

# **Test Report**

Report No.:	MTi241120009-03E1
Date of issue:	2024-12-11
Applicant:	Superior communications
Product name:	Power bank
Model(s):	06723, 06723/4971S(Oracle# for 06723)
FCC ID:	YJW-06723

Shenzhen Microtest Co., Ltd. http://www.mtitest.cn

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Test Result Certification			
Applicant:	Superior communications		
Address:	5027 Irwindale Ave. Suite Irwindale Ave CA United States 91706		
Manufacturer:	Shenzhen Jianshun Electronic Commerce Co., Ltd		
Address:	Room 1002, Zhuohuijia Plaza, Yousong Street, Longhua District, Shenzhen City, Guangdong Province.		
Product description			
Product name:	Power bank		
Trademark:	AT&T		
Model name:	06723		
Series Model(s):	06723/4971S(Oracle# for 06723)		
Standards:	47 CFR Part 15C		
Test Method:	ANSI C63.10-2013		
Date of Test			
Date of test:	2024-11-26 to 2024-11-28		
Test result:	Pass		

Test Engineer	:	James Qun
		(James Qin)
Reviewed By	••	Dowid. Cee
		(David Lee)
Approved By	:	leon chen
		(Leon Chen)



# **1** General Description

#### 1.1 Description of the EUT

Product name:	Power bank	
Model name:	06723	
Series Model(s):	06723/4971S(Oracle# for 06723)	
Model difference:	All the models are the same circuit and module, except the model name.	
Electrical rating:	Input(Type-C): 5V 3A / 9V 2.22A Output(Type-C): 5V 3A Magnetic Wireless: 15W Power Rating: 18.5Wh(3.7V) Battery Capacity: 5000mAh	
Accessories:	Cable: Type-C to Type-C cable (0.3m)*1	
Hardware version:	HQW028-(SW6236)-V4	
Software version:	HQW028-CMC9699-V4	
Test sample(s) number:	MTi241120009-03S1001	
RF specification		
Operating frequency range:	115-205kHz(5W/ 7.5W/ 10W) 360kHz(15W)	
Modulation type:	ASK	

#### 1.2 Description of test modes

No.	Emission test modes
Mode1	Charging+Wireless Output(5W)
Mode2	Charging+Wireless Output(7.5W)
Mode3	Charging+Wireless Output(10W)
Mode4	Charging+Wireless Output(15W)
Mode5	Wireless Output(5W)
Mode6	Wireless Output(7.5W)
Mode7	Wireless Output(10W)
Mode8	Wireless Output(15W)
Mode9	Stand by



#### **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

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.

Support equipment list					
Description	Model	Serial No.	Manufacturer		
HUAWEI QUICK CHARGE(65W)	HW-200200ZP1	JN67LSN7N03451	HUAWEI		
wireless charging load YBZ3.0		/	YBZ		
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.



# 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



## 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



# 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 Oc	cupied Bandwid	th	·	
1	Wideband Radio Communication Tester	Rohde&schwarz	CMW500	149155	2024-03-20	2025-03-19
2	ESG Series Analog Ssignal Generator	Agilent	E4421B	GB40051240	2024-03-21	2025-03-20
3	PXA Signal Analyzer	Agilent	N9030A	MY51350296	2024-03-21	2025-03-20
4	Synthesized Sweeper	Agilent	83752A	3610A01957	2024-03-21	2025-03-20
5	MXA Signal Analyzer	Agilent	N9020A	MY50143483	2024-03-21	2025-03-20
6	RF Control Unit	Tonscend	JS0806-1	19D8060152	2024-03-21	2025-03-20
7	Band Reject Filter Group	Tonscend	JS0806-F	19D8060160	2024-03-21	2025-03-20
8	ESG Vector Signal Generator	Agilent	N5182A	MY50143762	2024-03-20	2025-03-19
9	DC Power Supply	Agilent	E3632A	MY40027695	2024-03-21	2025-03-20
		Emissions in frequ	iency bands (bel	ow 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	3113A06184	2024-03-20	2025-03-19
		Emissions in freque	ency bands (30N	/IHz - 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	3113A06184	2024-03-20	2025-03-19



## 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.

#### 5.1.1 Conclusion:

The antenna of the EUT is permanently attached. The EUT complies with the requirement of FCC PART 15.203.



