

Global United Technology Services Co., Ltd.

Report No.: GTSL202104000276F01

TEST REPORT

Reason Information Technology (Shenzhen) Co., Ltd. **Applicant:**

1108a, building a, Xinghe world, 1 Yabao Road, Nankeng **Address of Applicant:**

community, Bantian street, Longgang District, Shenzhen

Reason Information Technology (Shenzhen) Co., Ltd. Manufacturer:

Address of 1108a, building a, Xinghe world, 1 Yabao Road, Nankeng community, Bantian street, Longgang District, Shenzhen Manufacturer:

Equipment Under Test (EUT)

Product Name: 1278 LORA RF module

Model No.: RM-RF10TP-1278(SP)

Serial No.: RM-RF10TP-1278(PI)

Trade Name: N/A

FCC ID: 2AZV8RM-RF10TP-1278

FCC CFR Title 47 Part 15 Subpart C Section 15.231 **Applicable standards:**

Date of sample receipt: Apr.15,2021

Date of Test: Apr.15,2021-May.31,2021

Date of report issued: May.31,2021

PASS * Test Result:

In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Luo **Laboratory Manager**



2 Version

Version No.	Date	Description
01	May.31,2021	Original

Prepared By:	Joseph Cly	Date:	May.31,2021
	Project Engineer		
Check By:	Johnson Lun	Date:	May.31,2021
	Reviewer		



3 Contents

		Pa	age
1	cov	/ER PAGE	1
2	VER	SION	2
3		NTENTS	
4		T SUMMARY	
•	4.1	MEASUREMENT UNCERTAINTY	
5		IERAL INFORMATION	
J			
	5.1 5.2	GENERAL DESCRIPTION OF EUT TEST MODE	
	5.2 5.3	DESCRIPTION OF SUPPORT UNITS	
	5.4	TEST FACILITY	
	5.5	TEST LOCATION	
	5.6	OTHER INFORMATION REQUESTED BY THE CUSTOMER	6
	5.7	DEVIATION FROM STANDARDS	
	5.8	ABNORMALITIES FROM STANDARD CONDITIONS	_
	5.9	ADDITIONAL INSTRUCTIONS	
6	TES	T INSTRUMENTS LIST	7
7	TES	T RESULTS AND MEASUREMENT DATA	9
	7.1	ANTENNA REQUIREMENT	
	7.2	CONDUCTED EMISSIONS	10
	7.3	RADIATED EMISSION METHOD	12
	7.4	20DB OCCUPY BANDWIDTH	
	7.5	DWELL TIME	
	7.6	DUTY CYCLE	19
8	TES	T SETUP PHOTO	21
9	EUT	CONSTRUCTIONAL DETAILS	21



4 Test Summary

Test Item	Section in CFR 47	Result		
Antenna Requirement	15.203	Pass		
Conduction Emission	15.207	Pass		
Field strength of the Fundamental Signal	15.231 (b)	Pass		
Spurious Emissions	15.231 (b)/15.209	Pass		
20dB Bandwidth	15.231 (c)	Pass		
Dwell Time	15.231 (a)(1)	Pass		

Pass: The EUT complies with the essential requirements in the standard.

4.1 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes			
Radiated Emission	30MHz-200MHz	3.8039dB	(1)			
Radiated Emission	200MHz-1GHz	3.9679dB	(1)			
Radiated Emission	1GHz-18GHz	4.29dB	(1)			
Radiated Emission 18GHz-40GHz 3.30dB						
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.						



5 General Information

5.1 General Description of EUT

Product Name:	1278 LORA RF module
Model No.:	RM-RF10TP-1278(SP)
Serial No.:	RM-RF10TP-1278(PI)
Trade Name:	N/A
Test sample(s) ID:	GTSL202104000276-1 (Engineer sample)
	GTSL202104000276-2 (Normal sample)
Operation Frequency:	433.049MHz
Channel Number	1
Modulation technology:	ASK
Antenna Type:	External antenna
Antenna gain:	3.00dBi
Power supply:	DC 5.0V From External Circuit
Adapter Information	Mode: CD122
(auxiliary test equipment supplied by test Lab)	Input: AC100-240V, 50/60Hz, 500mA
Supplied by test Lab)	Output: DC 5V, 2A



5.2 Test mode

Transmitting mode	Keep the EUT in transmitting mode.
-------------------	------------------------------------

Per-test mode.

