

Product Specification
产品规格书

产品型号 Product Model Number	Y9	
产品名称 Product Name	OWS 无线蓝牙耳机 OWS Bluetooth Earphone	
封样版本 Sealed version	A/01	
制定日期 Compile date	2025-11-28	
制作 Compile	审核 Audit	核准 Approved
刘军 Liu Jun		

版本修改记录
Version modification record

版本 Version	修改内容 Modify content	时间 Date
V.0	初版 First edition	2025/11/28

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1. ID/配色图



技术规格 Technical specification

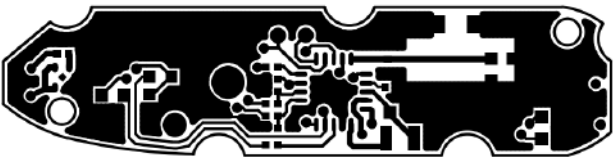


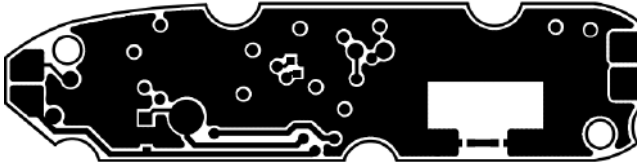
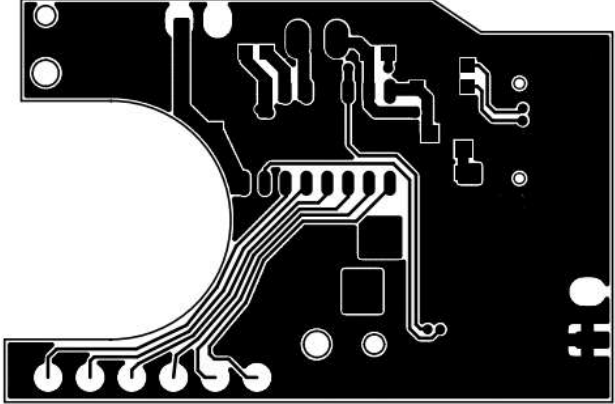
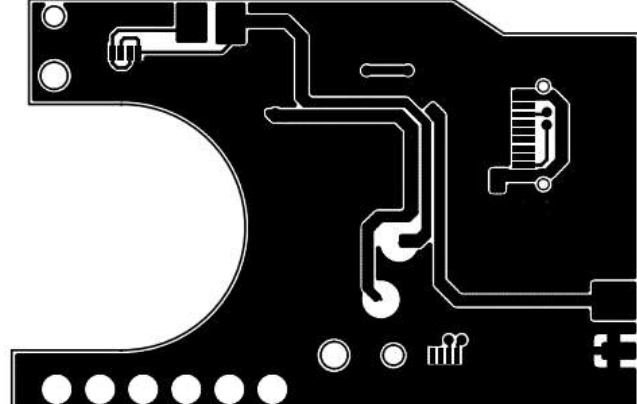
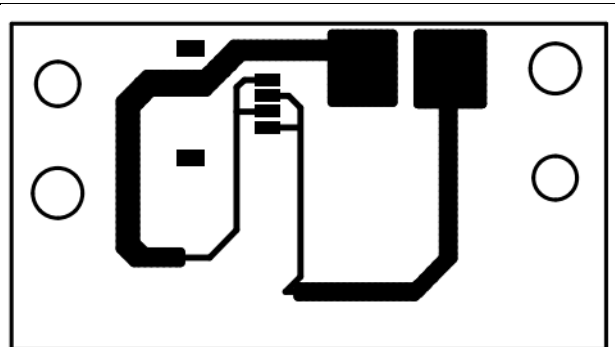