# 6 Radio Spectrum Matter Test Results (RF)

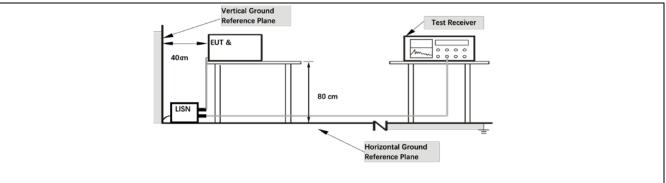
#### 6.1 Conducted Emission at AC power line

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 $\mu$ H/50 ohms line impedance stabilization network (LISN).				
Test Limit:	Frequency of emission (MHz)	Conducted limit (dBµ	IV)		
		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 for ac power- line conducted emissions from unlicensed wireless devices				

#### 6.1.1 E.U.T. Operation:

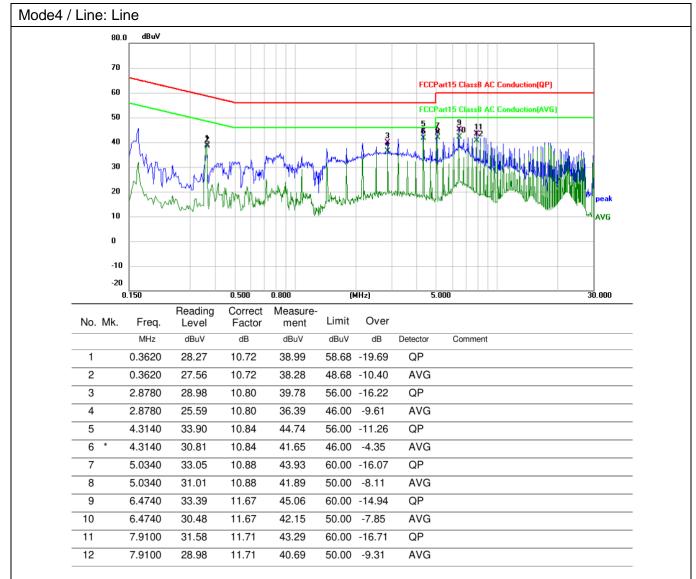
Operating Envi	Operating Environment:				
Temperature:	25.9 °C	5.9 °C Humidity: 59 % Atmospheric Pressure: 101 kPa			101 kPa
Pre test mode:	est mode: Mode1, Mode2, Mode3, Mode4				
Final test mode:All of the listed pre-test mode were tested, only the data of the worst mode (Mode4) is recorded in the report			of the worst mode		

