Datasheet

RS PRO Piezo Audio Transducer

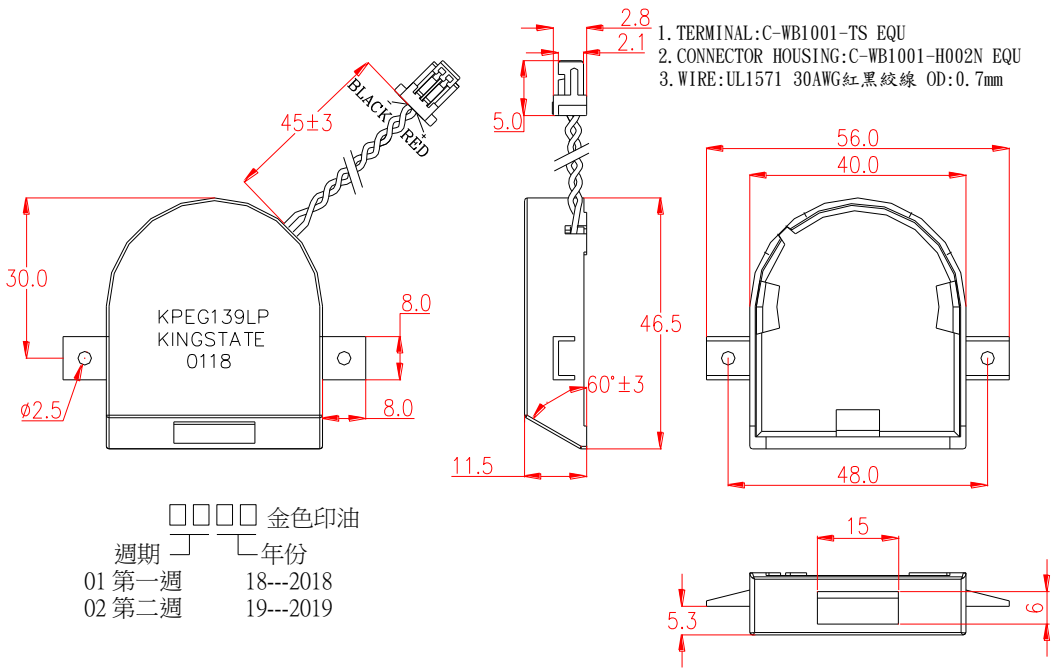
EN

A. SCOPE

This specification applies piezo audio transducer, 1812650

B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Operating Volt.	Vp-p	MAX. 60	
2	Current consumption	mA	MAX.30	At 12Vp-p,square wave,3260Hz.
3	Sound pressure level	dB	MIN.98	at 10cm/12Vp-p,square wave,3260Hz.
			MIN.85	at 300cm/50Vp-p,square wave,3260Hz.
4	Electrostatic capacity	pF	30,000 ± 30%	at 1KHz/1V
5	Operating temp.	℃	-30 ~ +80	
6	Storage temp.	℃	-40 ~ +85	
7	Dimension	mm	φ40.0 x H11.0	See appearance drawing
8	Weight (Max)	gram	14.5	
9	Material		PBT （BLACK）	
10	Terminal		Wire type	See appearance drawing
11	Environmental Protection Regulation		HSF	