2. Feature/电性参数

蓝牙版本 Bluetooth Version	BT 6.0
蓝牙协议 Supported Bluetooth Profile	1. MP2, MP3, WMA, APE, FLAC, AAC, MP4, M4A, WAV, AIF, AIFC
蓝牙芯片 Bluetooth chip	JL6973D4
佩戴方式 Way of wearing	入耳式 1pair earbuds(in ear)
功能用途 Functional use	双麦 ENC 蓝牙聆听 Quad Mic ENC Bluetooth listening
传输距离 Bluetooth Range	≥10 米 ≥10M
喇叭直径 Horn diameter	Φ10*4.8mm(背 EVA 带胶) Φ10*4.8mm (back EVA with glue)
喇叭频响范围 Horn frequency response range	50Hz - 5KHz
产品阻抗	16 Ω ±15%

Product impedance	
喇叭灵敏度 Horn sensitivity	107dB 士 3dB
额定功率 Speaker Power	10mW
麦克风 microphone	YXM2718AT421-08
麦克风频响范围 Microphone Frequency Response	100Hz - 10kHz
麦风灵敏度 Microphone Sensitivity	-42±1dB
载波频率 Carrier frequency	2.402GHz-2.480GHz
外壳材料 Housing material	ABS+PC
耳机电池类型 Battery Type	聚合物电池 450909-30mAh Polymer Battery 450909-30mAh
充电仓电池容量 Charging case battery capacity	聚合物电池 402040-300mAh Polymer Battery 402040-300mAh
耳机充电时间 Charging Time	1.5 小时左右 About 1.5 hours
充电仓充电时间 Charging time of the charging case	1 小时左右 About 1 hours
音乐播放时间 Music Playing Time	5-6 小时左右 About 5-6 hours
音乐播放电流 Music Playing Current	主机 10mA (狂狼最大声) Host 10mA
通话播放电流 Call Playing Current	主机 12mA (拨打 10086) Host 12ma (call 10086)
待机电流 Standby current	约 6mA ≈6mA
关机电流 Shutdown current	11uA ≈11uA
耳机充电电流 Earphone charging current	30mA
耳机尺寸(长, 宽, 高) Earphone size (length, width, height)	52*40*16mm
充电仓尺寸(长, 宽, 高) Charging case size (length, width, height)	67*56*32mm
耳机重量 Earphone weight	6.46g

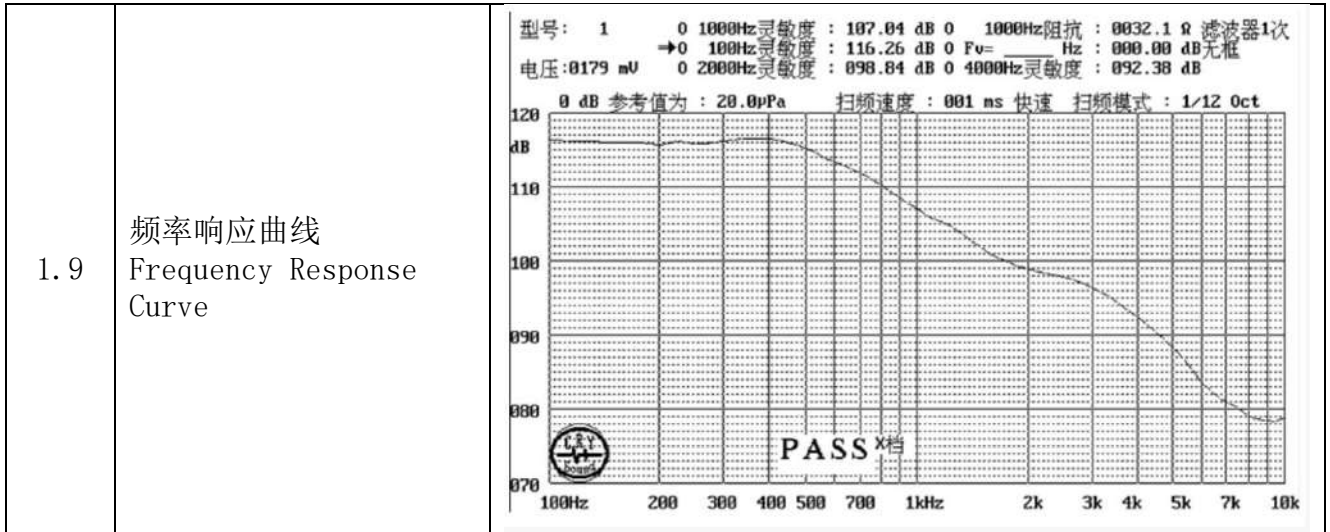
产品重量 Product weight	57.31g
工作温度 Operating temperature	-20℃到 60℃ -20℃-60℃
存储温度 Storage temperature	-20℃到 60℃ -20℃-60℃

