
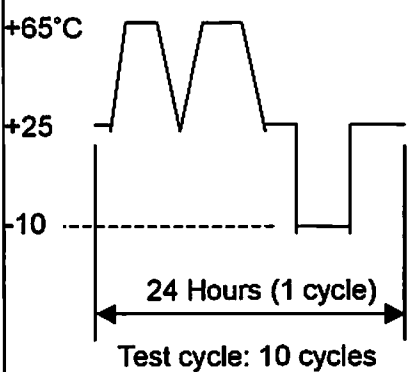
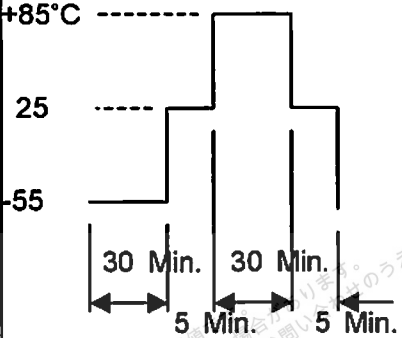


| HONDA TSUSHIN KOGYO CO., LTD. TOKYO JAPAN | | Sheet | 1 of 4 | | | | | | | | | |
|---|---------------------------------------|---|-----------------------------|-------------------------------------|-----------------------|---------------------------------------|----------------------|-----------|------------------|-------------|-------------|------------------|
| | | Date | March 10, 2003 | | | | | | | | | |
| PRODUCT SPECIFICATION SFP (Small Form Factor Pluggable) receptacle connector (0.8mm pitch right angle SMT) | | Approved by | Checked by | Written by | | | | | | | | |
| | | <i>K. Onishi</i> K. Onishi | <i>K. Kasai</i> K. Kasai | <i>K. Yotsutani</i> K. Yotsutani | | | | | | | | |
| | |  | Apr.22.2003 | K.Y | | | | | | | | |
| | | LTR. | Date | By | | | | | | | | |
| | | | | New Rev. | | | | | | | | |
| | | | | Rev. description | | | | | | | | |
| 1. Connector part number | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Connector part number</th> <th>Gold plating thickness on mating area</th> <th>Mating PCB thickness</th> </tr> </thead> <tbody> <tr> <td>AKX-20LFY</td> <td>0.38 micrometers</td> <td rowspan="2">0.9 ~ 1.1mm</td> </tr> <tr> <td>AKX-20LFYG1</td> <td>0.76 micrometers</td> </tr> </tbody> </table> | | | | | Connector part number | Gold plating thickness on mating area | Mating PCB thickness | AKX-20LFY | 0.38 micrometers | 0.9 ~ 1.1mm | AKX-20LFYG1 | 0.76 micrometers |
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| AKX-20LFYG1 | 0.76 micrometers | | | | | | | | | | | |
| 2. Specification | | | | | | | | | | | | |
| No. | Item | Specification | | | | | | | | | | |
| 1 | Current Rating | 0.5 Amp DC maximum per contact | | | | | | | | | | |
| 2 | Voltage Rating | 30 Volts AC (r.m.s.) | | | | | | | | | | |
| 3 | Operating Temperature | -40°C ~ 85°C | | | | | | | | | | |
| 4 | Storage Temperature | -40°C ~ 85°C | | | | | | | | | | |
| 5 | Humidity | 85%RH maximum | | | | | | | | | | |
| 6 | Differential Impedance | 100Ω ±15% | | | | | | | | | | |
| 7 | Insulation Resistance | When tested in accordance with method 302 of MIL-STD-202F, insulation resistance shall be a minimum of 1000 MΩ at 250 volts DC. After humidity temperature cycling and thermal shock tests, it shall be a minimum of 100MΩ. | | | | | | | | | | |
| 8 | Dielectric Withstanding Voltage | When tested in accordance with method 301 of MIL-STD-202F, there shall be no breakdown of insulation or flashover at 300 volts AC (r.m.s) for a minute. | | | | | | | | | | |
| 9 | Contact Resistance | When tested in accordance with method 3002.1 of MIL-STD-1344, contact resistance shall not exceed 50mΩ including conductor resistance. After environment and mechanical tests, it shall not exceed 70mΩ. | | | | | | | | | | |

