

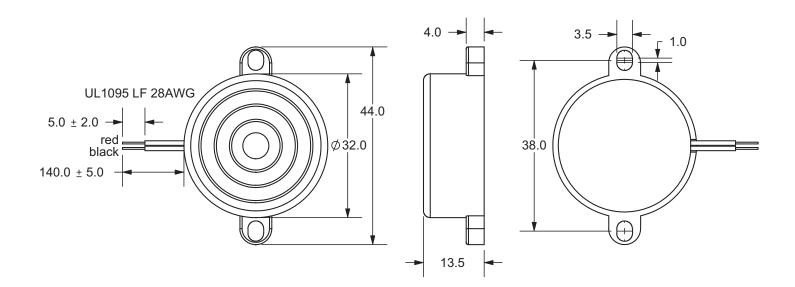
DESCRIPTION: piezo audio indicators

SPECIFICATONS

operating frequency	3.5 ± 0.5 KHz		
operating voltage range	8~18 V DC		
current consumption	12 mA max.	at 12 V DC	
sound pressure level	92 db min.	at 30 cm/12 V DC	
rated voltage	12 V DC		
tone	continuous		
operating tempurature	-30 ~ +85° C		
storage tempurature	-40 ~ +95° C		
dimensions	Ø32.0 x H13.5 mm		
weight	10.0 g max.		
material	ABS UL-94 1/16" high heat (black)		
terminal	wire type		
RoHS	yes		

APPEARANCE DRAWING

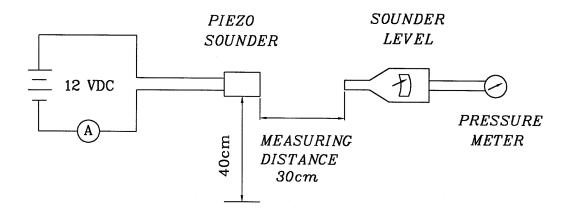
tolerance: ±0.5 units: mm





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MEASUREMENT METHOD

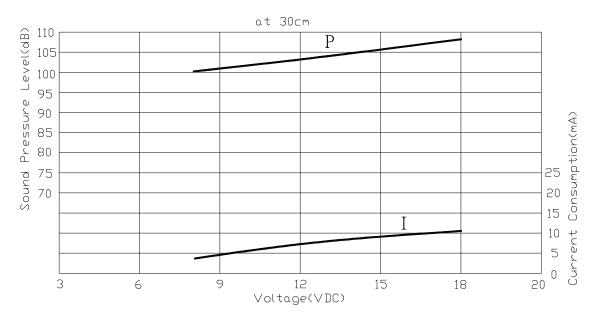


S.P.L. Measuring Circuit

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

S.G.: Hewlett Packard 33120A function gernerator or equivalent

CURRENT CONSUMPTION/SOUND PRESSURE LEVEL





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MECHANICAL CHARACTERISTICS

item	test condition		evaluation standard
solderability	Stripped wires are immersed in rosin for		90% min. of the lead terminals
5 seconds and then immersed in so		n immersed in solder bath	will be wet with solder
	of 270 ±5°C for 3 ±1 seconds.		(except the edge of the terminal).
lead wire pull strength	The pull force shal	I be applied to lead wire:	
	Horizontal	3.0N for 30 seconds	No damage or cutting off.
	Vertical	2.0N for 30 seconds	
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 ±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 +95°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	
	90±5% relative humidity for 240 hours.	
temp. cycle test	The part shall be subjected to 5 cycles. One cycle will consist of: $\begin{array}{r} +95^{\circ}C \\ +25^{\circ}C \\ \hline 0.5hr \\ 0.5hr \\ 0.25 \\ \hline 0.5hr \\ 0$	The buzzer will be measured after being placed at +25°C for 4 hours. The value of the oscillation frequency/current consumption should be ±10% compared to the initial measurements. The SPL should be within ±10dB compared to the initial measurements.



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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 +70°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