3. PCBA Design Section/PCBA 设计部分

耳机充电仓/Earphone charging case	
PCB 贴片线稿图 PCB Line Drawing	PCB 贴片线稿图 PCB Line Drawing
	
	
	
	

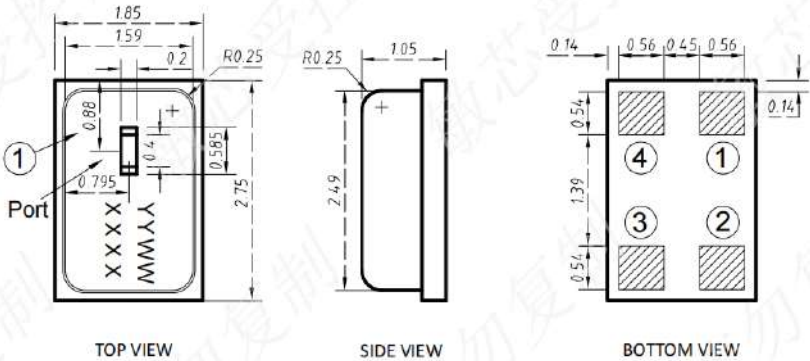
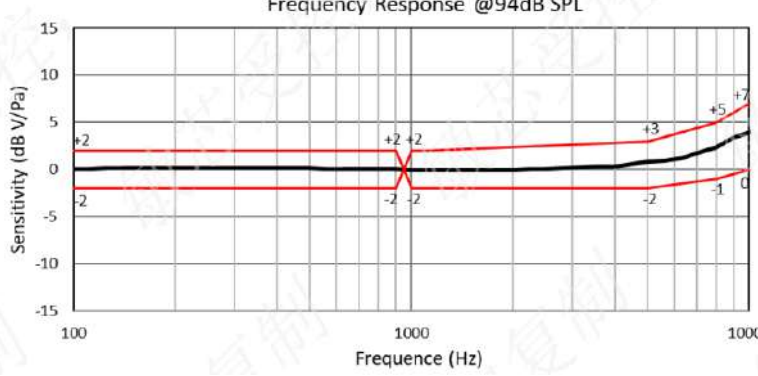
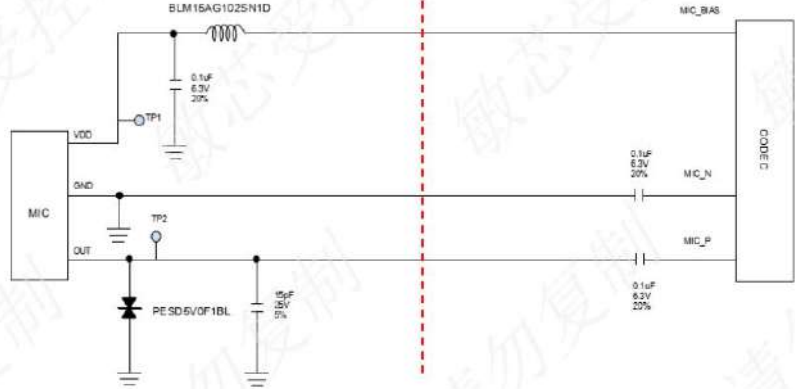
喇叭 Speaker

