| APPLICAB   |                   | DARD   | USB2.0 SPECIFICATIO         |                      |   | B CAB  | LE AND  | CONNE      | CTORS SPECIFICATION   | ON.  |          |
|--|-------------------|--|-----------------------------|----------------------|---|--|---|------------|-----------------------|--|----------|
| OPERATING<br>TEMPERATURE R   |                   | F RANGE  | -30°C TO +85°C STORAGE      |                      | NGF   | -30°C TO +85 °C                              |   |            |                       |  |          |
|  | TEWFERATURE KANGE |  | _                           | TEMPERATURE RA       |   |  | SIGNAL C  | ONLY       | 1.0 A/pin             |  |          |
| RATING   | VOLTA             | GE   | 30 V AC                     | CU                   | IRRENT  |  | POWER /   | A DDI V    | 1.8 A/pin (PIN No.1.N |  |          |
|  |                   |  |                             |                      |   | ı  | OWLK  | 4FFL1      | 0.5 A/pin (PIN No.2-I | No.4)  |          |
|  |                   |  | SPE(                        | CIFICA               | ATIO  | NS   |   |            |                       |  |          |
| ITE  | :M                |  | TEST METHOD                 |                      |   |  | F   | REQUIR     | REMENTS               | QT   | AT       |
| CONSTRU  | JCTION            | I  |                             |                      |   |  |   |            |                       |  | Į.       |
| GENERAL EXAMINATION VISUALL  |                   |  | Y AND BY MEASURING          | INSTRUM              | ENT.  | ACCO   | RDING T   | O DRA      | WING.                 | Х  | Χ        |
|  |                   |  | MED VISUALLY.               |                      |   | 1  |   |            |                       | Х  | Х        |
| ELECTRIC   | C CHARA           | CTERIS   | STICS                       |                      |   | •  |   |            |                       |  |          |
| CONTACT RESISTANCE 100 m.  |                   | 100 mA (   | A (DC OR 1000 Hz).          |                      |   | 30 mΩ MAX.                                   |   |            |                       | Х  | Х        |
|  |                   | 500 V DC.  |                             |                      | 100 MΩ MIN.   |  |   |            | Х                     | Х  |          |
| RESISTANCE<br>VOLTAGE PR   |                   |  |                             |                      | NO EI   | NO FLASHOVER OR BREAKDOWN.                   |   |            |                       | X  |          |
|  |                   | 100 V AC FOR 1 min.  MEASURE ADJACENT TWO CONTACTS AT  |                             |                      |   |  | ER OR I   | SKEANDOWN. | X                     | ^  |          |
| CAPASITANC   | E                 |  | Hz AC VOLTAGE.              | IIAOIO A             |   | 2 pF MAX.                                    |   |            |                       | X  | -        |
| MECHANI  | CAL CHAP          | RACTE  | RISTICS                     |                      |   |  |   |            |                       |  |          |
| INSERTION AND  |                   |  | IUM RATE OF 12.5 mm/m       |                      |   | -  | INSERTION FORCE 35 N MAX.   |            |                       | Х  | _        |
| WITHDRAWAL FORCES  |                   | MEASUR   | RED BY APPLICABLE CO        | NNECTO               | R.  |  |   |            | E 8 N MIN.            |  |          |
| MECHANICAL<br>OPERATION  |                   | 10000 TII  | MES INSERTIONS AND E        | EXTRACT              | IONS.   |  | <ol> <li>CONTACT RESISTANCE: NO INCREASE<br/>OF MORE THAN 10 mΩ FROM INITIAL</li> </ol> |            |                       |  |          |
|  |                   | MATING SPEED - MECHANICALLY OPERATED: 500 CYCLES / h OR - MANUALLY OPERATED: 200 CYCLES / h                      |                             |                      |   | VA   | VALUE.  |            |                       |  |          |
|  |                   |  |                             |                      | LES / h   | 2) INS                                       |   |            |                       |  | -        |
|  |                   |  |                             |                      |   | NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.    |   |            |                       |  |          |
|  |                   |  |                             |                      | ĹO  |  |   |            |                       |  |          |
| VIBRATION RANDOM VIBRATION   |                   |  |                             |                      |   | 1) NO ELECTRICAL DISCONTINUITY OF            |   |            | \ \ \                 |  |          |
|  |                   | SINGLE AMPLITUDE 0.75 mm, AT 2h<br>FOR 3 AXIAL DIRECTIONS, TOTAL 6h.   |                             |                      | 1 μs.<br>2) NO DAMAGE, CRACK AND LOOSENESS,<br>OF PARTS.  |  |   | X          | _                     |  |          |
|  |                   | FREQUENCY 50 TO 2000 Hz AT 15 min  |                             |                      |   |  |   |            |                       |  |          |
|  |                   | FOR 3 AXIAL DIRECTIONS.  |                             |                      |   |  |   | Х          | _                     |  |          |
|  |                   | 490m/s <sup>2</sup> DURATIONS OF PULSE 11 ms AT 3 TIMES FOR 6 DIRECTIONS, TOTAL 18 TIMES.                        |                             |                      |   |  |   |            | Х                     | _  |          |
| ENI/IRON   | MENITAL           |  | ACTERISTICS                 | AL 10 TIIVI          | LO.   |  |   |            |                       |  |          |
| LIVINOIN   | IVILIAIT          |  | 55 →+15 TO +35→+85−         | +15TO+3              | 85 °C   | 1) CO  | NTACT F   | RESIST     | ANCE: 70 mΩ MAX.      | 1  |          |
| THERMAL SH   | IOCK              | TIME $30 \rightarrow 2 \text{ TO } 3 \rightarrow 30 \rightarrow 2 \text{ TO } 3 \text{ min}$<br>UNDER 10 CYCLES. |                             |                      | <ul> <li>2) INSULATION RESISTANCE: 10 MΩ MIN.</li> <li>3) NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.</li> <li>NO DAMAGE, CRACK AND LOOSENESS,</li> </ul> |  |   |            | X                     | _  |          |
| THERWINE OF  | IOOK              |  |                             |                      |   |  |   |            | ^                     |  |          |
|  |                   | (MATING APPLICABLE CONNECTOR) TEMPERATURE -10~65 °C, HUMIDITY 90 TO  |                             |                      |   |  |   |            |                       |  |          |
| HUMIDITY LIFE  |                   |  | %, UNDER 7 CYCLES (168 h)   |                      |   | OF PARTS.                                    |   |            | Х                     | _  |          |
|  |                   | (MATING  | ATING APPLICABLE CONNECTOR) |                      |   |  |   |            |                       |  |          |
| DRY HEAT   |                   |  | EXPOSED AT +85±2 °C , 96 h. |                      |   | NO DAMAGE, CRACK AND LOOSENESS,<br>OF PARTS. |   |            |                       | Х  | _        |
|  |                   | (MATING APPLICABLE CONNECTOR)  EXPOSED AT -40±2 °C , 96 h.   |                             |                      | NO DAMAGE, CRACK AND LOOSENESS,   |  |   |            | 1                     |  |          |
| COLD   |                   | (MATING APPLICABLE CONNECTOR)  |                             |                      | OF PARTS.   |  |   | Х          |                       |  |          |
| CORROSION  | SALT MIST         |  | D AT 5 % SALT WATER,        |                      | TICLL   | NO HE  | AVY CC  | RROSI      | ON.                   | Х  | _        |
| T  | T                 |  | . (LEFT UNDER UNMATE        | -D CONDI             |   | NES  | T   |            | OLIFOKED              | 1  | <u> </u> |
| COUNT  | DE                | PCKILI(  | ON OF REVISIONS             |                      | DESIG   | NED  |   |            | CHECKED               | DΑ   | TE       |
| <u>∧</u>  <br>REMARK   |                   |  |                             |                      |   |  | APPRO   | VED        | NM. NISHIMATSU        | 15 1   | 0.07     |
| LUDOCE will not appropriate the newformance on those appointing in |                   |  |                             | KN. ICHIKAWA         |   | 15. 10. 27<br>15. 10. 27                     |   |            |                       |  |          |
| case this product will be mated with the others which              |                   |  |                             |                      |   |  |   | 0. 27      |                       |  |          |
| HIROSE's.  |                   |  |                             |                      | 10. 110   | 10.1   | J. L1   |            |                       |  |          |
| Jnless otherwise specified, refer to USB2.0, EIA364 or IEC 60512.  |                   |  |                             |                      | 15. 1   | 0. 27  |   |            |                       |  |          |
|  | •                 | -  | surance Test X:Applicable   |                      |   |  | I<br>IG NO.   |            | ELC-126332-3          | 3-00   | )        |
| SPECIFICATION SHEET PA   |                   |  | PART                        | TNO. ZX62-B-5PA (33) |   |  |   |            |                       |  |          |
|  |                   |  | SATION SHEET                |                      |   | · ·  | Δ   | 1/2        |                       |  |          |
|  | 1 111 1           |  | LOTINO OO., LIL             | ··                   | CODE  | . INU.                                       | U   |            | 0000 0-00             | <u>,                                    </u> | 1/2      |

