

型号 (Type) : HY 40 A 12 TR 09 - 1

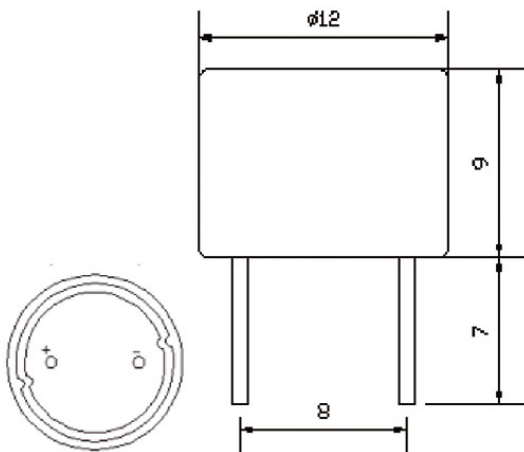
	1	2	3	4	5	6	7
1 华宇电子	Huayu Electronic Co.,Ltd						
2 标称频率	Center Frequency						
3 外壳材质	Housing Material						
4 外壳直径	Shell diameter						
5 功能	Function						
6 产品高度	Product height						
7 结构	structure						



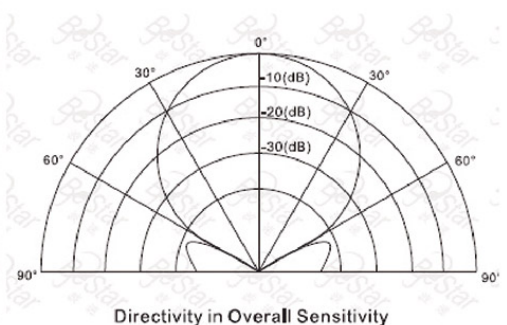
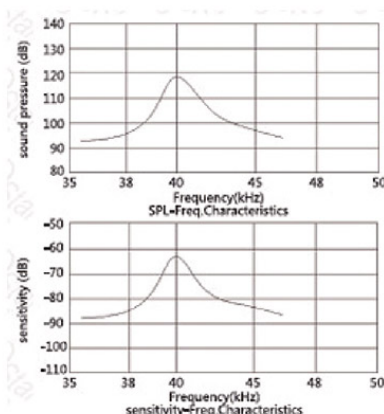
### 电气规格 (ELECTRICAL SPECIFICATION)

- |                                          |                           |
|------------------------------------------|---------------------------|
| 1. 功能 (Function) :                       | Dual use (双用途)            |
| 2. 结构 (structure) :                      | Open Structure (开放式)      |
| 3. 外壳材质 (Housing Material) :             | Aluminum (铝)              |
| 4. 中心频率 (Center Frequency) :             | 40 ± 1.5 KHz              |
| 5. 静态电容 (Free Capacitance) :             | 2300Pf ± 20%              |
| 6. 声压 (Sound Pressure Level) :           | 110dB min. (0dB=0.02mPa)  |
| 7. 灵敏度 (Sensitive) :                     | -70dB Min (0dB=1V/ μ bar) |
| 8. 发射角度 (-6 dB Directivity (deg) :       | 90° ± 15°                 |
| 9. 使用温度 (Operating Temperature) :        | -30°C ~ +70°C             |
| 10. 最大允许电压 (Maximum allowable voltage) : | 80Vp-p                    |
| 11. 储存温度 (Storage Temperature) :         | -40°C ~ +80°C             |
| 12. 余震 (Ringing) :                       | 2.0ms MAX                 |
| 13. 重量 (Weight) :                        | 1.5g                      |

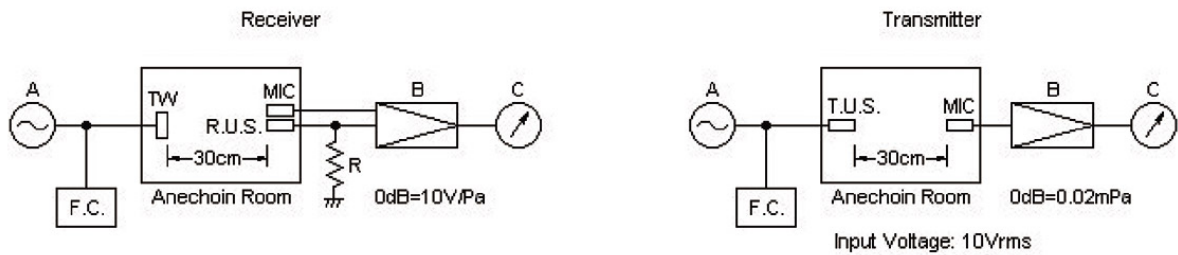
### 外观及尺寸 (Appearance and size)



### 性能参数 (graphics for performance parameters)



## 测试电路 (Test circuit)



A: Oscillator B: Amplifier C: Voltmeter R: 3.9K MIC: Microphone TW: Tweeter  
R.U.S.: Receiver Ultrasonic Sensor T.U.S.: Transmitter Ultrasonic Sensor F.C.: Frequency Counter

## 可靠性试验 (RELIABILITY TEST)

### 1 High temp test

After being placed in a chamber at 120°C for 24 hours

### 2 Low temp test

After being placed in a chamber at -30°C for 96 hours

### 3 Humidity Test

After being placed in a chamber +50°C and 90±5% relative Humidity for 96 hours

### 4 Vibration

Sensor shall be measured after being applied vibration of Amplitude of 1.5mm with 10 to 55hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours

### 5 Drop test

The part only shall be dropped from a height of 100cm onto a 10mm thick wooden board 3 times in 3 axes(X.Y.Z). (a total of 9 times).

### 6 Terminal Mechanical strength

The force 10 seconds of 9.8N(1.0Kg) is applied to each terminal in axial direction

No damage and cutting off

7 After the test the part shall meet specifications with-out any Degradation in appearance and performance except SPL after 4 hours at 25°C. The SPL should be in±10dB compared wit initial one.

### 1 高温试验

120 度放置 24 小时

### 2 低温试验

30 度放置 96 小时

### 3 湿度测试

50 度 90±5%，96 小时。

### 4 振动

10-55hz 1min 1.5mm 3 轴 (x.y.z) 2hours/direction

### 5 跌落试验

100CM高下跌到 10mm厚的木板上 3 次一个循环 (共做 9 次)。

### 6 接线的机械强度

用力 10 秒 9.8n (1.0kg) 施加到终端，在轴向方无损坏切断。

7 试验结束后，在 25°C 4 小时后，传感器的外观和性能均应符合规定。声压级应在 ±10db 相比初始。

## 包装规范 (Package Specification)

1 每只泡沫盒 100 只产品。

Each foam box has 100 products

2 每箱 40 只泡沫盒。

40 foam boxes in each case

3 每箱 4000 只产品。

4000 products per carton

4 包装箱尺寸 505X420X280 (mm)

Packing case size 505X420X280 mm

