# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

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Description: piezo telephone ringer

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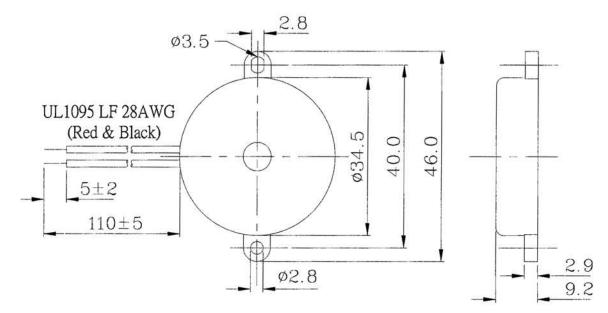


#### **Specifications**

30 Vp-p max.	
9 mA max.	at 10 Vp-p, square wave, 1.1 KHz
81 db min.	at 10 cm / 10 Vp-p, square wave, 1.1 KHz
43,000 pF ±30%	at 120 Hz / 1 V
-30 ~ +85° C	
-40 ~ +95° C	
ø34.5 x H9.2 mm	
5.3 g max.	
ABS UL-94 1/16" HB I	High Heat (Black)
Wire type	
yes	
	9 mA max. 81 db min. 43,000 pF ±30% -30 ~ +85° C -40 ~ +95° C ø34.5 x H9.2 mm 5.3 g max. ABS UL-94 1/16" HB H Wire type

# **Appearance Drawing**

Tolerance: ±0.5

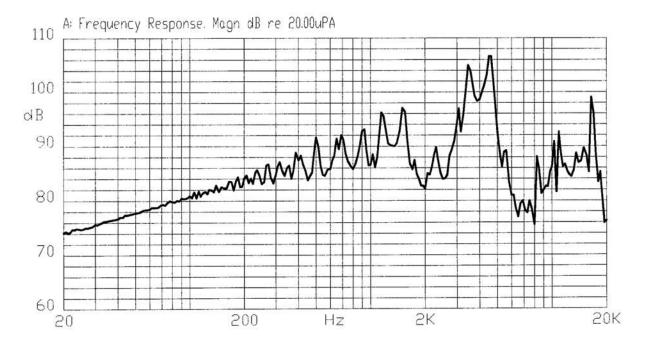




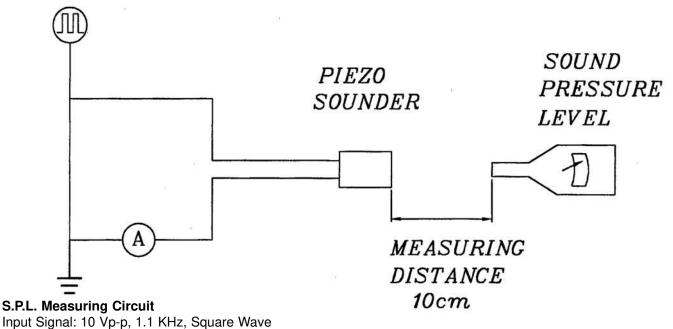
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### **Typical Frequency Response Curve**



#### **Measurement Method**



Mic: RION S.P.L. meter UC30 or equivalent

S.G.: Hewlett Packard 33120A Function Generator or equivalent



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#### **Mechanical Characteristics**

Item	Test Condition	Evaluation Standard	
Solderability	Stripped wires of lead wires are immersed in	90% min. of the stripped wires	
(Connector excepted)	rosin for 5 seconds and then immersed in	will be wet with solder.	
	a solder bath of +270 ±5°C for 3 ±0.5 seconds.	(Except the edge of the terminal)	
Terminal Mechanical Strength	The pull force should be applied to the double		
	lead wire:	No damage or cutting off.	
	Horizontal 3.0N (0.306kg) for 30 seconds		
	Vertical 2.0N (0.204kg) for 30 seconds		
Vibration	The buzzer will be measured after applying	The value of oscillation	
	a vibration amplitude of 1.5 mm with 10 to	frequency/current consumption	
	55 Hz band of vibration frequency to each of should be ±10% of the init		
	the 3 perpendicular directions for 2 hours.	measurements. The SPL should	
Drop Test	The part will be dropped from a height of 75 cm	be within ±10dB compared with	
	onto a 40 mm thick wooden board 3 times in	the initial measurement.	
	3 axis (X, Y, Z) for a total of 9 drops.		

# **Environment Test**

Item	Test Condition	Evaluation Standard
High temp. test	After being placed in a chamber at +95°C for 240 hours.	
Low temp. test	After being placed in a chamber at -40°C for 240 hours.	The buzzer will be measured after being placed at $+25^{\circ}$ C for 4 hours. The value of the oscillation frequency/current consumption should be $\pm 10\%$ compared to the initial measurements. The SPL should be within $\pm 10$ dB compared to the initial measurements.
Humidity test	After being placed in a chamber at +40°C and 90±5% relative humidity for 240 hours.	
Temp. cycle test	The part shall be subjected to 5 cycles. One cycle will consist of:	



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# **Reliability Test**

Item	Test Condition	Evaluation Standard
Operating (Life Test)	1. Continuous life test:	The buzzer will be measured afte
	The part will be subjected to 48 hours of	being placed at +25°C for 4
	continuous operation at +70°C with rated	hours. The value of the
	voltage applied.	oscillation frequency/current consumption should be ±10%
	<ol><li>Intermittent life test:</li></ol>	compared to the initial
	A duty cycle of 1 minute on, 1 minute off, a	measurements. The SPL should
	minimum of 5,000 times at room temp	be within ±10dB compared to
	(+25 ±2°C) with rated voltage applied.	the initial measurements.

#### **Test Conditions**

Standard Test Condition	a) Tempurature: +5 ~ +35°C	b) Humidity: 45 - 85%	c) Pressure: 860-1060 mbar
Judgement Test Condition	a) Tempurature: +25 ±2°C	b) Humidity: 60 - 70%	c) Pressure: 860-1060 mbar



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# Packaging