#### 6.1.2 Test Setup Diagram:

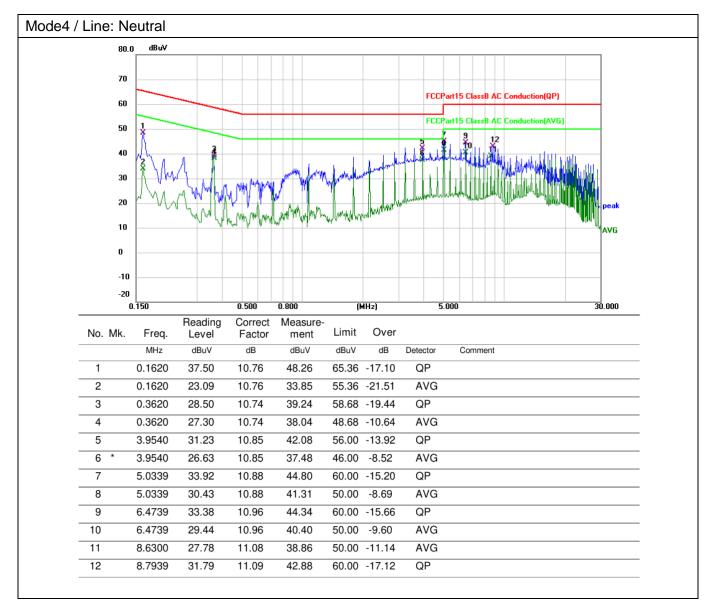




#### 6.1.3 Test Data:









#### 6.2 20dB Occupied Bandwidth

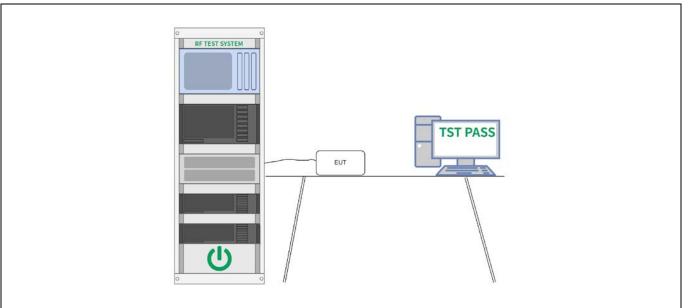
Test Requirement:	47 CFR Part 15.215(c)
Test Limit:	Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of 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
Procedure:	<ul> <li>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.</li> <li>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.</li> <li>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.</li> <li>d) Steps a) through c) might require iteration to adjust within the specified tolerances.</li> <li>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.</li> <li>f) Set detection mode to peak and trace mode to max hold.</li> <li>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).</li> <li>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.</li> <li>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 race to stabilize.</li> <li>Otherwise, the trace from step g) shall be used for step j).</li> <li>j) Place two markers. Alternatively, set a marker at the lowest frequency of the envelope of the</li></ul>



#### 6.2.1 E.U.T. Operation:

Operating Environment:							
Temperature:	23.1 °C		Humidity:	58 %		Atmospheric Pressure:	101 kPa
Pre test mode: Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, Mode8, Mode9			Mode8, Mode9				
Final test mode: All of the listed pre-test mode were tested, only the data of the worst mode (Mode7, Mode8) is recorded in the report			of the worst mode				
			ie <i>r</i> , ivioueo)	12 160010	ueu in	петероп	

#### 6.2.2 Test Setup Diagram:





#### 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.

Frequency	20 dB occupied bandwidth		99% occ	ccupied bandwidth	
kHz	Hz Hz			Hz	
129.995	81	1		689	
Agilent Spectrum Analyzer - Occupied BW 💢 R L RF 50 ହ 🛕 DC	SENSE:PULSE SOU	IRCE OFF ALIGN AUTO	02:09:25 PM Nov 26, 2024		
Center Freq 129.995 kHz	Center Freq: 129.99	5 kHz Avg Hold: 10/10	Radio Std: None	Frequency	
#IFGa	in:Low #Atten: 10 dB		Radio Device: BTS		
10 dB/div Ref 10.00 dBm					
0.00				Center Freq	
-10.0				129.995 kHz	
-30.0					
-40.0					
-50.0					
-70.0					
-80.0					
Center 130 kHz #Res BW 300 Hz	#VBW 1 kH		Span 5 kHz Sweep 68.07 ms	CF Step	
Occupied Bandwidth	Total F			500 Hz <u>Auto</u> Man	
	689 Hz			Freq Offset	
Transmit Freq Error	0 Hz OBW F	ower 99.	00 %	0 Hz	
x dB Bandwidth	811 Hz x dB	-20.0	0 dB		
MSG		STATUS	L DC Coupled		



**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.

Frequency	20 dB occupied bar	ndwidth	idth 99% occupied bandw		
kHz	Hz	Hz Hz			
360	812			690	
Agilent Spectrum Analyzer - Occupied BW M RL RF 50 Ω ▲ DC Center Freq 360.000 kHz	SENSE:PULSE SOURCE OFF Center Freq: 360.000 kHz		11:16 PMNov 26, 2024 io Std: None	Measurements	
#IFG 10 dB/div Ref 10.00 dBm	ain:Low #Atten: 10 dB		io Device: BTS	Swept SA	
10.00 -20.0				Channel Power	
-30.0 -40.0 -50.0				Occupied BW	
-60.0 -70.0 -80.0		·/~~~~		АСР	
Center 360 kHz #Res BW 300 Hz	#VBW 1 kHz	Sw	Span 5 kHz eep 68.07 ms	Power Stat	
Occupied Bandwidth	Total Power 690 Hz	-19.7 dB	m	CCDF	
Transmit Freq Error	7 Hz OBW Power	99.00	%	BurstPower	
x dB Bandwidth	812 Hz x dB	-20.00 d	B	More 1 of 2	
MSG		STATUS 🦺 D	C Coupled		



