[]	[]
	[]	AC:	[]	[]	[]	[]	[]
	[X]	DC: 13.5V, standard consumption around 90mA at 25°C					
[]	DC:						
Rated Power							
Clock frequencies..... :							
Other parameters							
Software version							
Hardware version							
Dimensions in cm (W x H x D)							
Mounting position	[]	Table top equipment					
	[]	Wall/Ceiling mounted equipment					
	[]	Floor standing equipment					
	[]	Hand-held equipment					

	[]	Other:	
Modules/parts.....:	Module/parts of test item	Type	Manufacturer
			
			
			
			
Accessories (not part of the test item)	Description	Type	Manufacturer
			
			
			
			
			
			
Documents as provided by the applicant	Description	File name	Issue date
			
			
			
			

⁽³⁾ Only for Medical Equipment

Identification of the client

FICOSA AUTOMOTIVE, S.L.U.
Poligon Industrial Can Mitjans S/N, 08232 Viladecavalls, Spain

Testing period and place

Test Location	DEKRA TESTING AND CERTIFICATION S.A.U. C/ Severo Ochoa, 6 - Parque Tecnológico de Andalucía; 29590 Campanillas (Málaga) (Location B)
Date (start)	2026-07-02
Date (finish)	2026-07-03

Document history

Report number	Date	Description
85477REM.002	2026-07-14	First release
85477REM.002A1	2026-09-03	Second release. Correction of standard date and operation mode. This modification test report cancels and replaces the test report 85477REM.002s.

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860mbar Max. = 1060mbar

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860mbar Max. = 1060mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860mbar Max. = 1060mbar

Remarks and comments

The tests have been performed by the technical personnel: Iván Guerrero González and Salvador Cuellar Guerrero.

Testing verdicts

Fail	F
Inconclusive	I
Not applicable	N/A
Not measured	N/M
Pass	P
Partial Passed	P*

List of equipment used during the test

Control No.	Equipment	Model	Manufacturer	Next Calibration
10304	EMI TEST RECEIVER 2Hz-44GHz	ESW44	ROHDE AND SCHWARZ	2026-10-01
06126	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2027-04-30
06132	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2027-05-12
04612	HORN ANTENNA 1-18GHz	BBHA 9120 D	SCHWARZBECK MESS-ELEKTRONIK	2027-10-15
04656	HORN ANTENNA 18-40GHz	BBHA 9170	SCHWARZBECK	2027-10-16
05641	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2027-10-23
10573	PRE-AMPLIFIER G>46dB 18-40GHz	BLMA 1840-5G	BONN ELEKTRONIK	2027-04-07
09360	PRE-AMPLIFIER G>40dB 1-18 GHz	BLMA 0118-1M	BONN ELEKTRONIK	2026-09-19
06064	SEMIANECHOIC ABSORBER LINED CHAMBER	SAC-3	Frankonia	--
06329	SHIELDED ROOM	--	FRANKONIA	--
04848	SOFTWARE FOR EMC/RF TESTING	EMC32	ROHDE AND SCHWARZ	--

Summary

Test Specification	Requirement – Test case	Verdict	Remark	Location	Test Operator
FCC CFR 47, Part 15, Subpart B (10-1-25 Edition) & ICES-003 Issue 7 (October 2020)	RE Radiated emission. Electromagnetic field measure	P	(1)	B	Salvador Cuellar Guerrero, Iván Guerrero González
	CE Continuous conducted emission	N/A	(2)	--	--
<u>Supplementary information and remarks:</u> Note: <ol style="list-style-type: none">Test required only to the 5th harmonics of the maximum internal work frequency in the EUT or 40GHz, whichever is lowerDevice powered by batteries					

Appendix A: Test results

Appendix A content

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Description of the operation modes

The operation modes described in this paragraph constitute a functionality of the sample under test for itself.
The operation modes used by the samples to which the present report refers, are shown in the following table:

Id	Description
OM/01	EUT ON. Automotive Radio System at 57.5 - 61.5GHz OFF.CAN communication established. Power supply:13.5Vdc

Test standards version applied

The product standards and test standards applied for each test cases are shown in the following table:

