

TESTING CENTRE TEC					
	TEST REPOR	<u> </u>			
FCC ID:	2BOO6DTE-R-V01				
Test Report No::	TCT250314E056	(65)			
Date of issue::	Apr. 07, 2025				
Testing laboratory:	SHENZHEN TONGCE TESTING	S LAB			
Testing location/ address:	2101 & 2201, Zhenchang Factor Fuhai Subdistrict, Bao'an District 518103, People's Republic of Ch	, Shenzhen, Guangdong			
Applicant's name::	Boards & More GmbH	(65)			
Address::	Rabach 1 4591, Molln, Austria				
Manufacturer's name:	OmniSpecial Technology Co., Lt	d			
Address:	No. 68, Yuhe Road, Yuanjiangyuan Village, Changping Town, Dongguan City, Guangdong Province, China				
Standard(s)::	FCC CFR Title 47 Part 15 Subpart C Section 15.231				
Product Name::	DTE ASSIST Remote control				
Trade Mark:	DUOTONE				
Model/Type reference:	DTE-R-V01	(3)			
Rating(s):	Rechargeable Li-ion Battery DC	3.7V			
Date of receipt of test item	Mar. 14, 2025	(E)	(C)		
Date (s) of performance of test:	Mar. 14, 2025 ~ Apr. 07, 2025				
Tested by (+signature) :	Rleo LIU	Reo GLONGCE			
Check by (+signature):	Beryl ZHAO	Boyl 2 TCT			
Approved by (+signature):	Tomsin	Joms in s			

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1. General Product Information

Report No.: TCT250314E028

1.1. EUT description

Product Name:	DTE ASSIST Remote control		
Model/Type reference:	DTE-R-V01		
Sample Number:	TCT250314E028-0101		
Operation Frequency:	916.4MHz		
Modulation Technology:	GFSK		
Antenna Type:	Internal Antenna		
Antenna Gain:	3dBi		
Rating(s):	Rechargeable Li-ion Battery DC	3.7V	

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.



2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna Requirement	§15.203	PASS
Conduction Emission, 0.15MHz to 30MHz	§15.207	N/A
Manually Activated Transmitter	§15.231(a)	PASS
Radiation Emission	§15.231(b), §15.205, §15.209, §15.35	PASS
Occupied Bandwidth	§15.231(c)	PASS

- 1. PASS: Test item meets the requirement.
- 2. Fail: Test item does not meet the requirement.
- 3. N/A: Test case does not apply to the test object.
- 4. The test result judgment is decided by the limit of test standard.





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3. General Information

3.1. Test Environment and Mode

Operating Environment:	
Condition	Radiated Emission
Temperature:	24.9 °C
Humidity:	50 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Operation mode:	Keep the EUT in continuous transmitting with modulation

The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case (Y axis) are shown in Test Results of the following pages.

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 was shown in this test report and defined as follows:

Axis	X	Υ	Z
Field Strength(dBuV/m)	52.47	55.31	52.59

Final Test Mode:

According to ANSI C63.10 standards, the test results are both the "worst case" and "worst setup": Y axis (see the test setup photo)

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.



4. Facilities and Accreditations

4.1. Facilities

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

• FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB.

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

• IC - Registration No.: 10668A

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Innovation, Science and Economic Development Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4.3. 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	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 1.08 dB
3	Spurious emissions, conducted	± 2.94 dB
4	Occupied Bandwidth	± 0.25 KHz
5	All emissions, radiated(<1 GHz)	± 4.56 dB
6	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
7	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB
8	Temperature	± 0.1°C
9	Humidity	± 1.0%

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5. Test Results and Measurement Data

5.1. Antenna Requirement

Standard requirement:

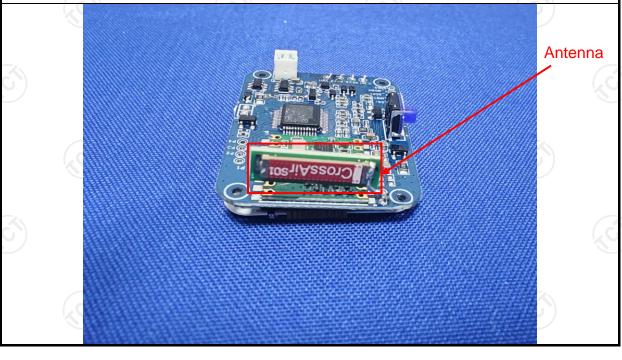
FCC Part15 C Section 15.203

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.

