

## 1. Scope

This specification applies to the Vibration motor of 4.2CH-1001WL-03  
d, to be delivered to

## 2. Standard Operation and Conditions

- 2-1 Rated Voltage : 1.3v DC
- 2-2 Rated Torque : Counter weight ( R2.75 x 4.50 x 180° )  
Specific Gravity of 18g/cc
- 2-3 Rated Speed : 6800 +/- 2000 rpm
- 2-4 Rated Current : 120 mA max.
- 2-5 Direction of Rotation : CW when (+) is applied to red-lead
- 2-6 Position of Motor : Regardless of output shaft direction

\* Above measurements apply at 25°C, relative humidity of 65%.

## 3. Mechanical Structures

- 3-1 Appearance : Should be free of cracks, rust, stain or dents.
- 3-2 Weight : approximately 1.72 grams
- 3-3 End play of shaft : 0.03mm ~ 0.2mm

## 4. Electrical Specifications

- 4-1 Rated Speed : 6800 +/- 2000 rpm
- 4-2 Rated Current : 120 mA max.
- 4-3 Min. starting voltage : 1.0 v max
- 4-4 Starting Current : 145 mA max (135ma Nominal)
- 4-5 Armature Resistance : 9.8 +/- 1 ohms
- 4-6 Insulation Resistance : 1 M ohms min.
- 4-7 Withstanding Voltage : DC200v between lead/housing case for 2 sec.  
The leakage current shall not exceed 1mA peak.

## 5. Life

: Perform tests by undermentioned conditions and  
judge deterioration of motor by stated below.

- 5-1 1 sec on, 2 sec off, @ 1.3v, total 100,000 cycles (83hrs) at 25°C, RH65%.
- 5-2 1 sec on, 2 sec off, @ 1.3v, total 40,000 cycles (33hrs) at -20°C.
- 5-3 1 sec on, 2 sec off, @ 1.3v, total 40,000 cycles (83hrs) at +70°C.

\* Definition of Life : Speed shall not exceed +50%/-30% from the initial value after  
performed any of above ALT stated 5.  
Current shall not exceed +30% from the initial value after  
performed any of above ALT stated 5.

4mm

## 5. Environmental Specifications

Motor satisfies the characteristics specified here in this specification after exposure in the environmental tests specified in 5-1.

- 5-1-1 **Vibration**  
Motor withstands 1.52mm amplitude over frequency of 50 Hz for 1 minute in each of X, Y, axis.
- 5-1-2 **Drop Shock**  
Motor satisfies the initial values after performed 2 meter high drop shock twice each of X, Y, Z axis mounted on 120g of drop shock fixture.
- 5-1-3 **Operating Temperature**  
-20°C ~ +70°C
- 5-1-4 **Storage Temperature**  
Motor satisfies the initial values after exposure to -40°C to +80°C for each of 48 hours and returned to room condition for 24 hours.
- 5-1-5 **Humidity**  
Motor satisfies the initial value after exposure to +40°C relative humidity of 90% for 96 hours.

