

SPECIFICATION FOR APPROVAL

Description : Piezo Audio Indicator

Customer's Model No. : _____

Specification No. : PKD-7407

Number Of The Edition : 1.3

CUSTOMER'S APPROVED SIGNATURE		

Approved by	Checked by	Issued by
		陽志明 2020.02.27

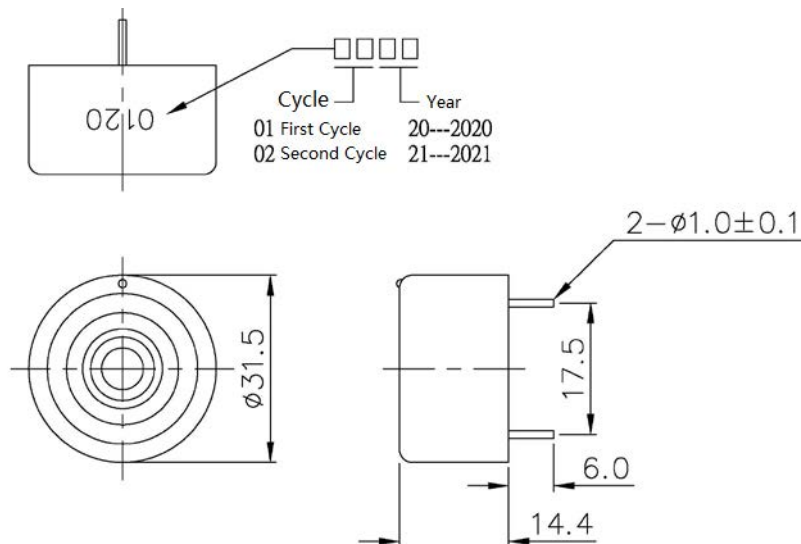
A. SCOPE

This specification applies piezo audio indicator, **KPEG272**

B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Resonant frequency	KHz	3.5 ± 0.5	
2	Operating Volt. range	VDC	3 ~ 28	
3	Current consumption	mA	MAX 6	at 12VDC
4	Sound pressure level	dB	MIN 88	at 30cm/12VDC
5	Rated Voltage	VDC	12	
6	Tone		Continuous	
7	Operating temp.	°C	-30 ~ +85	
8	Storage temp.	°C	-40 ~ +95	
9	Dimension	mm	φ 31.5 x H14.4	See appearance drawing
10	Weight (MAX)	gram	7.0	
11	Material		ABS UL-94 1/16" HB HIGH HEAT (BLACK)	
12	Terminal		Pin type (Plating Sn)	See appearance drawing
13	Environmental Protection Regulation		RoHS2.0	
14	Storage life	month	6	6 months preservation at room temp. (25±3°C), Humidity40%

