CUI INC

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Fax: (503) 372-1266
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A.SCOPE

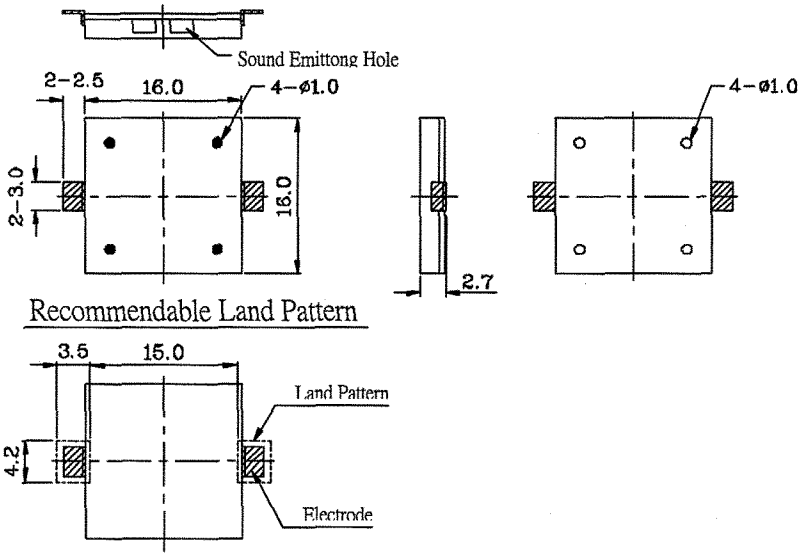
This specification applies piezo audio transducer, CMT-1603

B. SPECIFICATION

■Test condition: TEMP=25℃±2℃ Related humidity=65±5%

No.	Item	Unit	Specification	Condition
1	Operating Volt. Range	Vp-p	MAX 25	
2	Current consumption	mA	MAX 3	at 3Vp-p,square wave,4.0KHz.
3	Sound pressure level	dB	MIN 75	at 10cm/3Vp-p,square wave,4.0KHz
4	Electrostatic capacity	pF	14,000 ± 30%	at 120Hz/1V
5	Operating temp.	°C	-30 ~ +70	
6	Storage temp.	°C	-40 ~ +85	
7	Dimension	mm	L16.0 x W16.0 x H2.6	See appearance drawing
8	Weight (MAX)	gram	1.0	
9	Material		LCP (BLACK)	
10	Terminal		SMD type	See appearance drawing

