

NIKKO TOYS LIMITED

TEST REPORT

SCOPE OF WORK FCC TESTING- MODEL: 10350(10351/10352)

REPORT NUMBER SZHH01679853-001

ISSUE DATE JUL 29, 2022

PAGES

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NIKKO TOYS LIMITED

Application for Certification

FCC ID: 2AS9M19010NIKCOL

1:10 Elite Trophy Trucks X2 Assortment (18" / 46cm) Additional Name: 1:10 Elite Trophy Trucks X2 - Battleship Gray #12 (18" / 46cm), 1:10 Elite Trophy Trucks X2 - Trail Crew Red (18" / 46cm)

Model: 10350(10351/10352)

2.4GHz Transceiver

Report No.: SZHH01679853-001

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-20]

Prepared and Checked by:

Approved by:

Sign on file

Terry Tang Assistant Supervisor Peter Kang Technical Supervisor Date: Jul 29, 2022

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Intertek Testing Service Shenzhen Ltd. Longhua Branch

101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community GuanHu Subdistrict, LongHua District, Shenzhen, People's Republic of China Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751

Version: 01-November-2017

Page: 1 of 24

FCC ID 249_C



MEASUREMENT/TECHNICAL REPORT

This report concerns (che	ck one:)	Original Grant	<u>x</u>	Class II Ch	ange _	
Equipment Type: <u>DXX - P</u>	<u>'art 15 Low Po</u>	ower Communicat	tion Devic	e Transmitte	<u>ər</u>	
Deferred grant requested	per 47 CFR 0					
Company Name agrees to	o notify the Co	ommission by:		date		
of the intended date of an date.	nouncement	of the product so	that the g		issued	on that
Transition Rules Request	per 15.37?		Yes		No _	<u>x</u>
If no, assumed Part 15, So provision.	ubpart C for in	ntentional radiator	– the nev	v 47 CFR [1()-1-20	Edition]
Report prepared by:						
	101, 201, E Community People's Re	ting Services Sher Building B, No. 3 GuanHu Subdis public of China S-755-8601 6288/8	308 Wuh trict, Lon	e Avenue, 2 gHua Distri	Zhangk	0, 0



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1.0 <u>Summary of Test Result</u>

Applicant: NIKKO TOYS LIMITED Applicant Address: UNIT 2901, 29/F SHUI ON CENTRE 6-8 HARBOUR ROAD, WAN CHAI HONG KONG

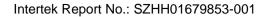
Manufacturer: NIKKO TOYS LIMITED Manufacturer Address: UNIT 2901, 29/F SHUI ON CENTRE 6-8 HARBOUR ROAD, WAN CHAI HONG KONG

MODEL: 10350(10351/10352)

FCC ID: 2AS9M19010NIKCOL

Test Specification	Reference	Results
Transmitter Radiated Emission	15.249 &15.209 &15.205	Pass
Bandedge		
20dB Bandwidth	15.215(c)	Pass

Notes: The EUT uses an Integral Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.





2.0 General Description

2.1 Product Description

The equipment under test (EUT) is a 1:10 Elite Trophy Trucks X2 Assortment (18" / 46cm) operating at 2.4G Band. The EUT can be powered by DC 6.0V (4 x 1.5V AAA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna Modulation Type: GFSK Antenna Gain: 0dBi

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

2.2 Related Submittal(s) Grants

This is an application for certification of controller unit for the 1:10 Elite Trophy Trucks X2 Assortment (18" / 46cm), and the corresponding car unit which associated with this EUT is subjected to FCC ID certification with FCC ID: 2AS9M19010NIK-TX.

2.3 Test Methodology

Radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Radiated emission measurement was performed in Semi-anechoic chamber. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

2.4 Test Facility

The Semi-anechoic chamber used to collect the radiated data is **Intertek Testing Services Shenzhen Ltd. Longhua Branch** and located at 101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community GuanHu Subdistrict, LongHua District, Shenzhen, People's Republic of China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: CN1188).



3.0 System Test Configuration

3.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.10 (2013).

