

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

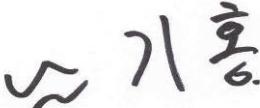
Test Report No. : W167R-D025
AGR No. : A164A-028R2
Applicant : SEOYON ELECTRONICS CO., LTD.
Address : 424, Sinwon-ro, Danwon-gu, Ansan-Si, Kyonggi-Do, South Korea
Manufacturer : SEOYON ELECTRONICS CO., LTD.
Address : 424, Sinwon-ro, Danwon-gu, Ansan-Si, Kyonggi-Do, South Korea
Type of Equipment : FOB-SMART KEY
FCC ID : NYOSYEC4FOB1608
Model No. : SYEC4FOB1608
Serial number : N/A
Total page of Report : 5 pages (including this page)
Date of Incoming : April 11, 2016
Date of issuing : July 07, 2016

SUMMARY

The equipment complies with the regulation; **FCC PART 15 SUBPART C Section 15.231**

This test report contains only the result of a single test of the sample supplied for the examination. It is not a general valid assessment of the features of the respective products of the mass-production.

Reviewed by:



Ki-Hong, Nam / Asst, Chief Engineer
ONETECH Corp.

Approved by:



Sung-Ik, Han/ Managing Director
ONETECH Corp.

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1. VERIFICATION OF COMPLIANCE

APPLICANT : SEOYON ELECTRONICS CO., LTD.
ADDRESS : 424, Sinwon-ro, Danwon-gu, Ansan-Si, Kyonggi-Do, South Korea
CONTACT PERSON : KEUNSU KIM / Assistant Manager
TELEPHONE NO : +82-31-420-3489
FCC ID : NYOSYEC4FOB1608
MODEL NAME : SYEC4FOB1608
BRAND NAME : HYUNDAI
DATE : July 07, 2016

EQUIPMENT CLASS	DSC - Part 15, Security/Remote Control Transmitter
E.U.T. DESCRIPTION	Folding Transmitter
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.231
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	None
FINAL TEST WAS CONDUCTED ON	3 m, Semi Anechoic Chamber

The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The SEOYON ELECTRONICS CO., LTD., Model: SYEC4FOB1608 (referred to as the EUT in this report) is a Transmitter that it controls locking and unlocking the door of a vehicle. Product specification information described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic	
OPERATING FREQUENCY	TX	433.92 MHz
	RX	134.20 kHz
MODULATION	FSK	
LIST OF EACH OSC. OR CRY. FREQ.(FREQ.>= 1 MHz)	13.08 MHz	
ANTENNA TYPE	PCB Pattern Antenna, LF 3D Antenna	
RATED SUPPLY VOLTAGE	DC 3 V from a battery	
NUMBER OF LAYERS	4 Layers	

2.2 Related Submittal(s) / Grant(s)

Original submittal only

3. RADIO FREQUENCY EXPOSURE

3.1 Introduction

The device with FCCID : NYOSYEC4FOB1608 , IC : 3109A-SYEC4FOB1608 is designed to be used in portable exposure conditions.

This product integrates a transmitter operated in 433.92 MHz frequency band.

3.2 Output power considerations :

Worst case output power transmitter : 74.34 dB μ V/m @ 3 m = -20.86 dBm = 0.008 mW eirp

3.3 Compliance criteria :

Transmitter is deemed to comply with FCC § 2.1093 requirements and IC RSS-102 Issue 5 as the output power of the device meets the conditions specified in section 4.3.1 (SAR test exclusion) considerations of the document ‘ KDB 447498 D01 General RF Exposure Guidance v06’ and in section 2.5.1 (Exemption from Routine Evaluation Limits – SAR Evaluation) of RSS-102 Issue 5.

FCC:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \bullet \\ [\sqrt{f_{(\text{GHz})}}] \leq 3.0$$

$$[0.008/5] \bullet [\sqrt{0.433\ 92}] = 0.0011 \leq 3.0$$

IC:

Max output power (mW) \leq 54.037 mW (limit at 433.92 MHz resulting of the linear interpolation of the limits at 300 MHz and 450 MHz specified in table 1 of section 2.5.1 of RSS-102 Issue 5)

$$0.008 \text{ mW} \leq 54.037 \text{ mW}$$