C. APPEARANCE DRAWING



Unit : mm
Tol : ±0.5

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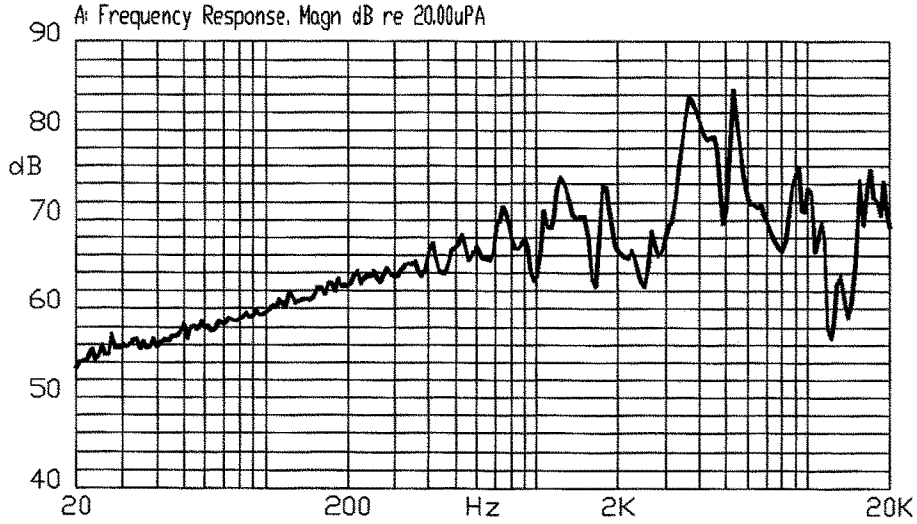
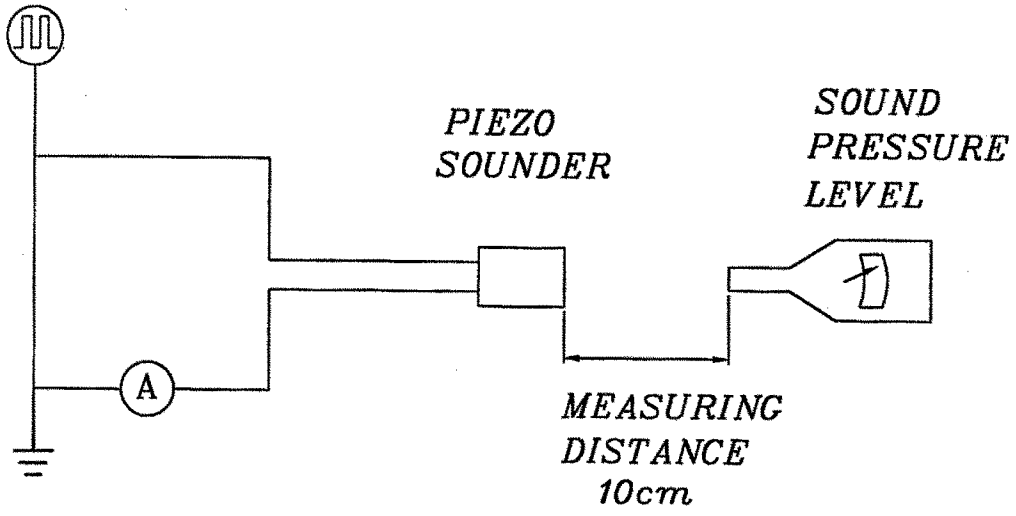
D. TYPICAL FREQUENCY RESPONSE CURVE



E. MEASURING METHOD

S.P.L. Measuring Circuit
Input Signal: 3Vp-p,4.0kHz, Square Wave



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

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

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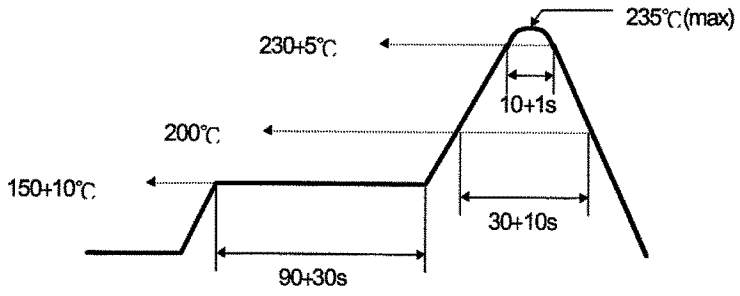
F. MECHANICAL CHARACTERISTICS

No	Item	Test condition	Evaluation standard
1	Solderability	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +230 ± 5 °C for 2 ± 0.5 second.	95% surface of lead pads must be covered with fresh solder
2	Soldering Heat Resistance	1)IR reflow Pre-heating conditions shall be+140 to +160℃ for 60 to 120 seconds. Ascending time up to +150℃ shall be longer than 30 seconds. Heating conditions shall be within 10 seconds at +230℃ min. But peak temperature shall be lower than +235℃,then being place in natural condition for 1 hour, sounder shall be measured 2)Soldering Iron Soldering iron of +270±5℃ shall be placed 0.5mm above from electrode of sounder. Melting solder through soldering iron shall be applied to electrode for 3±1 seconds, then being place in natural condition for 4 hours, sounder shall be measured.	No interference in operation
3	Terminal MechanicalStrength	The force 10 seconds of 9.8N is applied to each terminal is axial direction.	No damage and cutting off
4	Vibration	The part shall be subjected to a vibration cycle of 10Hz to 55Hz in a period of 1 minute. Total peak amplitude shall be 1.55mm . The vibration test shall consist of 2 hours per axis in each three axes (X, Y, Z), Total 6 hours.	After the test the part shall meet specifications without any damage in appearance and performance except SPL. The SPL shall be in ±10dB compared with initial one.
5	Shock	Sounder shall be measured after being applied shock (980m/s²)for each three mutually perpendicular directions to each for 3 times by half sine wave.	