1.1	型号 Model	LD 10-2-19
1.2	阻抗 Impedance	16 Ω \pm 15%
1.3	额定输入功率 Rated input power	10mW
1.4	最大输入功率 Maximum input power	15mW
1.5	灵敏度 Sensitivity	107dB \pm 3dB
1.6	频率范围 Frequency range	50Hz \sim 5KHz
1.7	失真率 Distortion Rate	THD \leq 3% @ 1kHz
1..8	尺寸 Dimension	<p>Technical drawing of the speaker LD 10-2-19 showing dimensions:</p> <ul style="list-style-type: none"> Overall diameter: 4.8 ± 0.2 Mounting hole diameter: 4.3 ± 0.1 Mounting hole offset: 0.5 Speaker diameter: $\varnothing 10 \pm 0.1$



麦克风 MIC.

2.1	型号 Model	YXM2718AT421-08
2.2	灵敏度 Sensitivity	-42 ± 1dB
2.3	阻抗 Impedance	200 Ω
2.4	消耗电流 Consumption current	150uA
2.5	频率范围 Frequency range	100Hz ~10KHz
2.6	指向性 Directivity	全方位 all around
2.7	信噪比 S/N Signal to noise ratio	57dB

<p>2.8</p>	<p>尺寸 Dimension</p>	 <p>TOP VIEW SIDE VIEW BOTTOM VIEW</p>
<p>2.9</p>	<p>频率响应曲线图 Frequency Response</p>	 <p>Frequency Response @94dB SPL</p>
<p>2.10</p>	<p>测试电路图 Measurement Circuit</p>	<p>● Recommended Application Example (differential amplification circuit)</p> 

4. Operation/功能操作/使用说明

序号 no.	功能 function	操作描述 Operation description	指示灯 Indicator light	语音包 Voice packet
耳机 Earphone				
1	开机 power on	耳机取出充电仓，耳机自动开机 Take the earphone out of the charging case, and the earphone will automatically power on	红白灯闪烁 The red and white lights are flashing	power on
2	手动开机 Manual power on	耳机不在充电仓内，关机状态下长按 MFB 键 3S 开机 The earphone is not in the charging case, long press the MFB key 3S to turn on the power in the off state	红白灯闪烁 The red and white lights are flashing	power on
3	关机 Power off	耳机放入充电仓，关仓后，耳机进入充电状态 The earphone is put into the charging case, and when the case is closed, the earphone enters the charging state	白灯常亮 White light always on	power off
4	手动关机 Manual power off	开机状态长按 MFB 键 5S，耳机关机 Long press MFB button for 5S in power-on state, earphone off	白灯闪烁 white light flashing	power off
5	超时关机 Shutdown Timeouts	开机状态下，OWS 与设备连接不成功，5 分钟自动关机 OWS connects unsuccessfully with the device in the power-on state and automatically shuts down in 5 minutes	左耳闪烁，右耳灯灭 Left ear blinks, right ear lights out	power on
6	配对模式 pairing mode	耳机取出充电仓自动配对，配对成功，然后打开手机上的蓝牙设备搜索。 The earphone is taken out of the charging case and paired automatically, the pairing is successful, then open the Bluetooth device search on your phone.	配对状态：左右耳白灯闪烁 配对成功：左耳闪烁，右耳灯灭 Pairing status: white light blinking in left and right ear Successful pairing: left ear blinking,	pairing

