| Storage tempe<br>range<br>(before unpact      |                                       |  | -10 to +60 [deg. C] (40 to  | 75%RH)      | Storage tel<br>range (after<br>but not ope |   | nting,        | -40 to +85 [deg. C] (85%RH MA<br>No freezing and condensing |                  |          | X)    |
|---|---------------------------------------|--|---|-------------|--|---|---------------|---|------------------|----------|-------|
| Operating                                     | Operating Operating temperature range |  | -10 to +60 [deg. C] (85%RH MAX) Characteris                                   |             |  | stic  |               | Differential 100 [ohm]                                      |                  |          |       |
| condition                                     |                                       |  | SLVS-200  | <u>9</u>    | ACTIVATE                                   |   | e 1           | 1.0 to  | 3.6V             |          |       |
| Input signal in                               |                                       |  | Differential voltage 200 to   | 1400 mVi    |  |   |               | 3.0 to 3.6V (typ 3.3V)                                      |                  |          |       |
|   | Suitable conne                        |  | (BF4-IR2) BF4-IR2-16P-0.  |             | p mpat pomo.                               |   | 90            |   | (.)p             |          |       |
|   |                                       |  | ,   |             | TIONS                                      |   |               |   |                  |          |       |
|   |                                       |  |   |             | TIONS                                      |   |               |   | SEMENTS.         | ОТ       |       |
|   | TEM<br>RUCTION                        |  | TEST METHOD   |             |  |   | REQUIREMENTS  |   |                  | QT       | AT    |
|   | Construction                          | Check visually and measure dimension with dimension  |   |             |  | According to the drawing  |               |   |                  | X        | Х     |
| and Finishir<br>Marking                       | ng                                    | measurement instrument.  |   |             |  |   |               |   |                  | X        | X     |
| )   |                                       | Check visually. CTERISTICS   |   |             |  |   |               |   |                  | ^        | ^     |
|   |                                       |  |   | forontial O | 100m\/n                                    | No me   | aalı bit e    | + 0 0E  | to 6 25 Chan     | X        | 1     |
| Data rate performance                         |                                       | Measure eye diagram when input differential 200mVp signal.   |   |             |  | No mask hit at 0.05 to 6.25 Gbps<br>(The mask should be similar to standard<br>ethernet mask) |               |   |                  |          | -     |
|   |                                       | Measure eye diagram input 6.25Gbps PRBS7 differential  |   |             |  | No mask hit (The mask should be   |               |   |                  | Х        | Х     |
|   |                                       | 200mVp signal.   |   |             |  | similar to standard ethernet mask)  |               |   |                  |          |       |
| Signal detect (OE-SDn)                        |                                       | Shall be turned OE-SDn=Low when EO-ACT=High and VDD=3.3V. (Same measurement method as "Data rate") |   |             |  | OE-SDn voltage -0.3 to 1.0V   |               |   | X                | X        |       |
| ACT detect                                    | (EO-ACTn)                             | Shall be turned EO-ACTn=Low when TX is during VDD=3.3V.  |   |             |  | EO-ACTn voltage -0.3 to 1.0V  |               |   | Х                | X        |       |
| Bit error rate (BER)                          |                                       | Measure BER with BERT during input differential 6.25Gbps PRBS7 200mVp signal.                      |   |             |  | < 1 X 10 <sup>-12</sup>   |               |   | X                | -        |       |
| Power cons                                    | sumption                              |  | Measure current by digital multimeter during operating condition at VDD=3.3V. |             |  |   | ≦160mW        |   |                  | X        | -     |
| Output sign                                   | al voltage                            |  | Shall be checked by eye diagram when input 6.25Gbps                           |             |  |   | 160 to 330mVp |   |                  | X        | Х     |
|   |                                       |  | fferential 200mVp signal.   |             |  |   |               |   |                  |          |       |
|   | L CHARAC                              |  |   |             |  |   |               |   |                  |          |       |
| LED light er                                  | mission                               | Apply V=3.0 to 3.6V at the pin, then check if LED light is   |   |             |  | Green light shall be visible  |               |   |                  | X        | X     |
| (Green)<br>LED light emission                 |                                       | visible or not.  Apply V=3.0 to 3.6V at the pin, then check if LED light is                        |   |             |  | Amber light shall be visible  |               |   | X                | X        |       |
| (Amber)                                       | 111001011                             | visible or not.  |   |             |  | Arriber light shall be visible  |               |   |                  |          |       |
