| REV | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE | REV | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | – | Revised | HJ.KIM | HJ.LEE | 18.03.06 | 6 | – | Revised | YI.KIM | HJ.LEE | 21.12.15 |
| 5 | – | Revised | YG.KIM | HJ.LEE | 21.08.23 | | – | | | | |

| | | |
|---|---|---|
| APPLICABLE STANDARD | | Universal Serial Bus Type-C Cable and Connector Specification Release 2.1<br>Universal Serial Bus Type-C Connectors and Cable Assemblies Compliance Document Revision 2.1b |
| RATING | CURRENT | 1.25A Max. for each power pin (A1, A4, A9, A12, B1, B4, B5, B9, B12)<br>0.25A for the other pins |
| | VOLTAGE | 48V AC/DC |
| OPERATING CONDITION | | -40℃ ~ +105℃(INCLUDING TEMP. RISE), 95% RH MAX.(NON-CONDENSING) |
| STORAGE CONDITION | | -10℃ ~ +60℃(WITH PACKING), 15% ~ 70% RH |

| Para. | Test Description | Test Procedure | Test Requirement | QT | AT |
|---|---|---|---|---|---|
| 1 | Examination of product | EIA 364-18<br>Visual inspection | No physical damage | O | O |
| Electrical Requirements | | | | | |
| 2 | Low Level Contact Resistance | EIA 364-23<br>Measure at 20mV max open circuit at 100mA(DC OR 1000Hz).<br>4-wire measurement is required and the resistance of PCB termination shall be deducted from the reading. | 40mΩ max initial for each contact.<br>50mΩ max after initial measurement. | O | - |
| 3 | Dielectric Withstanding Voltage | EIA 364-20<br>Measure per Method B with unmated condition.<br>100VAC RMS for 1 minute at sea level. | No disruptive discharge. | O | - |
| 4 | Insulation Resistance | EIA 364-21<br>500VDC with unmated and mated condition. | 100MΩ Min. | O | - |
| Mechanical Requirements | | | | | |
| 5 | Insertion force | EIA 364-13<br>Measure at 12.5mm/minute min. | Initial & After test : 5N to 20N<br>(with virgin plug) | O | - |
| 6 | Extraction force | EIA 364-13<br>Measure at 12.5mm/minute min. | Initial : 8N to 20N<br>After test : 6N to 20N<br>(with virgin plug) | O | - |
| 7 | Durability | EIA 364-09<br>10,000 insertion/extration cycles.<br>Cycle rate : 500±50 cycles per hour. | Low level contact resistance and dielectric withstanding voltage shall meet the spec after test. | O | - |
| 8 | Vibration | EIA 364-28<br>Test Condition VII, Test Letter D<br>20-500 Hz random levels, 15minutes in each of 3 mutually perpendicular directions. | No physical damage and no discontinuity longer than 1us.<br>Low level contact resistance shall meet spec before and after the test. | O | - |

| REMARKS | DRAFT | DESIGN | CHECK | APPROVAL | RELEASE |
|---|---|---|---|---|---|
| | H.J.KIM<br>16.08.03 | KN.ICHIKAWA<br>16.08.03 | H.J.LEE<br>16.08.03 | T.S.KANG<br>16.08.03 | DEPT<br>21.12.15<br>ENG |

