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|   | COUNT                       | DESCRIPTION OF REVISIONS  | BY                     | CHKD                | DATE     |   | COUNT    | DESCRIPTION OF REVISIONS                     | BY  | CHKD | DATE |
|---|-----------------------------|---|------------------------|---------------------|----------|---|----------|--|---|------|------|
| △   |                             |   |                        |                     |          | △   |          |  |   |      |      |
| △   |                             |   |                        |                     |          | △   |          |  |   |      |      |
| <b>APPLICABLE STANDARD</b>  |                             |   |                        |                     |          |   |          |  |   |      |      |
| 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-2S-2C(###)       |                     |          | Current   |          | AWG 30 : 0.5A AWG 28 : 1.0A                  |   |      |      |
|   | Voltage                     |   | 250V AC/DC             |                     |          |   |          | AWG 26 : 2.0A AWG 24 : 2.5A<br>AWG 22 : 3.0A |   |      |      |
| <b>SPECIFICATIONS</b>   |                             |   |                        |                     |          |   |          |  |   |      |      |
| ITEM  |                             | TEST METHOD   |                        |                     |          | REQUIREMENTS  |          |  |   | QT   | AT   |
| <b>CONSTRUCTION</b>   |                             |   |                        |                     |          |   |          |  |   |      |      |
| General Examination   |                             | Visually and by measuring instrument.   |                        |                     |          | According to drawing.   |          |  |   | 0    | 0    |
| Marking   |                             | Confirmed visually.   |                        |                     |          |   |          |  |   | 0    | 0    |
| <b>ELECTRICAL CHARACTERISTICS</b>   |                             |   |                        |                     |          |   |          |  |   |      |      |
| Contact Resistance  |                             | 20mV MAX, 1mA (DC or 1000Hz).   |                        |                     |          | 30 mΩ MAX.  |          |  |   | 0    | -    |
| Millivolt Level Method  |                             |   |                        |                     |          |   |          |  |   |      |      |
| Insulation Resistance   |                             | 500 V DC.   |                        |                     |          | 1,000 MΩ MIN.   |          |  |   | 0    | -    |
| Voltage Proof   |                             | 650 V AC for 1 min.   |                        |                     |          | No flashover or breakdown.  |          |  |   | 0    | -    |
| <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.   |          |  |   | 0    | -    |
| Mechanical Operation<br>(Au Plating)  |                             | 50 times insertion and extraction.  |                        |                     |          | ①Contact resistance: 30mΩ MAX<br>②No damage, crack or looseness of parts.   |          |  |   | 0    | -    |
| Mating and unmating force<br>(Sn Plating)   |                             | It takes out and inserts with a conformity connector.   |                        |                     |          | ①Insertion Force: 22.0N MAX<br>②Extraction Force : 0.5N MIN   |          |  |   | 0    | -    |
| Mating and unmating force<br>(Au Plating)   |                             | It takes out and inserts with a conformity connector.   |                        |                     |          | ①Insertion Force: 13.7N MAX<br>②Extraction Force: 0.5N MIN  |          |  |   | 0    | -    |
| 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.                                |          |  |   | 0    | -    |
| Shock   |                             | Acceleration 490 m/s <sup>2</sup> duration of pulse 11 ms at 3 times for 3 directions.              |                        |                     |          |   |          |  |   | 0    | -    |
| <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. |          |  |   | 0    | -    |
| Remarks   |                             |   |                        |                     |          |   |          |  |   |      |      |
| Note 1: Include the temperature rising by current.  |                             |   |                        |                     |          |   |          |  |   |      |      |
| Note 2: No condensing   |                             |   |                        |                     |          |   |          |  |   |      |      |
| 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    | DESIGNED  | CHECKED  | APPROVED                                     | RELEASED  |      |      |
|   |                             |   |                        |                     | J.S CHO  | J.S CHO   | S.M.LIM  | S.M.LIM                                      |  |      |      |
|   |                             |   |                        |                     | 21.05.14 | 21.05.14  | 21.05.14 | 21.05.14                                     |   |      |      |
| 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.                                     |   |      |      |
|   |                             |   |                        |                     |          |   |          | DF51K-2P-2H(805)                             |   |      |      |
| CODE NO.(OLD)   |                             |   | DRAWING NO.            |                     |          | CODE NO.  |          |  | 1/2   |      |      |
| CL  |                             |   | ELC4-633489            |                     |          | CL 6652-0073-2-805  |          |  |   |      |      |

|                                 |   |   |   |   |
|---------------------------------|---|---|---|---|
| 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    | Reflow time<br>Number of reflow cycles : 2cycles MAX<br>Duration above 220°C, 60sec. MAX.<br>Peak temperature : 250°C 10sec. MAX  | 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 | - |
| Recommended Temperature Profile | <p style="text-align: center;"><u>REFLOW TEMPERATURE PROFILE USING LEAD-FREE SOLDER PASTE (REFERENCE)</u></p> <p>NUMBER OF REFLOW CYCLES 2CYCLES MAX.<br/>THE TEMPERATURE IS MEASURED IN THE TERMINAL LEAD PART.</p> <p>ADDITIONAL FACTORS, SUCH AS SOLDER PASTE TYPE, PCB SIZE AND OTHER MOUNTED COMPONENTS COULD AFFECT THE PROFILES. THEREFORE, A THOROUGH EVALUATION OF MOUNTING CONDITION IS REQUIRED PRIOR TO PRODUCTION.</p> |   |   |   |

NOTE QT: QUALIFICATION TEST AT: ASSURANCE TEST O: APPLICABLE TEST

|                       |                            |                     |                    |                              |     |
|-----------------------|----------------------------|---------------------|--------------------|------------------------------|-----|
| HIROSE KOREA CO.,LTD. |                            | SPECIFICATION SHEET |                    | PART NO.<br>DF51K-2P-2H(805) |     |
| CODE NO.(OLD)<br>CL   | DRAWING NO.<br>ELC4-633489 | CODE NO.            | CL 6652-0073-2-805 |                              | 2/2 |