We have verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which only the worst case was shown in this test report and defined as follows:

	Axis	Χ	Υ	Z
433.049MHz	Field Strength(dBuV/m)	71.25	68.79	67.23

5.3 Description of Support Units

None.

5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• FCC —Registration No.: 381383

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

• IC —Registration No.: 9079A

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A

NVLAP (LAB CODE:600179-0)

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone,

Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480 Fax: 0755-27798960

5.6 Other Information Requested by the Customer

None.

5.7 Deviation from Standards

None.

5.8 Abnormalities from Standard Conditions

None.

5.9 Additional instructions

Software (Used for test) from client

Mode	Special test SW was built-in by manufacturer.
Power set	Default

Global United Technology Services Co., Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone,

Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



6 Test Instruments list

Radi	Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025	
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A	
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 25 2020	June. 24 2021	
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021	
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021	
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021	
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021	
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021	
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021	
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021	
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021	
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021	
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021	
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021	
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021	
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021	
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021	
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021	
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021	
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 18 2020	Oct. 17 2021	
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 18 2020	Oct. 17 2021	
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 18 2020	Oct. 17 2021	
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021	



Cond	Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 25 2020	June. 24 2021
4	ENV216 2-L-V- NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 25 2020	June. 24 2021
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 25 2020	June. 24 2021
8	Absorbing clamp	Elektronik- Feinmechanik	MDS21	GTS229	June. 25 2020	June. 24 2021
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 25 2020	June. 24 2021

RF C	RF Conducted Test:							
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 25 2020	June. 24 2021		
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021		
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 25 2020	June. 24 2021		
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 25 2020	June. 24 2021		
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 25 2020	June. 24 2021		
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 25 2020	June. 24 2021		
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 25 2020	June. 24 2021		
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 25 2020	June. 24 2021		

Gene	ral used equipment:					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 25 2020	June. 24 2021
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



7 Test results and Measurement Data

7.1 Antenna Requirement

Standard requirement: FCC Part15 C Section 15.203

15.203 requirement:

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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is External antenna, the best case gain of the antenna is 3.00dBi, reference to the appendix II for details.



7.2 Conducted Emissions

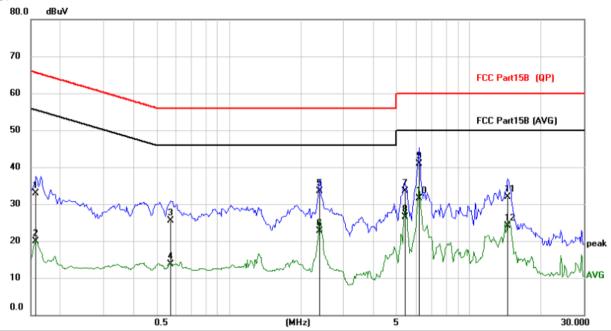
7.2 Conducted Emissions	1						
Test Requirement:	FCC Part15	FCC Part15 C Section 15.207					
Test Method:	ANSI C63.1	0:2013					
Test Frequency Range:	150KHz to	150KHz to 30MHz					
Class / Severity:	Class B	Class B					
Receiver setup:	RBW=9KH	z, VBW=30Kł	Hz, Sweep tin	ne=auto			
Limit:		•			t (dBuV)		
	Frequen	cy range (MH	lz) Qι	ıasi-peak		rage	
).15-0.5	6	66 to 56*	56 to	46*	
		0.5-5		56	4	6	
		5-30		60	5	0	
	* Decrease	s with the loga	arithm of the	frequency	'		
Test setup:	Decircuse	Reference Plane	and in the	irequerioy.			
Tool proceedures	AUX Equipment E.U.T EMI Receiver Remark E.U.T. Equipment Under Test LISN JAUX Filter AC power LISN JAUX Filter AC power E.U.T. Equipment Under Test LISN Line Impedence Stabilization Network Test table height=0.8m						
Test procedure:	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2009 on conducted measurement. 						
Test Instruments:	Refer to s	section 6.0	for details				
Test mode:	Refer to s	Refer to section 5.2 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mb ar	
Test voltage:	AC 120V,	60Hz			ı		
Test results:	PASS						
	1						

