

SWAGTEK

Product instruction Manual

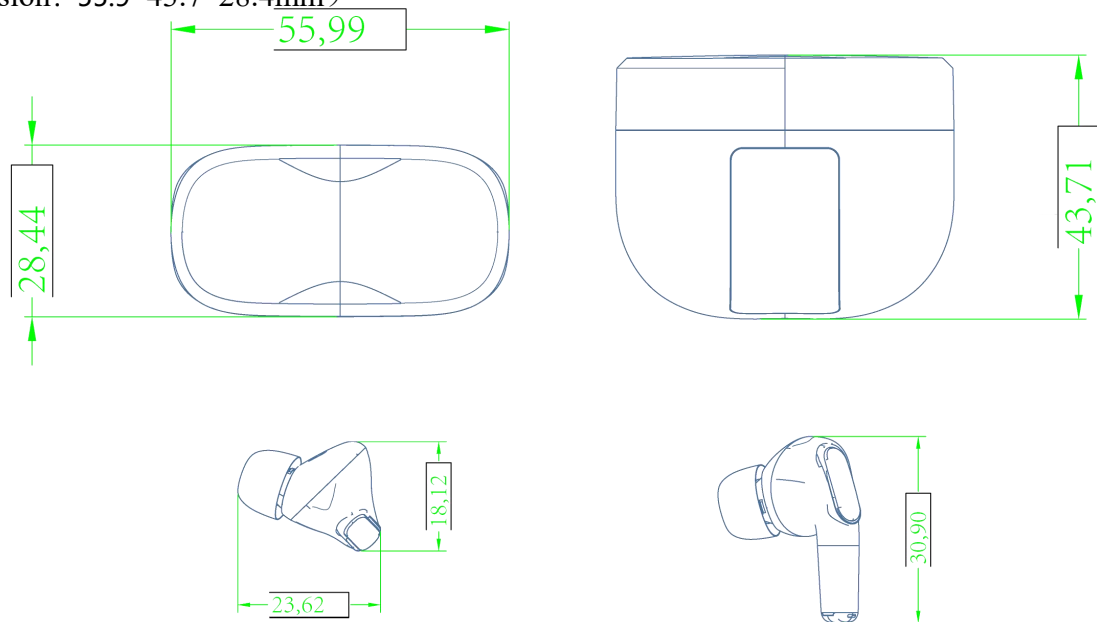
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1、Product summary :

1.1 Model name: TW20

1.2 weight and dimension: earbuds (dimension: 30.9*23.62*18.12mm) charging case (dimension: 55.9*43.7*28.4mm)



手工测量，有误差。

1.2.1 gross weight: earbuds (single 3.5 g) + charging case 40 g + giftbox g = g

1.2.2 net weight: earbuds (single 3.5 g) + charging case 40 g = 47 g

2、Cosmetic Drawing :

