

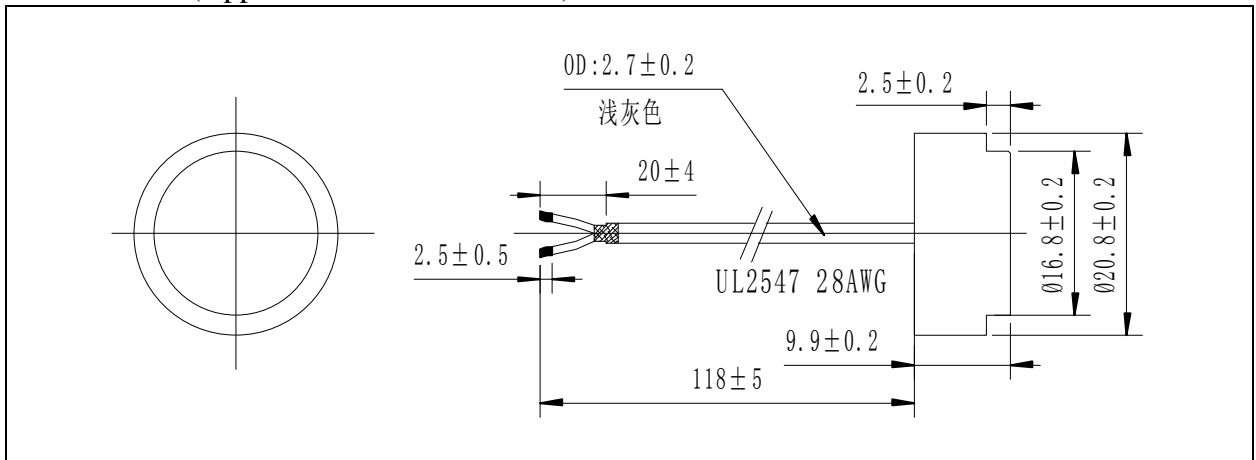
超 声 波 换 能 器

Ultrasonic Piezoelectric Transducer

1. 产品名称(Name): **US0011-006**
2. 产品型号(Model): **T/R965-US0011L430-01**
3. 性能参数(Electrical specification):

项目 Item	单位 Unit	标 准 Standard	测试条件(Test condition) T=25℃
谐振频率 Thick Resonant frequency	KHz	965±30	Agilent 4294A
带宽 (pause width)	KHz	60 (typ)	Agilent 4294A
接收幅值 Receiving Signal	mV	≥220	Fig1(receiving signal test device) At: 1MHz/1V _{p-p} /20 pulse/interval 20ms
谐振阻抗 Resonant impedance	Ω	≤110	Agilent 4294A
静电容量 Static capacitance	pF	1150±20%	数字电桥 At: 1000Hz/1V
最大输入电压 Allowable Maximum Input Voltage	V _{p-p}	5	At: 1MHz
最大静态耐压 Maximum pressure endurance	MPa	2.5	At: 6min
平均无故障时间 Mean Time To Failure	years	5	At: 1MHz/1V _{p-p}
工作温度 Operating Temperature	℃	+0.1~+90	
储存温度 Storage temperature	℃	-25~+55	

4. 外观尺寸(Appearance and dimensions): 计量单位 Unit (mm)



注:压电陶瓷豁免含铅量,其余物料符合 RoHS 环保要求

Note: All materials comply with RoHS Standards, while Piezo ceramic exempt from lead restriction.

