

TIMCO ENGINEERING INC.

849 NW State Road 45
Newberry, Florida 32669
<http://www.timcoengr.com>
888.472.2424 F 352.472.2030 email: tei@timcoengr.com

Test Report

Product Name: 27 MHz REMOTE CONTROL TRANSMITTER

FCC ID: AEKA54027

Applicant:

**TAIYO KOGYO CO., LTD.
NO 1-23-17, HIGASHIYOTSUGI
KATSUSHIKA-KU
TOKYO 124
JAPAN**

Date Receipt: 4/17/2006

Date Tested: 4/25/2006

APPLICANT: TAIYO KOGYO CO., LTD.
FCC ID: AEKA54027
REPORT #: T\Taiyo_AEK\783JT6\783JT6TestReport.doc

COVER SHEET

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EMC Equipment List

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
Antenna: Biconnical	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Antenna: Biconnical	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Antenna: Biconnical	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Analyzer Blue Tower Quasi- Peak Adapter	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Analyzer Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 9/5/05	9/5/07
Analyzer Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/13/05	4/13/07
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Antenna: Log- Periodic	Eaton	96005	1243	CAL 12/14/05	12/14/07
Antenna: Passive Loop	EMC Test Systems	EMCO 6512	9706-1211	CAL 4/27/06	4/27/08

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz. The ambient temperature of the UUT was 80°C with a humidity of 76%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz) METER READING + ACF = FS
33 20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

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APPLICANT: TAIYO KOGYO CO., LTD.

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NAME OF TEST: RADIATION INTERFERENCE

RULES PART NO.: 15.227

REQUIREMENTS: CARRIER FREQUENCY WILL NOT EXCEEDS 80 dBuV/m AT 3M.
OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

30 - 88 MHz	40.0 dBuV/M MEASURED AT 3 METERS
88 - 216 MHz	43.5 dBuV/M
216 - 960 MHz	46.0 dBuV/m
ABOVE 960 MHz	54.0 dBuV/m

TEST DATA:

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol.	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
26.995	27.00	33.6	H	0.80	13.76	48.16	31.84
26.995	27.00	63.2	V	0.80	12.44	76.44	3.56
26.995	53.99	16.3	H	1.01	10.16	27.47	12.53
26.995	53.99	18.5	V	1.01	9.90	29.41	10.59
26.995	134.98	5.0	H	1.64	13.89	20.53	22.97
26.995	134.98	6.6	V	1.64	14.80	23.04	20.46
26.995	161.97	4.0	H	1.83	16.62	22.45	21.05
26.995	161.97	8.4	V	1.83	17.58	27.81	15.69
26.995	188.97	4.1	H	2.02	13.90	20.02	23.48
26.995	188.97	4.2	V	2.02	14.50	20.72	22.78
26.995	215.96	3.9	H	2.18	11.62	17.70	25.80
26.995	215.96	7.3	V	2.18	11.48	20.96	22.54
26.995	242.96	4.8	H	2.31	12.12	19.23	26.77
26.995	242.96	7.7	V	2.31	12.08	22.09	23.91
26.995	269.95	6.7	H	2.45	13.20	22.35	23.65
26.995	269.95	11.0	V	2.45	13.20	26.65	19.35
27.145	27.15	42.0	H	0.80	13.76	56.56	23.44
27.145	27.15	65.9	V	0.80	12.44	79.14	0.86
27.145	54.29	12.8	H	1.01	10.06	23.87	16.13
27.145	54.29	18.9	V	1.01	9.84	29.75	10.25
27.145	108.58	10.7	H	1.46	10.59	22.75	20.75
27.145	108.58	11.1	V	1.46	10.81	23.37	20.13
27.145	135.73	5.7	H	1.65	14.06	21.41	22.09
27.145	135.73	9.5	V	1.65	14.92	26.07	17.43
27.145	162.87	3.6	H	1.84	16.59	22.03	21.47
27.145	162.87	4.8	V	1.84	17.53	24.17	19.33

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APPLICANT: TAIYO KOGYO CO., LTD.
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NAME OF TEST: RADIATION INTERFERENCE CONTD.

