

TEST REPORT

Ref. Report No.

99-341-054

This test report only responds to the tested sample and shall not be reproduced except

Name and address of the applicant

Hyosung Trans Industry Corp.
613-1, Wijeon 2-Ri, Wolrong-Myeon, Paju-City,
Kyungki-Do, Korea 413-810

Standard / Test regulation

FCC Part 18

Test result

Pass

Incoming date : November 10, 1999

Test date : December 6~16, 1999

Test item(s) ;

R-F Lighting Devices-Consumer Equipment
(Compact Self-Ballasted Fluorescent Lamp)

Model/type ref. ;

FTR20

Manufacturer ;

Hyosung Trans Industry Corp.

Additional information ;

-Required Authorization :Certification
-FCC ID. : OUIHSFTR20

Issue date : December 20, 1999

in full without written approval of the the Korea Testing Laboratory.

Tested and reported by

S. K. Seol

Soun-Kweon Seol , Senior Engineer

Reviewed by

S. J. Kim

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**KOREA TESTING
LABORATORY**

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. GENERAL INFORMATION

1. Grantee Name and : Hyosung Trans Industry Corp.
Mailing Address : 613-1, Wijeon 2-Ri, Wolrong-Myeon, Paju-City, Kyungki-Do,
Korea 413-810

2. Manufacturer's Name and : Hyosung Trans Industry Corp.
Mailing Address : 613-1, Wijeon 2-Ri, Wolrong-Myeon, Paju-City, Kyungki-Do,
Korea 413-810

3. Equipment Descriptions

3.1 Input Voltage : 120V, 60Hz
3.2 Oscillation Frequency : 45kHz (LC Oscillator)
3.3 Load Lamp : Compact Fluorescent Lamp (20Watt)

4. Rules and Regulations : FCC Part 18

5. Measuring Procedure : FCC/OET MP-5 (1986)

6. Place of Measurement : Absorber-lined room(3-Meter) of KTL

7. Date of Measurement

7.1 Conducted Emission : December 6, 1999
7.2 Radiated Emission : December 16, 1999

. CONDUCTED EMISSION MEASUREMENT (Section 18.307)**1. Test Procedure**

The EUT was installed with fluorescent lamp in accordance with the manufacturer's instruction and operated in a manner that is the representative of the typical usage for equipment.

The conducted emission measurement was made in shielded enclosure(5.0m x 3.5m x 2.0m). The EUT was placed on a wooden table 0.8 meters height, 1.0 by 1.5 meters in size and was placed 40 centimeters from a vertical earth grounded conducting surface(wall of shielded enclosure) with keeping at least 80 centimeters from any other earthed conducting surface including the case of LISN.

The LISN (3825/2, EMCO, 50 H, 50Ω) was installed below of the test table. The length of the power lead in excess of the 80 centimeters separating the EUT from the LISN was folded back and forth so as to form a bundle not exceeding 30 to 40 centimeters in length.

The 50Ω output terminal of the LISN was connected to the Spectrum Analyzer (8566B, HP) incorporated with the Quasi-Peak Adapter(85650A, HP) and Transient Limiter (11947A, HP) which was at the outside of the shielded enclosure using the coaxial cable 10 meters length.

The EUT was operated for a sufficient period of time to approximate normal operating conditions. The EUT was configured in manner which tends to maximize its emission characteristics in a typical application such as equipment reoriented or power cables were shifted.

The voltage developed across the 50Ω output terminal in LISN was measured by Spectrum Analyzer in PEAK HOLD MODE and graphed by Plotter(7470A, HP). The 6dB bandwidth of the Spectrum Analyzer and Quasi-Peak Adapter was set at 9kHz.

The frequency range from 450kHz to 30MHz was searched. The frequency and amplitude of the six highest ac powerline conducted emissions relative to the limit were reported. If any peak values were fallen into within 6dB of the limit, they were compared to Quasi-Peak values with Quasi-Peak instrument(ESH3, ROHDE & SCHWARZ).

The maximum emission level from the EUT occurred in such configuration as shown in the following photograph.

2. Photograph for the worst case configuration



3. Sample Calculation

The emission level measured in decibels above one microvolt ($\text{dB}\square$) was converted into microvolt (\square) as shown in following sample calculation.

For example :

$$\begin{array}{rcl} \text{Measured Value at } 0.50\text{MHz} & 40.0 & \text{dB}\square \\ + \text{ Cable Losses *} & 0.0 \text{ dB} & \\ \hline = \text{ Conducted Emission} & 40.0 \text{ dB}\square/\text{m} & \\ & (= 100.0 \square/\text{m}) & \end{array}$$

* In case of RG214/ RF cable 15Ft, the loss is about 0.17dB at the frequency of 30MHz which is negligible.

4. Measurement Data

- Resolution Bandwidth : Peak (6dB Bandwidth : 9kHz)
 CISPR Quasi-Peak (6dB Bandwidth : 9kHz)

- Measurement channel :

Power Lead Tested	Frequency (MHz)	Measured Value		Emission Level		Limit (□)	(*) Margin (dB)
		Peak (dB□)	Q-Peak (dB□)	(dB□)	(□)		
Live to Ground	0.50	40.0	-	40.0	100.0	250	-8.0
	0.60	39.0	-	39.0	89.1	250	-9.0
Neutral to Ground	0.50	38.6	-	38.6	85.1	250	-9.4
	0.61	37.0	-	37.0	70.8	250	-11.0

Note : The noise floor level of the spectrum analyzer was observed in 22dB□.

The two highest emission level was reported .

And refer to measured graphs on next page.

* Margin(dB) : Emission Level (dB) - Limit (dB)

