JAPAN QUALITY ASSURANCE ORGANIZATION
21-25, KINUTA 1-CHOME, SETAGAYA-KU, TOKYO 157-8573 JAPAN
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REPORT OF MEASUREMENTS

JQA APPLICATION NO.: 80-81034

Applicant	: NIKKO CO., LTD. 1-7-14, Mizumoto, Katsushika-ku, Tokyo 125-0032, Japan
Manufacturer	: NIKKO TEC INTERNATIONAL LTD. Room 812, Houston Center, 63 Mody Road, Tsimshatsui, Kowloon, Hong Kong
Description of Equipment	: Radio Controlled Toy
FCC ID	: CVTTN6760
Trade Name	: NIKKO
Model No.	: TN6760
Serial No.	: None
Operating Frequency	: 26.995 MHz – 27.255 MHz
Power Supply	: 9.0 VDC
Applicable Rule	: FCC Rules & Regulations Part 15 Subpart C (June 23, 1989)
Place of Measurement	: JQA EMC Engineering Dept.
Date of Measurement	: April 1, 1999(Completed)
Total Pages of This Report	: 15 (including this page)

I certify that I am authorized to sign for the report and that all the statement in this report and in the exhibits hereto are true and correct to the best my knowledge and belief.

Shigeru Osawa

Shigeru Osawa, Engineer
Testing Div.
EMC Engineering Dept.

1. Radiated Spurious Emissions: [§15.227(a),(b)]

Measurement Method Employed:
Measurements were made under the conditions specified ANSI C63.4.
The field strength measurements of the equipment under test were made at the distance of 3 meters away from the device which was placed on the wooden turntable 0.8 meter in height.
The receiving antenna polarized horizontally was varied from 1 to 4 meters and the wooden turntable was rotated through 360 degrees to obtain the highest reading on the field strength meter. The device was tested three orthogonal planes.
These measurements were repeated with the receiving antenna polarized vertically.
The internal pre-amplifier was used from 27 MHz up to 1000 MHz.

Measurement Results:

Operating Frequency : 27.145 MHz
Distance of Measurement : 3.0 meters

Frequency (MHz)	Antenna Factor (dB)	Meter Reading Horiz. (dBμV)	Meter Reading Vert. (dBμV)	Field Strength at 3 m Horiz. (μV/m)	Field Strength at 3 m Vert. (μV/m)
Fundamental					
27.145	-2.0	46.2	57.9	162.2	623.7 (Average)
27.145	-2.0	53.3	64.8	367.3	1380.4 (Peak)
Harmonics & other Frequency components					
54.290	4.3	14.3	11.8	8.5	6.4
81.435	8.1	1.6	2.6	3.1	3.4
108.580	10.7	1.1	0.8	3.9	3.8
135.725	12.8	< -5.0	< -5.0	2.5 or Less	
162.870	14.5	0.4	< -5.0	5.6	< 3.0
190.015	15.9	< -5.0	< -5.0	3.5 or Less	
217.160	17.2	1.3	< -5.0	8.4	< 4.1
244.305	18.3	< -5.0	< -5.0	4.6 or Less	
271.450	19.4	< -5.0	< -5.0	5.2 or Less	
298.595	20.3	< -5.0	< -5.0	5.8 or Less	
325.740	21.1	< -5.0	< -5.0	6.4 or Less	
352.885	21.9	< -5.0	< -5.0	7.0 or Less	
380.030	22.6	< -5.0	< -5.0	7.6 or Less	
407.175	23.3	< -5.0	< -5.0	8.2 or Less	
434.320	24.0	< -5.0	< -5.0	8.9 or Less	
461.465	24.6	< -5.0	< -5.0	9.5 or Less	
488.610	25.1	< -5.0	< -5.0	10.1 or Less	
515.755	25.7	< -5.0	< -5.0	10.8 or Less	
542.900	26.2	< -5.0	< -5.0	11.5 or Less	
579.045	26.7	< -5.0	< -5.0	12.2 or Less	
597.190	27.2	< -5.0	< -5.0	12.9 or Less	
624.335	27.7	< -5.0	< -5.0	13.6 or Less	
651.480	28.2	< -5.0	< -5.0	14.5 or Less	
678.625	28.6	< -5.0	< -5.0	15.1 or Less	

Frequency (MHz)	Antenna Factor (dB)	Meter Reading Horiz. (dB/μV)	Meter Reading Vert. (dB/μV)	Field Strength at 3 m Horiz. (μV/m)	Field Strength at 3 m Vert. (μV/m)
705.770	29.1	< -5.0	< -5.0	16.0 or Less	
732.915	29.6	< -5.0	< -5.0	17.0 or Less	
760.060	30.0	< -5.0	< -5.0	17.8 or Less	
787.205	30.4	< -5.0	< -5.0	18.6 or Less	
814.350	30.9	< -5.0	< -5.0	19.7 or Less	
841.495	31.3	< -5.0	< -5.0	20.7 or Less	
868.640	31.7	< -5.0	< -5.0	21.6 or Less	
895.785	32.1	< -5.0	< -5.0	22.6 or Less	
922.930	32.5	< -5.0	< -5.0	23.7 or Less	
950.075	32.9	< -5.0	< -5.0	24.8 or Less	
977.220	33.3	< -5.0	< -5.0	26.0 or Less	

Note: 1. The spectrum was checked from 27 MHz to 1000 MHz.
All emissions not listed were found to be more than 20 dB below the limits.