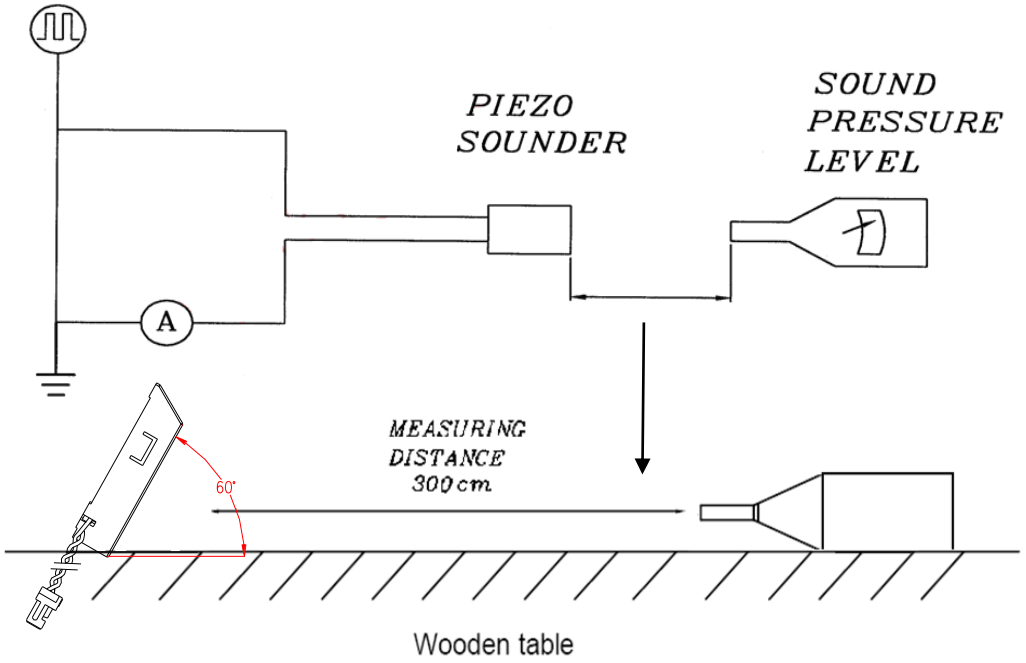
Tol : ± 0.5 Unit: mm

C. MEASURING METHOD

S.P.L. Measuring Circuit

1.Input Signal: 12Vp-p, 3260Hz, at 10cm ，Square Wave，MIN. 98 dB

2. Input Signal: 50Vp-p, 3260Hz, at 300cm ，Square Wave，MIN. 85 dB



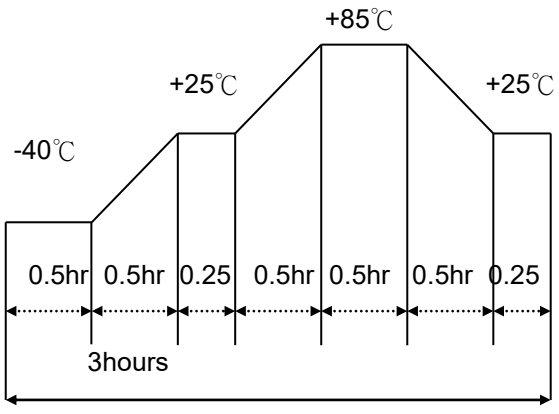
Mic：RION S.P.L meter UC30 or equivalent

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

D. 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±5℃ 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 +260±5℃ for 3±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 8 hours.	After the test the part shall meet specifications with-out any damage in appearance and the SPL should be in ±10dBA 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).**	

E. ENVIRONMENT TEST

No.	Item	Test Condition	Evaluation standard
1	High temp. test	After being placed in a chamber at +85℃ for 240 hours	Being placed for 4 hours at +25℃, 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.
2	Low temp. test	After being placed in a chamber at –40℃ for 240 hours	
3	Humidity test	After being placed in a chamber at +40℃ and 90±5% relative humidity for 240 hours	
4	Temp. cycle test	The part shall be subjected to 5 cycles. One cycle shall be consist of:: 	

F. RELIABILITY TEST

No.	Item	Test condition	Evaluation
1	Operating life test	1.Continuous life test 48 hours continuous operation at +65℃ 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℃)and rated voltage applied	Being placed for 4 hours at +25℃, 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℃ b) Humidity : 45-85% c) Pressure : 860-1060mbar

Judgment Test Condition: a) Temperature : +25 ± 2℃ b) Humidity : 60-70% c) Pressure : 860-1060mbar