

Specification for Linear Vibration Motor

Model: ELV1030A3

Prepared by	Checked by	Approved by
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Customer Name: _____

Customer Model: _____

Customer Comment: _____

Customer Approval / Date: _____

1. Standard Operation Condition

No.	Items	Specifications
1-1	Application	Communication machine haptic feedback. Medical apparatus and instruments
1-2	Description of the application	This is a wire contact vibrator which is applied with an AC signal (sine-wave/square-wave) around the resonant frequency. This device is recommended to be used for mobile phone or medical apparatus and the related instruments.
1-3	Rated Voltage	2.0 Vrms AC (Sine-wave)
1-4	Rated Frequency	205Hz
1-5	Operation Position	Output shaft (Horizontal or Vertical direction)
1-6	Operation Voltage	0~2.0 Vrms AC (Sine-wave)
1-7	Operation Temperature	-20°C to +70°C. Normal humidity
1-8	Storage Temperature	-40°C to +85°C. Normal humidity

2. Construction

No.	Items	Test Conditions	Specification
2-1	Appearance	Visula	Appropriate for usage
2-2	Dimension	Caliper or micrometer	Conform to drawing
2-3	Weight	Scale	Approximately 2.0g
2-4	Material	For a special purpose test machine	Compliant GP

3. Characteristics

In standard test, measurement is to be made at +5°C to +35°C & relative humidity 45% to 85%. If the judgement is questionable, the measurement is to be made at +18°C to +22°C and 60% to 70%RH.

No.	Items	Test Conditions	Specification
3-1	Rated the Amount of Vibration	100g fixture test jig 205 HZ, 2.0 Vrms AC	≥1.2G
3-2	Rated Load Current	At rated voltage	≤95mA
3-3	Terminal Resistace	/	25Ω±10%
3-4	Decay Rate	Free decay rate of vibration	≥120dB/S

No.	Items	Test Conditions	Specification
3-5	Mechanical Noise	100g fixture 205Hz 2.0Vms AC input Background noise: 20dB or less	≤50dB@10cm
3-6	Insulation Resistance	DC 100V apply between motor casing & supply terminal.	1MΩ(min)
3-7	Rise Time	100ms Max from 0 to 50% normal vibration (Refer to 4 Standard test Condition)	
3-8	Fall Time	150ms Max from 100% to 10% normal vibration (Refer to 4 Standard test Condition)	
3-9	Resonance Frequency F0	215-195Hz sweep down, 0.1Hz/step, 5Hz/s (Refer to 4 Standard test Condition)	205±5Hz

4.Reliability & Special Test

Immediately after reliability test, the samples shall be stored under climatic conditions such as normally exist in ordinary rooms or laboratories. Unless otherwise noted the recovery period shall be 4 hours at least before performance testing.

After reliability test, all samples must be meet the requirements as follows:

1. Acceleration: 1.0G
2. Rated current: 90mA max
3. No abnormalities in appearance and structure.

No.	Items	Test Conditions	Specification		
4-1	Life Test	Motor test conditions are listed as below. A motor is considered as meeting life expectation when either of the criteria described met.			
		Position	Conditions	Test Mode	Target Life Cycle
		Shaft Vertical	100g jip on foam 2.0Vrms Sine-wave 205Hz	As below	720hours
		<p>The diagram shows a square wave pulse. The high level is labeled '2.0Vrms' and the low level is labeled 'OFF'. The pulse width is '1S' and the fall time is '0.5S'. A double-headed arrow below the pulse indicates '1Cycle'.</p>			
4-2	Vibration Test	Samples that attached to a 100-gram fixture is vibrate with 2.2G, 10~55Hz/min for 10 minutes in each of X, Y, Z axis			

5. External Appearance

