

Test Report

Report No. : MTi241225006-07E1

Date of issue : 2025-01-21

Applicant : Shenzhen Caibo Technology Co., Ltd

Product : Portable 2 in 1 magnetic wireless charger

Model(s) : D5, CH-647, T652-F

FCC ID : 2AXTH-D5

Shenzhen Microtest Co., Ltd.



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Test Result Certificatio	n		@Mic -		
Applicant	Shenz	Shenzhen Caibo Technology Co., Ltd			
Applicant Address		F4, Building 30, Fifth Industrial Zone, Huaide Cuigang Industrial Park, Fu Yong, Bao'an District, Shenzhen, China.			
Manufacturer	Shenz	hen Caibo Technology Co., Ltd	~ NICIOLO		
Manufacturer Address		illding 30, Fifth Industrial Zone, Hung, Bao'an District, Shenzhen, Ch			
Product description		kes.			
Product name	Portab	ole 2 in 1 magnetic wireless chargo	er		
Trademark	KOAK	UMA (6)			
Model name	D5		,est		
Series Model(s)	CH-64	7, T652-F	~ MICION		
Standards	47 CFI	R Part 15C			
Test Method	ANSI	C63.10-2013	rest		
Testing Information			Micros		
Date of test	2024-1	12-31 to 2025-01-18			
Test result	Pass	, ost			
Prepared by:		Maleah Deng	Markentien		
Reviewed by:		David Lee	Dowid. Cel		
Approved by:		Leon Chen	Moderations Dowid. Cee Con chan		
2.0	10		<u> </u>		

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1 General Description

1.1 Description of the EUT

Product name:	Portable 2 in 1 magnetic wireless charger	
Model name:	D5	
Series Model(s):	CH-647, T652-F	
Model difference:	All the models are the same circuit and module, except the model name.	
Electrical rating:	Input: DC5V3A, 9V3A Wireless Output: Phone: 5W, 7.5W, 10W, 15W Watch: 2.5W	
Accessories:	N/A	
Hardware version:	V1.0	
Software version:	V1.0	
Test sample(s) number:	MTi241225006-07S1001	
RF specification		
Operating frequency range:	Coil1 (Phone): 115-205kHz (5W, 7.5W, 10W), 360kHz (15W) Coil2 (Watch): 326.5kHz	
Modulation type:	ASK	
Antenna(s) type:	Coil Antenna	

1.2 Description of test modes

No.	Emission test modes
Mode1	Wireless Output: Phone 5W+ Watch 2.5W
Mode2	Wireless Output: Phone 7.5W+ Watch 2.5W
Mode3	Wireless Output: Phone 10W+ Watch 2.5W
Mode4	Wireless Output: Phone 15W(MPP)+ Watch 2.5W
Mode5	Wireless Output: Phone 5W
Mode6	Wireless Output: Phone 7.5W
Mode7	Wireless Output: Phone 10W
Mode8	Wireless Output: Phone 15W(MPP)
Mode9	Wireless Output: Watch 2.5W
Mode10	Stand by

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1.3 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15°C ~ 35°C
Humidity:	20% RH ~ 75% RH
Atmospheric pressure:	98 kPa ~ 101 kPa

1.4 Description of support units

Support equipment list						
Description	Model	Serial No.	Manufacturer			
HUAWEI QUICK CHARGE(65W)	HW-200200ZP1	/	HUAWEI			
wireless charging load	YBZ 2.1	/	YBZ			
wireless charging load	YBZ 3.0	/	YBZ			
Watch	iWatch SE	FH7PP6BAG91J6	Apple			
Support cable list						
Description	Length (m)	From	То			
/	/	/	/			

1.5 Measurement uncertainty

Measurement	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	±3.1dB
Occupied channel bandwidth	±3 %
Radiated spurious emissions (9kHz~30MHz)	±4.3dB
Radiated spurious emissions (30MHz~1GHz)	±4.7dB
Temperature	±1 °C
Humidity	±5%

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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2 Summary of Test Result