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol.	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
27.145	190.02	5.8	H	2.03	14.01	21.84	21.66
27.145	190.02	6.9	V	2.03	14.61	23.54	19.96
27.145	217.16	6.3	H	2.19	11.59	20.08	25.92
27.145	217.16	9.1	V	2.19	11.46	22.75	23.25
27.145	244.31	6.2	H	2.32	12.17	20.69	25.31
27.145	244.31	8.5	V	2.32	12.16	22.98	23.02
27.145	271.45	4.4	H	2.46	13.24	20.10	25.90
27.145	271.45	11.8	V	2.46	13.27	27.53	18.47
27.255	27.26	40.7	H	0.80	13.75	55.25	24.75
27.255	27.26	66.4	V	0.80	12.45	79.65	0.35
27.255	54.51	17.1	H	1.01	9.98	28.09	11.91
27.255	54.51	20.5	V	1.01	9.80	31.31	8.69
27.255	109.02	10.3	H	1.46	10.56	22.32	21.18
27.255	109.02	10.6	V	1.46	10.78	22.84	20.66
27.255	136.28	5.9	H	1.65	14.18	21.73	21.77
27.255	136.28	8.4	V	1.65	15.00	25.05	18.45
27.255	163.53	4.4	H	1.84	16.56	22.80	20.70
27.255	163.53	5.3	V	1.84	17.49	24.63	18.87
27.255	190.79	6.1	H	2.04	14.24	22.38	21.12
27.255	190.79	6.2	V	2.04	14.84	23.08	20.42
27.255	218.04	7.4	H	2.19	11.56	21.15	24.85
27.255	218.04	10.1	V	2.19	11.44	23.73	22.27
27.255	245.30	5.5	H	2.33	12.21	20.04	25.96
27.255	245.30	9.4	V	2.33	12.22	23.95	22.05
27.255	272.55	6.3	H	2.46	13.28	22.04	23.96
27.255	272.55	13.7	V	2.46	13.33	29.49	16.51

SAMPLE CALCULATION: FSdBuV/m = MR (dBuV) + ACFdB.

All measurements below 30 MHz were taken using an EMC Test Systems Passive Loop Antenna.

TEST PROCEDURE: The procedure used was ANSI STANDARD C63.4-2003. The spectrum was scanned from 30 MHz to 1000 MHz. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The UUT was tested in 3 orthogonal planes.

PERFORMED BY: NAM NGUYEN **DATE:** 4/25/2006

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NAME OF TEST: Occupied Bandwidth

RULES PART NO.: 15.227

REQUIREMENTS: The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated to the general limits of 15.209.

TEST DATA:

THE GRAPHS ON THE FOLLOWING PAGES REPRESENT THE EMISSIONS TAKEN FOR THE DEVICE.

METHOD OF MEASUREMENT: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was taken. The vertical scale is set to 10 dB per division.