2. The symbol of “<” means “or less”.

3. The cable loss was included in the antenna factor.

4. Sample calculation :

at 27.145 MHz

$$10^{(AF+Mr)/20} = 10^{(-2.0+57.9)/20} = 623.7\ \mu V/m$$

Where,

Af = Antenna Factor including the cable loss.
Mr = Meter Reading

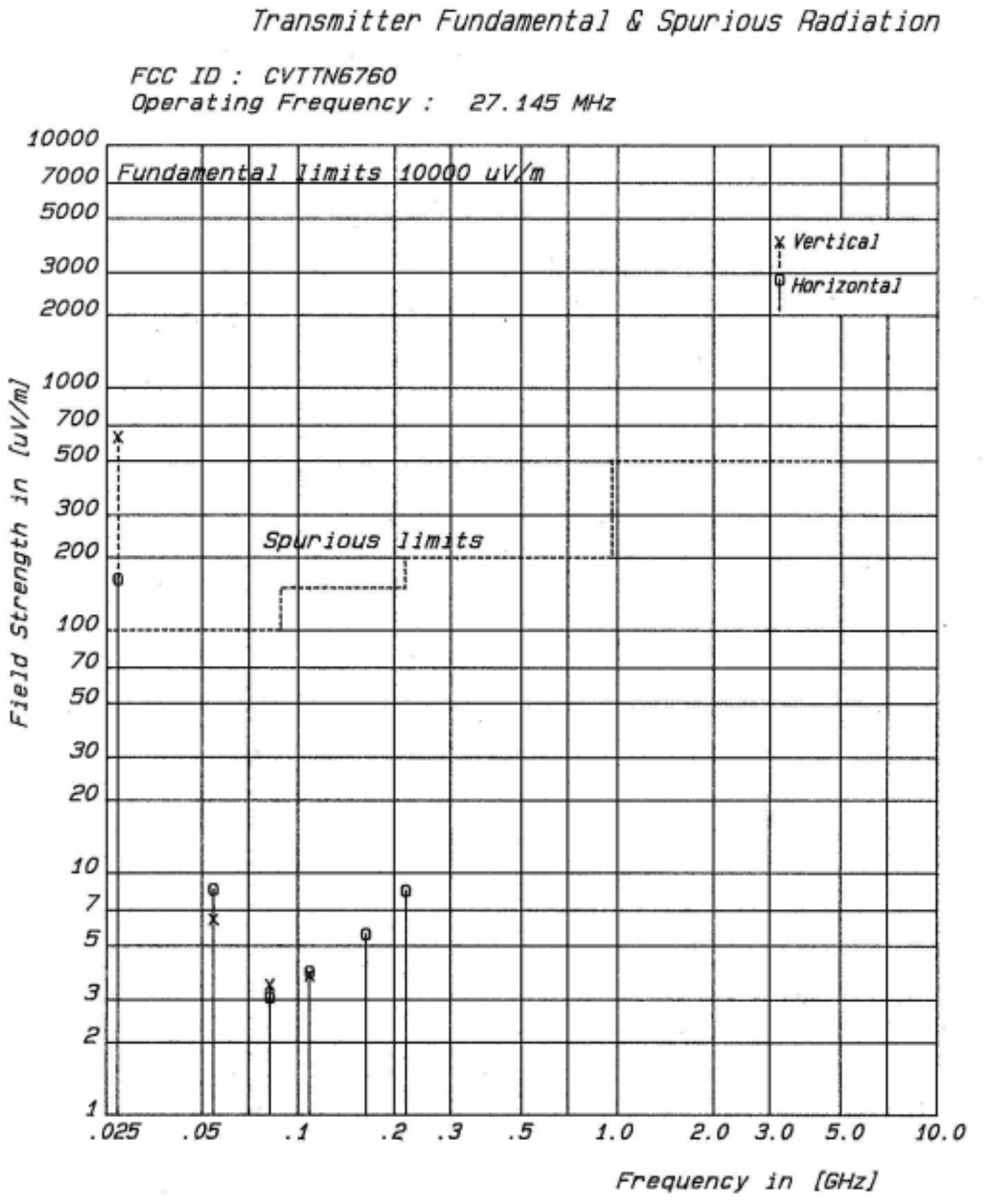
5. Measuring Instrument Setting:

Fundamental

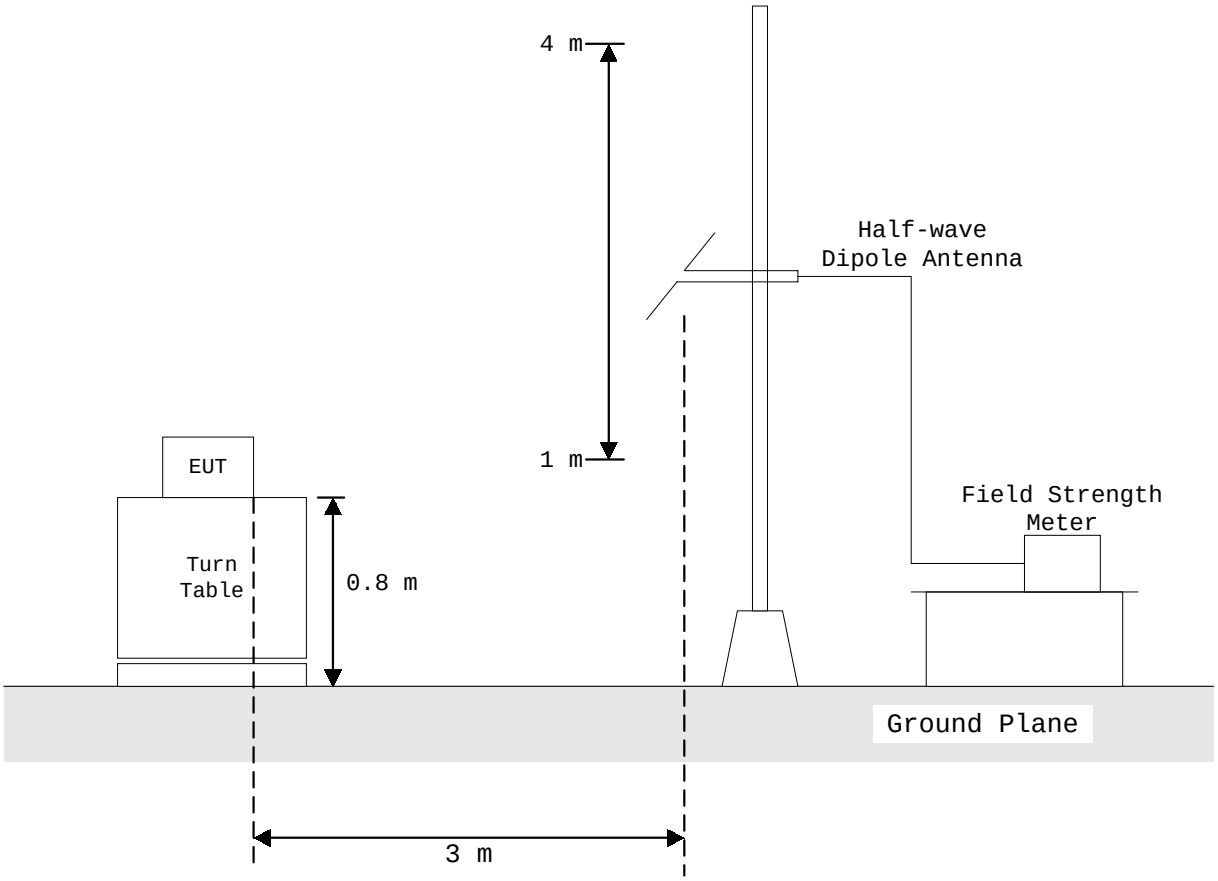
Detector function : Average / Peak
IF Bandwidth : 120 kHz

Harmonics & other frequency components

Detector function : CISPR quasi-peak
IF Bandwidth : 120 kHz


Transmitter Fundamental & Spurious Radiation
FCC ID : CVTTN6760
Operating Frequency : 27.145 MHz
Fundamental limits 10000 uV/m
Spurious limits
Vertical
Horizontal
Field Strength in [uV/m]
10000
7000
5000
3000
2000
1000
700
500
300
200
100
70
50
30
20
10
7
5
3
2
1
.025
.05
.1
.2
.3
.5
1.0
2.0
3.0
5.0
10.0
Frequency in [GHz]

