

|   | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |   | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |
|---|-------|--------------------------|----|------|------|---|-------|--------------------------|----|------|------|
| △ |       |                          |    |      |      | △ |       |                          |    |      |      |
| △ |       |                          |    |      |      | △ |       |                          |    |      |      |

| APPLICABLE STANDARD |                             |                        |                           |                                                                 |
|---------------------|-----------------------------|------------------------|---------------------------|-----------------------------------------------------------------|
| RATING              | Operating Temperature Range | -55°C to 105°C (Note1) | Storage Temperature Range | -10°C to +60°C (Note3)                                          |
|                     | Operating Humidity Range    | 20% to 80% (Note2)     | Storage Humidity Range    | 40% to 70% (Note3)                                              |
|                     | Applicable Connector        | DF51K-20DS-2C(###)     | Current                   | AWG 30 : 0.5A    AWG 28 : 1A<br>AWG 26 : 1.5A<br>AWG 22-24 : 2A |
|                     | Voltage                     | 250V AC/DC             |                           |                                                                 |

| SPECIFICATIONS                                                                                                                                                                                                                                                                                          |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------|----------------------------------|-------------------------------------|
| ITEM                                                                                                                                                                                                                                                                                                    | TEST METHOD                                                                                         | REQUIREMENTS                                                                                                      | QT                               | AT                              |                                  |                                     |
| <b>CONSTRUCTION</b>                                                                                                                                                                                                                                                                                     |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
| General Examination                                                                                                                                                                                                                                                                                     | Visually and by measuring instrument.                                                               | According to drawing.                                                                                             | ○                                | ○                               |                                  |                                     |
| Marking                                                                                                                                                                                                                                                                                                 | Confirmed visually.                                                                                 |                                                                                                                   | ○                                | ○                               |                                  |                                     |
| <b>ELECTRICAL CHARACTERISTICS</b>                                                                                                                                                                                                                                                                       |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
| Contact Resistance                                                                                                                                                                                                                                                                                      | 20mV MAX, 1mA (DC or 1000Hz).                                                                       | 30 mΩ MAX.                                                                                                        | ○                                | -                               |                                  |                                     |
| Millivolt Level Method                                                                                                                                                                                                                                                                                  |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
| Insulation Resistance                                                                                                                                                                                                                                                                                   | 500 V DC.                                                                                           | 1,000 MΩ MIN.                                                                                                     | ○                                | -                               |                                  |                                     |
| Voltage Proof                                                                                                                                                                                                                                                                                           | 650 V AC for 1 min.                                                                                 | No flashover or breakdown.                                                                                        | ○                                | -                               |                                  |                                     |
| <b>MECHANICAL CHARACTERISTICS</b>                                                                                                                                                                                                                                                                       |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
| Mechanical Operation<br>(Sn Plating)                                                                                                                                                                                                                                                                    | 30 times insertion and extraction.                                                                  | ①Contact resistance: 30mΩ MAX<br>②No damage, crack or looseness of parts.                                         | ○                                | -                               |                                  |                                     |
| Mechanical Operation<br>(Au Plating)                                                                                                                                                                                                                                                                    | 50 times insertion and extraction.                                                                  | ①Contact resistance: 30mΩ MAX<br>②No damage, crack or looseness of parts.                                         | ○                                | -                               |                                  |                                     |
| Mating and unmating force<br>(Sn Plating)                                                                                                                                                                                                                                                               | It takes out and inserts with a conformity connector.                                               | ①Insertion Force: 88.2N MAX<br>②Extraction Force : 5.2N MIN                                                       | ○                                | -                               |                                  |                                     |
| Mating and unmating force<br>(Au Plating)                                                                                                                                                                                                                                                               | It takes out and inserts with a conformity connector.                                               | ①Insertion Force: 56.2N MAX<br>②Extraction Force: 5.0N MIN                                                        | ○                                | -                               |                                  |                                     |
| Vibration                                                                                                                                                                                                                                                                                               | Frequency 10 to 55 Hz, single amplitude 0.75 mm, at 10 cycles for 3 direction.                      | ①No electrical discontinuity of 1 μ s.<br>②No damage, crack or looseness of parts.                                | ○                                | -                               |                                  |                                     |
| Shock                                                                                                                                                                                                                                                                                                   | Acceleration 490 m/s <sup>2</sup> duration of pulse 11 ms at 3 times for 3 directions.              |                                                                                                                   | ○                                | -                               |                                  |                                     |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>                                                                                                                                                                                                                                                                    |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
| Damp Heat<br>(Steady State)                                                                                                                                                                                                                                                                             | Exposed at 40 ± 2 °C , humidity 90 to 95 %, 96 h. (After leaving the room temperature for 1 to 2h.) | ①Contact resistance: 30 mΩ MAX.<br>②Insulation resistance: 500MΩ MIN.<br>③No damage, crack or looseness of parts. | ○                                | -                               |                                  |                                     |
| Remarks<br>Note 1: Include the temperature rising by current.<br>Note 2: No condensing<br>Note 3: Apply to the condition of long term storage for unused products before pcb on board, after pcb board , operating temperature and humidity range is applied for interim storage during transportation. |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
|                                                                                                                                                                                                                                                                                                         |                                                                                                     | DRAWN<br>J.S CHOI<br>18.03.02                                                                                     | DESIGNED<br>J.S CHOI<br>18.03.02 | CHECKED<br>S.M.LIM<br>18.03.02  | APPROVED<br>T.S KANG<br>18.03.02 | RELEASED<br>ENG<br>20.02.13<br>DEPT |
| Unless otherwise specified, refer to IEC 60512.                                                                                                                                                                                                                                                         |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
| NOTE QT: QUALIFICATION TEST AT: ASSURANCE TEST O: APPLICABLE TEST                                                                                                                                                                                                                                       |                                                                                                     |                                                                                                                   |                                  |                                 |                                  |                                     |
| HIROSE KOREA CO.,LTD.                                                                                                                                                                                                                                                                                   |                                                                                                     | SPECIFICATION SHEET                                                                                               |                                  | PART NO.<br>DF51K-20DP-2DS(805) |                                  |                                     |
| CODE NO.(OLD)<br>CL                                                                                                                                                                                                                                                                                     |                                                                                                     | DRAWING NO.<br>ELC4-632484                                                                                        |                                  | CODE NO.<br>CL 6652-0050-7-805  |                                  | 1/2                                 |