| MECHAI  | NICAL CH                              | A R A C T F  | PISTICS   |             |  | I   |               |   |                  |          |       |
|   |                                       |  |   | unmating    | with RF4-IR2                               | No lo   | neanae        | s hra   | akage and cracks | Х        | Τ.    |
| Mating Durability                             |                                       | (BF4-IR2) 1000 cycles of mating and unmating with BF4-IR2 socket.                                  |   |             |  | No looseness, breakage and cracks (Visual and data transmission check                         |               |   |                  | ^        |       |
|   |                                       |  |   |             |  | before and after test)  |               |   |                  | X        | -     |
| Vibration                                     |                                       | Vibration f  | or 2 hours in 3 directions, a   | t an ampl   | itude of 1.5mm                             | 1   |               |   |                  | Х        | -     |
|   |                                       |  | equency range 10 to 55 [Hz  | -           |  |   |               |   |                  |          |       |
| Shock   |                                       | 3 times and 3 directions with the acceleration   |   |             |  |   |               |   |                  | X        | -     |
| Fiber clamping strength                       |                                       | 490 [m/s²] in duration 11ms.  Loading tensile force to the fiber until break for same direction    |   |             |  | > 10N   |               |   |                  | X        | -     |
|   |                                       | with fiber 6   | XIT.  |             |  |   |               |   |                  |          |       |
| COUN  | NT D                                  | <br>ESCRIPTIO  | ON OF REVISIONS   |             | DESIGNED                                   | <u> </u>  |               | (   | CHECKED          | D/       | ATE   |
| <b>A</b> 0                                    |                                       |  |   | 1           |  |   |               |   |                  |          |       |
| REMARK  |                                       |  |   |             |  | A   | APPRO         | VED   | YY.HIYAMA        | 2022     | 21212 |
| Each tes                                      | st item shall b                       | e checked  | by mating with suitable receptacle connector                                  |             |  |   |               |   | TS.YAMAZAKI      | 20221208 |       |
| evaluatio                                     | n board (BF4-I                        | •  |   |             |  |   | DESIGI        | NED   | SK.AOYAMA        |          | 21206 |
| This spec                                     | cifications shee                      | t is based o   | is based on using BF4MC type in BF4-IR2.                                      |             |  | DRA   |               | ۷N  | SK.AOYAMA        | 20221206 |       |
| Note QT:Qualification Test, AT:Assurance Test |                                       |  |   |             |  |   | ELC-392024    |   |                  |          |       |
| שנ  | S                                     | PECIFICATION SHEET   |   |             | PART NO.                                   | D. BF4-IR2IR2-01-   |               | -IR2IR2-01-4M   | IM               |          |       |
| 11/7  | HIR                                   | OSE ELECTRIC CO., LTD.   |   |             | CODE NO.                                   | NO. CL0831-1276-0-00  |               | 276-0-00  | Δ                | 1/2      |       |
|   | UD0011 2 1                            | _  |   |             | _  | _   |               |   |                  |          |       |

|   |              | SPECIFIC/   | ATIONS     |   |                   |     |       |
|---|--------------|---|------------|---|-------------------|-----|-------|
| ITE   | ΕM           | TEST METHOD   |            | RE  | QUIREMENTS        | QT  | АТ    |
| ENVIRON   | MENTAL       | . CHARACTERISTICS   |            |   |                   |     |       |
| Transportation and storage temperature and humidity load as Testmethod Start at 23 deg.C⇒-20 deg.C (72hours) = (Ramp up time 1.5hours) ⇒23 deg.C⇒ (Ramp down time 1.2hours) ⇒23 deg.C⇒ +60 deg.C, 90%Rh (72hours) ⇒23 deg.C |              |   | low        | No looseness, breakage and cracks<br>(Visual and data transmission check<br>before test, intermediate test and after<br>test) |                   | X   | -     |
| Temperature   | cycling test | -40 to 85 degree Celsius with dwell time of 10r 100 cycles  | nin,       |   |                   | Х   | -     |
| High temprerature 85 degree Celsius , 1000 hours storage  |              |   |            |   |                   | X   | -     |
| Low temperates<br>storage   | ture         | -40 degree Celsius, 1000 hours  |            |   |                   | Х   | -     |
| Temperature<br>Humidity cycl  |              | Temperature, Humidity: -10 ⇔ 65 degree Cels w/o applying current.  Number of cycle: 10 cycles, Cycle time: 24 h  No humidity control RH93  65°C  10°C  10°C | ours/cycle |   |                   | X   | -     |
| ESD tolerance   |              | (BF4-IR2) Applied voltage 2kV (Human Body N   |            |   |                   | X   |       |
| Note QT:Qu  |              | st AT:Assurance Test X:Applicable Test  | DRAWIN     | NG NO.  | NO. ELC-392024-00 |     |       |
| HS.   |              | PECIFICATION SHEET  | PART NO.   |   | F4-IR2IR2-01-4N   | . 1 | 0 / 0 |
|   | HIR          | OSE ELECTRIC CO., LTD.  | CODE NO    | CL083   | 1-1276-0-00       | Δ   | 2/2   |