



PUIaudio



Data Sheet

HD-EMB1305-SC

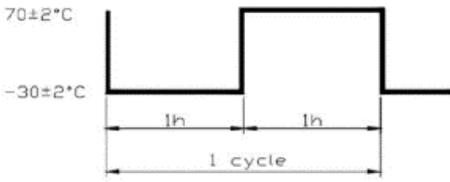
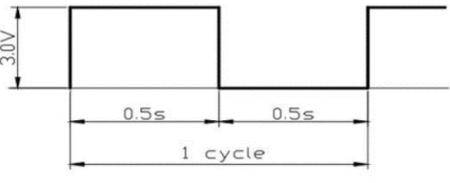
Features:

- Designed to be driven with 3 VDC
- Low current consumption
- Spring Contact motor surrounded by a rubber boot for easy assembly
- Generates 13,000 RPMs with no more than 50 dBA acoustic noise

Specifications

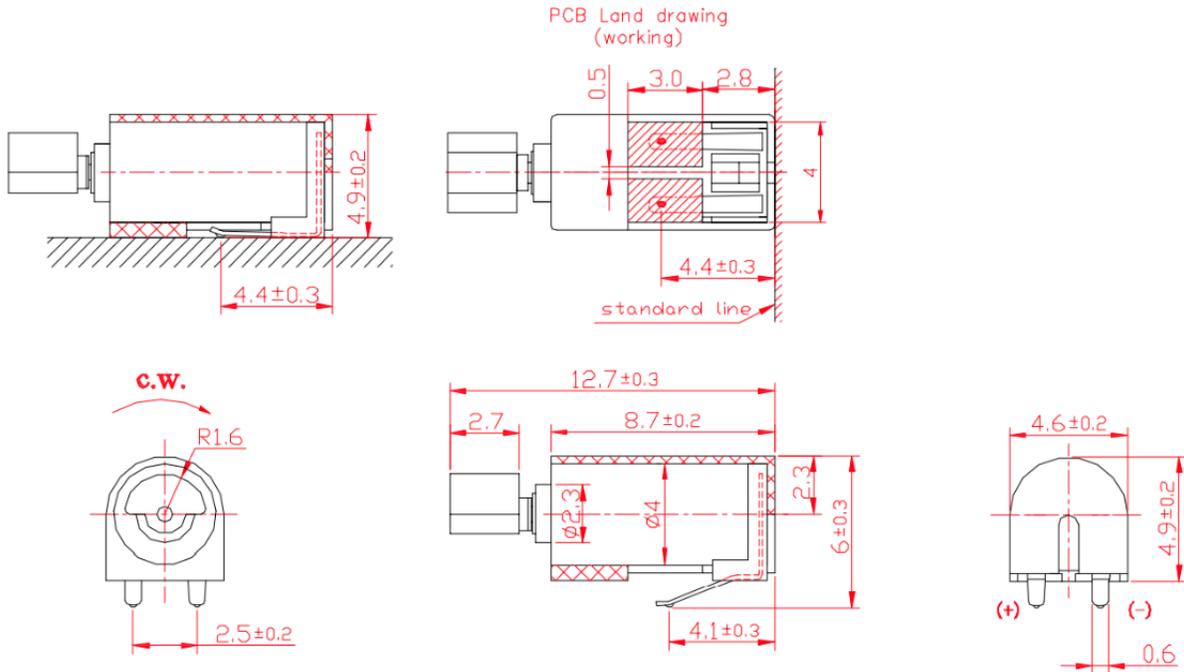
| Parameters | Values | Units |
|---------------------------|----------------|----------------------------|
| Rated Voltage | 3.0 | V _{DC} |
| Starting Voltage | 2.4 | V _{DC} |
| Operating Voltage Range | 2.2-3.6 | V _{DC} |
| Direction of Rotation | CW/CCW | - |
| Terminal Resistance | 93 ± 20% | Ohms |
| Rated Speed | 13,000 ± 2,500 | RPM (@ 3 V _{DC}) |
| Rated Current (Max) | 30 | mA (@ 3 V _{DC}) |
| Stall Current (Max) | 40 | mA (@ 3 V _{DC}) |
| Shaft End Play | 0.2 ± 0.1 | mm |
| Mechanical Noise (Max) | 50 | dBA (@ 3 V _{DC}) |
| Environmental Compliances | RoHS/REACH | - |
| Weight | 0.8 | Grams |
| Storage Temperature | -40 ~ +80 | °C |
| Operating Temperature | -30 ~ +70 | °C |