E.U.T Antenna:

The antenna is internal antenna which permanently attached, and the best case gain of the antenna is 3dBi





5.2. Conducted Emission

5.2.1. Test Specification

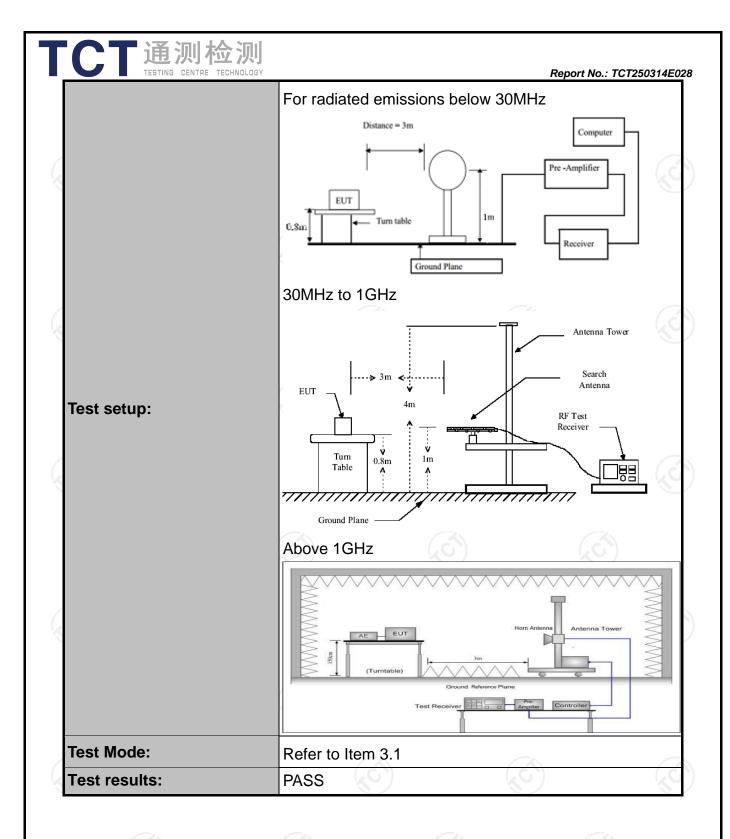
			(-	
Test Requirement:	FCC Part15 C Section 15.207			
Test Method:	ANSI C63.4:2014			
Frequency Range:	150 kHz to 30 MHz	(4)	(C ⁽)	
Receiver setup:	RBW=9 kHz, VBW=30	kHz, Sweep time	e=auto	
	Frequency range		dBuV)	
	(MHz)	Quasi-peak	Average	
Limits:	0.15-0.5	66 to 56*	56 to 46*	
	0.5-5	56	46	
	5-30	60	50	
	Reference	e Plane		
Test Setup: Test Mode:	## AC power Som LISN Filter AC power Filter AC power Filter AC power EMI Receiver E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m Charging + Transmitting Mode			
Test Procedure:	1. The E.U.T and simulation power through a line (L.I.S.N.). This proimpedance for the modern through a LI coupling impedance refer to the block photographs). 3. Both sides of A.C. conducted interferer emission, the relative the interface cables ANSI C63.4:2014 or	ulators are connect impedance state ovides a 500hm reasuring equipment of the state	polization network on/50uH coupling tent. ected to the main of a 50ohm/50uH mination. (Please test setup and led for maximum and the maximum uipment and all of ged according to	
Test Result:	N/A			