| SPECIFICATIONS                  |  |  |    |    |  |  |  |  |
|---------------------------------|--|--|----|----|--|--|--|--|
| ITEM                            | TEST METHOD  | REQUIREMENTS   | QT | АТ |  |  |  |  |
| SOLDERABILITY                   | SOLDERING POINT IMMERSED IN SOLDER BATH OF 255±5°C, 5 sec. (USING TYPE R FLAX) | SOLDER SHALL COVER MINIMUM OF 95%<br>OF THE SURFACE BEING IMMERSED | Х  | _  |  |  |  |  |
| RESISTANCE TO<br>SOLDERING HEAT | ,  | NO DEFORMATION OR SIGNIFICANT LOOSENESS OF CONTACTS.               | Х  | -  |  |  |  |  |

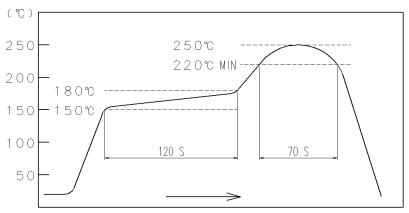


FIG – 1 <u>RESISTANCE TO SOLDERING HEAT</u> (TEMPERATURE AT TOP SURFACE OF CONNECTOR)

## RECOMMENDED PROFILE REFERS TO FIG – 2. (TEMPERATURE AT SMT LEADS)

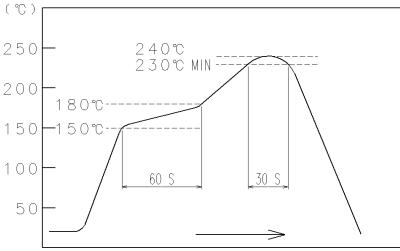


FIG – 2 RECOMMENDED REFLOW PROFILE TEMPERATURE

| Note QT:Q | ualification Test AT:Assurance Test X:Applicable Test | DRAWIN   | IG NO.          | ELC-126332-33-00 |             |     |
|-----------|---|----------|-----------------|------------------|-------------|-----|
| HS.       | SPECIFICATION SHEET                                   | PART NO. | ZX62-B-5PA (33) |                  |             |     |
| 11.0      | HIROSE ELECTRIC CO., LTD.                             | CODE NO  | CL242           | 2-0033-8-33      | $\triangle$ | 2/2 |