

RF Exposure

Applicant : Shenzhen LiteTrace Technologies Co., Ltd
Address : 305 Suite C, 3151 Shahe West Street Jianxing
Technology Plaza, Nanshan Shenzhen, China
Product Name : Keilton Wall switch
Brand Mark : Keilton+Autani
Model : WP1018S
FCC ID : 2A26YWP1018S
Report Number : BLA-EMC-202508-A7503
Date of Receipt : Aug. 19, 2025
Date of Test : Aug. 19, 2025 to Aug. 29, 2025
Test Standard : KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

Compiled by: *Hugh*Review by: *Xavier*Approved by: *Blue Zheng*
Issued Date: Aug. 29, 2025**BlueAsia of Technical Services(Shenzhen) Co., Ltd.**Address: Building C, No. 107, Shihuan Road, Shiyuan Sub-District, Baoan District,
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Revise Record

Version No.	Date	Description
01	Aug. 29, 2025	Original

1 General information

1.1 General information

Applicant	Shenzhen LiteTrace Technologies Co., Ltd
Address	305 Suite C, 3151 Shahe West Street Jianxing Technology Plaza, Nanshan Shenzhen, China
Manufacturer	Shenzhen LiteTrace Technologies Co., Ltd
Address	305 Suite C, 3151 Shahe West Street Jianxing Technology Plaza, Nanshan Shenzhen, China
Factory	N/A
Address	N/A

1.2 General description of EUT

Product name	Keilton Wall switch
Model no.	WP1018S
Series model	N/A
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK
Rate data:	1Mbps; 2Mbps
Channel Spacing:	2MHz
Number of Channels:	40
Antenna Type:	PCB antenna
Antenna Gain:	-1.37dBi(Provided by customer)
Power supply or adapter information	AC120V
Hardware Version	N/A
Software Version	N/A

Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2 RF Exposure Compliance Requirement

2.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.2 Limits

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

where

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

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B. 1})$$

2.3 Result

$$\text{EIRP} = p_t \times g_t = (E \times d)^2 / 30$$

Where:

p_t = transmitter output power in watts,

g_t = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, --- $10((\text{dBuV/m})/20)/106$

d = measurement distance in meters (m) ---3m

$$\text{Spot} = (E \times d)^2 / 30 \times g_t$$

$$\text{Ant gain} = -1.37 \text{ dBi}$$

2.4 WIFI

Max Output power = 3.206 dBm @ BLE 1M 2402 MHz

$$\text{ERP} = 3.206 - 1.37 - 2.15 = -0.314 \text{ dBm}$$

So

ERP is worse case

$$10^{-0.3206} = 2.092 \text{ mW} < 3060 \text{ mW}$$

Comply with RF exposure exemption limit.

----END OF REPORT----

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