G.Recommended Temperature Profile For Reflow Oven



(Reference standard : EIAJ ED-4702)

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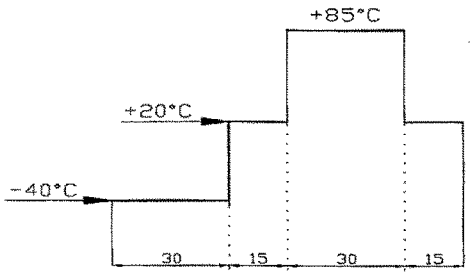
H. ENVIRONMENT TEST

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 with -40 ℃ for 240 hours	
3	Humidity test	After being placed in a chamber at +40 ℃ and 90±5% relative humidity for 240 hours	
3	Temp.Cycle	The part shall be subjected to 5 cycles.  Umit : minute	

I. RELIABILITY TEST

No.	Item	Test condition	Evaluation standard
1	Operating life test	1.Continuous life test 250 hours continuous operation at +70℃ with maximum rated voltage applied. 2.Intermittent life test A duty cycle of 1 minute on, 5 minutes off, a minimum of 10000 times at room temp.(+25 ±2℃)and maximum 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°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

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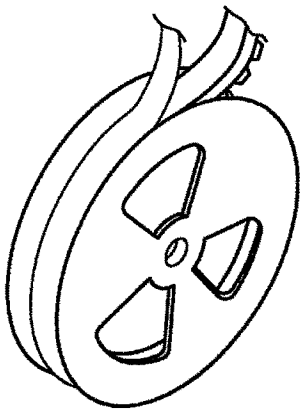
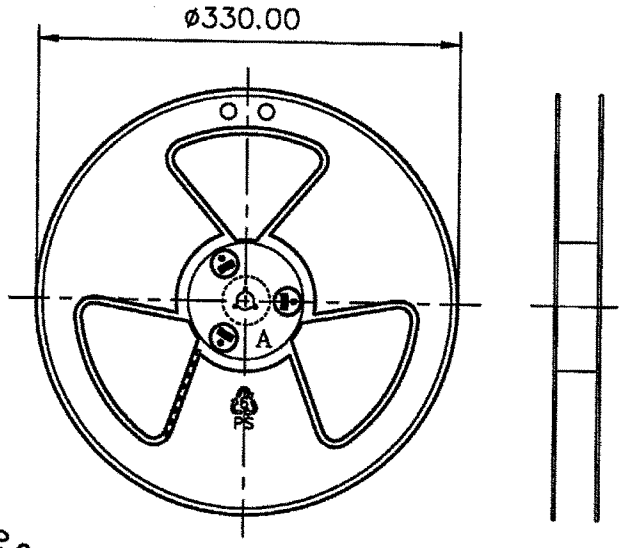
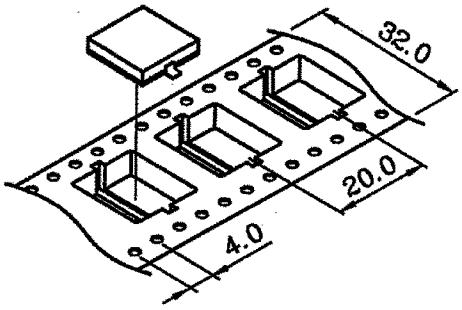
J. PACKING STANDARD





1 Reel : 1000PCS



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