2.1 产品外观图



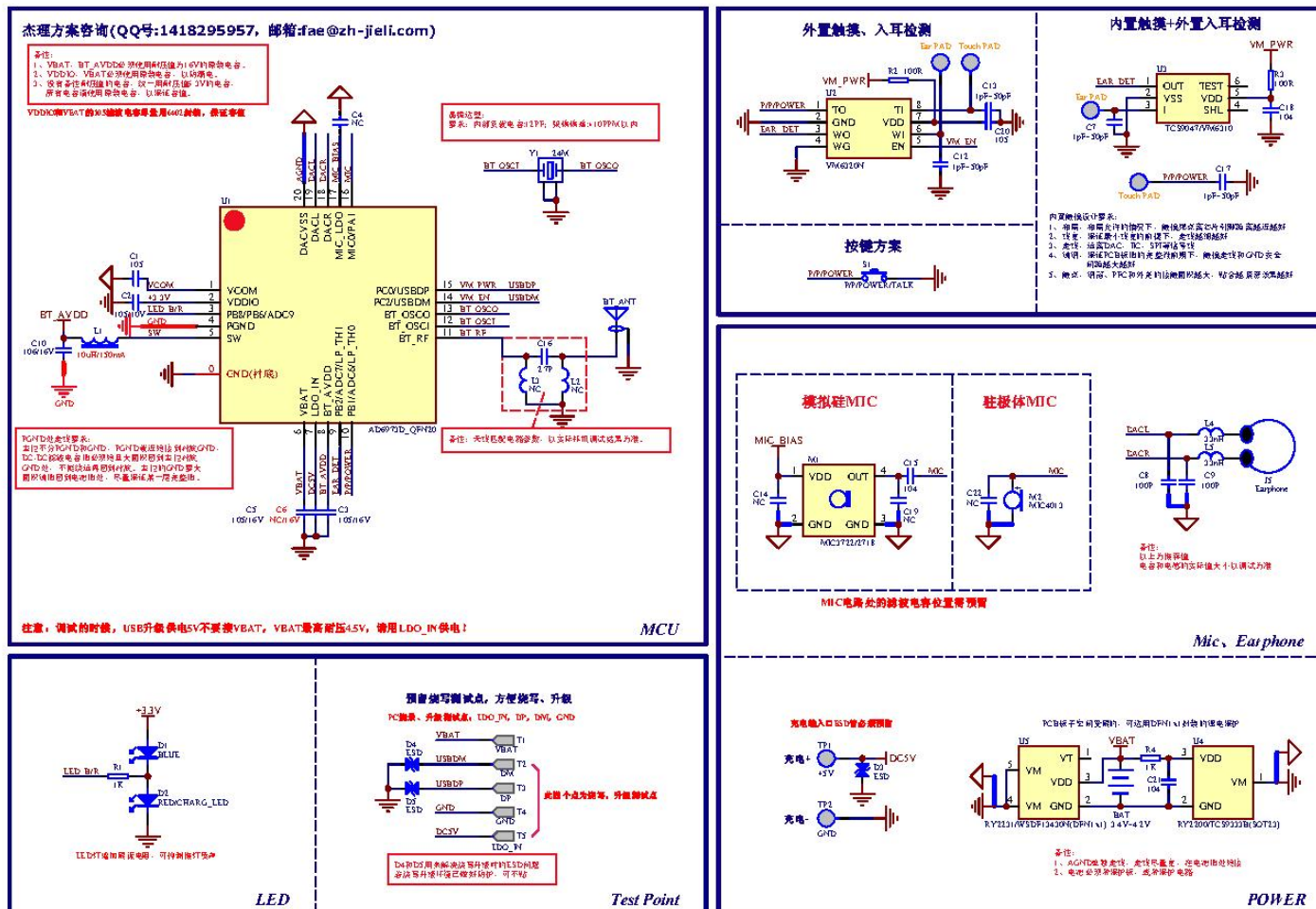
2.2 product list

耳机物料表:

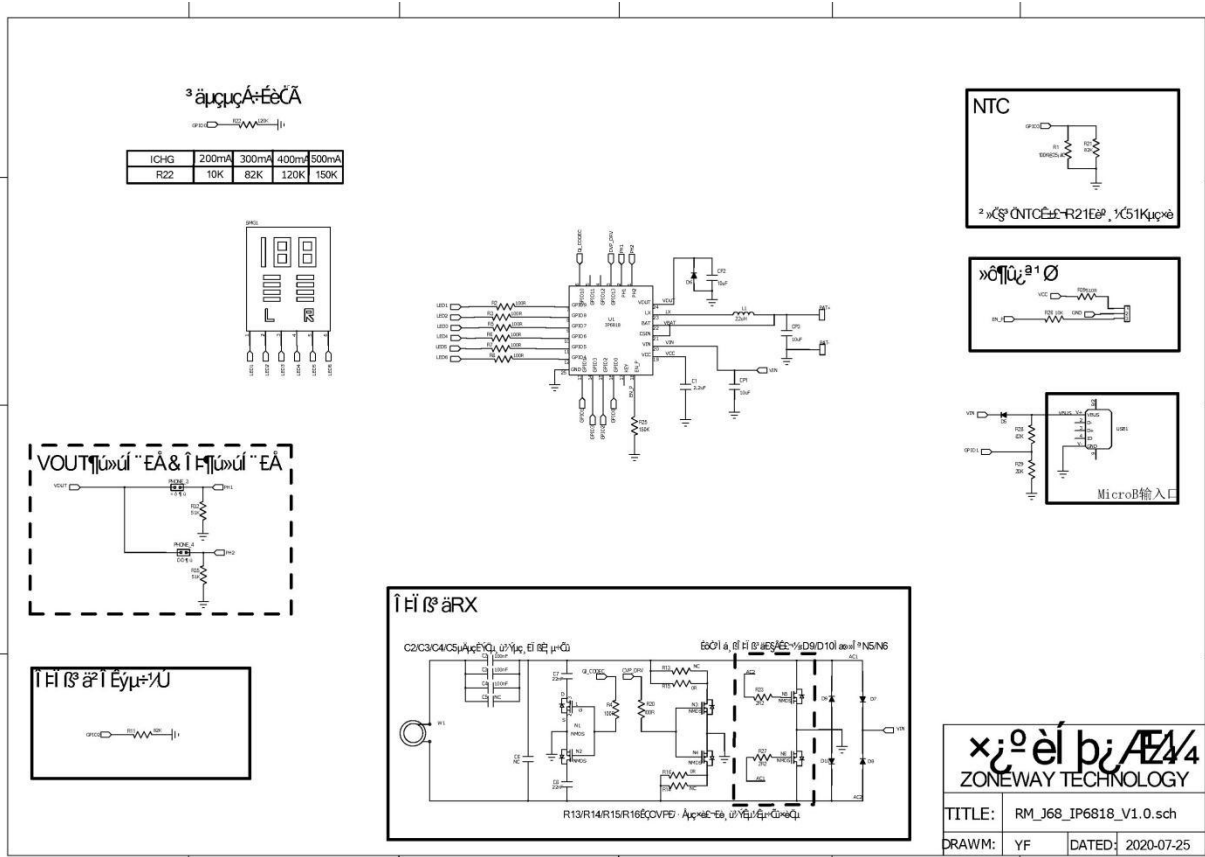
充电仓物料表:

3、 The circuit principle diagram :

3.1 earbuds circuit diagram



3.2 charging case diagram



4、Hardware parameter

4.1 Bluetooth chipset

Item	description	spec
1	Chipset name	AD6973D
2	Bluetooth version	V5.2+EDR
3	Bluetooth protocol	A2DP/AVCTP/AVDTP/AVRCP/HFP/SPP/SMP /ATT/GAPGATT/RFCOMM/SDP/I2Cprofile
4	Working frequency	2.402GHz - 2.480GHz
5	Effective distance	Indoor barrier free ≥ 15 米

4.2 audio characters

speaker		
items	name	spec
1	Speaker dimension	$\Phi 13.0 \pm 0.1\text{mm}$ 、 $0.8 \pm 0.2\text{g}$
2	Speaker frequency respon e range	20HZ—20KHZ At 0.179 V
3	Speaker sensitivity	116+3dB At 1000 Hz At 0.179V
4	Speaker type	Titanium film Dynamic speaker
5	Speaker impedance	$32\Omega \pm 15\%$
6	Rated input power	Rated input power 3mW, maximum powwr 5mW
microphone		
item	name	spec
1	Directivity of Mic	omnidirectional
2	Mic sensitivity	$-38 \pm 1\text{dBV/Pa}$ /1kHz
3	Mic frequency range	10kHz-20kHz
4	MIC impedance	200 Ω

5、 Earbuds function guide diagram

5.1 function diagram



5.2 function list

5.2.1 earbuds

NO.	Status	Actions
1	Power on	1.open the charging case,earbuds will be power on automatic and pair, pair time within 180second, over 180s, will power off automatic and thers is warning tone come out.
2	dual ear model	After open charging case,earbuds will power automatic , R/L earbuds will pair automatic, waiting for a few seconds, TWS paired 。 open Bluetooth function from menu of mobile to search TW20 and klik TW20 to connect, warning tone will come our after connected
3	Single ear mode 单耳模式	take out anyone earbuds and close charging case , power on aumatically ,after 30s, thisearbud will enter single mode automaticlly,然后打开手机蓝牙, open bluetooth function in mobile phone ,klik search device, then klik TW20 to connetc ,then can use earbuds in single mode
4	Pick up call	Once click any of L/R earbuds (Bluetooth been connected)
5	Hang up call	Once click any of L/R earbuds in calling (Bluetooth been connected)
6	Reject incoming call	Press 2s any of L/R earbuds (Bluetooth been connected)

7	Vol +	NA
	Vol -	NA
8	DISCONNECT	disconnected , earbuds will come out warning tone , earbuds will power off after disconnecting 5minuts。 when powwr off, earbuds will come out warning tone too
9	Play/Pause	once cik any of L/R to play or pause music (Bluetooth been connected)
10	Battery capacity display	support battery display on IOS and Android
11	Auto connect after power on	Earbuds will active connect to the last connected device automatically one time after power on
12	Previous track	Click 3times of any L/R earbuds,go back to previous track (Bluetooth been connected)
13	Next track	double click any of L/R earbuds go to next track (Bluetooth been connected)
15	Long press for 5 seconds to power on	Power on after pressing any of L/R 5s (Bluetooth been connected) , earbuds come out warning tone

5.2.2 充电充仓

1	Charging port	Power supply voltage: DC 5V,via type-c cable to charge
2	Indicator light	these is LED indicate when charge, after 100% charged, LED will go out
3	Headset Charging	place earbuds into charging case to charge, in charging, LED will indicate, after fully charged, LED go out
4	Length of charging USB cable	20cm

NO.	Status	Warning tone
1	Power on	Power On or customization
2	Pairing mode	Pairing or customization
3	Connection succeeded	Connected or customization
4	Power off	Power off or customization
5	Low battery	Low battery or customization

5.3 others test

Earbuds battery capacity	30mah
Charging case battery capacity	300mah
frequency	2.402GHz - 2.480GHz
Working current	earbuds: 15mA charging case: 60mA
Working voltage	3.3v-4.2v
Charging spec	earbuds: DC5V 30-35mA charging case: DC5V 320mA
waterproof	IPX5
Hall	OCH4002-S 极
Talk time	About 2.5小时 (90% volume)
Playing time (single earbuds) 50% volume	4H (earbuds batter capacity from 100%)
Playing time (double earbuds) 50%音量	4H (earbuds from 100% battery capacity)
playing (double earbuds) 50% volume	12H (charging case battery+earbuds battery)
Standby time	>200hrs
Working conditions (temperature)	-10℃ — +45℃
Store temperature	-20℃ — +60℃
display	LED indicate charge

FCC Statement

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.