The EUT was powered by DC 6.0V (4 x 1.5V AAA batteries) during the test, only the worst data was reported in this report.

For maximizing emissions below 30 MHz, the EUT was rotated through 360°, the bottom of the loop antenna was placed 1 meter above the ground, and the antenna polarization was changed. For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Section 4.

The EUT was operated standalone and placed in the central of the turntable.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on a turn table, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

3.2 EUT Exercising Software

There was no special software to exercise the device.

3.3 Special Accessories

No special accessories used.

3.4 Equipment Modification Any modifications installed previous to testing by NIKKO TOYS LIMITED will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd Longhua Branch.

- 3.5 Measurement Uncertainty When determining the test conclusion, the Measurement Uncertainty of test has been considered.
- 3.6 Support Equipment List and Description

Description	Manufacturer	Model No.
N/A	N/A	N/A



4.0 Emission Results

Data is included worst-case configuration (the configuration which resulted in the highest emission levels).

4.1 Radiated Test Results

A sample calculation, configuration photographs and data tables of the emissions are included.

4.1.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

Where $FS = Field Strength in dB\mu V/m$ $RA = Receiver Amplitude (including preamplifier) in dB\mu V$ CF = Cable Attenuation Factor in dB AF = Antenna Factor in dB/m AG = Amplifier Gain in dB PD = Pulse Desensitization in dBAV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD + AV

Assume a receiver reading of 62.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA = $62.0 \text{ dB}\mu\text{V}$ AF = 7.4 dB/m CF = 1.6 dB AG = 29.0 dB PD = 0 dB AV = -10 dB FS = $62 + 7.4 + 1.6 - 29 + 0 = 42 \text{ dB}\mu\text{V/m}$

Level in μ V/m = Common Antilogarithm [(42 dB μ V/m)/20] = 125.9 μ V/m



4.1.2 Radiated Emission Configuration Photograph

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

4.1.3 Radiated Emissions

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission at 647.405000 MHz

Judgement: Passed by 22.4 dB

TEST PERSONNEL:

Sign on file

Terry Tang, Assistant Supervisor Typed/Printed Name

<u>Jun 9, 2022</u> Date



Applicant: NIKKO TOYS LIMITED Date of Test: Jun 9, 2022 Worst Case Operating Mode:

Model: 10350(10351/10352) Transmitting(2410.000MHz)

85 80 70 60 FCC Part 15 Class B Electric Field Strength QP Level in dBuV/m 50 40 30 المتلقط المكاليس 20 10 1.444 العداد المليه الطريان 0 80 100M 30M 50 60 200 300 400 500 800 1G Frequency in Hz

ANT Polarity: Horizontal

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
178.880000	10.2	1000.0	120.000	Н	12.1	33.4	43.5
417.030000	18.0	1000.0	120.000	Н	20.1	28.0	46.0
647.405000	23.6	1000.0	120.000	Н	24.7	22.4	46.0

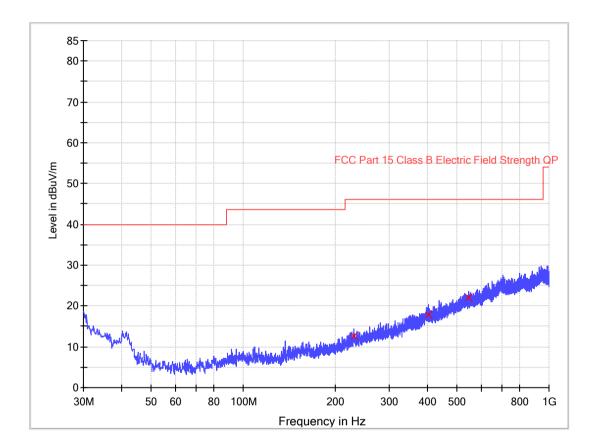
Remark:

- 1. Corr. (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. QuasiPeak (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Limit Line(dBµV/m) Level (dBµV/m)



Applicant: NIKKO TOYS LIMITED Date of Test: Jun 9, 2022 Worst Case Operating Mode:

Model: 10350(10351/10352) Transmitting(2410.000MHz)