| No. | Item | Specification |
|-----|---|--|
| 10 | Mating PCB Insertion and Withdrawal Force | <p>Mating PCB insertion and withdrawal force with connector shall satisfy following vales.</p> <p>Insertion Force: The force required to insert mating PCB into the connector shall not exceed 40N.</p> <p>Withdrawal Force: The force required to withdraw mating PCB from the connector shall not exceed 11.5N.</p> |
| 11 | Durability | <p>When tested in accordance with JIS C5402 6.3, there shall be no physical damage to the connector. After test, contact resistance shall not exceed 70mΩ and mating PCB insertion and withdrawal force shall satisfy the values in item #10.</p> <p>Test cycles: 100 cycles Mating speed: 400 ~ 600 cycles per hour</p> |
| 12 | Vibration | <p>When tested in accordance with method 204D of MIL-STD-202F, test condition B, there shall be no physical damage to the connector. During vibration, there shall be no discontinuity of test circuit greater than 1 microsecond. (100mA DC of current is applied to the circuit.) After test, contact resistance shall not exceed 70mΩ.</p> <p>Frequency: 10Hz ~ 500Hz Acceleration: 98m/s² peak</p> |
| 13 | Shock | <p>When tested in accordance with method 213B of MIL-STD-202F, test condition C, there shall be no physical damage to the connector. During test, there shall be no discontinuity of test circuit greater than 1 microsecond. (100 mA DC of current is applied to the circuit.) After test, contact resistance shall not exceed 70 mΩ.</p> <p>Acceleration: 490 m/s² Shock pulse: Half sine pulse of 11 milliseconds</p> |
| 14 | Humidity Temperature Cycling | <p>When tested in accordance with method 106E of MIL-STD-202F, there shall be no physical damage to the connector. After test, insulation resistance shall be no less than 100 MΩ and there shall be no breakdown of insulation or flashover at 300 volts AC (r.m.s) for a minute. Contact resistance shall not exceed 70mΩ as well.</p>  <p>The diagram shows a temperature cycling waveform. The vertical axis represents temperature in degrees Celsius, with marked levels at +65, +25, and -10. The horizontal axis represents time. One cycle is defined as 24 hours. The waveform starts at +25°C, rises to +65°C, stays there for a period, then falls to +25°C, stays there for a period, then falls to -10°C, stays there for a period, and finally returns to +25°C. A double-headed arrow below the waveform indicates that the entire sequence from the first +25°C level to the next +25°C level constitutes one 24-hour cycle. Below the diagram, it is noted that the total test cycle consists of 10 cycles.</p> |

| No. | Item | Specification |
|-----|---------------------------------|--|
| 15 | Thermal Shock | <p>When tested in accordance with method 107G of MIL-STD-202F, test condition A, there shall be no physical damage to the connector. After test, insulation resistance shall be no less than 100 MΩ and there shall be no breakdown of insulation or flashover at 300 volts AC (r.m.s) for a minute. Contact resistance shall not exceed 70mΩ as well.</p>  <p>Test cycle: 5 cycles</p> |
| 16 | High Temperature Life | <p>When tested in accordance with method 108A of MIL-STD-202F, there shall be no physical damage to the connector. After test, contact resistance shall not exceed 70mΩ. Temperature: +85°C Test time: 250 hours</p> |
| 17 | Cold Resistance | <p>When tested in accordance with JIS C 5402, 7.9, there shall be no physical damage to the connector. After test, contact resistance shall not exceed 70mΩ. Temperature: -55°C Test time: 96 hours</p> |
| 18 | Corrosion (Salt water spray) | <p>When tested in accordance with method 101E of MIL-STD-202G, test condition B, there shall be no any excessive corrosion on the every part of connector. After test, contact resistance shall not exceed 70mΩ. Concentration: 5% Temperature: +35°C Test time: 48 hours</p> |
| 19 | Mixed Flowing Gas | <p>When tested in accordance with test condition class 2 of EIA-364-65A, there shall be no any excessive corrosion on the every part of connector. After test, contact resistance shall not exceed 70mΩ. Concentration: H₂S: 10ppb NO₂: 200ppb CL₂: 10ppb SO₂: 100ppb Temperature: +30°C Test time: 14 days</p> |

| No. | Item | Specification |
|-----|---------------------------|---|
| 20 | Solderability | When tested in accordance with method 208E of MIL-STD-202G, contact termination shall be 95% covered with new continuous solder coating. Solder temperature: $+245 \pm 5^{\circ}\text{C}$ Test time: 5~10 seconds |
| 21 | Resistance to Solder Heat | When exposed to the following soldering condition per each category, there shall be no any excessive thermal damage on the every part of connector. Hand soldering: Soldering iron temperature: $350 \pm 10^{\circ}\text{C}$ Soldering time: 2~3 seconds Re-flow soldering: Peak temperature: $250 \pm 5^{\circ}\text{C}$ Soldering temperature: 230°C minimum for 30 ± 10 seconds Pre heating temperature: $150 \sim 180^{\circ}\text{C}$ for 90 ± 10 seconds The number of re-flow soldering is limited to two times. |

Temperature profile