			right ear light off	
7	TWS 与设备连接 TWS connects to the device	设备打开蓝牙功能，搜索配对名为“Y9”的蓝牙设备，并点击连接，直至手机显示与耳机连接成功 Turn on the Bluetooth function of the device, search for the Bluetooth device named “Y9”, and click on the connection until the phone shows a successful connection with the headset.	连接成功：左右灯灭 Successful connection: left and right lights off	Connected
8	TWS 与设备断开 TWS disconnected from the device	设备与 OWS 断开，OWS 自动进入搜索配对模式 Device disconnected from OWS, OWS automatically enters search pairing mode	左耳闪烁，右耳灯灭 Left ear blinks, right ear lights out	disconnected
9	回连模式 Rewind mode	开机配对后，自动进入回连最后配对的设备，回连不上或没设备连接 5 分钟自动关机 After powering on the pairing, automatically enter the last paired device back to connect, back to connect or no device to connect 5 minutes automatically shutdown	左耳闪烁，右耳灯灭 Left ear blinks, right ear lights out	connected
10	超距回连 long-distance reconnection	连接状态下，超距后 5 分钟内可自动回连。如仍未回连，自动关机 Under the connection status, it can be automatically reconnected within 5 minutes after the distance is exceeded. If still not connected, automatic shutdown	/	power off
11	接听/挂断电话 Answer/hang up calls	来电时单击左耳或者右耳 Click on the left or right ear when calling	/	
12	拒接电话 Refuse to answer	来电时长按左耳或者右耳 2S Long press left or right ear for 2 S when calling	/	Di
13	播放/暂停 Play / Pause	单击左耳或者右耳 Click on the left or right ear	/	
14	上一曲	双击左耳 Double click on the left ear	/	

	Previous song			
15	下一曲 Next song	双击右耳 Double click on the right ear	/	
16	音量加 Increase the volume	三击右边 Three clicks to the right ear	/	
17	音量减 Reduce the volume	三击左边 Three clicks to the left ear	/	
18	语音助手 (如 SIRI) Voice assistants	长按左右耳 2S, 唤醒 SiRi Long press left or right ear for 2 S to wake up Siri	/	Di
19	低电量提醒 Low battery alert	开机状态中, 电池电压低于 3.3V Battery voltage is less than 3.3V in power state	每隔 1 分钟指示灯快闪 2 次 Indicator light blinks 2 times every 1 minute	battery in low
20	低电关机 Low power shutdown	开机状态中, 电池电压低于 3.2V Battery voltage less than 3.2V in power state	白灯长亮 1 秒 White light for 1 second.	Di
21	耳机充电 Earphone charging	放入充电仓中, 左右耳机充电分别单个触发控制, In the charging case, the left and right earphones are separately triggered and controlled	耳机指示灯常亮, 饱满灭掉 Earphone indicator white light is always on, full off	
22	来电铃声 Incoming Call Ringtone	苹果/安卓: 同手机铃声 Apple / Android: Same ringtone	/	
23	电量展示 Electricity display	连接设备上面需显示 OWS 当前电量 The current OWS charge must be displayed on the connected device	/	

充电仓 Charging case

序号 no.	功能 function	操作描述 Operation description	指示灯 Indicator light
1	充电仓充电 Charging case charging	数码管数字显示 100 后，10S 后灭灯 After the digital display on the digital tube reaches 100, the light will turn off after 10 seconds	
2	充电盒对耳机充电 Charging case to charge earphone	数码管跑马灯常亮，耳机红灯常亮，饱满灭掉 The running light on the digital tube is always on, the red light on the earphones is always on, and when it is full, it should be turned off	
3	低电量提醒 Low battery alert	数码管显示 0 数字闪烁 6 次提示后熄灭 The digital tube displays 0 digits and flashes 6 times before turning off the prompt	
4	低电关机 Low power shutdown	电池达到关机电压，不给耳机充电，充电仓关机，灯灭。 The battery reaches the shutdown voltage, does not charge the headphones, the charging compartment is turned off, and the light is off.	