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



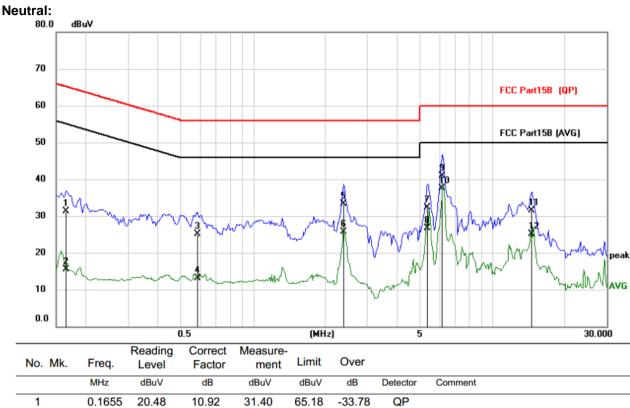
Measurement data

Line:



							-,	_		
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		0.1578	22.04	10.93	32.97	65.58	-32.61	QP		
2		0.1578	8.93	10.93	19.86	55.58	-35.72	AVG		
3		0.5712	14.67	10.92	25.59	56.00	-30.41	QP		
4		0.5712	2.82	10.92	13.74	46.00	-32.26	AVG		
5		2.3847	22.62	10.98	33.60	56.00	-22.40	QP		
6		2.3847	11.65	10.98	22.63	46.00	-23.37	AVG		
7		5.4063	22.42	11.12	33.54	60.00	-26.46	QP		
8		5.4063	15.32	11.12	26.44	50.00	-23.56	AVG		
9		6.2019	29.69	11.17	40.86	60.00	-19.14	QP		
10	*	6.2019	20.33	11.17	31.50	50.00	-18.50	AVG		
11		14.4426	20.38	11.45	31.83	60.00	-28.17	QP		
12		14.4426	12.74	11.45	24.19	50.00	-25.81	AVG		





No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1655	20.48	10.92	31.40	65.18	-33.78	QP	
2	0.1655	4.57	10.92	15.49	55.18	-39.69	AVG	
3	0.5828	14.11	10.92	25.03	56.00	-30.97	QP	
4	0.5828	2.25	10.92	13.17	46.00	-32.83	AVG	
5	2.3885	22.42	10.98	33.40	56.00	-22.60	QP	
6	2.3885	14.64	10.98	25.62	46.00	-20.38	AVG	
7	5.3330	21.14	11.12	32.26	60.00	-27.74	QP	
8	5.3330	15.62	11.12	26.74	50.00	-23.26	AVG	
9	6.1745	29.70	11.16	40.86	60.00	-19.14	QP	
10 *	6.1745	26.31	11.16	37.47	50.00	-12.53	AVG	
11	14.5752	20.09	11.45	31.54	60.00	-28.46	QP	
12	14.5752	13.57	11.45	25.02	50.00	-24.98	AVG	

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss
- 4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