5.3. Radiated Emission Measurement

5.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.231(a) and 15.209				
Test Method:	ANSI C63.10:2020				
Frequency Range:	9 kHz to 5 G	9 kHz to 5 GHz			
Measurement Distance:	3 m				
Antenna Polarization:	Horizontal &	Vertical			
Receiver Setup:	Frequency 9kHz- 150kHz 150kHz- 30MHz 30MHz-1GHz Above 1GHz	Peak Peak	1MHz 1MHz	VBW 1kHz 30kHz 300KHz 3MHz 10Hz	Peak Value Average Value
Test Procedure:	Above 1GHz Peak 1MHz 3MHz Peak Value				





5.3.2. Limit

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Fundamental Frequency (MHz)	· · · Filingamental			
40.66-40.70	2250	225		
70-130	1250	125		
130-174	1250 to 3750*	125 to 375*		
174-260	3750	375		
260-470	3750 to 12500*	375 to 1250*		
Above 470	12500	1250		
Horn Antenna	Schwarzbeck	BBHA 9120D		

^{*}Linear interpolations

[Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows:

For the band 130-174 MHz, μ V/m at 3 meters = 56.81818(F) - 6136.3636; for the band 260-470 MHz, μ V/m at 3 meters = 41.6667(F) - 7083.3333. The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.

For EUT

Fundamental Frequency (MHz)	Filed Strength of Fundamental (dBµV/m)	Filed Strength of Spurious Emission(dBµV/m)
916.4	81.94	61.94

- Intentional radiators operating under the provisions of this Section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions.
- 2.According to 15.35, on any frequency or frequencies below or equal to 1000 MHz, the limits Shown are based on measuring equipment employing a CISPR quasi-peak detector function and related measurement bandwidths, unless otherwise specified the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test.
- 3. According to 15.231(b), The limits on the field strength of the spurious emissions in the above table is based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in Section 15.209, whichever limit permits one higher field strength.



Frequencies in restricted band are complied to limit on Paragraph 15.209

Frequency Range (MHz)	Distance (m)	Field strength (dBμV/m)	
0.009-0.490	3	20log 2400/F (kHz) + 80	
0.490-1.705	3	20log 24000/F (kHz) + 40	
1.705-30	3	20log 30 + 40	
30-88	3	40.0	
88-216	3	43.5	
216-960	3	46.0	
Above 960	3	54.0	

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.
- 5. If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula Ld1 = Ld2 * (d2/d1)







5.3.3. Test Instruments

	F	Radiated Emission	n Test Site (966)		
Equipment	Manufacturer	Model	Serial Number	Date of Cal.	Due Date
EMI Test Receiver	R&S	ESCI7	100529	Jan. 21, 2025	Jan. 20, 2026
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 27, 2024	Jun. 26, 2025
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	Jan. 21, 2025	Jan. 20, 2026
Pre-amplifier	SKET	LNPA_1840G-50	SK202109203500	Jan. 21, 2025	Jan. 20, 2026
Pre-amplifier	HP	8447D	2727A05017	Jun. 27, 2024	Jun. 26, 2025
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 27, 2024	Jun. 26, 2025
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 29, 2024	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 29, 2024	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Jan. 23, 2025	Jan. 22, 2026
Coaxial cable	SKET	RE-03-D	/	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	SKET	RE-03-M	1-2	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	SKET	RE-03-L		Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	SKET	RE-04-D	/	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	SKET	RE-04-M	1	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	SKET	RE-04-L	/	Jun. 27, 2024	Jun. 26, 2025
Antenna Mast	Keleto	RE-AM	/	/	/
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	1) 1





