

承认书

SPECIFICATION FOR APPROVAL

客户 (CUSTOMER): _____

客户料号 (CUST P/N): _____

产品物料编号: (PART. NO): 135118000956 _____

奥迪威产品名称 (DESCRIPTION): TC0120-001 _____

奥迪威产品型号 (P/N): T/R48-15.5H279Z-L19-01 _____

规格书编号 (SPECIFICATION. NO): K2-WSP-TC-00417 _____

规格书版本 (VERSION): A1 _____

■ 规格书状态 (Specs Type):

样件 (Sample Specs)

量产 (Standard Specs)

样件规格书 (Sample Specs):

适用于产品的小批量试制. (Apply to trial order.)

量产规格书 (Standard Specs):

适用于产品的批量生产. (Apply to mass production.)

客户承认 CUSTOMER APPROVAL	签名 SIGNATURE.	承认章 COMPANY CHOP.

编制 DWN.	审核 CHK.	批准 APPD.

■ 产品规格书仅供参考, 在产品量产之前, 需要确认最新版本的量产规格书, 并得到客户的签名承认.

(Specifications are for reference only, and it is required to be approved by customers before mass production.)

注: 承认书一式两份, 请返回一份. (Note: Specs are in duplicate, please send one copy back.)



PIEZO ULTRASONIC SENSOR SPECIFICATIONS

■ MODEL: T/R48-15.5H279Z-L19-01

■ ELECTRICAL SPECIFICATION:

No	Items	Specification	Note
1	Resonant Frequency 谐振频率	48±1.0 kHz at 25±3°C	By impedance analyzer 4294
2	Overall Sensitivity 敏感度	500~800 μS at 25±3°C	With CY00523 tester (X150605A), Distance to obstacle: 1 meter, Obstacle: Φ75 *1000 PVC pipe
3	Ring time 余振	1.2~1.8 mS at 25±3°C	With CY00523 tester (X150605A) Defined as output pulse width
		≤2.2 mS at -40 to 85°C	
4	X-axle direction angle X轴方向角	65(Typical)	-6dB angle of overall sensitivity
5	Y-axle direction angle Y轴方向角	65(Typical)	-6dB angle of overall sensitivity
6	静电容量	1400±20% pF	At 1kHz, 25±3°C, Digital LC
7	MAX. Input Voltage 最大输入电压	140 Vp-p	(48KHz) Pulse width 0.417ms, interval 20ms
8	Operating temperature 工作温度	-40°C~+85°C	
9	Storage temperature 贮存温度	-40°C~+85°C	
10	Mean Time To Failure 平均无故障时间	50000H	Normal room temperature

■ MECHANICAL CHARACTERISTICS:

LEAD STRENGTH: To pull longitudinally 4.9kgf min



■ APPEARANCE AND DIMENSIONS:

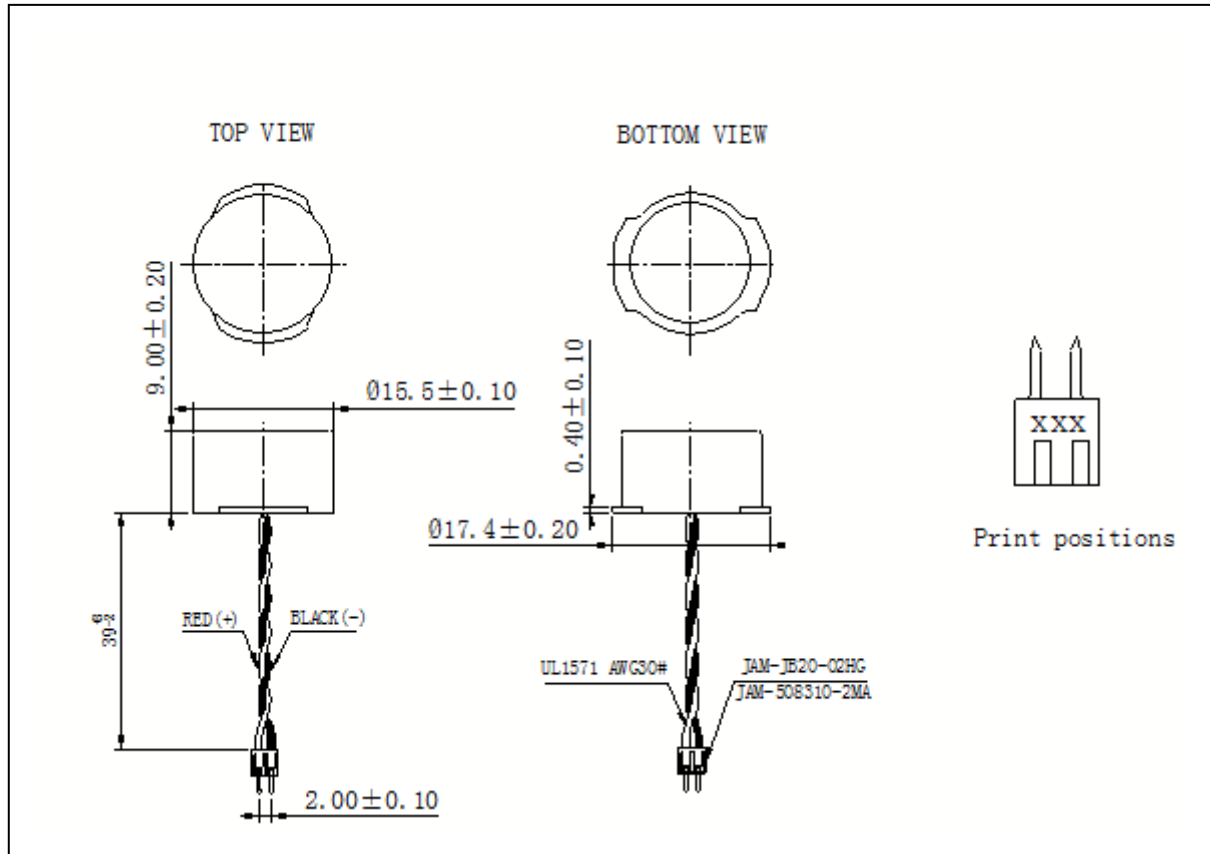


Fig. 1

NOTE: All materials are ROHS, But Piezo is releas.

■ TESTING INSTRUMENT AND CONDITION LIST

No.	Testing item	Testing Equipment/Methods	Testing conditions
1	Resonant Frequency	Piezoelectric Transducer Resistance Testing System	25±3℃
2	Echo Sensitivity	CY00523 tester	Distance to obstacle: 1 meter , Obstacle: Φ75 *1000 PVC pipe According to Fig. 2
3	Decay Time	CY00523 tester	According to Fig. 2
4	Directivity	B&KPLUSE100	-6dB
5	Capacitance	Digital LC	Testing temperature :25±3° C
6	Maximum Input Voltage (V p-p)	With ADW tester Circuit Oscillograph: Tektronix TDS1002	Pulse Width: 0.417mS, Interval :20mS
7	Mean Time to Failure	Aging Equipment AWHY001	Testing temperature :25±3° C
8	Operating Temperature(℃)	High-Low alternating temperature Cabinet	Testing temperature :25±3° C
9	Storage Temperature(℃)	High-Low alternating temperature Cabinet	Testing temperature :25±3° C