7.3 Radiated Emission Method

Test Requirement: FCC Part15 C Section 15.231 (b)& Section 15.209



				Report No.	GIS	LZUZ	104000276F01	
Test Method:	ANSI C63.10:2013							
Test Frequency Range:	9kHz to 5000MHz							
Test site:	Measurement Distar	nce: 3m						
Receiver setup:	Frequency	Dete	ector	RBW	VB	W	Value	
	9KHz-150KHz	Quas	i-peak	200Hz	600	Hz	Quasi-peak	
	150KHz-30MHz	Quas	i-peak	9KHz	30K	Hz	Quasi-peak	
	30MHz-1GHz	Quas	i-peak	100KHz	300k	Ήz	Quasi-peak	
		Pe	eak	1MHz	3MI	Ηz	Peak	
	Above 1GHz	Pe	eak	1MHz	10H	Ιz	Average	
Limit:	Frequency		Limit	(dBuV/m @	3m)		Remark	
(Field strength of the	433.049MHz	Z		100.80			Peak Value	
fundamental signal)				80.80			verage Value	
Limit:	Fundamental Freq	u onev	Fie	ld Strength	of	Fie	eld Strength of Unwanted	
(Spurious Emissions)	(MHz)	luericy	1	undamental			Emissions	
	, ,		(microvolts/meter)			(microvolts/meter)		
	40.66-40.70		1,000		100			
	70-130 130-174		500 500 to 1,500**			50 50 to 1,50**		
	174-260		1,500		1,50			
	260-470			00 to 5,000	**	1	,50 to 5,00**	
	Above 470		.,0	5,000			5,00	
			1					
	Frequency			Class B	(dBuV	/m @		
	(MHz)		Peak 74			Average 54		
	Above 1000		unwanted emission level i			c 20		
	maximum permitted to strength.							
Test setup:	Below 30MHz							
	Turn Table Socm	Tum T		Intenna Im				
	Below 1GHz							



Report No.: GTSL202104000276F01 Test Antenna < 1m ... 4m EUT: Turn Table. < 80cm Turn Table Receiver. Preamplifier. Above 1GHz < 3m > Test Antenna < 1m 4m > EUT. Turn Table+ -150cm di Preamplifier+ Receiver+ Test Procedure: 1. The EUT was placed on the top of a rotating table (0.8 meters for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Test Instruments: Refer to section 6.0 for details Test mode: Refer to section 5.2 for details Test environment: Humid.: 50% 1 010mbar Temp.: 25 °C Press.: DC 5.0V Test voltage: Test results: **Pass**



Measurement data:

The emissions from 30MHz to 5GHz are measured peak and average level, below 1 GHz measured QP level, detailed test data please see below. Besides, we tested 3 directions and recorded the worst data.

Emission Styles	Frequency (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Direction (H/V)
Fundamental	433.049	71.25	100.80	29.55	PK	Н
Spurious	435.560	35.59	46.00	10.41	PK	Н
Harmonics	866.098	51.24	80.80	29.56	PK	Н
Harmonics	1299.147	50.36	74.00	23.64	PK	Н
Fundamental	433.049	68.59	100.80	32.21	PK	V
Spurious	435.870	37.11	46.00	8.89	PK	V
Harmonics	866.098	50.79	80.80	30.01	PK	V
Harmonics	1299.147	49.72	74.00	24.28	PK	V

Emission Styles	Frequency (MHz)	PK Level (dBuV/m)	AV Factor (dB/m)	AV Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Directio n (H/V)
Fundamental	433.049	71.25	0.00	71.25	80.80	9.55	Н
Harmonics	866.098	51.24	0.00	51.24	60.80	9.56	Н
Harmonics	1299. 147	50.36	0.00	50.36	54.00	3.64	Н
Fundamental	433.049	68. 59	0.00	68. 59	80.80	12.21	V
Harmonics	866.098	50.79	0.00	50.79	60.80	10.01	V
Harmonics	1299. 147	49.72	0.00	49.72	54.00	4. 28	V

Note:

- AV Level (dBuV/m)= PK Level (dBuV/m)+ AV Factor(dB)
- 2. AV Factor=20*log(Duty Cycle)=20*log(1)=0



7.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.231 (c)	
Test Method:	ANSI C63.10:2013	
Limit:	The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments: Refer to section 6.0 for details		
Test mode: Refer to section 5.2 for details		
Test results:	Pass	

