

RF Exposure Evaluation

1. Introduction

Product Type	Li-ion 0.5 ARC Motor
Model no.	MT01-1320-069001-A, MT01-1320-069002-A, MT01-1320-069003-A
FCC ID:	2AGGZ003B9ACA46
Rating:	5V $\overline{\text{---}}$; 0.73A, 6W
RF Transmission Frequency:	433.92MHz
Modulation:	FSK
Antenna Type:	Line antenna
Max Antenna Gain:	-1.5 dBi
Description of the EUT:	The Equipment Under Test (EUT) is a DC Tubular Motor supports 433.92MHz wireless function.
Reference RF Report	68.910.22.0038.01

2. Limit and Guidelines on Exposure to Electromagnetic Fields

According to 447498 D04 Interim General RF Exposure Guidance v01 and §1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption.

3. Calculation method

According to ANSI C63.10-2013 (9.5 Equations to calculate EIRP),

Calculate the EIRP from the radiated field strength in the far field using Equation (22):

$$EIRP = E_{Meas} + 20 \log(d_{Meas}) - 104.7 \quad (22)$$

where

EIRP is the equivalent isotropically radiated power, in dBm
 E_{Meas} is the field strength of the emission at the measurement distance, in dB μ V/m
 d_{Meas} is the measurement distance, in m

NOTE—Because this equation yields the identical result whether the field strength is extrapolated using the default 20 dB/decade of distance extrapolation factor, or the field strength is not extrapolated for distance, this equation can generally be applied directly (with no further correction) to determine EIRP. In some cases, a different distance correction factor may be required; see 9.1.

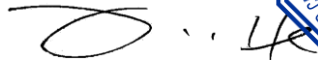
Field Strength (E_{Meas}):	83.8 (dB μ V/m) (f=433.92MHz)
Measurement Distance(d_{Meas}):	3 (m)
Equivalent Isotropically Radiated Power(EIRP):	0.073 (mW)

The max output power of the product is 0.073 mW, which is less than 1 mW.

Result: Compliance

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

Reviewed by:




Prepared By:



Jessie He/ Project Manager
 Date: 2022-09-05

Myron Yu/Project Engineer
 Date: 2022-09-05