ANT Polarity: Vertical

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m
230.120000	12.6	1000.0	120.000	V	13.9	33.4	46.0
402.843750	17.9	1000.0	120.000	V	20.1	28.1	46.0
545.433750	22.1	1000.0	120.000	V	23.3	23.9	46.0

Remark:

- 1. Corr. (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. QuasiPeak (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Limit Line(dB μ V/m) Level (dB μ V/m)



4.1.4 Transmitter Spurious Emissions (Radiated)

Worst Case Radiated Emission at 2483.500 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 8.5 dB

TEST PERSONNEL:

Sign on file

Terry Tang, Assistant Supervisor Typed/Printed Name

Jun 9, 2022 Date



Applicant: NIKKO TOYS LIMITED Date of Test: Jun 9, 2022 Worst Case Operating Mode:

Model: 10350(10351/10352) Transmitting

Table 1

Radiated Emissions (2410 MHz)											
Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)				
Horizontal	2410.000	98.6	36.7	28.1	90.0	114.0	-24.0				
Horizontal	4820.000	47.5	36.7	35.5	46.3	74.0	-27.7				

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2410.000	98.6	36.7	28.1	28.9	61.1	94.0	-32.9
Horizontal	4820.000	47.5	36.7	35.5	28.9	17.4	54.0	-36.6

Notes: 1. Peak Detector Data unless otherwise stated.

- 2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.
- 4. Horn antenna is used for the emission over 1000MHz.



Applicant: NIKKO TOYS LIMITED Date of Test: Jun 9, 2022 Worst Case Operating Mode:

Model: 10350(10351/10352) Transmitting

Table 2

Radiated Emissions (2442 MHz)									
PolarizationFrequency (MHz)Reading (dBµV)Pre- Amp 									
Horizontal	2442.000	98.3	36.7	28.1	89.7	114.0	-24.3		
Horizontal	4884.000	46.5	36.7	35.5	45.3	74.0	-28.7		

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2442.000	98.3	36.7	28.1	28.9	60.8	94.0	-33.2
Horizontal	4884.000	46.5	36.7	35.5	28.9	16.4	54.0	-37.6

Notes: 1. Peak Detector Data unless otherwise stated.

- 2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.
- 4. Horn antenna is used for the emission over 1000MHz.



Applicant: NIKKO TOYS LIMITED Date of Test: Jun 9, 2022 Worst Case Operating Mode:

Model: 10350(10351/10352) Transmitting

Table 3

Radiated Emissions (2475 MHz)										
PolarizationFrequency (MHz)Reading (dBµV)Pre- Amp 										
Horizontal	2475.000	98.0	36.7	28.1	89.4	114.0	-24.6			
Horizontal	4950.000	45.4	36.7	35.5	44.2	74.0	-29.8			

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2475.000	98.0	36.7	28.1	28.9	60.5	94.0	-33.5
Horizontal	4950.000	45.4	36.7	35.5	28.9	15.3	54.0	-38.7

Notes: 1. Peak Detector Data unless otherwise stated.

- 2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.
- 4. Horn antenna is used for the emission over 1000MHz.



5.0 Equipment Photographs

For electronic filing, the photographs of the tested EUT are saved with filename: external photos.pdf & internal photos.pdf.

6.0 **Product Labelling**

For electronic filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

7.0 <u>Technical Specifications</u>

For electronic filing, the block diagram and schematics of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

8.0 Instruction Manual

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.



9.0 Miscellaneous Information

This miscellaneous information includes details of the measured bandedge, 20dB Bandwidth, the test procedure and calculation of factor such as pulse desensitization.

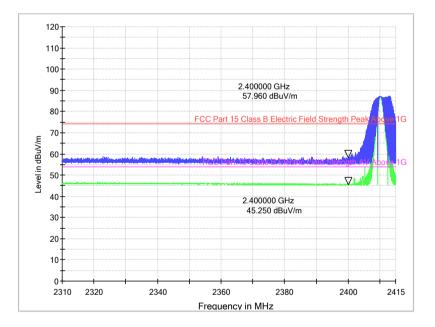
9.1 Bandedge Plot

The test plots are attached as below. From the plot, the field strength of any emissions outside of the specified frequency band are attenuated to the general radiated emission limits in section 15.209. It fulfils the requirement of 15.249(d).

