

RF Exposure Evaluation Report

Equipment under Test: Industrial Remote Control
Model No. : Alpha604AJ, Alpha604BJ
FCC ID : LZ6-ALPHA604XJ
IC : 2838A-ALPHA604XJ
Manufacturer : Fomotech International Corp.
Applicant : Fomotech International Corp.
Address : 2F-1, 286-3, Hsin Ya Road,Chien Chen District,
Kaohsiung City 806, Taiwan, R.O.C.
Date of Receipt : May 16, 2022
Date of Report : June 10, 2022

Prepared by

Central Research Technology Co.



EMC Test Laboratory

No.11, Lane41, Fushuen St., Jungshan Chiu, Taipei, Taiwan, 104, R.O.C.

This report shall not be reproduced, except in full, without written approval of Central Research Technology Co.. It may be duplicated completely in its entirety for legal use with the permission of the applicant. The test result in this report is based on the information provided by manufacturer and applies only to the sample tested.

1 Requirement for Compliance

According to KDB 447498 D04, SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

According to RSS-102 Issue 5, SAR exemption limit:

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

2 Result

Frequency Range (MHz)	Peak power (dBm)	Duty cycle (ms/100ms)	Maximum time-average Power		Antenna distance (mm)	Limit (mW)
			(dBm)	(mW)		
902~928	19.27	1.8	1.8	1.5	5	7 (for FCC) 16.36 (for IC)

Note: Average power= peak power- 10log(0.018)=1.8 dBm

According to result, the SAR testing for this device is not required.