PERFORMED BY: NAM NGUYEN

DATE: 4/25/2006

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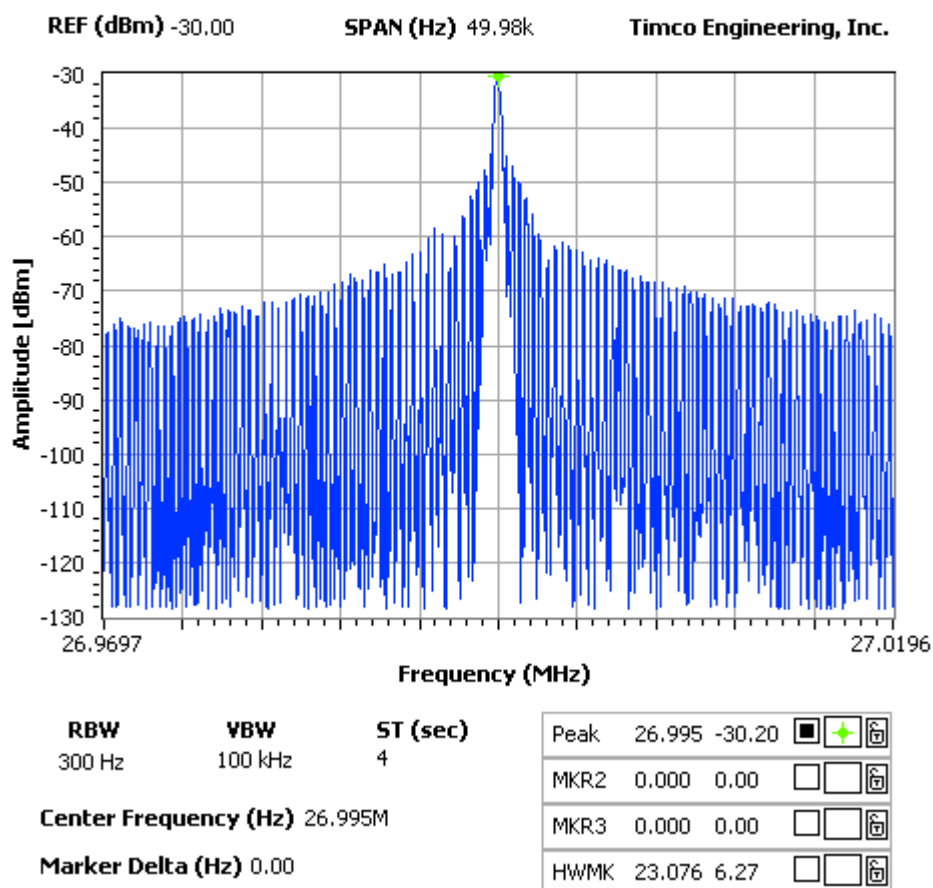
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NOTES:

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OCCUPIED BANDWIDTH PLOT - 26.995 MHz



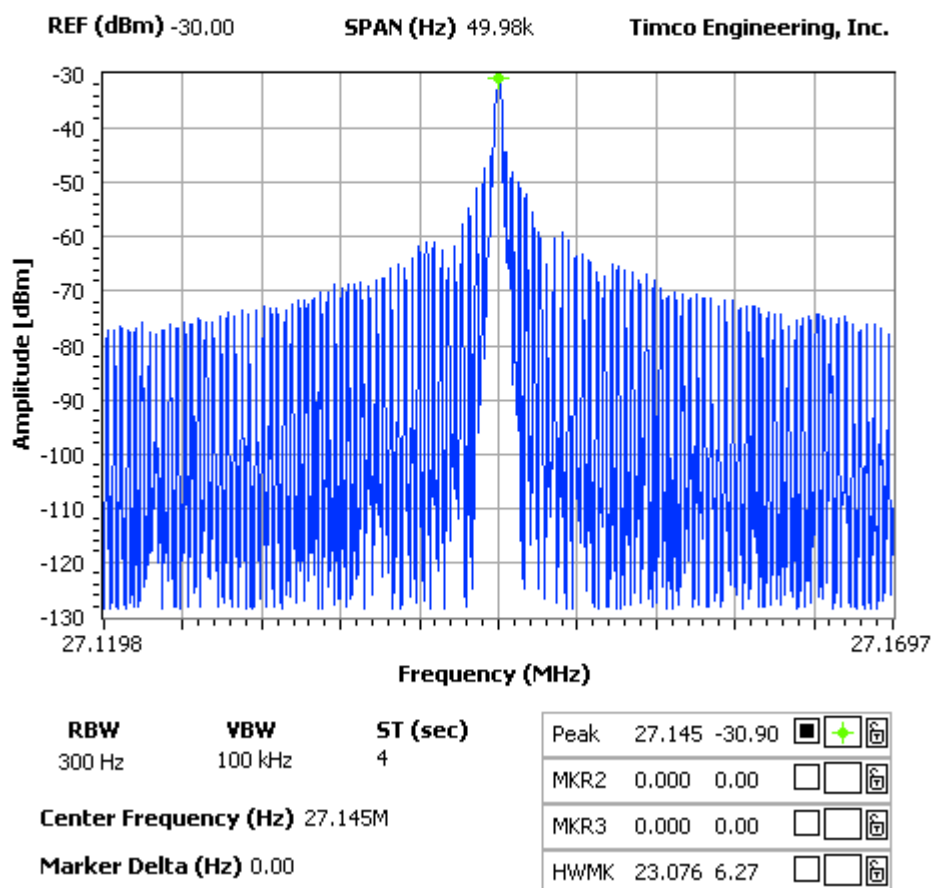
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OCCUPIED BANDWIDTH PLOT - 27.145 MHz