No.	Item	Standard	Requirement	Result
1	Antenna requirement	47 CFR Part 15C	47 CFR Part 15.203	Pass
2	Conducted Emission at AC power line	47 CFR Part 15C	47 CFR Part 15.207(a)	Pass
3	20dB Occupied Bandwidth	47 CFR Part 15C	47 CFR Part 15.215(c)	Pass
4	Emissions in frequency bands (below 30MHz)	47 CFR Part 15C	47 CFR Part 15.209	Pass
5	Emissions in frequency bands (30MHz - 1GHz)	47 CFR Part 15C	47 CFR Part 15.209	Pass

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3 Test Facilities and accreditations

3.1 Test laboratory

Test laboratory:	Shenzhen Microtest Co., Ltd.		
Test site location:	101, No.7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China		
Telephone:	(86-755)88850135		
Fax:	(86-755)88850136		
CNAS Registration No.:	CNAS L5868		
FCC Registration No.:	448573		
IC Registration No.:	21760		
CABID:	CN0093		

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4 List of test equipment

No.	Equipment	Manufacturer	Model	Serial No.	Cal. date	Cal. Due	
	Conducted Emission at AC power line						
1	EMI Test Receiver	Rohde&schwarz	ESCI3	101368	2024-03- 20	2025-03- 19	
2	Artificial mains network	Schwarzbeck	NSLK 8127	183	2024-03- 21	2025-03- 20	
3	Artificial Mains Network	Rohde & Schwarz	ESH2-Z5	100263	2024-03- 20	2025-03- 19	
		20dB Occup	ied Bandwidth				
1	Wideband Radio Communication Tester	Rohde&schwarz	CMW500	149155	2024-03- 20	2025-03- 19	
2	ESG Series Analog Ssignal Generator	Agilent	E4421B	GB400512 40	2024-03- 21	2025-03- 20	
3	PXA Signal Analyzer	Agilent	N9030A	MY513502 96	2024-03- 21	2025-03- 20	
4	Synthesized Sweeper	Agilent	83752A	3610A019 57	2024-03- 21	2025-03- 20	
5	MXA Signal Analyzer	Agilent	N9020A	MY501434 83	2024-03- 21	2025-03- 20	
6	RF Control Unit	Tonscend	JS0806-1	19D80601 52	2024-03- 21	2025-03- 20	
7	Band Reject Filter Group	Tonscend	JS0806-F	19D80601 60	2024-03- 21	2025-03- 20	
8	ESG Vector Signal Generator	Agilent	N5182A	MY501437 62	2024-03- 20	2025-03- 19	
9	DC Power Supply	Agilent	E3632A	MY400276 95	2024-03- 21	2025-03- 20	
	En	nissions in frequenc	y bands (below	30MHz)			
1	EMI Test Receiver	Rohde&schwarz	ESCI7	101166	2024-03- 20	2025-03- 19	
2	Active Loop Antenna	Schwarzbeck	FMZB 1519 B	00066	2024-03- 23	2025-03- 22	
3	Amplifier	Hewlett-Packard	8447F	3113A0618 4	2024-03- 20	2025-03- 19	
	Emissions in frequency bands (30MHz - 1GHz)						
1	EMI Test Receiver	Rohde&schwarz	ESCI7	101166	2024-03- 20	2025-03- 19	
2	TRILOG Broadband Antenna	schwarabeck	VULB 9163	9163-1338	2023-06-11	2025-06- 10	
3	Active Loop Antenna	Schwarzbeck	FMZB 1519 B	00066	2024-03- 23	2025-03- 22	
4	Amplifier	Hewlett-Packard	8447F	3113A0618 4	2024-03- 20	2025-03- 19	

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5 Evaluation Results (Evaluation)

5.1 Antenna requirement

Test Requirement:	Refer to 47 CFR Part 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.
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5.1.1 Conclusion:

The antenna of the EUT is permanently attached.

The EUT complies with the requirement of FCC PART 15.203.