■ Decay Time Echo Sensitivity Test

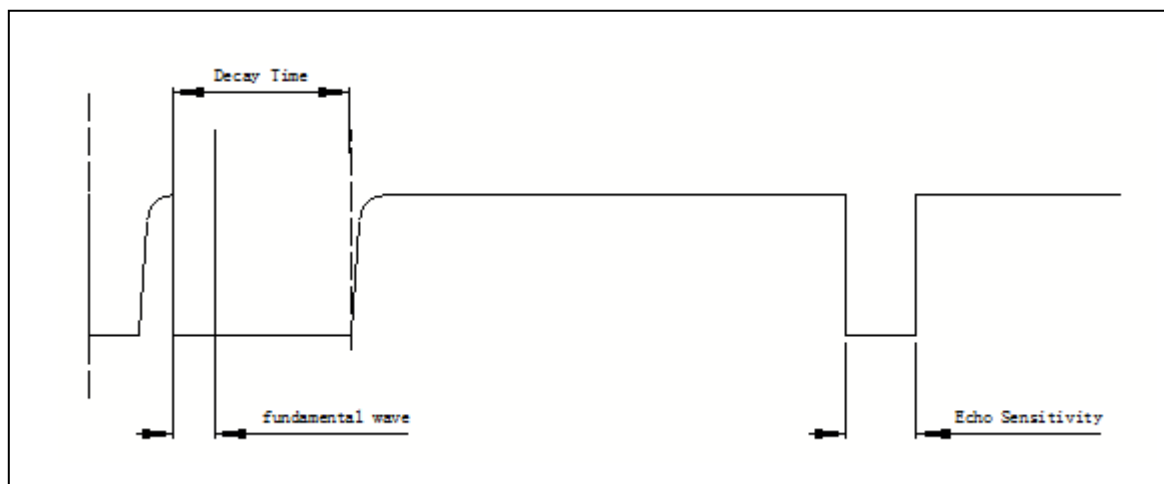
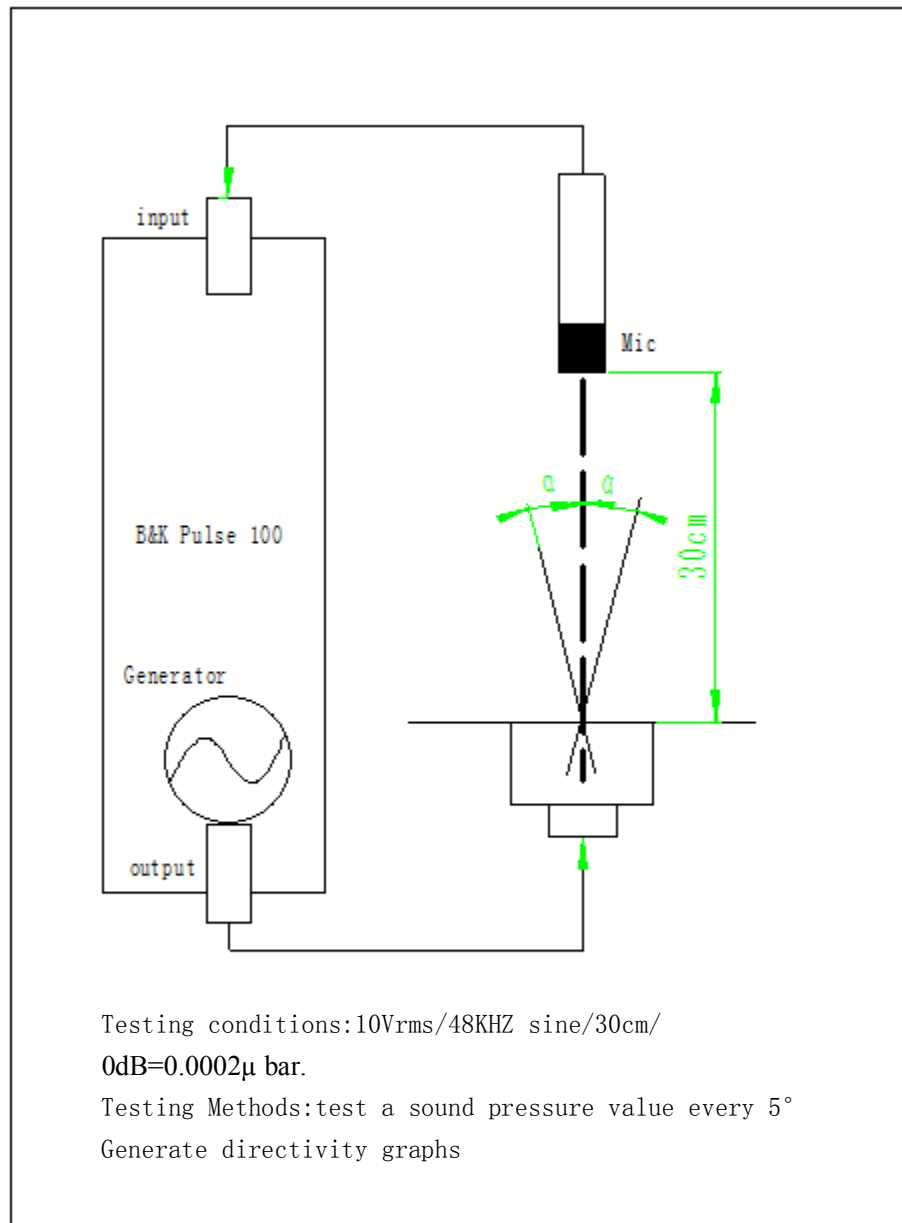


