

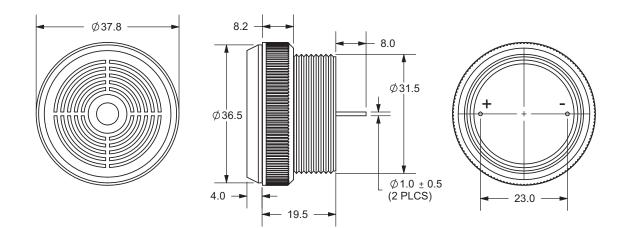
DESCRIPTION: panel mount piezo indicators

# **SPECIFICATONS**

operating frequency	3.6 ± 0.5 KHz	
operating voltage range	0.7 ~ 15 V DC	
current consumption	20 mA max. (12 mA typ)	at 12 V DC
sound pressure level	98 db min. (106 mA typ)	at 30 cm/12 V DC
rated voltage	12 V DC	
tone	continuous	at 12 V DC
operating tempurature	-30 ~ +80° C	
storage tempurature	-40 ~ +80° C	
dimensions	Ø36.5 x H23.5 mm	
weight	18.5 g max.	
material	ABS UL-94 1/16" HB (gray)	
terminal	pin type (Sn plating)	
RoHS	yes	

## **APPEARANCE DRAWING**

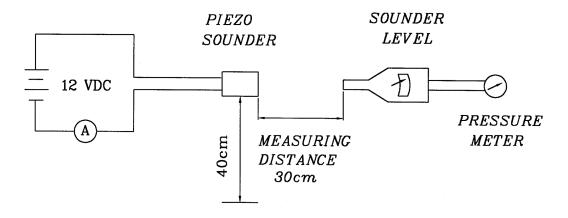
tolerance: ±0.5 units: mm





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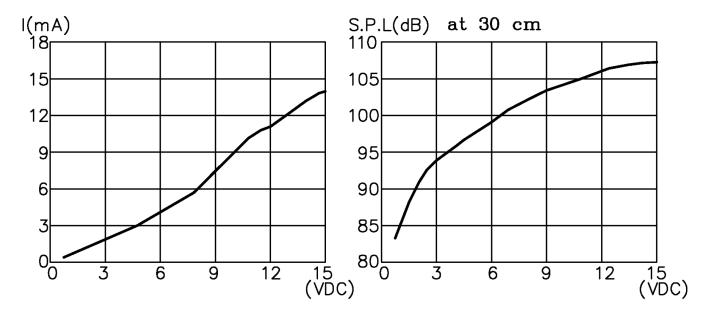
### **MEASUREMENT METHOD**



S.P.L. Measuring Circuit

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

CURRENT CONSUMPTION/SOUND PRESSURE LEVEL





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# **MECHANICAL CHARACTERISTICS**

item	test condition	evaluation standard
solderability	Lead terminals are immersed in rosin for	90% min. of the lead terminals
	5 seconds and then immersed in solder bath	will be wet with solder
	of 270 ±5°C for 3 ±1 seconds.	(except the edge of the terminal).
soldering heat resistance	Lead terminals are immersed up to 1.5mm from	
-	buzzer's body in solder bath of 300 ±5°C for	No interference in operation.
	$3 \pm 0.5$ seconds or 260 $\pm 5^{\circ}$ C for 10 $\pm 1$ seconds.	
terminal mechanical strength	For 10 seconds, the force of 9.8N (1.0kg) is	No damage or cutting off.
	applied to each terminal in axial direction.	
vibration	The buzzer shall 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 $\pm 10\%$ of the initial
	the 3 perpendicular directions for 2 hours.	measurements. The SPL should
drop test	The part will be dropped from a height of	be within ±10dB compared with
	75 cm onto a 40 mm thick wooden board 3	the initial measurement.
	times in 3 axes (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 +80°C for	_
	240 hours.	
low temp. test	After being placed in a chamber at -40°C for	
	240 hours.	
humidity test	After being placed in a chamber at +40°C and	1
	90±5% relative humidity for 240 hours.	
temp. cycle test	The part shall be subjected to 5 cycles. One	The buzzer will be measured after being placed at +25°C for 4
	cycle will consist of:	
		hours. The value of the
	<b>+80</b> °C	oscillation frequency/current
		consumption should be ±10%
	+25°C +25°C	compared to the initial
		measurements. The SPL should
	-40°C	be within ±10dB compared to the
		initial measurements.
	0.5hr 0.5hr 0.25 0.5hr 0.5hr 0.5hr 0.5hr 0.5hr	
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	3hours	



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### **RELIABILITY TEST**

item	test condition	evaluation standard
operating (life test)	1. Continuous life test:	The buzzer will be measured after
	The part will be subjected to 48 hours of	being placed at +25°C for 4
	continuous operation at +65°C with rated	hours. The value of the
	voltage applied.	oscillation frequency/current
		consumption should be ±10%
	2. Intermittent life test:	compared to the initial
	A duty cycle of 1 minute on, 1 minutes off, a	measurements. The SPL should
	minimum of 5,000 times at room temp	be within ±10dB compared to
	$(+25 \pm 2^{\circ}C)$ 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