Measurement Data

Test Frequency (MHz)	20dB bandwidth (MHz)	Limit (MHz)	Result
433.049	0.1659	1.0826	Pass

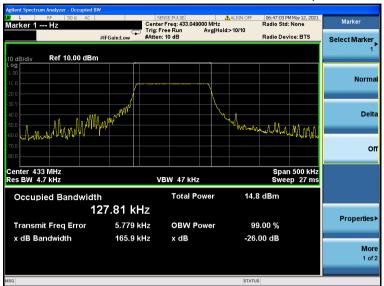
Note: Limit= Fundamental frequencyx0.25%

433.049×0.25%=1.0826MHz

Test plot as follows:

GTS

Report No.: GTSL202104000276F01





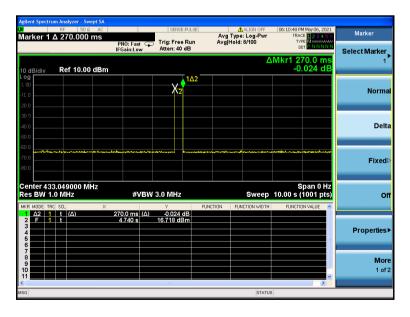
7.5 Dwell Time

Test Requirement:	FCC Part15 C Section 15.231 (a)(1)		
Test Method:	ANSI C63.10:2013		
Receiver setup:	RBW=100KHz, VBW=300KHz, span=0Hz, detector: Peak		
Limit:	Not more than 5 seconds		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 6.0 for details		
Test mode:	Refer to section 5.2 for details		
Test results:	Pass		

Measurement data:

Frequency (MHz)	Duration of each TX (second)	Limit (second)	Result
433.049	0.270	<5.0	Pass

Test plot as follows:





7.6 Duty Cycle

Test Requirement:	FCC Part15 C Section 15.231			
Test Method:	ANSI C63.10:2013			
Receiver setup:	RBW=100KHz, VBW=300KHz, span=0Hz, detector: Peak			
Limit:	No dedicated limit specified in the Rules.			
Test Procedure:	Place the EUT on the table and set it in transmitting mode.			
	2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.			
	3. Set centre frequency of spectrum analyzer=operating frequency.			
	4. Set the spectrum analyzer as RBW=100kHz, VBW=100KHz, Span=0Hz, Adjust Sweep=100ms to obtain the "worst-case" pulse on time			
	5. Repeat above procedures until all frequency measured was complete.			
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane			
Test Instruments:	Refer to section 6.0 for details			
Test mode:	Refer to section 5.2 for details			
Test results:	Pass			

Measurement data:

Calculate Formula: Duty cycle factor =20 log(Duty cycle)

Duty cycle=on time/0.1 seconds or period, whichever is less

Test data:

In a transmit cycle 1000ms period found burst 1pcs, the Duty Cycle

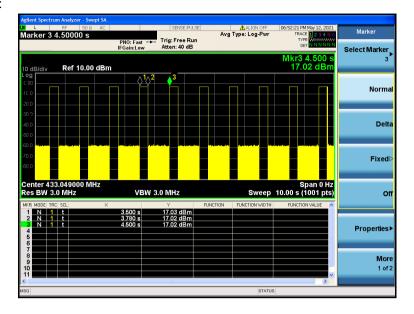
can calculate as below: Duty Cycle= 100/100=1

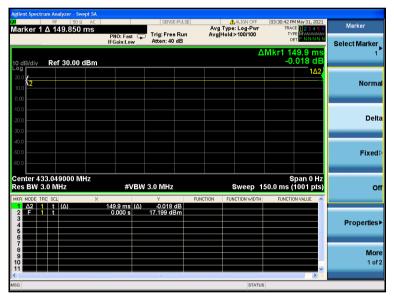
AV Factor=20*log(Duty Cycle)=20*log(1)=0



Test plot as follows:

Report No.: GTSL202104000276F01







8 Test Setup Photo

Reference to the appendix I for details.

9 EUT Constructional Details

Reference to the appendix II for details.

----- End -----