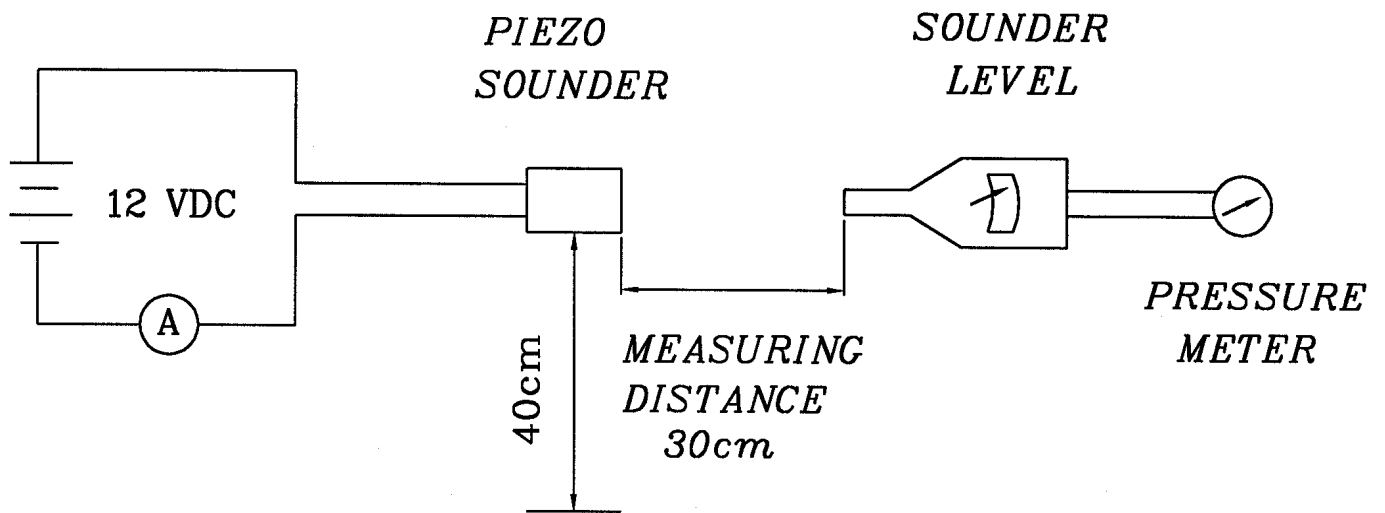
C. APPEARANCE DRAWING



Tol : ± 0.5 Unit : mm

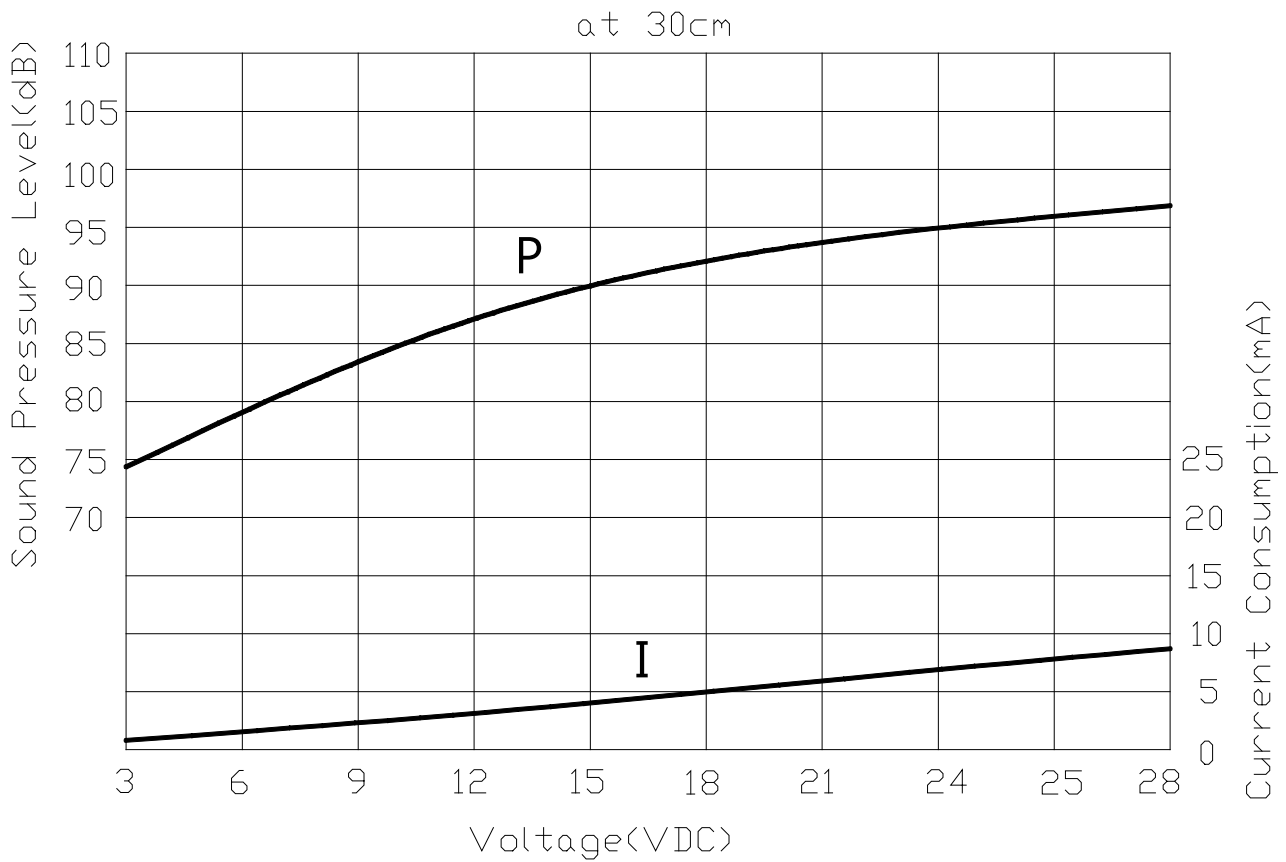
D. MEASURING METHOD

S.P.L. Measuring Circuit



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

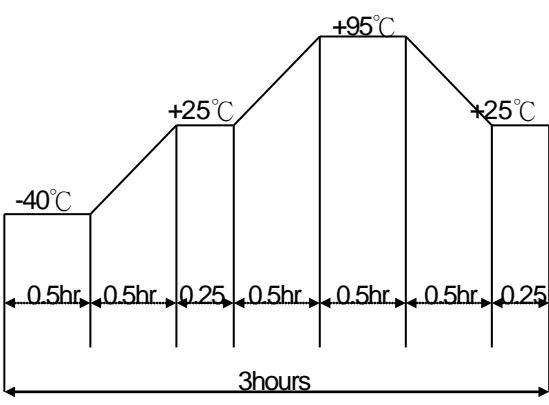
E. VOLTAGE: SOUND PRESSURE LEVEL / VOLTAGE: CURRENT CONSUMPTION CHARACTERISTICS



F. MECHANICAL CHARACTERISTICS

No.	Item	Test Condition	Evaluation standard
1	Solderability	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+270\pm 5^{\circ}\text{C}$ for 3 ± 1 seconds.	90% min. lead terminals shall be wet with solder. (Except the edge of terminal)
2	Soldering Heat Resistance	Lead terminal are immersed up to 1.5mm from sounder's body in solder bath of $+300\pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds or $+260\pm 5^{\circ}\text{C}$ for 10 ± 1 seconds.	No interference in operation
3	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
4	Vibration	Buzzer 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.	The value of oscillation frequency/ current consumption should be in 10% compared with initial ones .The SPL should be in $\pm 10\text{dB}$ compared with initial one.
5	Drop test	The part only shall be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes (X.Y.Z). (a total of 9 times).	