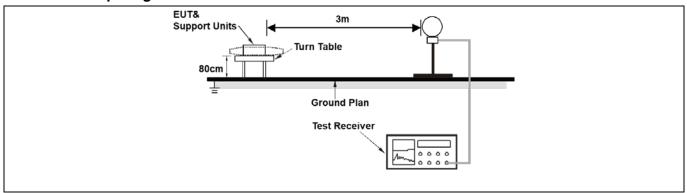
#### 6.3 Emissions in frequency bands (below 30MHz)

Test Requirement:	47 CFR Part 15.209					
Test Limit:	Frequency (MHz)	Field strength	Measuremen			
		(microvolts/meter)	t distance			
	0.000.0.400	2400/5(1/1-)	(meters)			
	0.009-0.490	2400/F(kHz)	300			
	0.490-1.705	24000/F(kHz) 30	30			
	30-88	100 **	30 3			
	88-216	150 **	3			
	216-960	200 **	3			
	Above 960	500	3			
		paragraph (g), fundamental en	-			
		rating under this section shall n		ne		
		MHz, 76-88 MHz, 174-216 MHz				
		in these frequency bands is pe	rmitted under othe	er		
	sections of this part, e.g.					
	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.					
		for frequencies above 1000 MI	0			
	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					
		ak field strength shall not excee				
		ers along the antenna azimuth.				
Test Method:	ANSI C63.10-2013 secti	-				
Procedure:	ANSI C63.10-2013 secti	on 6.4				

#### 6.3.1 E.U.T. Operation:

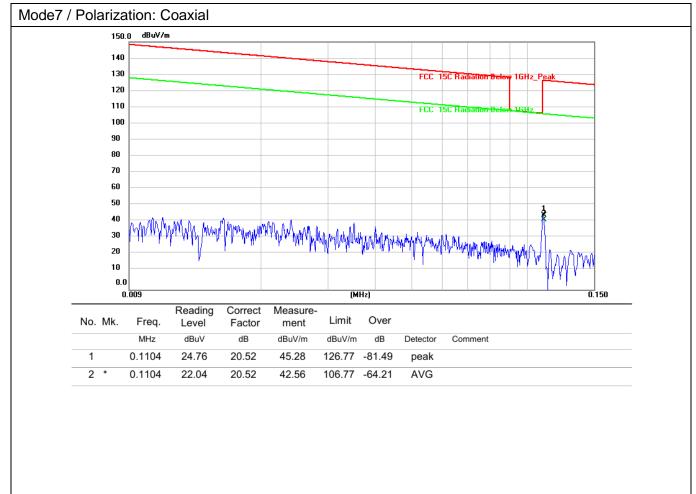
Operating Environment:				
Temperature: 23 °C	Humidity: 56 % Atmospheric Pressure: 101 kPa			
Pre test mode:	Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, Mode8, Mode9			
Final test mode:All of the listed pre-test mode were tested, only the data of the worst mode (Mode7, Mode8) is recorded in the report				