## 6. Cautions

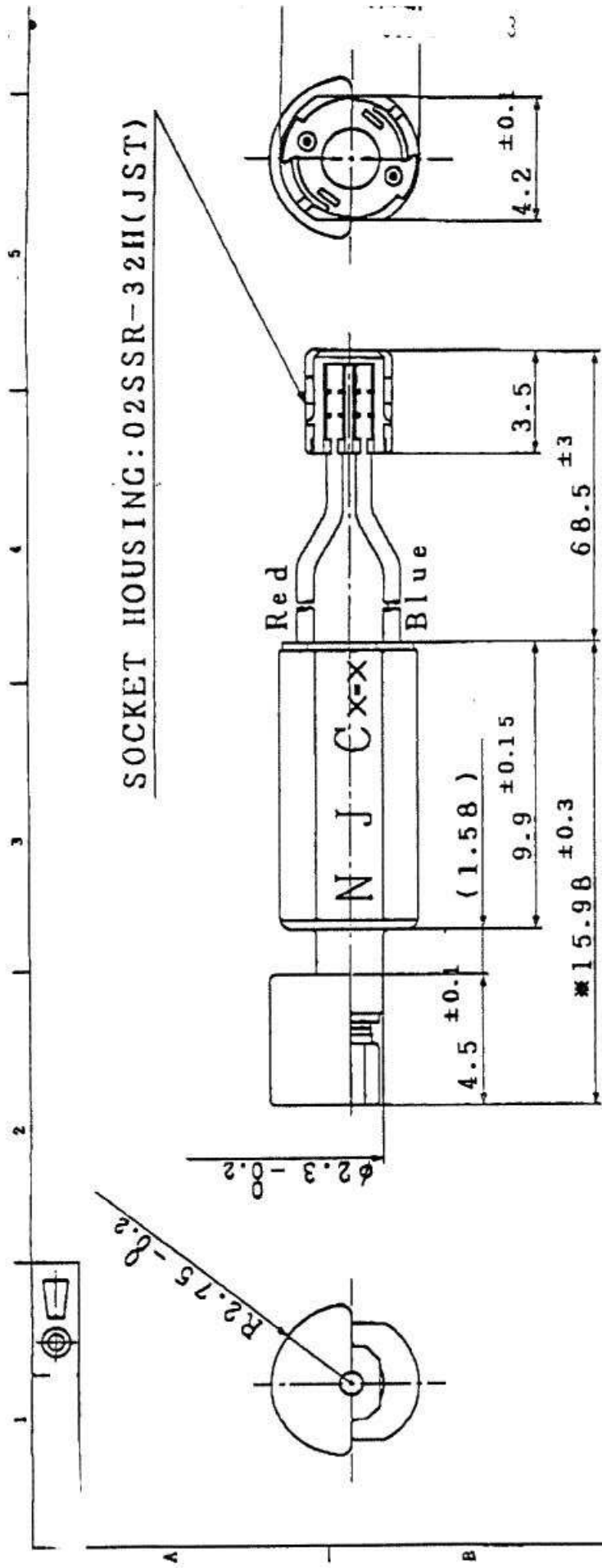
- 6-1 **Storage**  
Avoid storing in corrosive gas environment such as H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, Cl<sub>2</sub> etc or, substances such as organic silicon, cyanide, formalin, or phenol compounds that may emit toxic gasses. Motors may get serious damages. Not to be stored without running more than 6 months.
- 6-2 **Locked Operation**  
Motors may get overheated or fail if operated with rotor, locked condition or under excessive loads continuously.
- 6-3 **Condensation**  
Condensation on electric circuits may damage motor or control circuit. Monitoring environment and undertaking measurement for prevention and condensation sensor to actuate power-off when needed is recommended.
- 6-4 **others**  
Do not disassemble or subject to shock.

## 7. Notes

- 7-1                   guarantees one year from purchase date however repair charge will be required even in warranty period if damages are caused by mishandling or abuse usage.
- 7-2                   Material and construction may be changed within category of specification without advance notice.

4mm

SOCKET HOUSING: 02SSR-32H(JST)



NOTE 1) Overall length marked(\*) is to be measured while counterweight is pushed to motor bodyside.  
 2) End play of shaft 0.03~0.2mm.

4mm

TOLERANCE		ANGLE		SCALE	DATE	REVISIONS	
DIMENSION(φ)	0	1	2	5/1	SYM.	UNIT	TITLE
14φ	0	0.1	0.2	XX		4.2CH-1001	
8<L>13D	0	0.1	0.2	XX			
30<L>13D	0	0.1	0.2	XX			
130<L>	0	0.3	0.5	XX			
MATERIAL		FINISH		QTY.		OUTLINE DI	
APPD.	CHK.	DESN.	DRW.	DWC.NO.		D056249-00	
		MORITA YOSHII		REMARK			
		ST. 267/97 367					