MEASUREMENT SET-UP FOR RADIATED EMISSIONS



Configuration of EUT

for horizontal plane

for vertical plane

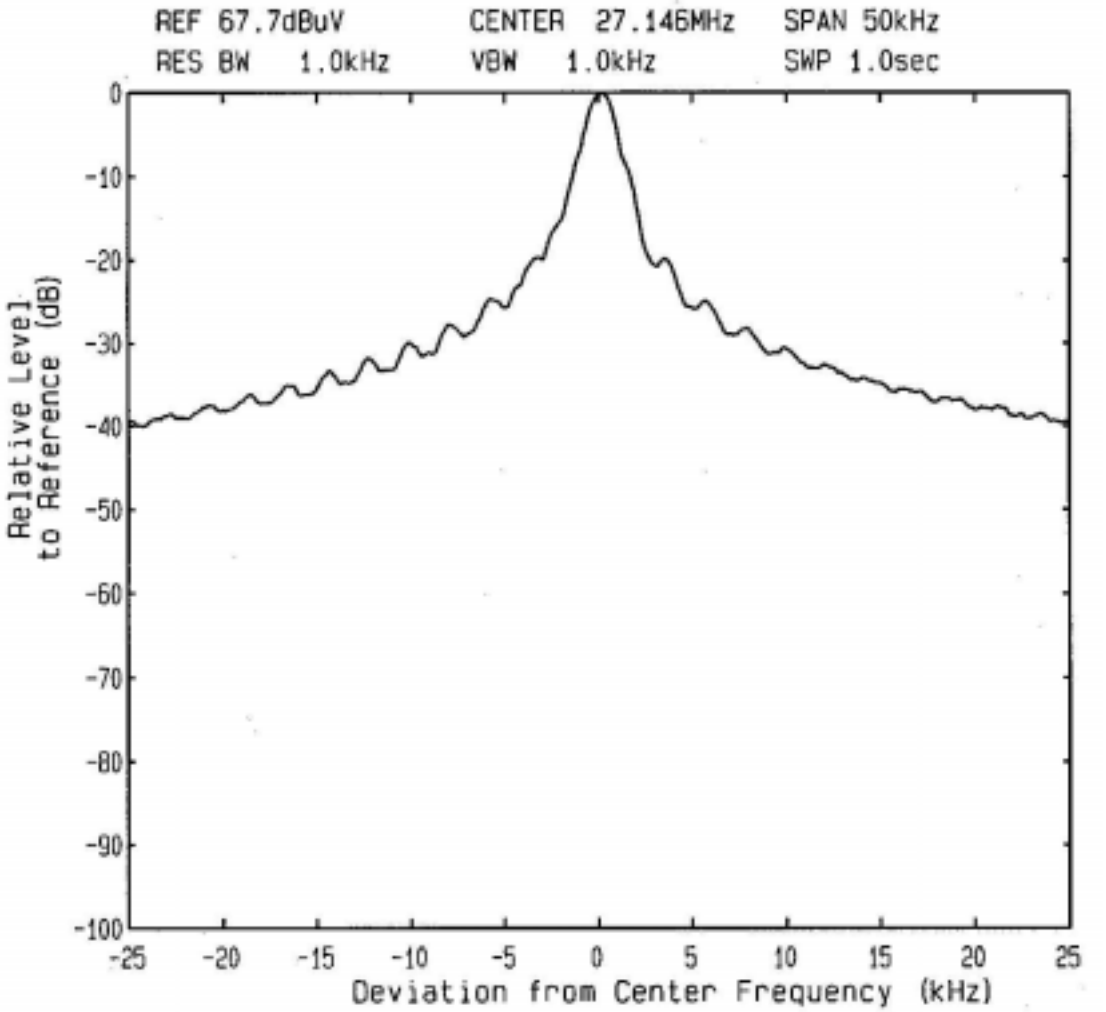
2. Radiated Emission, Additional Provisions : [§15.215(c)]

Measurement Method Employed: By using a spectrum analyzer with a vertical antenna for picking up the signal, the measurements of the fundamental frequency component were made under the following transmitting modes of the EUT.

Measurements Results : This device comply with §15.215 (c) recommendation. Refer to the attached graphs.