5.3.4. Test Data

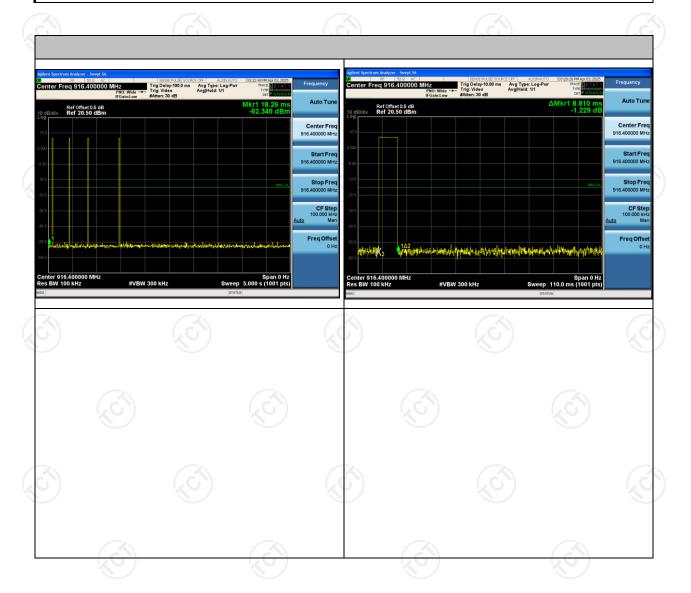
Duty Cycle Test Data

916.4MHz:

Total time (ms)	Effective time (ms)	Duty Cycle	AV Factor(dB)
100	8.91	0.09	-21.00

Note:

Effective time= 8.91ms
Duty Cycle= Effective time/ Total time=0.09
AV Factor = 20 log(Duty Cycle)= -21.00





Field Strength of Fundamental

Frequency (MHz)	Emission PK (dBuV/m)	Horizontal /Vertical	Limits PK (dBuV/m)	Margin (dB)
916.4	96.03	Н	101.94	-5.91
916.4	92.61	V	101.94	-9.33

Frequency (MHz)	Emission PK (dBuV/m)	AV Factor(dB)	Horizontal /Vertical	Emission AVG (dBuV/m)	Limits AV (dBuV/m)	Margin (dB)
916.4	96.03	-21.00	(C) H	75.03	81.94	-6.91
916.4	92.61	-21.00	V	71.61	81.94	-10.33

Harmonics and Spurious Emissions

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBµV/m)	Limit@3m (dBµV/m)
(0) ((0)		(YO.) (YO
)1	
	<u> </u>	-7(-1)

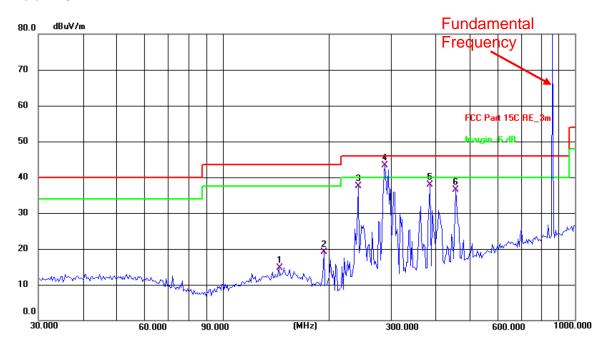
Note: 1. Emission Level=Reading+ Cable loss-Antenna factor-Amp factor

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement





Below 1GHz



Site: 3m Anechoic Chamber1 Polarization: Horizontal Temperature: 24.9(C) Humidity: 50 %

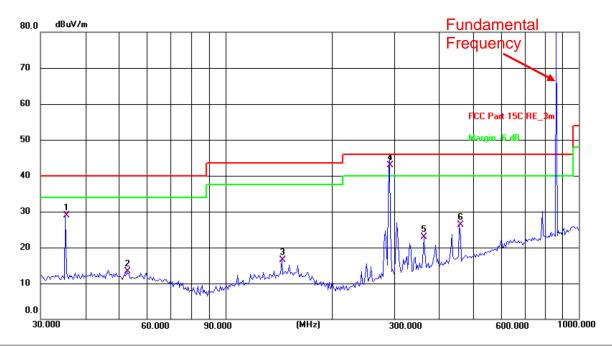
Limit: FCC Part 15C RE_3m Power: DC 3.7 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	144.3346	26.69	-11.92	14.77	43.50	-28.73	QP	Р	
2	193.7726	33.51	-14.37	19.14	43.50	-24.36	QP	Р	
3	242.5252	51.31	-13.80	37.51	46.00	-8.49	QP	Р	
4 *	289.0020	54.65	-11.39	43.26	46.00	-2.74	QP	Р	
5	387.9917	47.28	-9.44	37.84	46.00	-8.16	QP	Р	
6	459.1143	44.68	-8.23	36.45	46.00	-9.55	QP	Р	