Peak Measurement

Restricted-band band-edge tests shall be performed as radiated measurements, i.e (Band-edge Plot).

(i) Lower channel 2410.000 MHz:



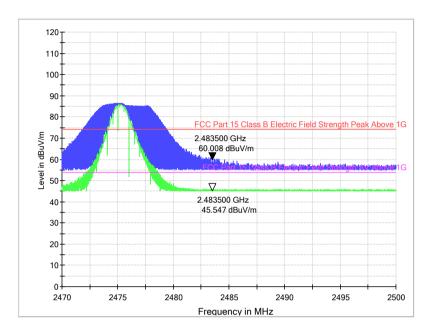
Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2400.000	66.6	36.7	28.1	58.0	74.0	-16.0

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2400.000	53.9	36.7	28.1	45.3	54.0	-8.7

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dBµv/m (Peak Limit) and 54dBµv/m (Average Limit).



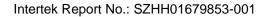
(ii) Upper channel 2475.000MHz:



Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2483.500	67.7	36.8	29.1	60.0	74.0	-14.0

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2483.500	53.2	36.8	29.1	45.5	54.0	-8.5

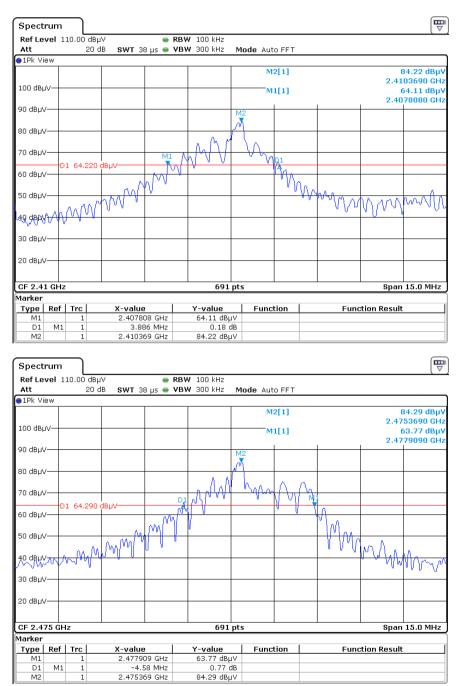
The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dBµv/m (Peak Limit) and 54dBµv/m (Average Limit).





9.2 20dB Bandwidth

Pursuant to FCC part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered. The test plots are reported as below.





9.3 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device. The effective period (T_{eff}) is approximately 1.1594ms for a digital "1" bit, as shown in the plots of Section 9.4 With a resolution bandwidth (3 dB) of 100 kHz, the pulse desensitivity factor was 0 dB

9.4 Calculation of Average Factor

Averaging factor in $dB = 20 \log (duty cycle)$

The specification for output field strengths in accordance with the FCC rules specify measurements with an average detector. During testing, a spectrum analyzer incorporating a peak detector was used. Therefore, a reduction factor can be applied to the resultant peak signal level and compared to the limit for measurement instrumentation incorporating an average detector.

The time period over which the duty cycle is measured is 100 milliseconds, or the repetition cycle, whichever is a shorter time frame. The worst case (highest percentage on) duty cycle is used for the calculation. The duty cycle is measured by placing the spectrum analyzer in zero scan (receiver mode) and linear mode at maximum bandwidth (3 MHz at 3 dB down) and viewing the resulting time domain signal output from the analyzer on a Tektronix oscilloscope. The oscilloscope is used because of its superior time base and triggering facilities.

The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 32.3188ms Effective period of the cycle = 1.1594ms DC =1.1594ms / 32.3188ms =0.0359 or 3.59%

Therefore, the averaging factor is found by $20 \log_{10} (0.0359) = -28.9 dB$

The test plots are attached as below.