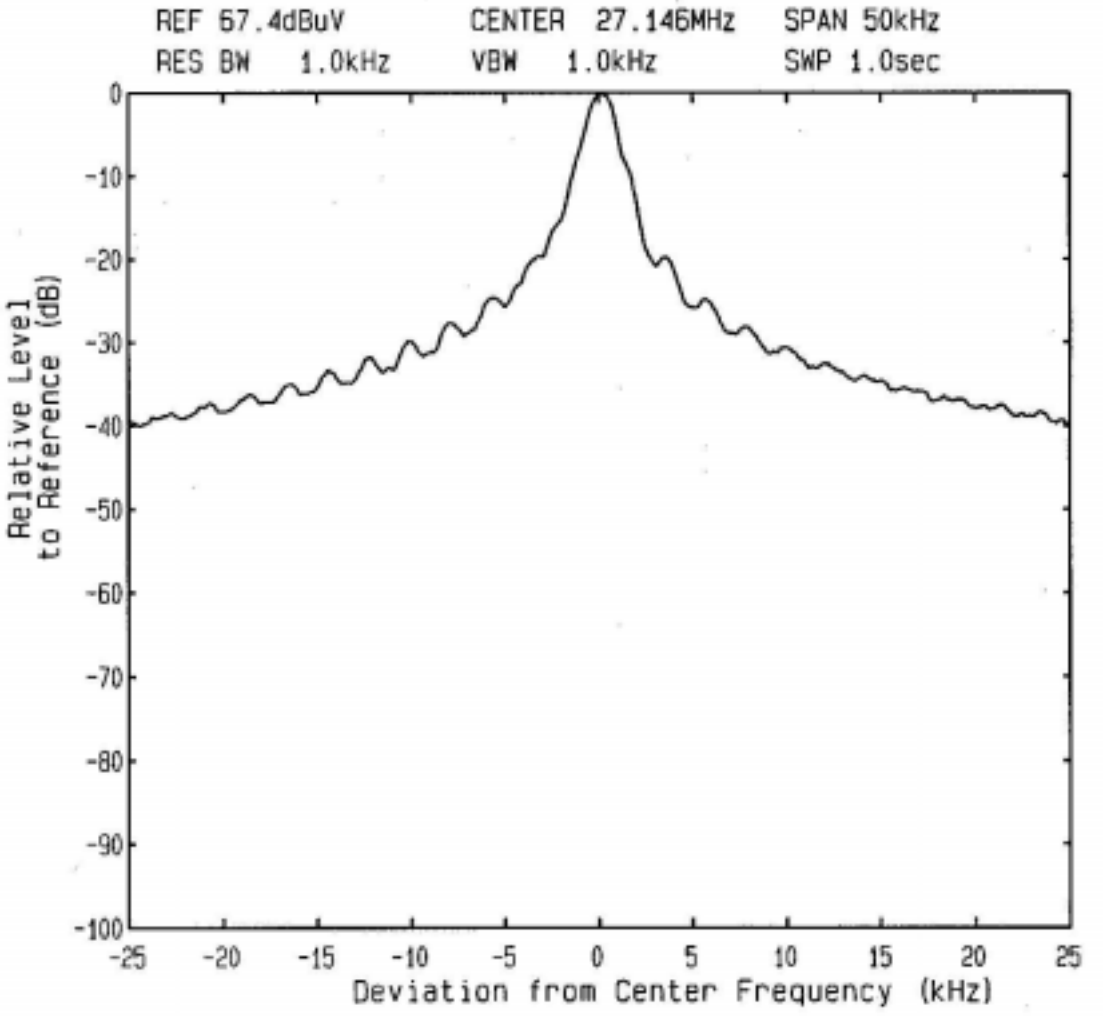
Emission Limitation

FCC ID : CVTTN6760
Model : TN6760
RADIO CONTROLLED TOY
Mode of EUT : Left



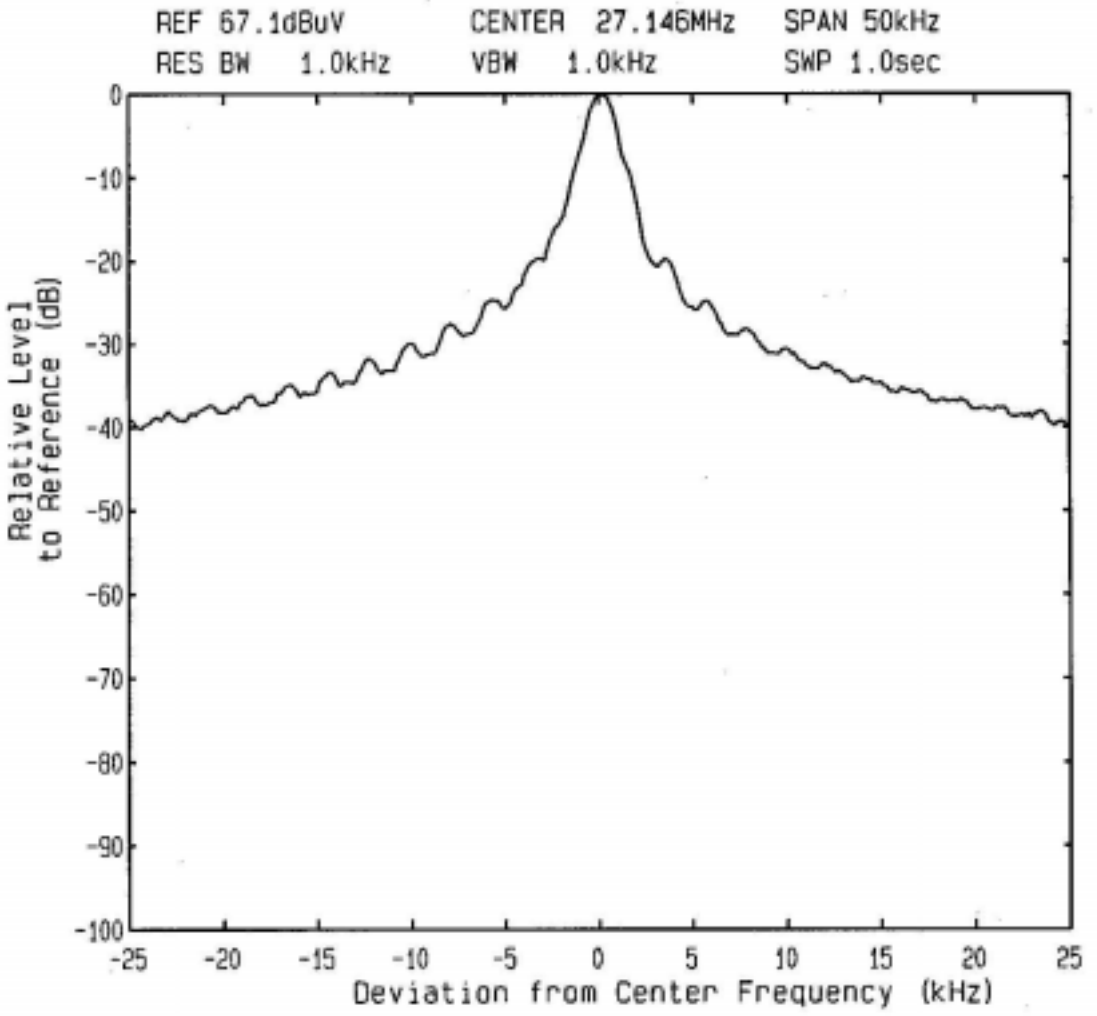
Emission Limitation

FCC ID : CVTTN6760
Model : TN6760
RADIO CONTROLLED TOY
Mode of EUT : Right



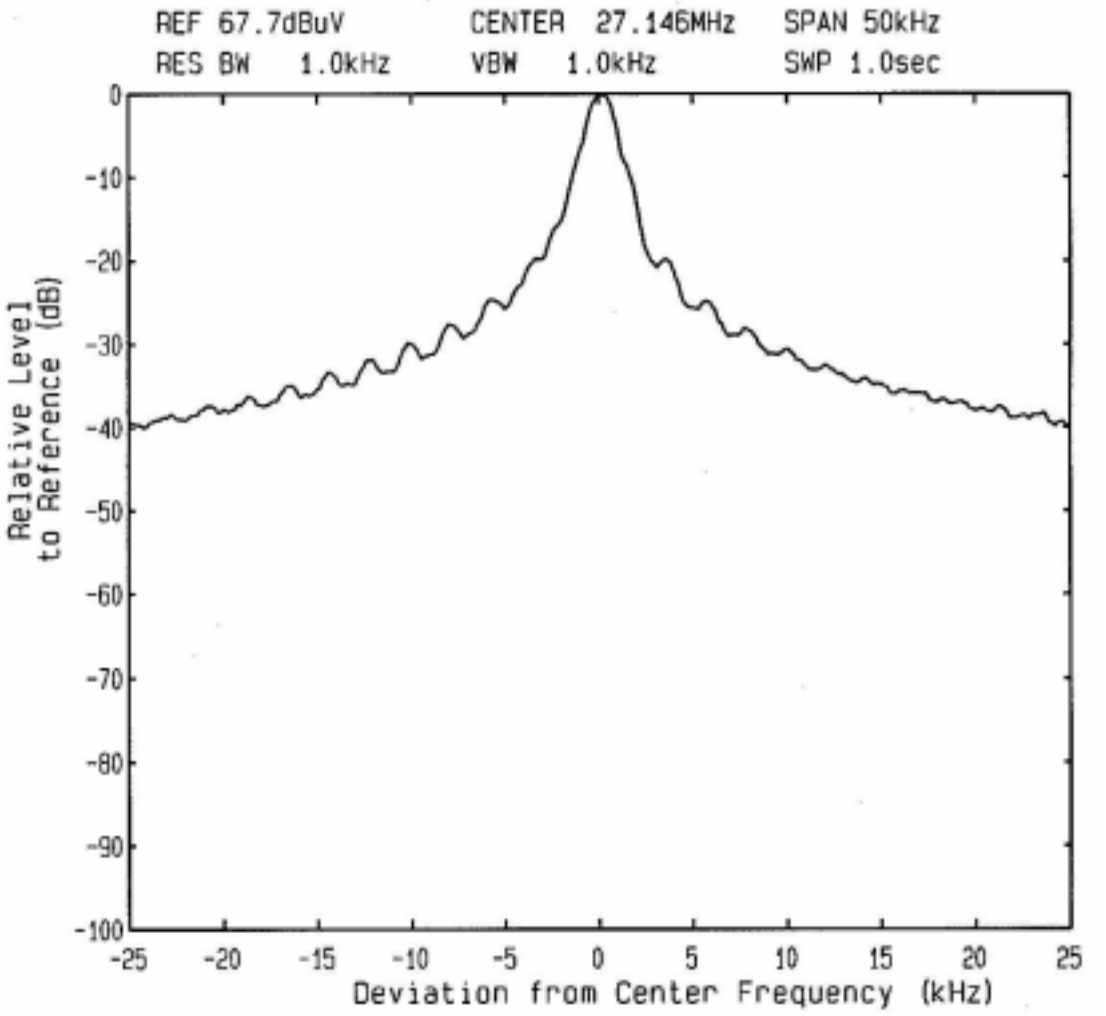
