

超声波传感器产品规格书

Ultrasonic Sensor Specification

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版本 V1

Version: V1

本规格书的产品规格仅供参考，本规范的内容可能会发生变化。在批量生产前，请再次确认。

The product specification is for reference only, and the contents of this specification is subject to change. Please confirm again before mass production.

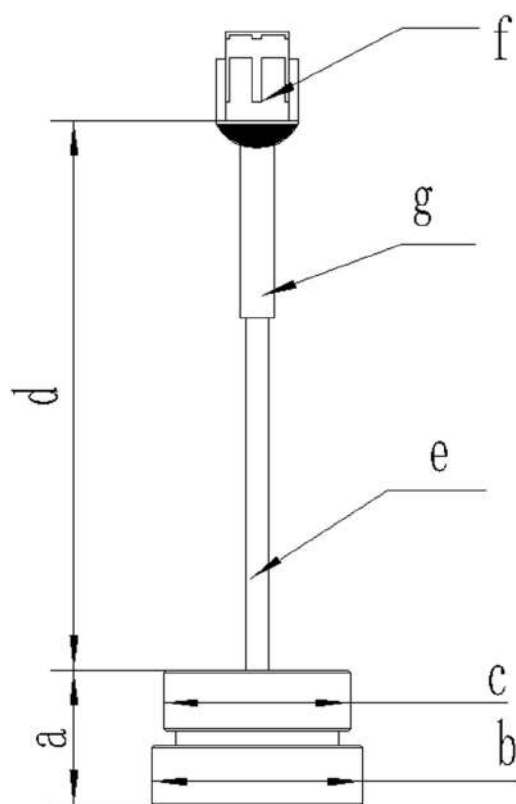
1. 适用范围-Application

本产品规格适用于用于对扫地机器人等产品对地面材质的检测。将本产品用于上述以外的任何其他应用时，请与我们联系。

This product specification is suitable for the detection of floor materials by products such as sweeping robots. Please contact us when using this product for any application other than those listed above.

2. 产品型号: JYGT-UA1612-300K-W6

3. 外观尺寸-Appearance and Dimensions



a: $12 \pm 0.3\text{mm}$

b: $16 \pm 0.3\text{mm}$

c: $\text{Ø}14 \pm 0.3\text{mm}$

d: $60 \pm 5\text{mm}$

e: 屏蔽线(Shielded wire):

AWM1533 28AWG,

耐高温(Temperature resistant) 80°C 。

f: 接头(connector) A1501H-2P

4. 性能参数(Electronic performance)

标准测试条件: 温度 24±4°C, 湿度 45%~75%R.H

Test Standard Conditions: Temp 24±4°C, Humidity: 45%~75%R.H

	项目 Item	规格 Specifications	备注 Remarks
4.1	工作频率 Frequency	290±20KHz	
4.2	电容量 Capacity	1300 pF ± 20%	At 1kHz, 1Vrms
4.4	回波强度 Echo intensity	≥1.5V	1. 驱动信号(Drive signal) Voltage: 12Vp-p, Frequency : 300kHz, 5Pluse 3. 驱动间隔 Driving interval: 300Hz (3.33ms) 接收电路增益 Receiver circuit gain: 60dB 到靶板的距离 Distance to target board: 100mm
4.5	最大工作电压 Max. Voltage	100 Vp-p	

备注: 回波值测试电路, 为高致测试板, 仅参考。

Remarks: the echo value test circuit is our company's test board, for reference only.

5. 最大额定范围(Max Rated Range)

	项目 Item	规格 Specifications
5-1	使用温度范围 Working Temp Range	-20°C-+60°C
5-2	存储温度范围 Storage Temp Range	-40°C-+80°C
5-3	使用湿度范围 Working Humidity Range	≤90%R.H
5-4	存储湿度范围 Storage Humidity Range	≤90%R.H

6. 测试方法(Test Method)

图一 测试系统

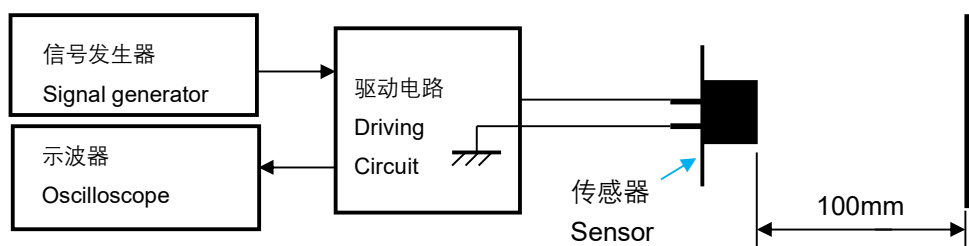
(DRW1: Test System)

反射板(test board):

100mm×100mm, 1mm,

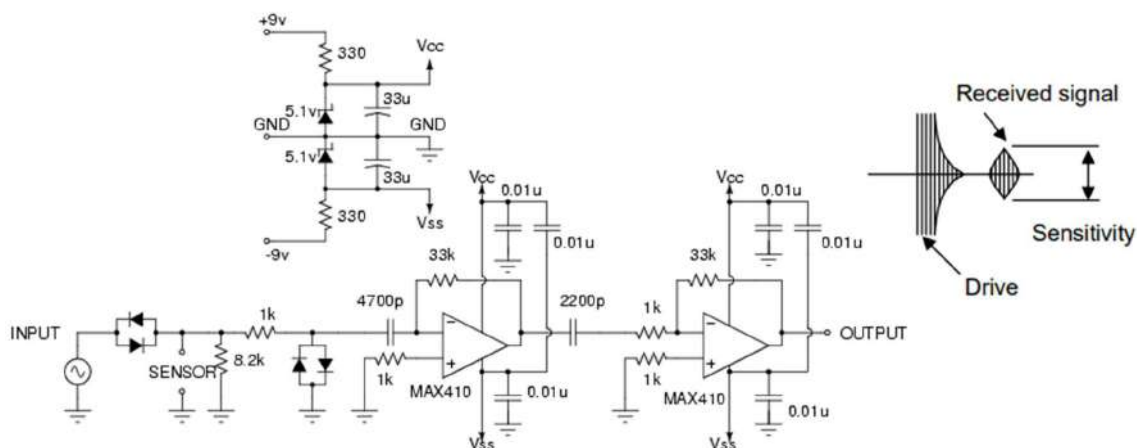
材质: 硬质板

Material: hard board



图二 驱动电路

(DRW2: Driving Circuit)



7. 声场辐射参考图(Sound field radiation reference diagram)