Product Test Standard	Test standard	Requirement – Test case
FCC CFR 47, Part 15, Subpart B (10-1-25 Edition) & ICES-003 Issue 7 (October 2020)	ANSI C63.4 (2014)	RE Radiated emission.
	ANSI C63.4 (2014)	CE Continuous conducted emission

SAMPLE CALCULATION

For radiated measurements:

Values measures by the test receiver / analyzer are converted to field strength, in dBuV/m, at the regulatory distance using the following calculation:

$$\text{Unwanted Lvl (dBuV/m)} = \text{Raw Rec (dBuV)} + \text{Preamp (dB)} + \text{Trd Corre. (dB/m)} + \text{SigPath (dB)}$$

Where,

Raw Rec (dBuV): Measured voltage in the receiver / spectrum analyzer in dBuV

Preamp (dB): Path loses due to preamplifier

Trd Corr. (dB/m): Antenna factor in dB/m

SigPath (dB) = Cable loss (dB) – External Gain amplifier (dB) – Distance factor (dB)

Cable loss (dB): Cable loss

External Gain amplifier (dB): Gain from external amplifier (when used)

Distance factor (dB): Distance factor in dB. When measurement distance is different to limit distance

The field strength, calculated by this way is compared with the regulatory limit.

Test Cases Details

FCC 47 CFR Part 15B

RE Radiated emission. Electromagnetic field measure

Limits

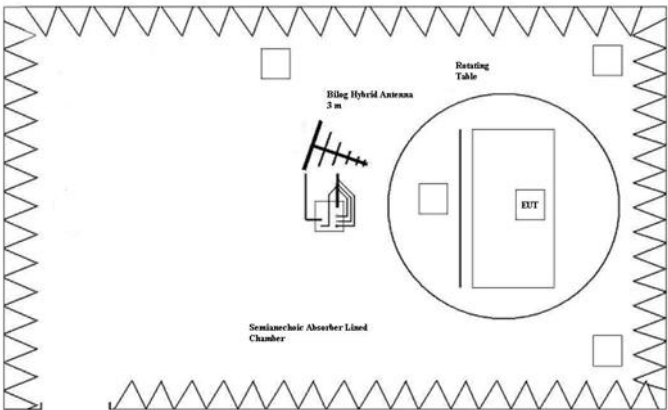
Limits of interference Class B

The applied limit for radiated emissions, 3 m distance, according to the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (10-1-25 Edition), Secs. 15.109 & ICES-003 Issue 7 (October 2020)

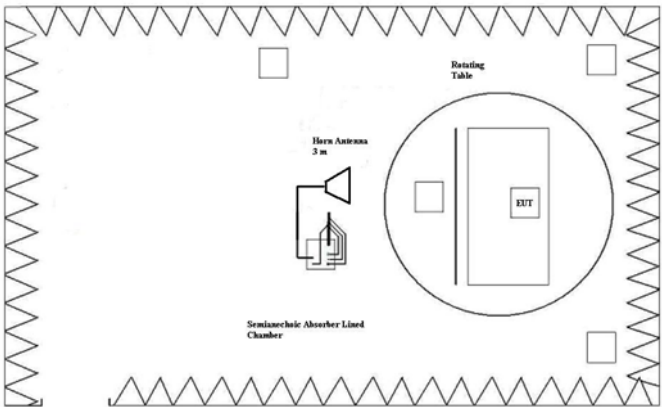
	FCC Part 15B		ICES-003 Issue 7		FCC Part 15B & ICES-003 Issue 7	
Frequency range (MHz)	QP Limit for 3 m		QP Limit for 3 m		PK Limit for 3 m	AVG Limit for 3 m
	(µV/m)	(dBµV/m)	(µV/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)
30 to 88	100	40	100	40	---	---
88 to 216	150	43.5	150	43.5	---	---
216 to 230	200	46	200	46	---	---
230 to 960	200	46	224	47		
960 to 1000	500	54	500	54	---	---
Above 1000	---	---	---	---	74	54

Limits according to FCC Part 15B, are equal or more stringent than those of ICES-003 Issue 7.

Setup for measurements



Setup for measurements < 1GHz.



Setup for measurements > 1GHz.