5. 接收幅值测试方式 Measuring method of receiving signal

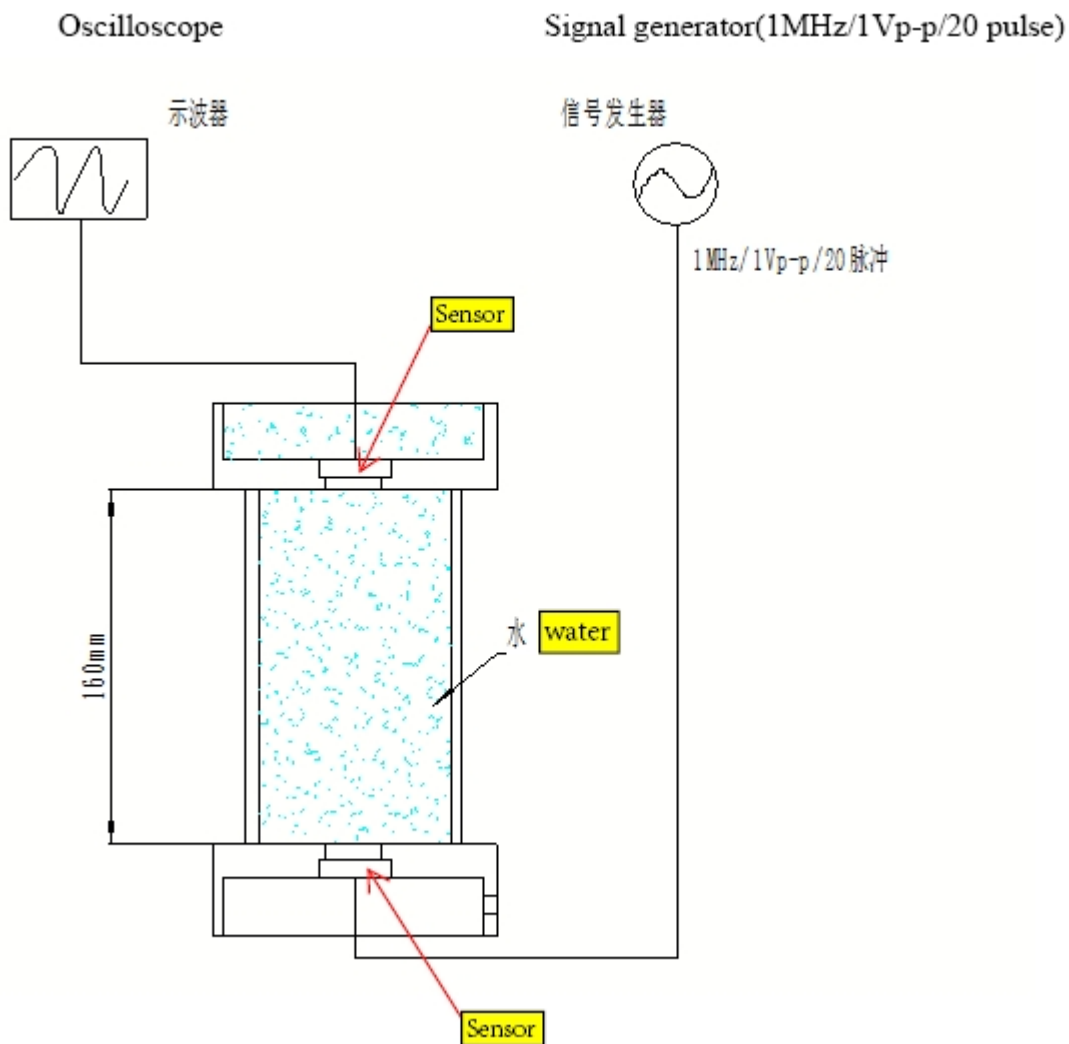


FIG1

6. Environmental testing

Test Item	Test condition	Requirement	Test standard
高温储存 High temperature storage test	将试验品放置于 $90 \pm 3^\circ\text{C}$ 环境中、在 0.3MPa 的等效压强下、保温时间 96 小时 Keep the sample at $90 \pm 3^\circ\text{C}$, 0.3MPa for 96 hours	满足电性能变化值 (附表一) Electrical Performance changes meet Appendix 1	参照 GB2423.2 试验 BbCJ128-2007 Reference standards: GB2423.2 Bb and CJ128-2007
低温储存 Low temperature storage test	将试验品放置于 $-25 \pm 3^\circ\text{C}$ 的恒温环境中保温时间 96 小时 Kepp the sample at $-25 \pm 3^\circ\text{C}$ for 96 hours	满足电性能变化值 (附表一) Electrical Performance changes meet Appendix 1	参照 GB2423.2 试验 Ab 及参照 GB2423.1-2008 Reference standards: GB2423.2 Ab and GB2423.1-2008