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O: Applicable Test

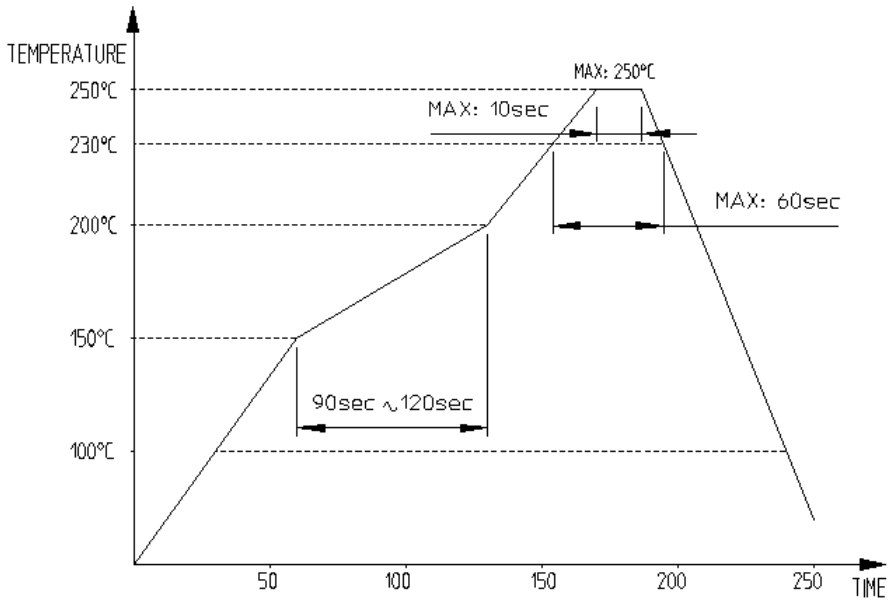
| DWG NO | CL NO | PART NO |
|---|---|---|
| ELC4-632149 | CL 6240-0004-7 | CX90B1-24P |

| | | |
|---|---|---|
| HRS HIROSE KOREA.CO.,LTD | PRODUCT SPECIFICATION | 1 / 3 |

Mar.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

| Para. | Test Description | Test Procedure | Test Requirement | QT | AT |
|---|---|---|---|---|---|
| Environmental Requirements | | | | | |
| 9 | Temperature Life | EIA 364-17, Method A<br>105℃ without applied voltage for 120hours. | Low level contact resistance shall meet spec before and after the test. | O | - |
| 10 | Cyclic Temperature and Humidity | EIA 364-31<br>25±3°C at 80±3% RH for 1 hour.<br>65±3°C at 50±3% RH for 1 hour.<br>Thermal ramp : 0.5 hour<br>Number of cycles : 24 cycles | Low level contact resistance shall meet spec before and after the test. | O | - |
| 11 | Thermal Shock | EIA 364-32, Test Condition I<br>10cycles -55°C and +105°C | No physical damage.<br>Low level contact resistance shall meet spec before and after the test. | O | - |
| 12 | Solderability | EIA 364-52<br>Dwell in 245℃±5℃ of the solder bath for 5sec. | Solder coverage shall be 95% min.of the immersed surfaces. | O | - |
| 13 | Salt Spray | EIA 364-26<br>5% of NaCl in 35℃ for 48hours | No corrosions that affect to connector operation.<br>Low level contact resistance shall meet spec before and after the test. | O | - |
| 14 | Reflow test (Co-planarity) | Reflow profile[Fig1]<br>Peak 250°C max.<br>For 10 sec 2 times. | 0.1max before reflow<br>0.1max after reflow<br>No deformation of mold<br>No shape of blister and popcorn | O | - |

REMARKS




[Fig1]. REFLOW TEMPERATURE

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O: Applicable Test

| DWG NO | CL NO | PART NO |
|---|---|---|
| ELC4-632149 | CL 6240-0004-7 | CX90B1-24P |



Mar.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

Mar.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

# Qualification Test Sequence Table

| Para. | Test Description | Test Group | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H |
| 1 | Examination of product | O | O | O | O | O | O | O | O |
| 2 | Low Level Contact Resistance | O | O | O | O | O | | O | |
| 3 | Dielectric Withstanding Voltage | | O | | | | | | |
| 4 | Insulation Resistance | | O | | | | | | |
| 5 | Insertion force | | O | | | | | | |
| 6 | Extraction force | | O | | | | | | |
| 7 | Durability | | O | | | | | | |
| 8 | Vibration | O | | | | | | | |
| 9 | Temperature Life | | | O | | | | | |
| 10 | Cyclic Temperature and Humidity | | | | O | | | | |
| 11 | Thermal Shock | | | | | O | | | |
| 12 | Solderability | | | | | | O | | |
| 13 | Salt Spray | | | | | | | O | |
| 14 | Reflow test (Co-planarity) | | | | | | | | O |

REMARKS
1) Numbers in the table above indicate the sequence corresponding to each test group.

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O: Applicable Test

| DWG NO | CL NO | PART NO |
|---|---|---|
| ELC4-632149 | CL 6240-0004-7 | CX90B1-24P |