

Contents

1. Specification
 - 1.1 Overview
 - 1.2 Product function
 - 1.3 Product appearance
 - 1.4 Operation conditions
 - 1.5 BLE communication
2. Electrical Characteristics
 - 2.1 Electrical Performance
 - 2.2 BLE (transmission)
 - 2.3 BLE (Receiver)

1. Specification

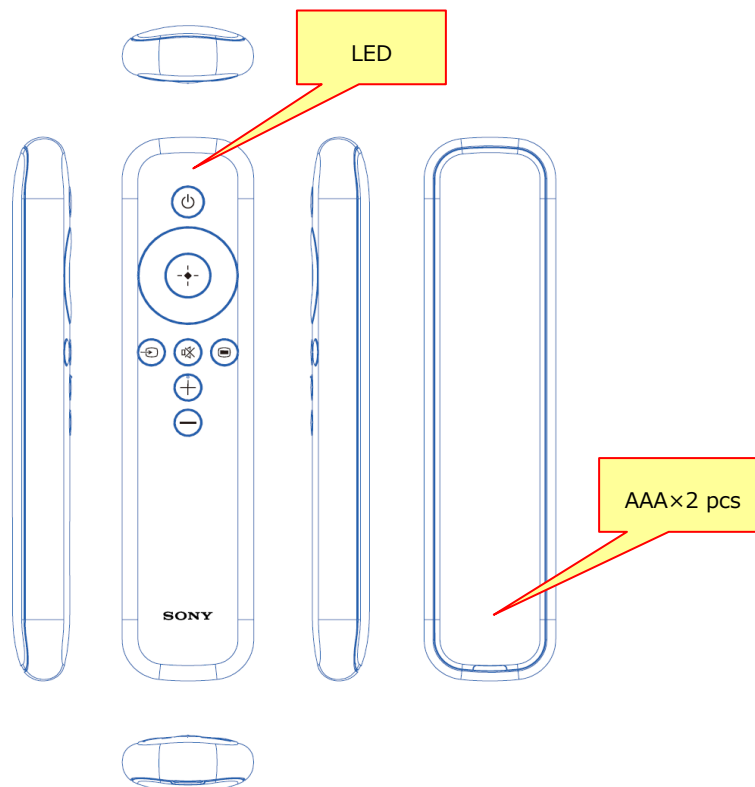
1.1 Overview

Bluetooth 4.2 support controller with AAA battery x 2pcs

1.2 Product function

1. BLE communication
2. Key Code transmission
3. LED Indication

1.3 Product appearance



1.4 Operation conditions

No	ITEM	Unit	
1	Voltage range	V	DC 2.0~3.6 (Typ: DC 3.0)
2	Temperature range	°C	-10 ~ +45
4	Humidity range	%RH	20~95

1.5 BLE communication

No	ITEM	Unit	
1	Bluetooth Ver	–	Bluetooth 4.2
2	Frequency range	GHz	2.402~2.483(ISM band)
3	Channel center frequency	GHz	2402 + k×2MHz(k=0,1,2,⋯39)
4	Modulation method	–	GFSK
5	Data rate	Mbps	1.0(Max)

2. Electrical Characteristics

2.1 Electrical Performance

No	Item 項 目	Rating 規 格	Note 備考
1	Circuit Leakage Current	Less than 10uA	$V_b = 3.2V$
2	Operating Current	Press Key: 0.5mA or less	$V_b = 3.2V$
3	Oscillation Frequency(1)	32MHz±10ppm (BLE Micom)	$V_b = 3.2V$
4	Oscillation Frequency(2)	32.768KHz±20ppm(BLE Micom)	$V_b = 3.2V$
5	Operating Distance	More than 10m	$V_b = 3.2V$
6	Actual Performance Test	Check to make sure that the correct operations are performed when each key is pressed	-

SPECIFICATION

Model Name : LSPX-A1R

2.2 BLE (transmission)

No	Item	Unit	Min.	Typ.	Max.	Bluetooth Spec
1	Output power P_{AV} ⁽¹⁾	dBm	-3	0	1.8	-20 to 10
2	Leakage Power Avg ⁽¹⁾	dBm	-100	-65	100	< 100
3	Output power P_{PK} ⁽¹⁾	dBm	-	4.5	10	< 10
4	Peak-Pavg Avg ⁽¹⁾	dBm	-	0.5	3	< 3
5	Frequency range	MHz	2402	-	2480	2400 to 2482
6	Frequency Accuracy Avg ⁽¹⁾	kHz	-150	8	150	< ± 150
7	Frequency Offset Avg ⁽¹⁾	kHz	-150	11	150	< ± 150
8	Frequency Drift Avg ⁽¹⁾	kHz	-50	3	50	< ± 50
9	Initial Frequency Drift Avg ⁽¹⁾	kHz	-20	-0.1	20	< ± 20
10	Max Drift Rate Avg ⁽¹⁾	kHz	-20	3	20	< ± 20
11	Avg Frequency Deviation Avg ⁽¹⁾	kHz	185	225	275	185 to 275
12	Min Frequency Deviation Avg ⁽¹⁾	kHz	185	210	275	185 to 275
13	Max Frequency Deviation Avg ⁽¹⁾	kHz	-1000	240	1000	-1000 to 1000
14	Delta F1 Avg ⁽²⁾	kHz	225	250	275	225 to 275
15	Delta F2 Avg / Delta F1 Avg ⁽²⁾	-	0.8	-	-	> 0.8
16	Delta F2 Max Threshold: 185.0 kHz ⁽²⁾	%	99.9	-	-	> 99.9

Note :

⁽¹⁾ Payload: 10101010, Length: 37 Bytes⁽²⁾ Payload: 11110000 & 10101010, Length: 37 Bytes

2.3 BLE (Sensitivity)

No	Item	Unit	Min.	Typ.	Max.	Bluetooth Spec
1	Sensitivity at 30.8% PER ^{(1) (2)}	dBm	-	-80	-70	≤ -70
2	Maximum received signal at 30.8% PER ^{(1) (2)}	dBm	-	-10	-	≥ -10

Note :

⁽¹⁾ Packets: 1500, Payload: PRBS 9, Length: 37 Bytes⁽²⁾ Measured at $F_0 = 2442\text{MHz}$.