5. 可靠性测试标准 Reliability Test Standards

试验项目 Test item	子类别 Sub-Category	标准 standard
Temperature test 温度测试	Storage with package - Damp Heat (高温储存试验)	High temperature storage test: test temperature: 70°C, test time: 48 hours 高温贮存试验 测试温度 70°C, 测试时间 48 小时
	Storage with package - Cold (低温储存试验)	Low temperature storage test test temperature -20°C, test time 48 hours 低温贮存试验 测试温度 -20°C, 测试时间 48 小时
	Thermal shock (part of Accelerated life tests (高低温循环测试))	Low temperature: - 20 °C for 1 h/high temperature HT: 60 °C for 1 h; Cycles: 24 times, a total of 48 hours; 低温试验: -20° C1 小时/高温试验: 60° C 保温 1 小时; 周期: 24 次, 共 48 小时;

Transportation Tests 运输测试	Random Vibration test (震动试验)	频率 5~55Hz, 振幅:5mm, 扫频方式, 30min. 5 ~ 55 hz frequency, amplitude, 5 mm, frequency sweeping method, 30 min.
	Package Drop test (包装跌落试验)	Faces:6 Edge:3 Corner:1 Per National Spec (按照国标)
	Free Drop test (Bare product) (裸机跌落试验 裸机自然状态下)	1) 1.2m 2) 3 times on concrete or 6 times on the wooden board (水泥地面: 3次; 或者木质地板: 6次)
Reliability Test 可靠性试验	switch life tests (开关寿命测试)	Press force=160±30g, Travel=0.15-0.22, Life=50000 次 /在 160±30 的力度下以 100 次/分的速度, 对按键进行开关闭动作, 至少 10000, 功能正常。
	Durability 插拔寿命	Speed=3cycles/min, total cycle=3000, no deformation. 3000 次插拔, 插拔速度 3 次/分钟, 外观无变形
	Headband Pull Test (抽拉测试)	1. 插拔测试机, 30 次/分钟, 500G 的力抽拉 3000 次, (抽拉正常, 功能无损坏) /Speed=30cycles/min, total cycle=3000, 500g,
	Headband Expansion (头带扩张测试)	1. 头带扩张测试机。2., 30 次/分, 扩张 3000 次无变形, 产品功能正常。 Speed=30cycles/min, total cycle=3000, No crack.
	Twist test (头带扭转测试)	Speed =30cycles /min and the rotation degree to 45°, total test cycles=3,000, no crack. 1. 头带扭矩 45 度不断裂, 扭转 3000 次, 功能正常, 30 次/分。
	Salt spray test (corrosion) (盐雾试验)	5% NaCl, 35°C 24Hr in a tester→wash→Remove water→4Hrs, room temperature NaCl 5%, 35°C, 在测试仪中 24 小时-洗涤-去水- 4 小时, 室温 35°C
	Perspiration resistance test (PU/cloth/ coated surface, metal/ plated/ laser logo) 耐汗性测试	Dried surface, Artificial perspiration: approx. pH 4.0 and pH5.0 Wrap the Double layers gauzes containing Artificial perspiration around the specimen Leave the specimen in the chamber at a temperature 65 ±2 ° C, humidity of 90 to 95 %, for 48 hours. Take the specimen out of the chamber, leave it under a room temperature for 2hours, and clean the surface by washing in running tap water. CRITERIA: No significant discoloration, Cracks, blistering and deformation (material