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6 Radio Spectrum Matter Test Results (RF)

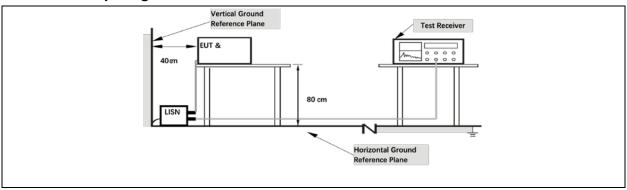
6.1 Conducted Emission at AC power line

Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, 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 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN).				
Test Limit:	Frequency of emission (MHz)	Conducted limit (dBµV)			
		Quasi-peak	Average		
	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30 60 50				
	*Decreases with the logarithm of the frequency.				
Test Method:	ANSI C63.10-2013 section 6.2				
Procedure: Refer to ANSI C63.10-2013 section 6.2, standard test method power-line conducted emissions from unlicensed wireless devi					

6.1.1 E.U.T. Operation:

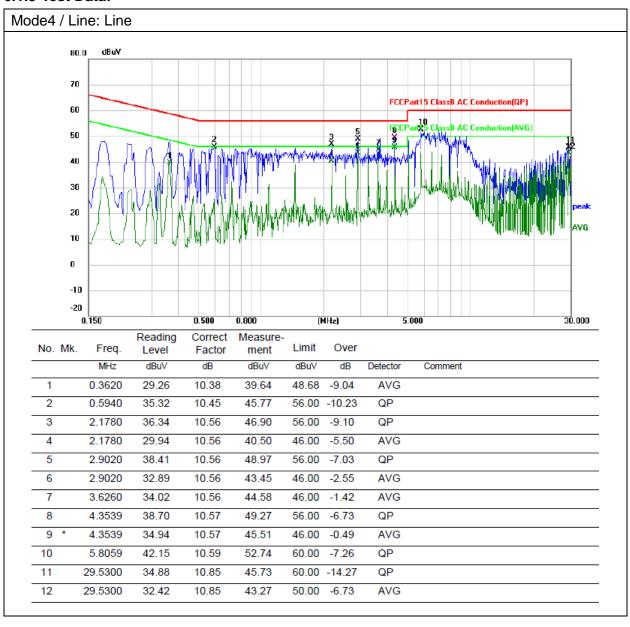
Operating Environment:						
Temperature:	Temperature: 21.7 °C Humidity: 47 % Atmospheric Pressure: 101 kPa					
Pre test mode:		Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, Mode8, Mode9, Mode10				
Final test mode	All of the listed pre-test mode were tested, only the data of the worst mode (Mode4) is recorded in the report					

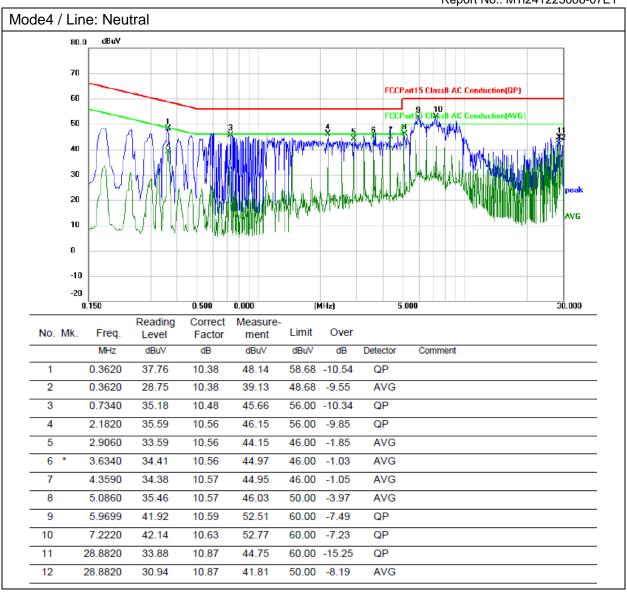
6.1.2 Test Setup Diagram:



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6.1.3 Test Data:





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6.2 20dB Occupied Bandwidth

6.2 ZUGB Occup	and Bandwidth
Test Requirement	: 47 CFR Part 15.215(c)
Test Limit:	Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.
Test Method:	ANSI C63.10-2013, section 6.9.2
Test Method: Procedure:	a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW. b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement. c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2. d) Steps a) through c) might require iteration to adjust within the specified tolerances. e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "-xx dB down" requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value. f) Set detection mode to peak and trace mode to max hold. g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value). h) Determine the "-xx dB down amplitude" using [(reference value) - xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument. i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j). j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "-xx dB do
Tal: 0755_88850135_1/30	envelope of the spectral display, such that the marker is at or slightly below the "-xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the

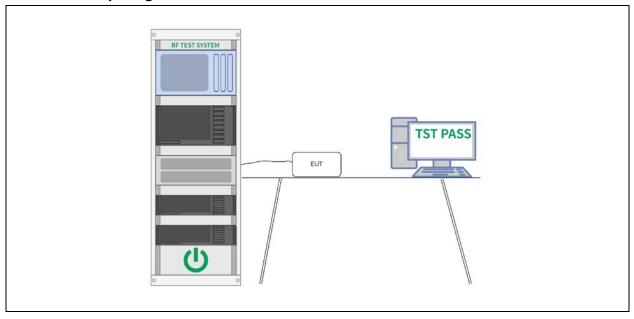
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reference marker amplitude. The marker-delta frequency reading at
this point is the specified emission bandwidth.
k) The occupied bandwidth shall be reported by providing plot(s) of the
measuring instrument display; the plot axes and the scale units per
division shall be clearly labeled. Tabular data may be reported in
addition to the plot(s).

6.2.1 E.U.T. Operation:

Operating Environment:						
Temperature:	Temperature: 22.8 °C Humidity: 42 % Atmospheric Pressure: 101 kPa					
Pre test mode: Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, I Mode9, Mode10					7, Mode8,	
Final test mode:		All of the listed pre-test mode were tested, only the data of the worst mode (Mode7, Mode8, Mode9) is recorded in the report				

6.2.2 Test Setup Diagram:

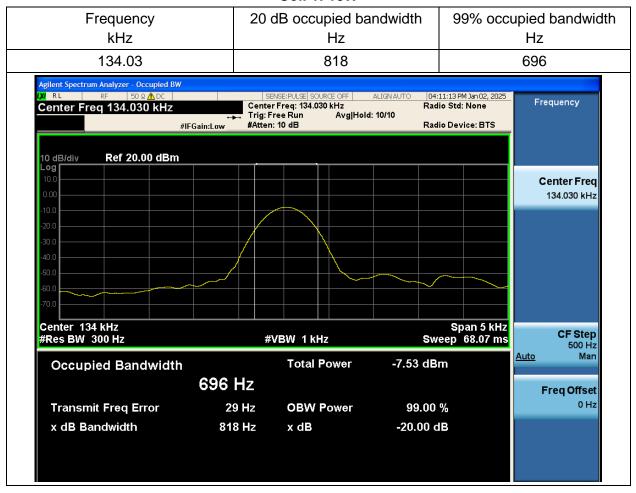


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6.2.3 Test Data:

Note: Because the measured signal is CW-like, adjusting the RBW per C63.10 would not be practical since measurement bandwidth will always follow the RBW. The RBW is set to 300 Hz to perform the occupied bandwidth test.

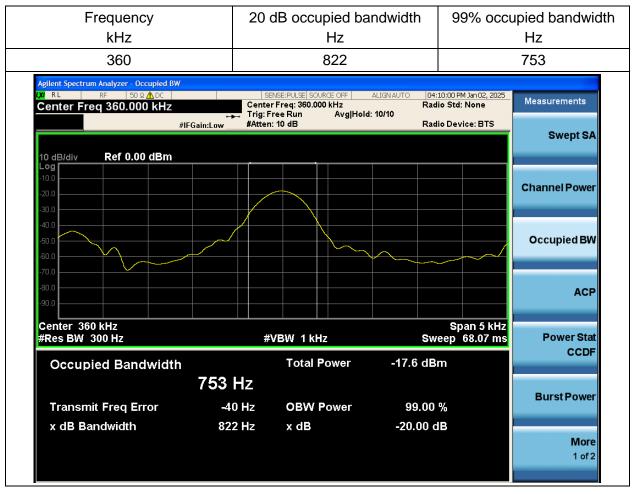
Coil 1: 10W



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Note: Because the measured signal is CW-like, adjusting the RBW per C63.10 would not be practical since measurement bandwidth will always follow the RBW. The RBW is set to 300 Hz to perform the occupied bandwidth test.