|                              |                                                                                                                                                                                                                       |                                                                                                                     |   |   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---|---|
| Rapid Change of Temperature  | Temperature -55 °C → +105 °C<br>Time 30min → 30min<br>Under 5 Cycles.<br>(The transferring time of the tank is 2 to 3 MIN)<br>(After leaving the room temperature for 1 to 2h.)                                       | ①Contact resistance: 30 mΩ MAX.<br>②Insulation resistance: 1,000MΩ MIN.<br>③No damage, crack or looseness of parts. | O | — |
| Dry Heat                     | Exposed at 105±2 °C, 96h                                                                                                                                                                                              | ①Contact resistance: 30 mΩ MAX.<br>②Insulation resistance: 1,000MΩ MIN.<br>③No damage, crack or looseness of parts. | O | — |
| Cold                         | Exposed at -55±3 °C, 96h                                                                                                                                                                                              | ①Contact resistance: 30 mΩ MAX.<br>②Insulation resistance: 1,000MΩ MIN.<br>③No damage, crack or looseness of parts. | O | — |
| Resistance To Soldering Heat | ①Automatic soldering (flow)<br>Soldered at solder temperature, 260 °C for in immersion , duration, 5 s.<br>②Manual soldering<br>Soldering iron temperature :270 °C,<br>Soldering time :3s.<br>No strength on contact. | No deformation of case of excessive looseness of the terminals.                                                     | O | — |
| Solderability                | Soldering temperature: 245 °C<br>Duration of immersion :soldering, for 5 sec.                                                                                                                                         | New uniform coating of solder shall cover minimum of 95 % of the surface Being immersed.                            | O | — |

|                                                                   |                            |                     |                    |                                 |
|-------------------------------------------------------------------|----------------------------|---------------------|--------------------|---------------------------------|
| NOTE QT: QUALIFICATION TEST AT: ASSURANCE TEST O: APPLICABLE TEST |                            |                     |                    |                                 |
| HIROSE KOREA CO.,LTD.                                             |                            | SPECIFICATION SHEET |                    | PART NO.<br>DF51K-20DP-2DS(805) |
| CODE NO.(OLD)<br>CL                                               | DRAWING NO.<br>ELC4-632484 | CODE NO.            | CL 6652-0050-7-805 | 2/2                             |