G. ENVIRONMENT TEST

No.	Item	Test Condition	Evaluation standard
1	High temp. test	After being placed in a chamber at $+95^{\circ}\text{C}$ for 240 hours	Being placed for 4 hours at $+25^{\circ}\text{C}$, buzzer shall be measured. The value of oscillation frequency/ current consumption should be in $\pm 10\%$ compared with initial ones . The SPL should be in $\pm 10\text{dB}$ compared with initial one.
2	Low temp. test	After being placed in a chamber at -40°C for 240 hours	
3	Humidity test	After being placed in a chamber at $+40^{\circ}\text{C}$ and $90\pm 5\%$ relative humidity for 240 hours	
4	Temp. cycle test	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of :</p> 	

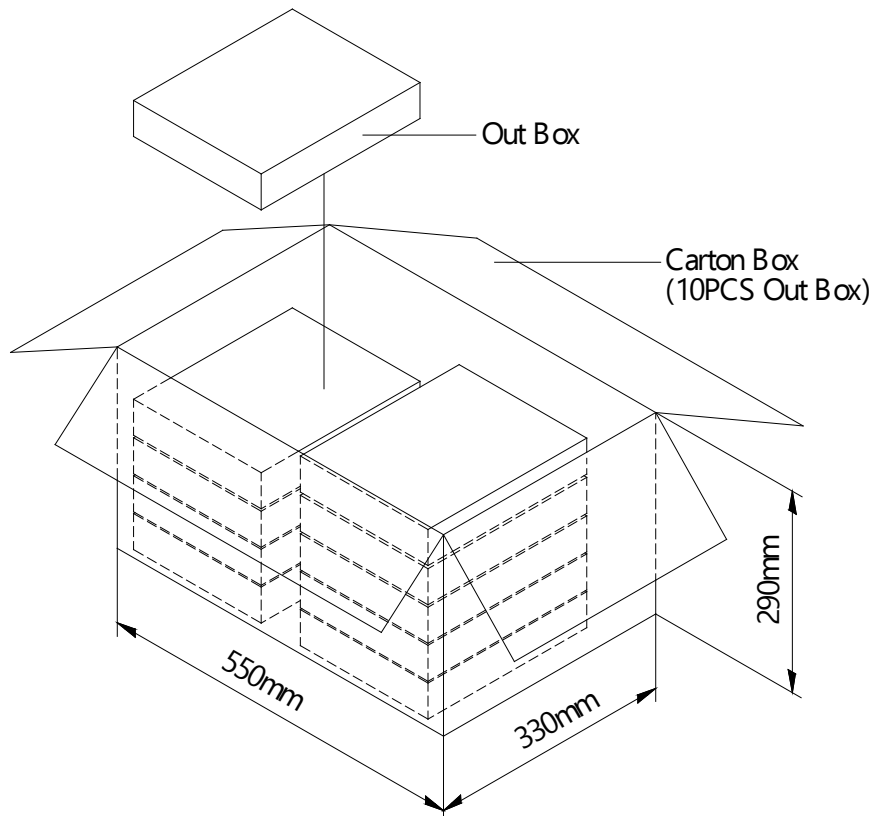
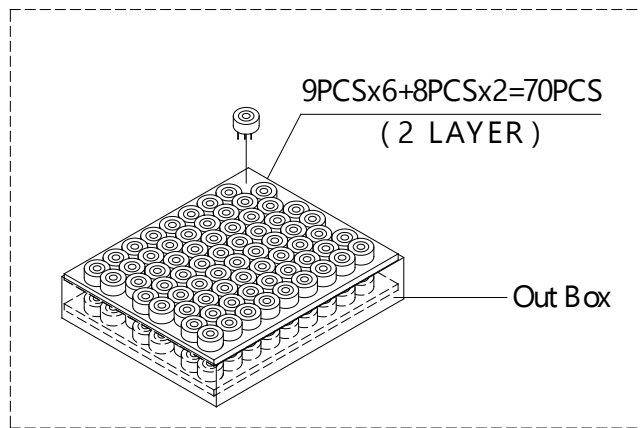
H. RELIABILITY TEST

No.	Item	Test condition	Evaluation standard
1	Operating life test	1.Continuous life test 48 hours continuous operation at +70°C with rated voltage applied. 2.Intermittent life test A duty cycle of 1 minute on, 1 minutes off, a minimum of 5000 times at room temp.(+25±2°C)and rated voltage applied.	Being placed for 4 hours at +25°C, buzzer shall be measured. The value of oscillation frequency/ current consumption should be in ±10% compared with initial ones .The SPL should be in ±10dB compared with initial one.

TEST CONDITION.

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

I. PACKING STANDARD



Out Box	310mmx248mmx49mm	1x140PCS=140PCS
Carton Box	550mmx330mmx290mm	140PCSx10=1,400PCS