Site: 3m Anechoic Chamber1 Polarization: Vertical Temperature: 24.9(C) Humidity: 50 %

Limit: FCC Part 15C RE_3m Power: DC 3.7 V

- II A 1									
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector	P/F	Remark
1	35.2512	41.44	-12.55	28.89	40.00	-11.11	QP	Р	
2	52.5753	25.66	-12.45	13.21	40.00	-26.79	QP	Р	
3	144.3347	28.51	-11.92	16.59	43.50	-26.91	QP	Р	
4 *	291.0360	54.18	-11.28	42.90	46.00	-3.10	QP	Р	
5	364.2595	32.87	-9.98	22.89	46.00	-23.11	QP	Р	
6	459.1144	34.58	-8.23	26.35	46.00	-19.65	QP	Р	

Note: 1. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported

2. Freq. = Emission frequency in MHz

Measurement $(dB\mu V/m) = Reading level (dB\mu V) + Corr. Factor (dB)$

Correction Factor= Antenna Factor + Cable loss - Pre-amplifier

Limit $(dB\mu V/m) = Limit$ stated in standard

 $Margin (dB) = Measurement (dB\mu V/m) - Limits (dB\mu V/m)$

* is meaning the worst frequency has been tested in the test frequency range second harmonic

3. The limit value of the fundamental frequency is 101.94dBuV/m.



Above 1GHz (PK value)

Frequency PK Value (MHz)	Read Level PK (dBuV)	Correction Factor (dB/m)	Level PK (dBuV/m)	Limit Line PK (dBuV/m)	Limit Line AV (dBuV/m)	Margin Limit (dB)	Polarization
2749.20	60.76	-18.59	42.17	81.94	61.94	-19.77	Vertical
3665.60	51.73	-18.14	33.59	81.94	61.94	-28.35	Vertical
4582.00	49.45	-17.61	31.84	81.94	61.94	-30.10	Vertical
5498.40	46.94	-16.45	30.49	81.94	61.94	-31.45	Vertical
6414.80	46.32	-14.84	31.48	81.94	61.94	-30.46	Vertical
7331.20	44.94	-14.17	30.77	81.94	61.94	-31.17	Vertical
2749.20	57.71	-18.59	39.12	81.94	61.94	-22.82	Horizontal
3665.60	54.78	-18.14	36.64	81.94	61.94	-25.30	Horizontal
4582.00	51.27	-17.61	33.66	81.94	61.94	-28.28	Horizontal
5498.40	52.11	-16.45	35.66	81.94	61.94	-26.28	Horizontal
6414.80	52.43	-14.84	37.59	81.94	61.94	-24.35	Horizontal
7331.20	48.96	-14.17	34.79	81.94	61.94	-27.15	Horizontal

- 1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss Pre-amplifier
- 2. Margin (dB) = Peak Emission Level (dB μ V/m)-AV limit (dB μ V/m)
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 5. Data of measurement shown " * " in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.





5.4. Manually Activated Transmitter

5.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.231(a)(1)			
Test Method:	ANSI C63.10:2020			
Limit:	According to 15.231(a), A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.			
Test Procedure:	 According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. Set to the maximum power setting and enable the EUT transmit continuously. Use the following spectrum analyzer settings. RBW = 100KHz, VBW≥RBW; Span = 0; Sweep Time > T(on)+5S; Detector function = peak; Measure and record the results in the test report. 			
Test setup:	Spectrum Analyzer EUT			
Test Mode:	Refer to Item 3.1			
Test results:	PASS (C)			

5.4.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial Number	Date of Cal.	Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 27, 2024	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB) /		1(0)

