

Description: piezo telephone ringer

Date: 10/19/2006 Unit: mm Page No: 1 of 5



Specifications

Operating voltage	30 Vp-p max.	
Current consumption	9 mA max.	at 10 Vp-p, square wave, 1.1 KHz
Sound pressure level	81 db min.	at 10 cm / 10 Vp-p, square wave, 1.1 KHz
Electrostatic capacity	43,000 pF ±30%	at 120 Hz / 1 V
Operating tempurature	-30 ~ +85° C	
Storage tempurature	-40 ~ +95° C	
Dimensions	ø34.5 x H9.2 mm	
Weight	5.3 g max.	
Material	ABS UL-94 1/16" HB High Heat (Black)	
Terminal	Wire type	
RoHS	Ves	

Appearance Drawing

Tolerance: ±0.5





Date: 10/19/2006 Unit: mm Page No: 2 of 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



Description: piezo telephone ringer

Date: 10/19/2006 Unit: mm Page No: 3 of 5

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 $+270 \pm 5^{\circ}$ 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 initial	
	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.	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.
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:	



Description: piezo telephone ringer

Date: 10/19/2006 Unit: mm Page No: 4 of 5

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%
	2. Intermittent life test:	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
	$(+25 \pm 2^{\circ}C)$ 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



Description: piezo telephone ringer

Date: 10/19/2006 Unit: mm Page No: 5 of 5

Packaging