<p>交变湿热 Alternating temperature humidity test</p>	<p>将试验品放置于 25±3℃, 湿度 95% 环境中放置 1H; 然后在 3H 内升温至 55±3℃, 保温 9±0.5H 后在 3H 内降温至 25±3℃, 并保温 9±0.5H, 如此循环 6 次 Keep the sample at 25±3℃, humidity of 95% for 1 hour. Then rise the temperature to 55±3℃ in 3 hours and keep for 9±0.5 hours. And then low the temperature to 25±3℃ in 3 hours and keep for 9±0.5 hours. That cycle repeats for 6 times</p>	<p>满足电性能变化值 (附表一) Electrical Performance changes meet Appendix 1</p>	<p>参照 GB2423.4 试验 Db Reference standards: GB2423.4 Db</p>
<p>静态耐压测试 Static pressure test</p>	<p>将试验品放置于打压台上, 在 80±5℃ 下进行打压测试, 打压台施加恒定水压 2.5MPa, 打压 2.5MPa / 6 分钟 Put the sample on pressure test device, start the pressure test at 80±5℃. Apply 2,5MPa water pressure for 15 mins.</p>	<p>满足电性能变化值 (附表一) Electrical Performance changes meet Appendix 1</p>	<p>参照 EN1434-2007 Reference standards: EN1434-2007</p>
<p>动态耐压测试 Dynamic pressure test</p>	<p>将试验品放置于 25±5℃ 下打压测试, 压强变化频率: 1Hz, 即 1 秒内压强从 0.05MPa 增加到 0.4MPa, 4000 次循环 Put the sample on pressure test device at 25±5℃. Apply the pressure from 0.05MPa to 0.4MPa in 1 second, then from 2.5MPa to 0.5MPa in another 1 second. That cycle repeats for 4000 times</p>	<p>满足电性能变化值 (附表一) Electrical Performance changes meet Appendix 1</p>	<p>企业标准 Q/CYADW2—2014 Enterprise standard: Q/CYADW2—2014</p>
<p>注: 每种试验为单独试验, 试验品不少于 5pcs; 常温条件 T=25±3℃, H=45~65%R.H. Note: Each test is Individual test and samples should be more than 5pcs for each test. Normal temperature condition: T=25±3℃, H=45~65%R.H</p>			

附表一:电性能变化值

Appendix 1: Electrical Performance changes value

<p>序号 Number</p>	<p>项目 Parameter</p>	<p>变化值 (%) Change value</p>
<p>1</p>	<p>谐振频率 Resonant frequency</p>	<p>+/-5%</p>
<p>2</p>	<p>谐振阻抗 Resonant impedance</p>	<p>+/-30%</p>

3	静态电容 Static capacitance	+/-20%
4	接收幅值 Receiving Signal	+/-30%

7 包装(Package):

片/箱 PCS/CTN	包装盘 123(cm) Carton 123 (cm)	包装箱 125(cm) Carton 125 (cm)	毛重(Kg) Gross weight	净重(Kg) Net weight
600	39.5*31*2.8	44*32*29	8.5	7.0

8.注意事项 Note:

- a) 该产品只能使用于液体环境中，不能在气体中使用；
- a) The product can only used for liquid medium, not for air medium.
- b) 设计驱动线路时请考虑防信号干扰；
- b) Please consider to add Anti interference fuction in drive circuit.
- c) 为了防止工作失效产生事故，次级产品设计时应加入防失效功能；
- c) To avoid the accident caused by failure, please add anti-failure function when design the secondary product.
- d) 如果要给本产品加上外壳，在外壳和传感器之间要用柔软的橡胶圈隔开。为了不影响传感器的振动，传感器前端面要保持自由，否则传感器性能会发生变化；
- d) Please separate the prouduct and the housing by soft rubber ring if need to add housing for this product. Please keep the product emitting surface free vibration, or the performance may be changed.
- e) 为了防止传感器发生故障、工作失效或性能退化，应避免在如下或类似条件下使用本产品。
- e) Please do not use the product under the below conditions to avoid any fault or performance degradation
 - 1) 强烈的冲击或振动；
 - 1) Strong Impact or vibration
 - 2) 有溶解性有机物的环境下；
 - 2) Soluble organic matter environment
 - 3) 超过允许输入电压。
 - 3) Over maximum input voltage

9.修订记录(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
2016/10/12	/	/	新建规格书

制作/日期 Accomplished by/Date		确认/日期 Approved by/Date	
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