#### 6.3.2 Test Setup Diagram:

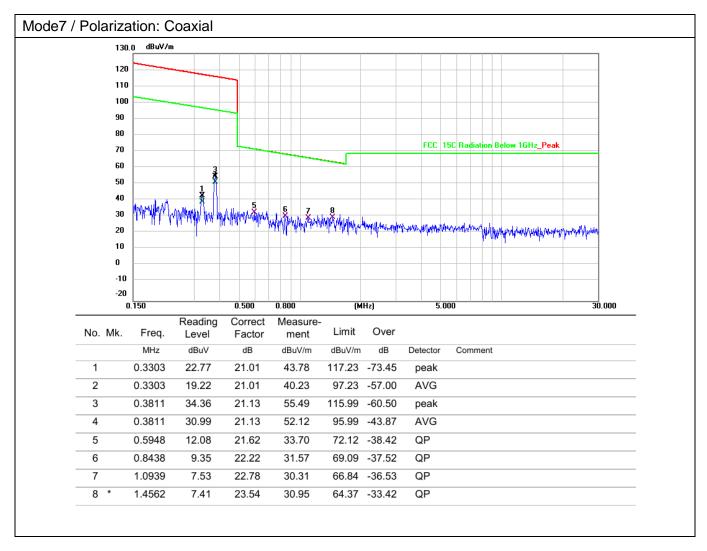




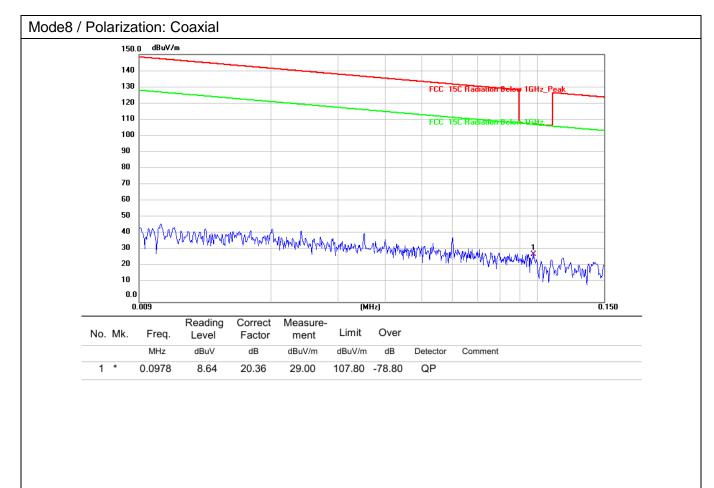
#### 6.3.3 Test Data:



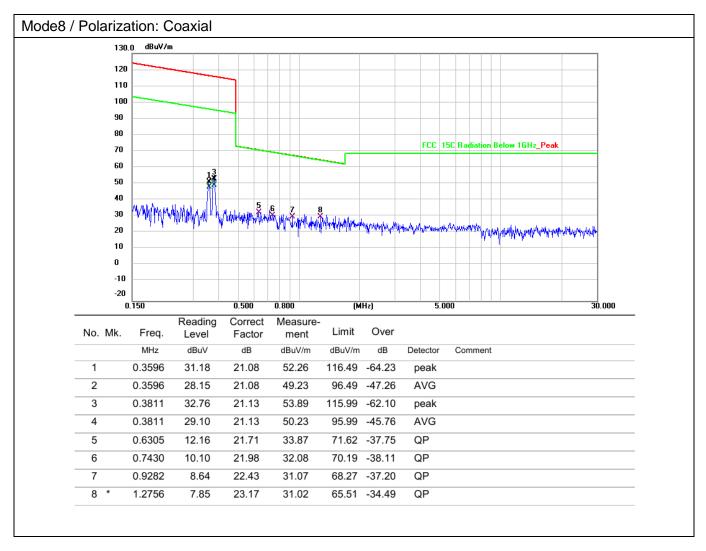














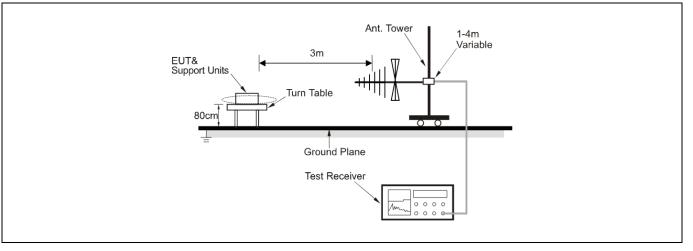
#### 6.4 Emissions in frequency bands (30MHz - 1GHz)