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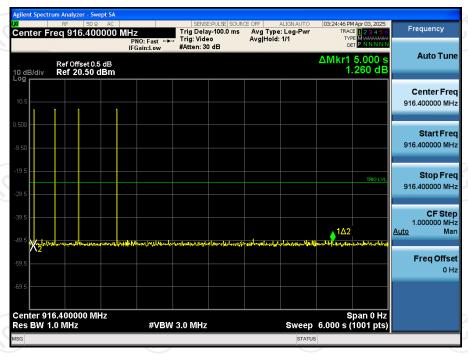
5.4.3. Test data

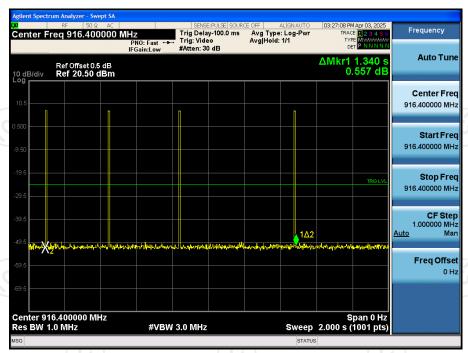
Report	No.:	TCT250314E028
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Test Channel (MHz)	Manually Activated Transmitter (s)	Limit (s)	Conclusion
916.4	1.34	5	PASS

Test plots as follows:

916.4MHz







5.5. Occupied Bandwidth

5.5.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.231C		
Test Method:	ANSI C63.10:2020		
Limit:	According to 15.231(c), The bandwidth of the emission shall be no wider than 0.25% of the centre frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the centre frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.		
Test Procedure:	 According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. Set to the maximum power setting and enable the EUT transmit continuously. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = 50KHz, centered on a hopping channel; RBW = 3KHz; VBW = 10KHz; Sweep = auto; Detector function = peak; Trace = max hold. Measure and record the results in the test report. 		
Test setup:	Spectrum Analyzer EUT		
Test Mode:	Refer to Item 3.1		
Test results:	PASS		

5.5.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial Number	Date of Cal.	Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 27, 2024	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB	165	1	



5.5.3. Test data

Report No.: TCT250314E028

Test Channel (MHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
916.4	61.09	2291.00	PASS

Note: Limit = 916.4MHz *0.25% = 2291.00 kHz

Test plots as follows:

916.4MHz



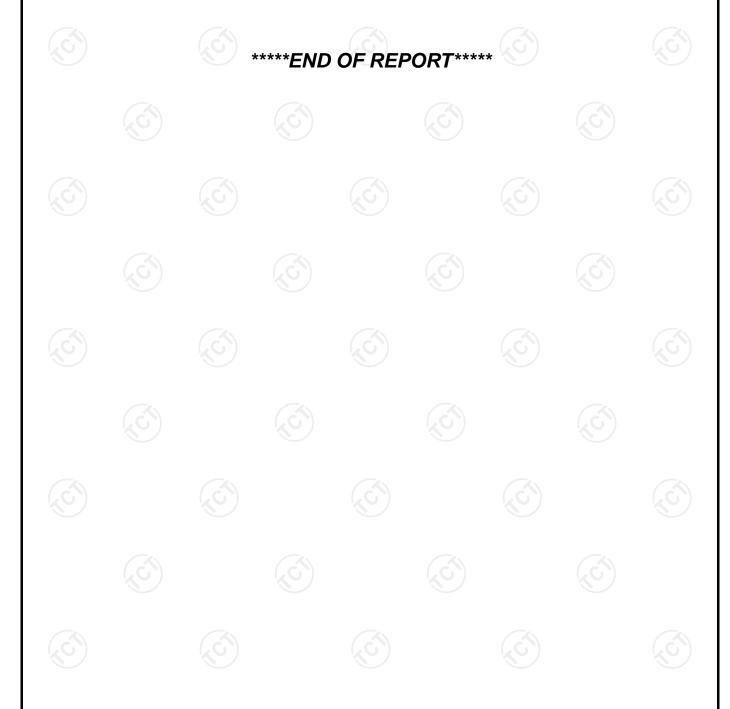


Appendix A: Photographs of Test Setup

Please refer to document Appendix No.: TCT250314E028-A

Appendix B: Photographs of EUT

Please refer to document Appendix No.: TCT250314E028-B & TCT250314E028-C



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