Emission Limitation

FCC ID : CVTTN6760
Model : TN6760
RADIO CONTROLLED TOY
Mode of EUT : Forward



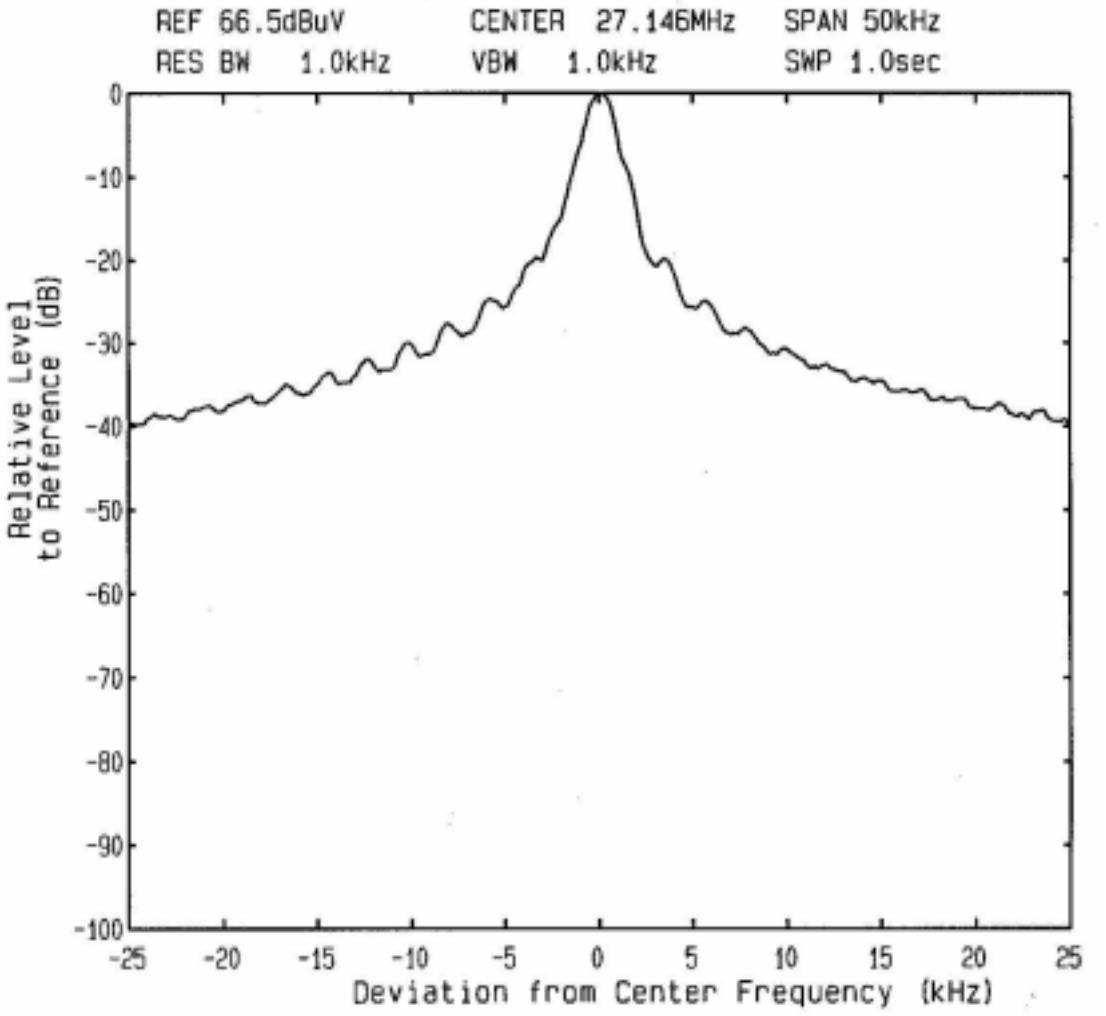
Emission Limitation

FCC ID : CVTTN6760
Model : TN6760
RADIO CONTROLLED TOY
Mode of EUT : Reverse



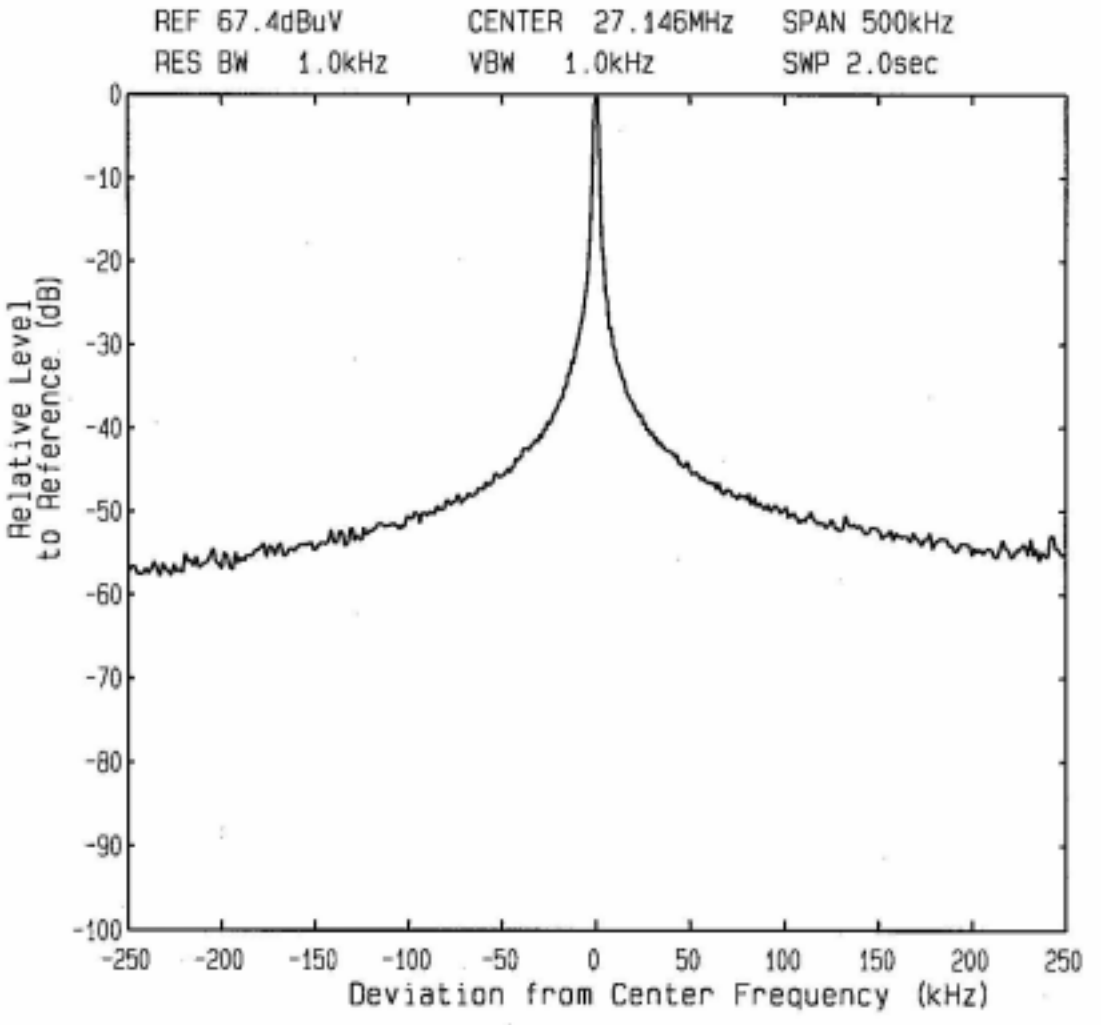
Emission Limitation

FCC ID : CVTTN6760
