

SLP...R/S - 2

SPEC No. SC-SLP 01

作成日: 61年10月28日			一般向			
作成	チェック	承認	提出先	特定客先向 (客先名)		
萩 61.10.28 原佳	高 61.10.28 井	浅 61.10.29 井		提出No. BJS-		
<特記事項> 但し後日 話約の見直し要 (又. 6) 。輸土に移管						
<div style="text-align: center;"> 天 61.11.14 庭 </div>						
改訂	改訂内容			日付	担当	認

SPECIFICATION FOR
LOW PROFILE TYPE ZIFLOK
SLP__R/S - 2

1. SCOPE

This specification stipulates the connector to which the edge of 1.25mm pitch FPC(Flexible Printed Circuit Board) is connected by zero insertion force.

2. APPLICABLE STANDARDS

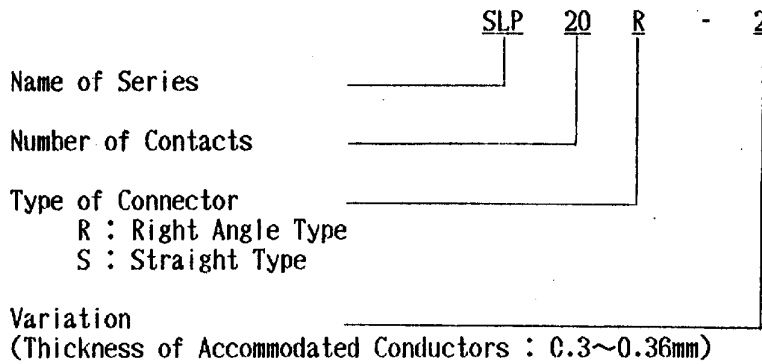
JIS - C - 5402

Methods for Test of Connectors for Electronic Equipment.

UL 94

Plastic Materials for Parts in Devices and Appliances, Test for Flammability of.

3. CATALOG NO. STRUCTURE



4. SHAPE, DIMENSIONS

See attached drawings.

5. MATERIALS

See attached drawings.

6. ACCOMMODATED CONDUCTORS (FPC)

See attached drawings.

7. ACCOMMODATED P.C. BOARD

(P.C. Board on which the connectors are installed.)

See attached drawings.

8. RATING

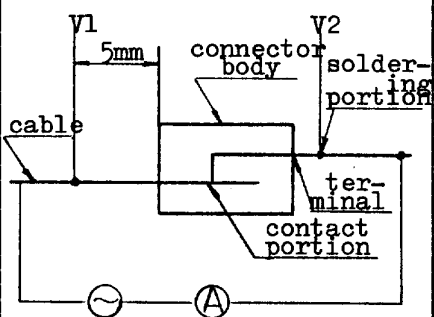
- 8 - 1 Voltage : A.C.200V
- 8 - 2 Current : 1A (refer to note)
- 8 - 3 Operating temperature range : -55°C ~ + 85°C

(Note) Maximum allowable current per pin is 1A.
 Total current for the whole connector varies upon the number of contacts as shown in the following table.

Number of contacts	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Total current (A)	1.4	1.6	1.7	1.9	2.0	2.2	2.3	2.4	2.6	2.7	2.9	3.0	3.2	3.4	3.6	3.8	4.0

9. PERFORMANCE CHARACTERISTICS

9 - 1 Electrical Performance

No.	Test Item	Test Procedure	Performance
9-1-1	Contact Resistance	<p>Measure contact resistance between the points V1 and V2 shown in the following circuit by the voltage drop method.</p>  <p>1) Open circuit voltage : less than 20mV 2) Test current : less than 20mA</p>	<p>Initial value : less than 30mΩ</p> <p>Contact resistance after the test must be referred to the table of the specified value in each test item.</p>

No.	Test Item	Test Procedure	Performance
9-1-2	Insulation Resistance	1) Measure insulation resistance between adjacent contacts of the connector individual. 2) Test voltage D.C.500V. 3) Read the value after one minute when test voltage applied.	More than 1000 M Ω
9-1-3	Dielectric Withstanding Voltage	1) Apply A.C.500V one minute between adjacent contacts of the connector individual. 2) Set current : A.C.1mA.	Free from short circuit or insulation breakdown.

9 - 2 Mechanical Performance

No.	Test Item	Test Procedure	Performance
9-2-1	Durability (Slider Operation)	1) Measure contact resistance before and after the test according to the method specified in clause 9-1-1 by using the accommodated conductors stipulated in clause 6. 2) Number of ON-OFF operations of slider : 20 times. (Accommodated conductor must be inserted in and pulled out for each slider ON-OFF operation)	1) Initial contact resistance : less than 30 m Ω 2) Contact resistance after the test : less than 50m Ω 3) Free from any failure such as breaking & etc. of the connectors and the conductors.
9-2-2	Vibration	(JIS - C - 5025 Condition B) 1) Kind of test : Sweep durability test 2) Frequency range : 10 ~ 500 Hz 3) Full amplitude or acceleration speed : 1.5mm or 10G 4) Sweep speed : about 15 minutes with the cycles of 10-500-10Hz. 5) Test time : 2 hours for each axis. (Total 6 hours)	1) No chattering (No circuit opening) for more than 1 μ sec. during the test. 2) Free from breaking, deforming, and falling off etc. of any portion of the connectors.