Fig. 2

■ 指向性测试 (DIRECTIVITY TEST)



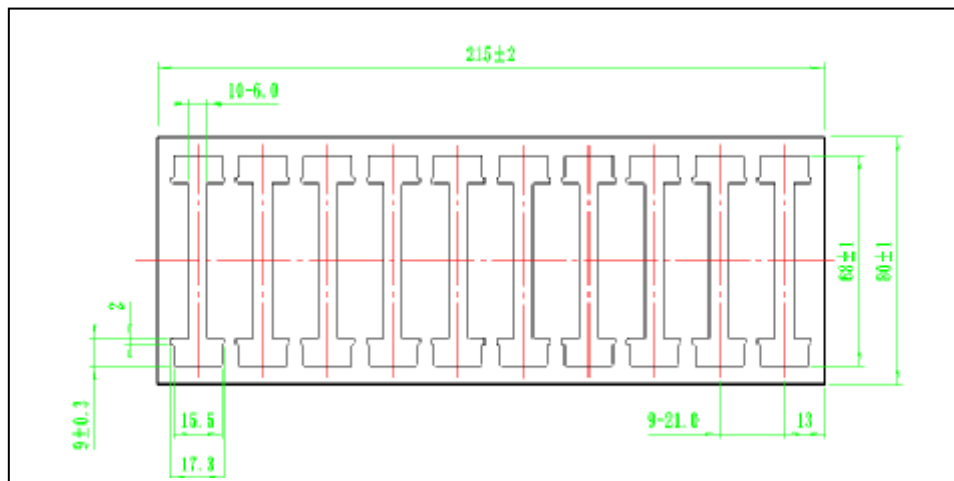
■ 环境测试 (ENVIRONMENTAL TEST)