Test Requirement:	47 CFR Part 15.209			
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measuremen 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	
Test Method:	frequency bands 54-72 M However, operation withi sections of this part, e.g., In the emission table abo The emission limits show employing a CISPR quas kHz, 110–490 kHz and al three bands are based of As shown in § 15.35(b), f limits in paragraphs (a) ar However, the peak field s maximum permitted aver any condition of modulati (b) of this section, the peak	ove, the tighter limit applies at the on in the above table are based si-peak detector except for the f bove 1000 MHz. Radiated emiss in measurements employing an for frequencies above 1000 MH of (b)of this section are based of strength of any emission shall n age limits specified above by m ion. For point-to-point operation ak field strength shall not exceet ers along the antenna azimuth.	or 470-806 MHz. mitted under other ne band edges. on measurements requency bands 9–90 ssion limits in these average detector. Iz, the field strength on average limits. ot exceed the nore than 20 dB under nuder paragraph	
Procedure:	ANSI C63.10-2013 section	on 6.5		

#### 6.4.1 E.U.T. Operation:

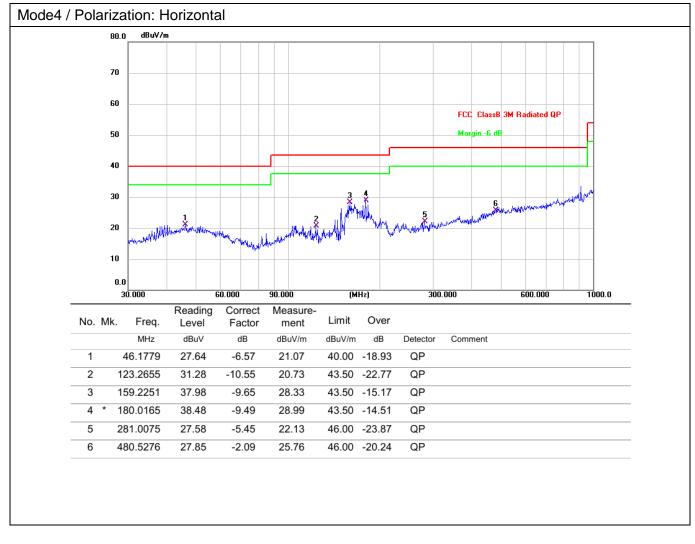
Operating Environment				
Temperature: 21 °C	Humidity: 56 % Atmospheric Pressure: 101 kPa			
Pre test mode:	Pre test mode: Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, Mode8, Mode9			
Final test mode:All of the listed pre-test mode were tested, only the data of the worst mode (Mode4) is recorded in the report				

#### 6.4.2 Test Setup Diagram:

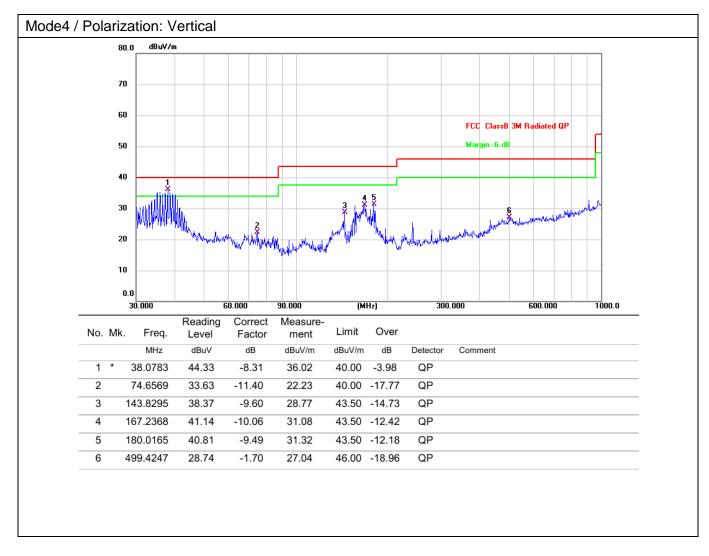




#### 6.4.3 Test Data:









### Photographs of the test setup

Refer to Appendix - Test Setup Photos

#### Photographs of the EUT

Refer to Appendix - EUT Photos

----End of Report----