Coil 1: 15W



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Note: Because the measured signal is CW-like, adjusting the RBW per C63.10 would not be practical since measurement bandwidth will always follow the RBW. The RBW is set to 300 Hz to perform the occupied bandwidth test.

Coil 2: 2.5W



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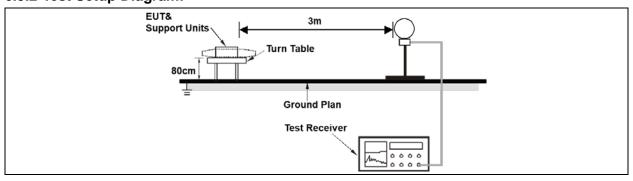
6.3 Emissions in frequency bands (below 30MHz)

Test Requirement:	47 CFR Part 15.209						
Test Limit:	Frequency (MHz)	Field strength	Measuremen				
		(microvolts/meter)	t distance				
			(meters)				
	0.009-0.490	2400/F(kHz)	300				
	0.490-1.705	24000/F(kHz)	30				
	1.705-30.0	30	30				
	30-88	100 **	3				
	88-216	150 **	3				
	216-960	200 **	3				
	Above 960	500	3				
Toot Mothod:	** Except as provided in paragraph (g), fundamental emissions intentional radiators operating under this section shall not be located the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 4806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and In the emission table above, the tighter limit applies at the band. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the first strength limits in paragraphs (a) and (b) of this section are based average limits. However, the peak field strength of any emission not exceed the maximum permitted average limits specified about more than 20 dB under any condition of modulation. For point-to operation under paragraph (b) of this section, the peak field strength limits are shall not exceed 2500 millivolts/meter at 3 meters along the antiazimuth.						
Test Method:	ANSI C63.10-2013 section 6.4						
Procedure:	ANSI C63.10-2013 sect	ion 6.4					

6.3.1 E.U.T. Operation:

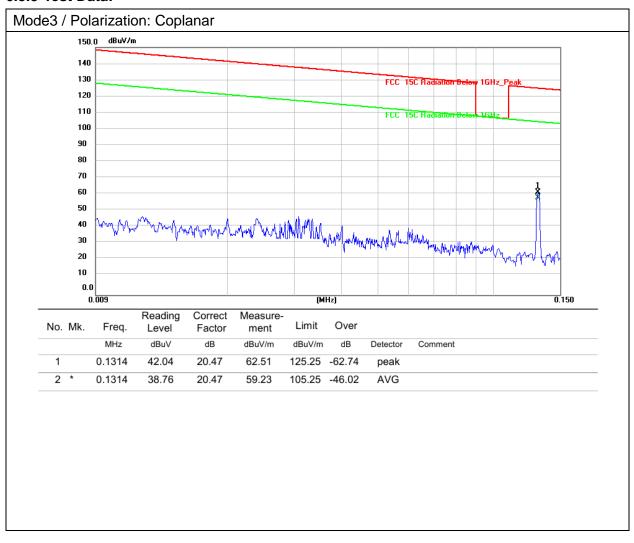
Operating Environment:							
Temperature:	Temperature: 22.3 °C Humidity: 40 % Atmospheric Pressure: 101 kPa						
Pre test mode: Mode1, Mode2, Mode3, Mode4, Mode5 Mode9, Mode10					e4, Mode5, Mode6, Mode	7, Mode8,	
Final test mode.			All of the listed pre-test mode were tested, only the data of the worst mode (Mode3, Mode4) is recorded in the report				