Model : TN6760
RADIO CONTROLLED TOY
Mode of EUT : SPIN SWITCH

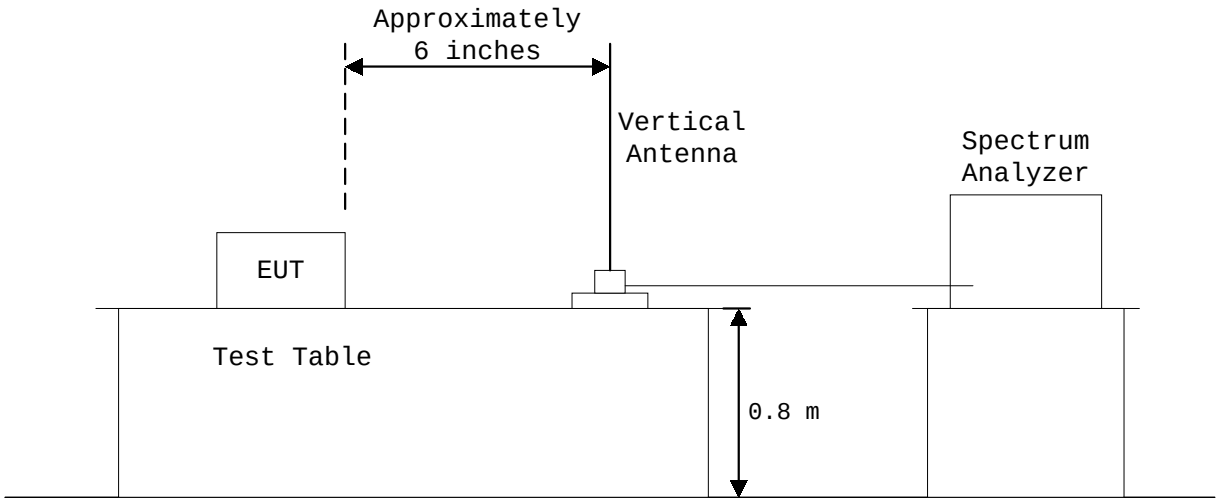


Emission Limitation

FCC ID : CVTTN6760
Model : TN6760
RADIO CONTROLLED TOY
Mode of EUT : SPIN SWITCH



MESUREMENT SET-UP FOR BAND WIDTH



LIST OF MEASUREMENT EQUIPMENT

Equipment (Model No.)	Manufacturer	Date of Cal.
1. Field Strength Meter		
ESVP	Rohde & Schwarz	May 1998
2. Spectrum Analyzer		
8566B	Hewlett Packard Inc.	April 1998
3. Tuned Dipole Antenna		
KBA-511	Kyoritsu Electrical Works	November 1998
KBA-611	Kyoritsu Electrical Works	November 1998
4. Vertical Antenna		
91972-2	Stoddard Aircraft Radio Co., Ltd.	-