	<p>degradation), Stickiness of external surfaces, Haze of transparent plastic.</p> <p>外表干净, 干燥的样品, 人工汗水成份/升: 1 升蒸溜水, 加 8 克磷酸二氢钠二水合物 (NaH₂PO₄•2H₂O), 8 克氯化钠 (NaCl), 5 克醋酸混合成 pH 值为 4.5 左右的溶液, 用双层蘸满汗液的纱布敷在样品表面, 将样品放入温湿度为 65 ±2 ° C、90 to 95 %, 48 后取出, 恢复常 2 小时, 用自来水冲洗干净, 白色纱布上无褪色, 染色现象</p>
<p>Alcohol Test on coated surface /酒精测试(喷油、丝印件)</p>	<p>1. 95%医用酒精. 2. 500G, 30 次. 3. 两层棉布在表面外理件上来回算一次循环, 擦拭 30 次无露底, 掉漆现象. 95% medical alcohol. 2500G, 30 times. 3. Apply two layers of cotton cloth on the surface of the external treatment part for one cycle, wipe 30 times without exposing the bottom or peeling paint</p>
<p>Abrasion test on coated surface /磨损试验(喷油、丝印件)</p>	<p>Loading: 250 g; Cycles:50 times, HB pencil (250 克的力 50 次, HB 铅笔)</p>
<p>grid cut test on coated surface 百格测试(喷油、丝印件)</p>	<p>1, Dried surface, 6x6 cut-lattice by cross-cutter , 1mmx1mm cutting spacing, on a surface as flat as possible of the test object (If the specimen is very small and there is not enough space to cut the surface in lattice patterns, cut it in a cross), clear surface by hairbrush.</p> <p>2, 3M tape(Scotch 610#) 3 times/point, only one peel for each tape, Apply a piece of tape over the cuts. The tape must be carefully applied to the test surface in order to avoid bubbles between the tape and the surface, the tape should be stay on the surface 60sec, remove the tape quickly pulling in 45 degree angle.</p> <p>干燥的表面, 用专用百格刀在产品平面划出 6 行 6 列 1mmx1mm 的小方格, 如果产品面小不足又划方格, 可划一个交叉十字, 用毛刷清洁测试面, 用 3M SCOTCH610#胶带贴在格子表面赶出气泡并保持 1 分钟, 每个点以 45 度角快速拉起 3 次, 胶带经一次拉起后不能再用。经测试后的样品方格内不脱层。</p>

6 . 温馨提示 Warm prompt

1) 耳机充电过程中, 耳机处于关机状态, 会断开与手机的连接, 电源适配器必须选用 5V±0.2V

During the earphone charging process, the earphone is in a shutdown state, which will disconnect from the mobile phone, and the power source adapter must be selected $5V \pm 0.2V$

2) 耳机开机后, 如果手机未搜索到耳机, 可以先关闭手机蓝牙再重新打开手机蓝牙, 手机会重新搜索

After the earphone is turned on, if the phone does not search for the earphone, you can turn off the Bluetooth of the phone first and then turn on the Bluetooth of the phone again.

7. 运输要求 Transport requirements

产品在半荷电 (50%-90%电量状态) 包装成箱经行运输, 在运输过程中应防止剧烈振动, 冲击或挤压, 防止日晒雨淋, 可适用于汽车、火车、轮船、飞机等普通交通工具运输。

The product should be packed into boxes with half charge (50% -90% charge state) for transportation. During transportation, it should be protected from severe vibration, shock or extrusion, sun and rain. It can be applied to cars, trains, ships, planes and other ordinary transport vehicles.

8. 产品使用时警告事项及注意事项

Warnings and precautions when using the product

1. 切勿使用具有腐蚀性的清洁剂清洁本产品。
Do not use aggressive cleaning agents to clean this product.
2. 切勿让本产品加热或靠近火源。
Do not allow this product to be heated or near a source of fire.
3. 切勿让本产品长时间受阳光直接照射。
Do not expose this product to direct sunlight for prolonged periods.
4. 切勿将本产品弃置于火中, 避免发生爆炸。
Do not throw this product into a fire to avoid explosion.
5. 切勿尝试拆出本产品做任何修改。
Do not attempt to disassemble the product to make any modifications.
6. 如长时间不使用本产品, 请将它储存于干燥的环境中, 并每月至少为耳机充电一次以延长寿命, 避免极端的温度和灰尘。
If you do not use this product for a long time, please store it in a dry environment and charge the headset at least once a month to extend its life.