Results

S/	OM	Code	Freq Rng (MHz)	V
01	OM/01	RE0101LR	[30, 1000]	P
01	OM/01	RE0101HR1	[1000, 17000]	P
01	OM/01	RE0101HR2	[17000, 40000]	P

Verdict

Pass

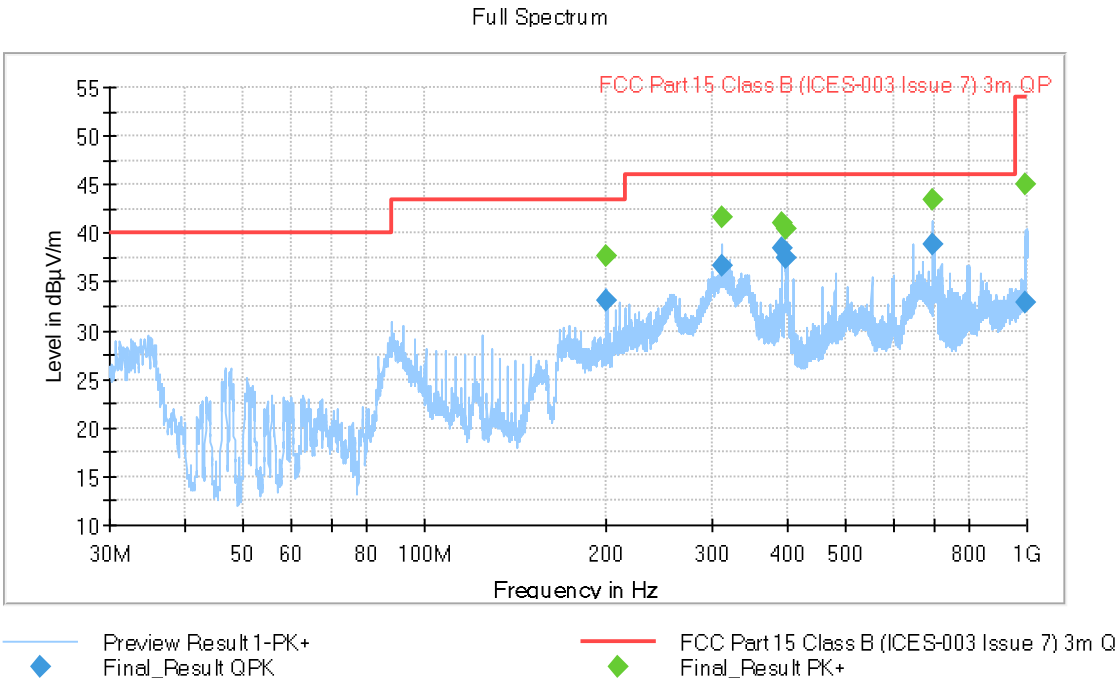
Attachments

EMC Test Code = RE0101LR Frequency Range MHz = [30, 1000]

Sample ID: S/01

Operation Mode: OM/01

Images:



Tables:

Radiated Emission

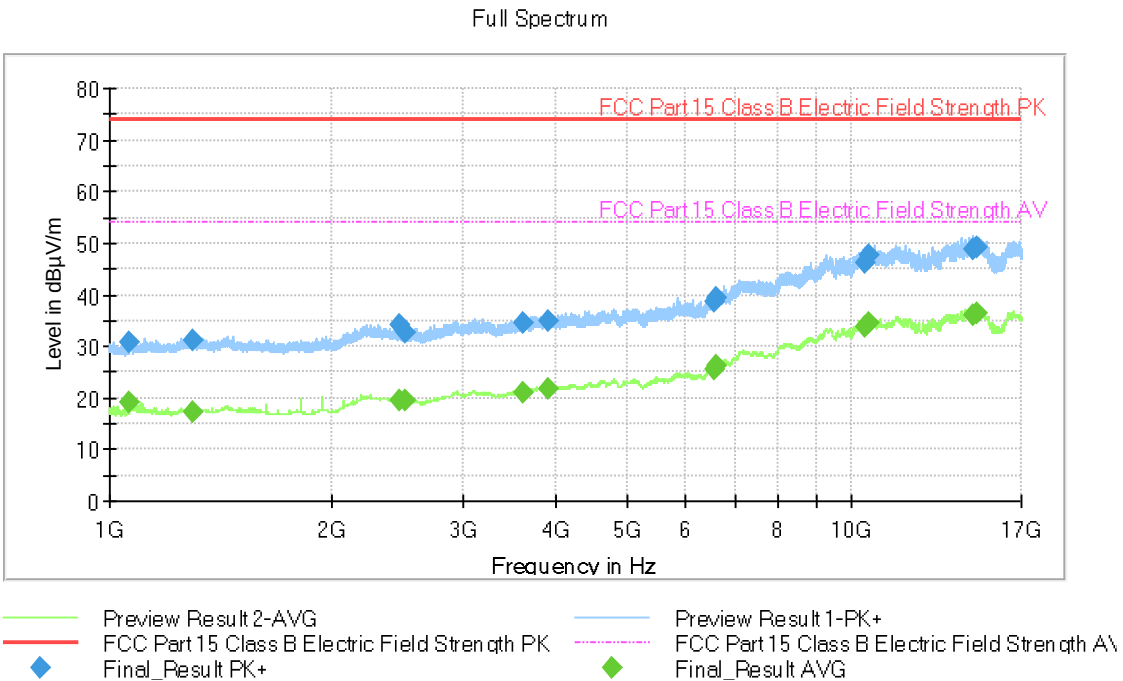
Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
199.680000	---	37.68	---	---	100.0	V	-171.0
199.680000	33.01	---	40.00	6.99	100.0	V	-171.0
312.000000	36.60	---	47.00	10.40	100.0	V	5.0
312.000000	---	41.67	---	---	100.0	V	5.0
392.700000	38.40	---	47.00	8.60	100.0	V	-88.0
392.700000	---	40.99	---	---	100.0	V	-88.0
398.220000	---	40.45	---	---	251.0	H	171.0
398.220000	37.48	---	47.00	9.52	251.0	H	171.0
696.000000	38.90	---	47.00	8.10	100.0	V	147.0
696.000000	---	43.37	---	---	100.0	V	147.0
996.270000	32.84	---	47.00	14.16	100.0	V	175.0
996.270000	---	45.14	---	---	100.0	V	175.0

EMC Test Code = RE0101HR1 Frequency Range MHz = [1000, 17000]

Sample ID: S/01

Operation Mode: OM/01

Images:



Tables:

Radiated Emission

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
1062.000000	---	19.05	53.97	34.92	-39.0	0.0	24.9	33.2
1062.000000	30.73	---	73.97	43.24	-39.0	0.0	24.9	44.9
1297.750000	31.14	---	73.97	42.83	-38.7	0.0	25.9	44.0
1297.750000	---	17.34	53.97	36.63	-38.7	0.0	25.9	30.2
2463.000000	34.01	---	73.97	39.96	-37.4	0.0	27.6	43.8
2463.000000	---	19.68	53.97	34.29	-37.4	0.0	27.6	29.4
2500.000000	32.58	---	73.97	41.39	-37.3	0.0	27.6	42.4
2500.000000	---	19.40	53.97	34.57	-37.3	0.0	27.6	29.2
3613.000000	34.39	---	73.97	39.58	-36.8	0.0	29.3	42.0
3613.000000	---	21.00	53.97	32.97	-36.8	0.0	29.3	28.6
3917.500000	34.79	---	73.97	39.18	-36.6	0.0	29.8	41.6
3917.500000	---	21.62	53.97	32.35	-36.6	0.0	29.8	28.5
6547.250000	---	25.63	53.97	28.34	-35.3	0.0	34.4	26.6
6547.250000	38.72	---	73.97	35.25	-35.3	0.0	34.4	39.6
6600.000000	39.44	---	73.97	34.53	-35.2	0.0	34.5	40.2
6600.000000	---	26.33	53.97	27.64	-35.2	0.0	34.5	27.1
10429.750000	46.26	---	73.97	27.71	-30.4	0.0	40.3	36.4