Reliability Testing

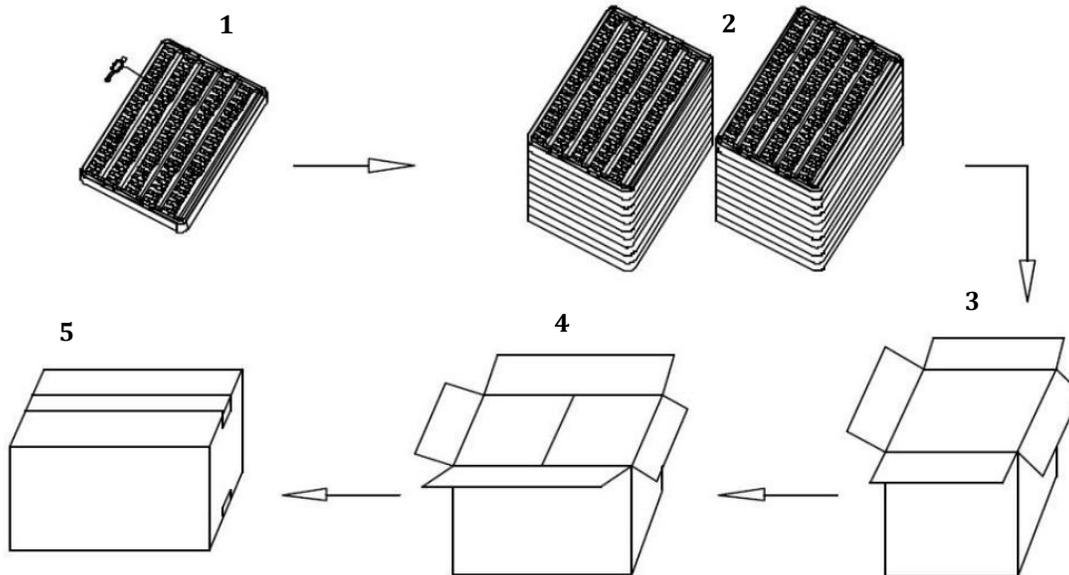
| Type of Test | Test Specifications | Pass/Fail Criteria |
|------------------|--|---|
| High Temperature | Temperature: $+60\pm 2^{\circ}\text{C}$ Test Duration: 96 hours | After each test, motors rest for 2 hours at room temperature. After rest, the motor shall meet the following initial values: <ol style="list-style-type: none"> 1) Rated Speed: $\pm 30\%$ initial 2) Rated Current: $\pm 30\%$ initial 3) Starting Voltage: $\leq 2.8 V_{\text{DC}}$ |
| Low Temperature | Temperature: $-40\pm 2^{\circ}\text{C}$ Test Duration: 96 hours | |
| High Humidity | Temperature: $+40\pm 2^{\circ}\text{C}$ Humidity: 90 ~ 95 RH Test Duration: 96 hours | |
| Heat Shock |  <p>Test Cycles: 20</p> | After each test, the motors shall meet the following initial values: <ol style="list-style-type: none"> 1) Rated Speed: $\pm 30\%$ initial 2) Rated Current: $\pm 30\%$ initial 3) Starting Voltage: $\leq 2.8 V_{\text{DC}}$ |
| Free Drop | Drop from listed drop height twice in $\pm X$, $\pm Y$, $\pm Z$ directions (12 total): Jig Mass: 100 grams (including motor) Drop Height: 1.5 meters Test Cycles: 2 per drop axis | |
| Lifetime |  <p>Test Cycles: 200,000 (@ $3V_{\text{DC}}$)</p> | |

After testing, each motor must achieve the listed Pass/Fail Criteria for the appropriate test.

Dimensions



Packaging



- | | |
|---------------------------|-----------------------------------|
| 1. 100 pieces / tray | Tray Size (mm): 230 x 158 x 15 |
| 2. 20 trays / stack | Quantity / Stack: 2000 pieces |
| 3. 2 stacks / inner box | Quantity / Inner Box: 4000 pieces |
| 4. 2 inner boxes / carton | Carton Size (mm): 360 x 260 x 170 |

Specifications Revisions

| Revision | Description | Date |
|-----------------|---------------------------|-------------|
| A | RELEASED FROM ENGINEERING | 07/05/2022 |

Note:

- 1. Unless otherwise specified:
 - A. All dimensions are in millimeters.
 - B. Default tolerances are $\pm 0.5\text{mm}$ and angles are $\pm 3^\circ$.
- 2. Specifications subject to change or withdrawal without notice.