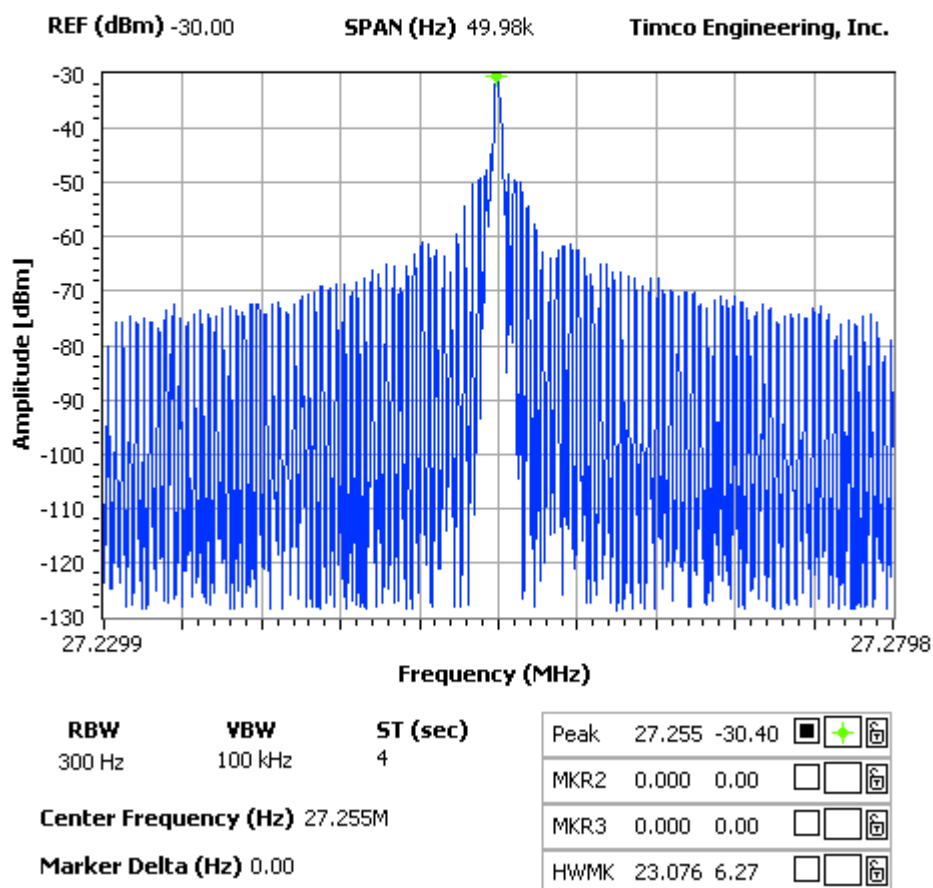
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OCCUPIED BANDWIDTH PLOT - 27.255 MHz



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TEST SET UP PHOTO



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