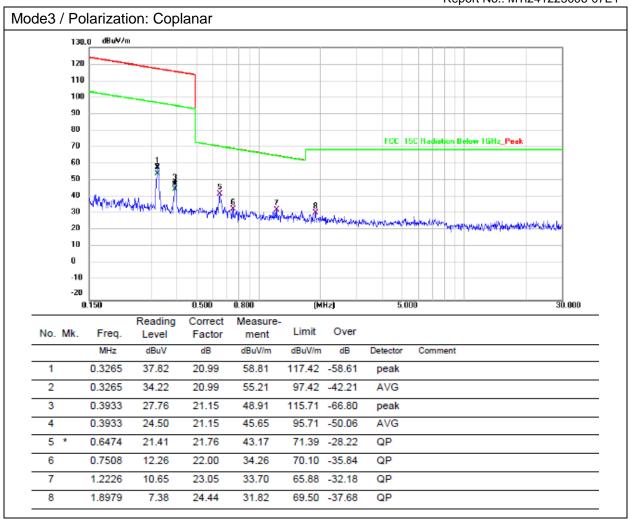
6.3.2 Test Setup Diagram:

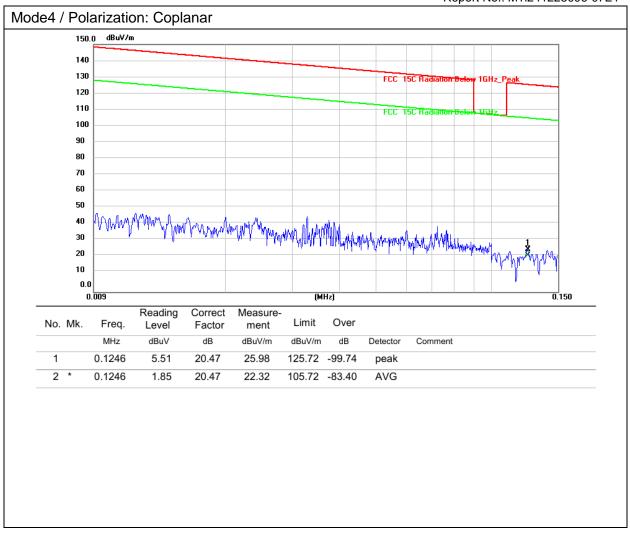


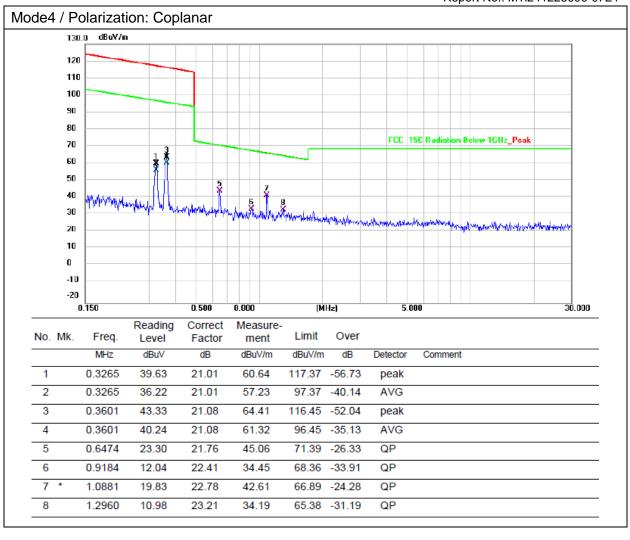
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6.3.3 Test Data:









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6.4 Emissions in frequency bands (30MHz - 1GHz)

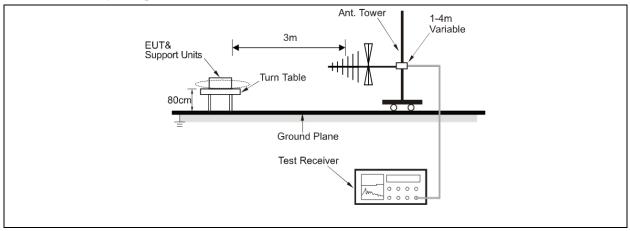
Test Requirement:	47 CFR Part 15.209					
Test Limit:	Frequency (MHz)	Field strength	Measuremen			
		(microvolts/meter)	t distance			
		,	(meters)			
	0.009-0.490	2400/F(kHz)	300			
	0.490-1.705	24000/F(kHz)	30			
	1.705-30.0	30	30			
	30-88	100 **	3			
	88-216	150 **	3			
	216-960	200 **	3			
	Above 960	500	3			
Tost Mothod:	** 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 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a)and (b)of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b)of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.					
Test Method:	ANSI C63.10-2013 sect					
Procedure:	ANSI C63.10-2013 sect	ion 6.5				