9 - 3 Environmental Performance

No.	Test Item	Test Procedure	Performance
9-3-1	Damp Heat (Steady State)	(JIS - C - 5023) 1) Measure contact resistance before and after the test according to the method specified in clause 9-1-1 by using the accommodated conductor stipulated in clause 6. 2) After the test, measure insulation resistance according to the method specified in clause 9-1-2. 3) Bath temperature : 40°C 4) Bath humidity : 90~95% 5) Test time : 48 hours 6) After mating the conductors and the connectors, expose them in the air. Dry naturally after finished posttreatment. (Without making insertion or extraction)	1) Initial contact resistance : less than 30 mΩ 2) Contact resistance after the test : less than 50mΩ 3) Insulation resistance after the test : more than 100 MΩ
9-3-2	Salt Spray	(JIS - C - 5028) 1) Measure contact resistance before and after the test according to the method specified in clause 9-1-1 by using the accommodated conductor stipulated in clause 6. 2) Chamber density : 5% 3) Test time : 48 hours 4) After mating the conductors and the connectors, expose them in the air. Dry naturally after finished posttreatment.(24 hours)	1) Initial contact resistance : less than 30 mΩ 2) Contact resistance after the test : less than 50mΩ

No.	Test Item	Test Procedure	Performance															
9-3-3	Change of Temperature	<p>(JIS - C - 5030)</p> <p>1) Measure contact resistance before and after the test according to the method specified in clause 9-1-1 by using the accommodated conductor stipulated in clause 6.</p> <p>2) One cycle of temperature variation is shown in the following table. Test for 5 cycles of the variation.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Step</th> <th>Temp.(℃)</th> <th>Time (minute)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55 ± 3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25 ± 2</td> <td>0~3</td> </tr> <tr> <td>3</td> <td>85 ± 2</td> <td>30</td> </tr> <tr> <td>4</td> <td>25 ± 2</td> <td>0~3</td> </tr> </tbody> </table> <p>3) After mating the conductors and the connectors, expose them in the air under normal temperature.</p>	Step	Temp.(℃)	Time (minute)	1	-55 ± 3	30	2	25 ± 2	0~3	3	85 ± 2	30	4	25 ± 2	0~3	<p>1) Initial contact resistance : less than 30 mΩ</p> <p>2) Contact resistance after the test : less than 50mΩ</p> <p>3) Free from crack, warp and deformation etc. of connectors</p>
Step	Temp.(℃)	Time (minute)																
1	-55 ± 3	30																
2	25 ± 2	0~3																
3	85 ± 2	30																
4	25 ± 2	0~3																

9 - 4 Other Performances

No.	Test Item	Test Procedure	Performance						
9-4-1	Resistance to Soldering Heat	<p>(JIS - C - 5034)</p> <p>The connectors are mounted on the P.C. Board and soldered by the following conditions.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Soldering Bath Temp.(℃)</th> <th>Dipping Time (sec.)</th> </tr> </thead> <tbody> <tr> <td>350 ± 10</td> <td>3 + 1 0</td> </tr> <tr> <td>250 ± 5</td> <td>10 ± 1</td> </tr> </tbody> </table>	Soldering Bath Temp.(℃)	Dipping Time (sec.)	350 ± 10	3 + 1 0	250 ± 5	10 ± 1	Free from any damage, regarding feature and contact performance after the test.
Soldering Bath Temp.(℃)	Dipping Time (sec.)								
350 ± 10	3 + 1 0								
250 ± 5	10 ± 1								

No.	Test Item	Test Procedure	Performance				
9-4-2	Solderability	<p>(JIS - C - 5033) The connectors are mounted on P.C. Board after dipping into less active Rosin family flux and soldered in accordance with the following condition.</p> <table border="1"> <tr> <td>Soldering Bath Temp. (°C)</td> <td>Dipping Time (sec.)</td> </tr> <tr> <td>230 ± 5</td> <td>5 ± 0.5</td> </tr> </table>	Soldering Bath Temp. (°C)	Dipping Time (sec.)	230 ± 5	5 ± 0.5	Actual soldered area must be more than 90% of the specified area to be soldered.
Soldering Bath Temp. (°C)	Dipping Time (sec.)						
230 ± 5	5 ± 0.5						
9-4-3	Retension Force of Conductors (FPC) ↓ (Reference data)	Measure initial value of pulling off force after inserted and locked by using the accommodated conductors stipulated in clause 6.	More than 100g / contact.				

10. Indication & Packaging

10 - 1 Indication

- 1) The catalog number and lot number of the connectors are not indicated on the connector itself.
- 2) Catalog number, quantity and name of Manufacturers are indicated on the package box.

10 - 2 Packaging

The connector individuals are put into the package box with specified quantity in accordance with the method specified in the packaging specification.

11. Remarks

11 - 1

Since the retension force for the conductor specified in clause 9-4-3 varies upon kind, structure and surface treatment of the conductors, values of retension force stipulated for each performance characteristics are to be used as reference value.

11 - 2

As CIC (Conductive Ink Circuitry) can not be used as the conductors accommodated for the connectors, please consult us on this matter separately.