Spectrum	1							E
Ref Level 110.00	L O dBµV 20 dB 🕳 SWT		BW 3 MHz					(*
SGL	20 00 🔮 3 11	100 ms 🖕 🖡	DW JMHZ					
●1Pk Max						1		
100 dBµV								
90 dBµV								
во dвµV		1			Π			
50 dBpv								
70 dBµV								
50 dBµV								
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40 dBµV								
30 dвµv								
20 dBµV								
CF 2.475 GHz			691 p	its				10.0 ms/
Spectrum								
Ref Level 110.00 Att	0 dBµV 20 dB 🕳 SWT		W 3 MHz					
SGL								
1Pk Max				Di	F 4 1			
				U	[1]		8	0.07 dB 2.3188 ms
100 dBµV				M:	1[1]		8	33.77 dBµV
· · · · ·								
						1		2.9710 ms
						D 1		2.9710 ms
90 dBµV						D1		2.9710 ms
90 dBµV						01		2.9710 ms
								2.9710 ms
						01		2.9710 ms
90 dBµV								2.9710 ms
90 dBµV M1 80 dBµV 70 dBµV 60 dBµV								
90 dBµV M1 80 dBµV 70 dBµV 60 dBµV		thurman		Muralia	Warakaba Juka			
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90 dBµV M1 80 dBµV 70 dBµV 60 dBµV 40 dBµV 40 dBµV 30 dBµV		tur una	www.uku.lly.Wikip	يتاله وزير مرزير مرا	างการให้การให้การ			



Spectrum	
Ref Level 110.00 dBµV	
Att 20 dB SGL 20 dB	12
●1Pk Max	
	D1[1] 0.08 dB 1.1594 ms
100 dBµV	M1[1] 83.77 dBμV 2.9710 ms
90 dBµV	
80 dB _L V	
70 dB _L V-	
60 dBµV	
590 ABO - up allandelly Maran hell war allow well	where the and the two and the second second the second
40 dBµV	
30 dBµV	
20 dBµV	
CF 2.475 GHz	591 pts 5.0 ms/



9.5 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.10 - 2013.

The transmitting equipment under test (EUT) is placed on a styrene turntable which is four feet in diameter and approximately 0.8 meter up to 1GHz and 1.5 meter above 1GHz in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Section 9.4.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.



9.5 Emissions Test Procedures (cont'd)

ntertek

Total Quality. Assured. Test Report

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

The IF bandwidth used for measurement of radiated signal strength was 10 kHz for emission below 30 MHz and 120 kHz for emission from 30 MHz to 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Section 9.2). Above 1000 MHz, a resolution bandwidth of 3 MHz is used, RBW 10 MHz used for fundamental emission.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the restricted bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.



10.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-12	BiConiLog Antenna	ETS	3142E	00166158	4-Aug-2021	4-Aug-2024
SZ185-04	EMI Receiver	R&S	ESR7	102466	16-Nov-2021	16-Nov-2022
SZ061-09	Horn Antenna	ETS	3115	00092346	17-Oct-2020	17-Oct-2022
SZ061-06	Active Loop Antenna	Electro- Metrics	EM-6876	217	18-May-2021	18-May-2023
SZ061-15	Double- RidgedWav eguide Horn Antenna	ETS	3116C-PA	00224718	1-Nov-2020	1-Nov-2022
SZ056-06	Spectrum Analyzer	R&S	FSV40	101101	20-Dec-2021	20-Dec-2022
SZ181-04	Preamplifier	Agilent	8449B	3008A024 74	16-May-2022	16-May-2023
SZ188-01	Anechoic Chamber	ETS	RFD-F/A- 100	4102	12-Dec-2021	12-Dec-2024
SZ062-02	RF Cable	RADIALL	RG 213U		15-Aug-2021	15-Aug-2022
SZ062-05	RF Cable	RADIALL	0.04- 26.5GHz		15-Aug-2021	15-Aug-2022
SZ062-12	RF Cable	RADIALL	0.04- 26.5GHz		15-Aug-2021	15-Aug-2022
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02		15-Aug-2021	15-Aug-2022