No.	Testing items	Testing Methods	Criteria
1	Shock Test	Acceleration:980m/s ² (100G);Direction:3directions; Shock time:3times/directions	The variation of the echo sensitivity at 48kHz within 40% compared with initial figures at 25degC Decay Time≤2.6ms
2	Drop Test	Height:1meter onto concrete floor;Times:3times	The variation of the echo sensitivity at 48kHz within 40% compared with initial figures at 25degC Decay Time≤2.6ms。
3	Vibration Test	Vibration frequency: 10Hz to 55Hz;Amplitude1.5mm ; SweepPeriod: 1 minute; Direction:3directions;Time:3hours/direction.	The variation of the echo sensitivity at 48kHz within 40% compared with initial figures at 25degC Decay Time≤2.6ms。
4	Pull strength	2.45N of force.	There should be no substantial damage
5	High-temp . storage	Temperature:+85±3℃;time: 1000h & followed normalization period at 25℃ for 24h.	The variation of the echo sensitivity at 48kHz within 40% compared with initial figures at 25degC Decay Time≤2.6ms。
6	Low-temp. storage	Temperature: -40±3℃;time: 1000h, & followed by a normalization period at 25℃ for 24h.	The variation of the echo sensitivity at 48kHz within 40% compared with initial figures at 25degC Decay Time≤2.6ms。
7	Humidity resistance	Temperature: +85±3℃, Humidity:85% R.H;time:1000h, & followed by a normalization period at 25℃ for 24h.	The variation of the echo sensitivity at 48kHz within 40% compared with initial figures at 25degC Decay Time≤2.6ms。
8	Temp. shock	Temperature: -40℃±3℃ for 0.5h, within 5 min up to +85℃±3 for 0.5h, cycles:1000cycles & followed by a normalization period at 25℃ for 24h.	The variation of the echo sensitivity at 48kHz within 40% compared with initial figures at 25degC Decay Time≤2.6ms。

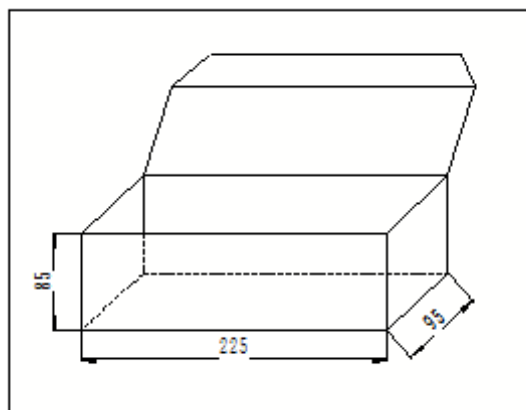


■ PACK:

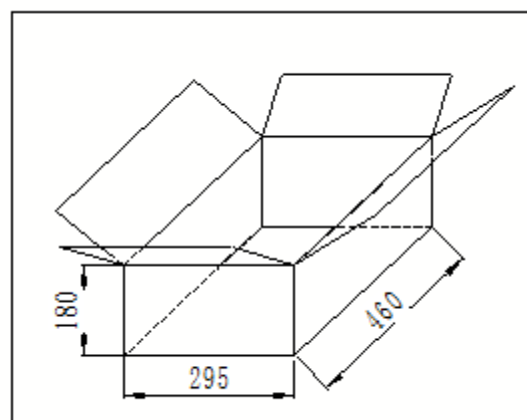
1、 PACKING TRAY:20pcs a tray



2、 PACKING CASE:5 trays a case,total of 100pcs



3、 PACKING BOX:12 cases a box,total of 1200pcs



■ NOTE:

1. DESIGN RESTRICTION/PRECAUTIONS

- This sensor is designed for use in air environment. Do not use it in liquid.
- In the case where secondary accidents due to operation failure or malfunctions can be anticipated, add a fail safe function to the design.
- In the case where this sensor is to be hold in housing, use soft buffer between sensor and housing. The front convex part of this sensor vibrates in large extension. If this part is hold, its characteristics will vary. The top must be free to vibrate.

2. USAGE RESTRICTION/PRECAUTIONS:

- To prevent sensor malfunctions, operational failure or any deterioration of its characteristics, do not use this sensor in the following, or similar conditions.
 - a) In strong shock or vibration.
 - b) In high temperature and humidity for a long time.
 - c) In corrosive gases or sea breeze.
 - d) In an atmosphere of organic solvents.
 - e) In dirty and dusty environments that may contaminate the sensor front.
 - f) Over specified allowable input voltage(Vp-p)
- Do not solder adding stress on outer lead, also do not apply stress like spin or pressure just after soldering.

In case you form the leads, support the root firmly.

■ Revision history

文件修订记录 File revision history			
修订时间 Revision time	修订版本 Version of revision	内部 ECR 编号 The number of ECR	修订内容 Contents of revision
2017/10/21	A1	/	The first revision