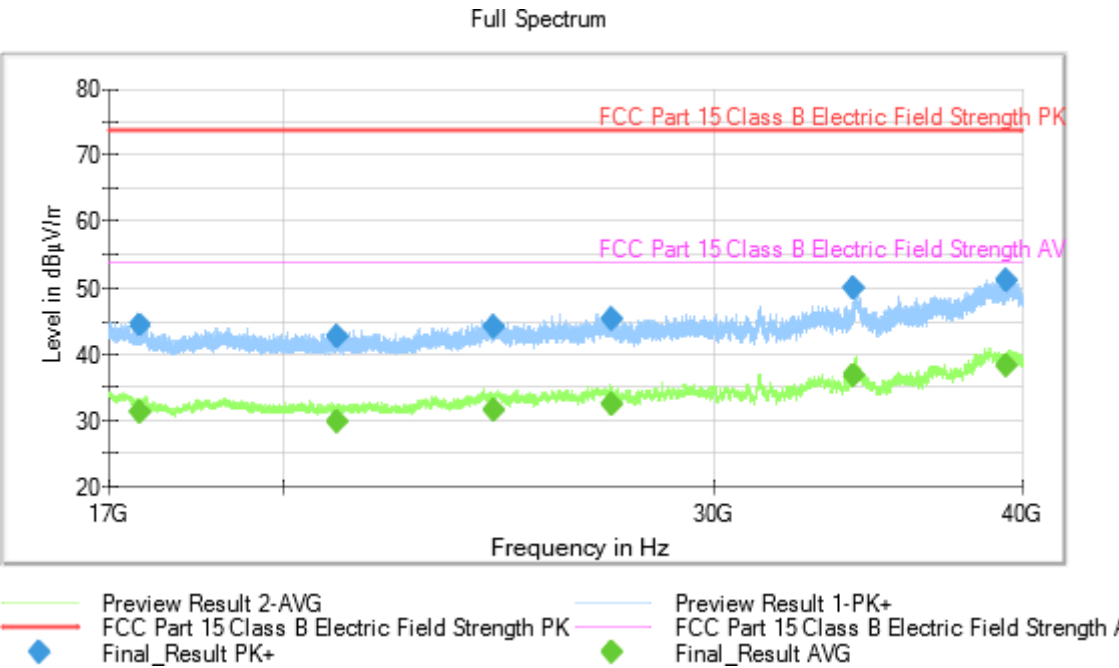
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
10429.750000	---	33.74	53.97	20.23	-30.4	0.0	40.3	23.9
10600.000000	47.66	---	73.97	26.31	-30.0	0.0	40.4	37.3
10600.000000	---	34.59	53.97	19.38	-30.0	0.0	40.4	24.2
14660.000000	48.72	---	73.97	25.25	-27.9	0.0	42.0	34.7
14660.000000	---	36.05	53.97	17.92	-27.9	0.0	42.0	22.0
14798.000000	49.17	---	73.97	24.80	-27.8	0.0	41.8	35.2
14798.000000	---	36.48	53.97	17.49	-27.8	0.0	41.8	22.5

EMC Test Code = RE0101HR2 Frequency Range MHz = [17000, 40000]

Sample ID: S/01

Operation Mode: OM/01

Images:



Tables:

Radiated Emission

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)	Raw Rec (dBµV)
17512.133333	44.43	---	73.97	29.54	1000.0	100.0	H	124.0	-58.4	0.0	37.7	65.2
17512.133333	---	31.05	53.97	22.92	1000.0	100.0	H	124.0	-58.4	0.0	37.7	51.8
21051.833333	42.59	---	73.97	31.38	1000.0	100.0	V	-134.0	-54.2	0.0	37.9	58.8
21051.833333	---	29.69	53.97	24.28	1000.0	100.0	V	-134.0	-54.2	0.0	37.9	45.9
24389.900000	---	31.54	53.97	22.43	1000.0	100.0	V	-39.0	-51.2	0.0	38.8	43.9
24389.900000	44.05	---	73.97	29.92	1000.0	100.0	V	-39.0	-51.2	0.0	38.8	56.4
27223.500000	45.08	---	73.97	28.89	1000.0	100.0	V	-55.0	-52.1	0.0	40.0	57.2
27223.500000	---	32.38	53.97	21.59	1000.0	100.0	V	-55.0	-52.1	0.0	40.0	44.5
34190.966667	49.73	---	73.97	24.24	1000.0	100.0	H	-46.0	-55.0	0.0	42.8	61.9
34190.966667	---	36.83	53.97	17.14	1000.0	100.0	H	-46.0	-55.0	0.0	42.8	49.0
39396.633333	---	38.06	53.97	15.91	1000.0	100.0	H	76.0	-52.6	0.0	44.7	46.0
39396.633333	50.97	---	73.97	23.00	1000.0	100.0	H	76.0	-52.6	0.0	44.7	58.9