6.4.1 E.U.T. Operation:

Operating Environment:						
Temperature:	Temperature: 22.5 °C Humidity: 43 % Atmospheric Pressure: 101 kPa					
Pre test mode:		Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, Mode8, Mode9, Mode10				
Final test mode.			f the listed p e (Mode4) is		were tested, only the dat the report	a of the worst

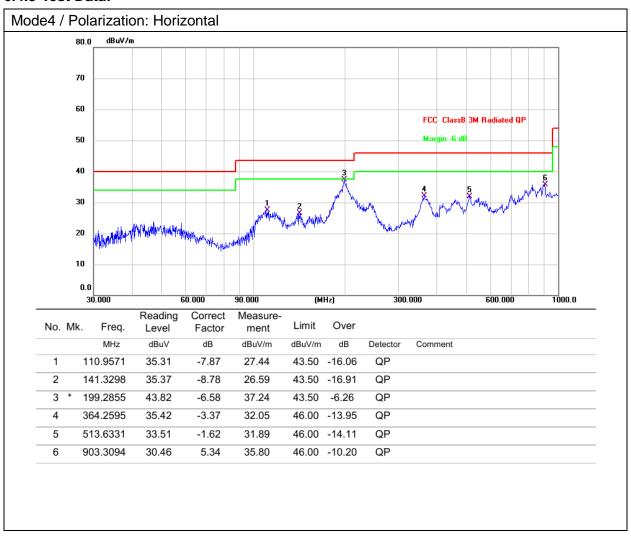
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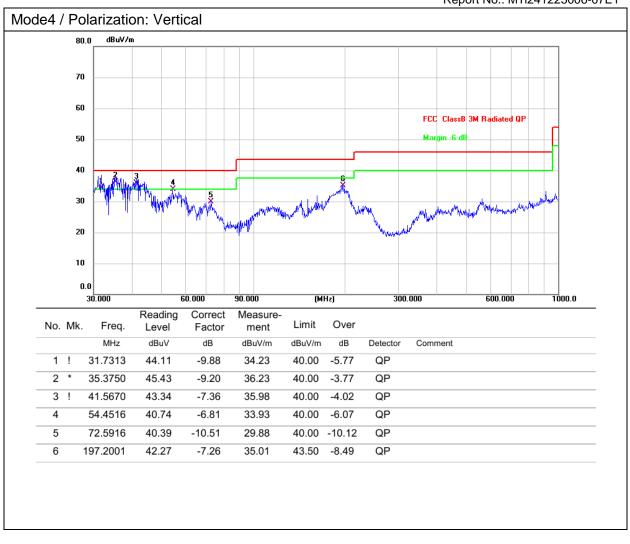
6.4.2 Test Setup Diagram:



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6.4.3 Test Data:





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Photographs of the test setup

Refer to Appendix - Test Setup Photos

Tel: 0755-88850135-1439 Mobile: 131-4343-1439 (Wechat same number) Web: http://www.mtitest.cn E-mail: mti@51mti.com
Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
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Photographs of the EUT

Refer to Appendix - EUT Photos

Tel: 0755-88850135-1439 Mobile: 131-4343-1439 (Wechat same number) Web: http://www.mtitest.cn E-mail: mti@51mti.com
Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
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Statement

- 1. This report is invalid without the seal and signature of the laboratory.
- The test results of this report are only responsible for the samples submitted. Client shall be responsible for representativeness of the sample and authenticity of the material.
- 3. The report shall not be partially reproduced without the written consent of the Laboratory.
- 4. This report is invalid if transferred, altered or tampered with in any form without authorization.
- 5. The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.
- 6. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

***** END OF REPORT *****