

Honda Tsushin Kogyo Co., Ltd.		Date issued		August. 4, 2004	
Product Specification 0.4 mm pitch fine coaxial cable plug and board receptacle.		Approved by		Checked by	
		K. Ohnishi		K. Kasai	
		M. Maruishi		M. Maruishi	
		2	Jan. 05, 2005	M. Maruishi	Change item.
		1	Aug. 24, 2004	H. Aizawa	Added 40 pos.
		LTR.	Date	By	Description

1. Connector part number $\triangle 1$

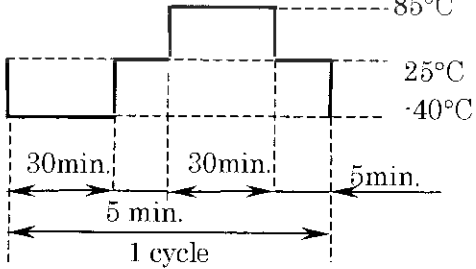
Connector part number	No. of pos.	Description
LVX-A30LMSG+	30 pos.	0.4 mm pitch fine coaxial cable plug.
LVX-A40LMSG+	40 pos.	
LVX-A30SFYG+	30 pos.	0.4 mm pitch fine coaxial board receptacle.
LVX-A40SFYG+	40 pos.	


2. Ratings

No.	Item	Specification
2-1	Current rating	0.2 A DC maximum per contact
2-2	Voltage rating	100 V AC (r.m.s.)
2-3	Operating temperature	-20 °C to +70 °C
2-4	Relative humidity	95 % RH maximum

3. Characteristics

No.	Item	Specification
3-1	Insulation resistance	When tested in accordance with EIA 364-21, the initial insulation resistance shall be a minimum of 1000 M Ω at 250V DC. After test, the insulation resistance shall be a minimum of 100M Ω at 250V DC
3-2	Dielectric withstanding voltage	When tested in accordance with EIA 364-20, there shall be no breakdown of insulation or flashover at 250 V AC (r.m.s) for a minute.
3-3	Contact resistance (Low level)	When tested in accordance with EIA 364-23, the initial contact resistance shall not exceed 100 m Ω including the conductor resistance. After test, change in the contact resistance before and after test shall not exceed 40 m Ω .

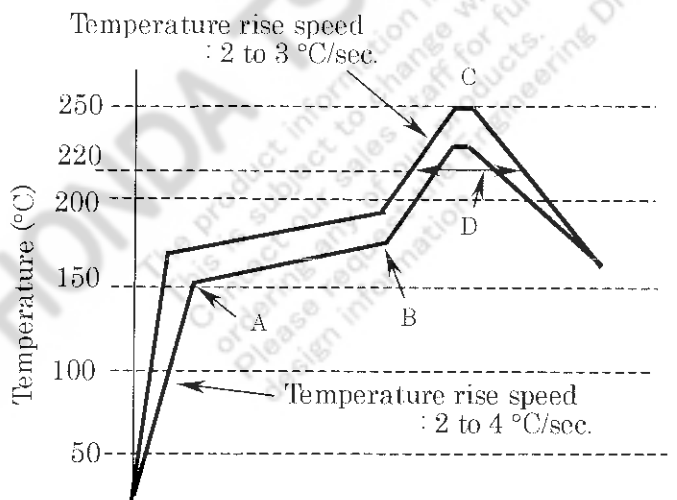
No.	Item	Specification																			
3-4	Connector insertion and withdrawal force (overall)	<p>· Insertion force The force required to insert a cable plug into the mating board receptacle connector shall not exceed the value in the below table.</p> <p>· Withdrawal force The force required to withdraw a cable plug from the mated board receptacle in the mating direction (Not pulling cable) shall not less than the value in the below table.</p> <p style="text-align: right;">Unit: N</p> <table border="1" data-bbox="663 698 1417 860"> <thead> <tr> <th rowspan="2">No. of pos.</th> <th colspan="2">Insertion force</th> <th colspan="2">Withdrawal force</th> </tr> <tr> <th>Initial</th> <th>After test</th> <th>Initial</th> <th>After test</th> </tr> </thead> <tbody> <tr> <td>30</td> <td>49</td> <td>49</td> <td>5</td> <td>3</td> </tr> <tr> <td>40</td> <td>52</td> <td>52</td> <td>6.3</td> <td>4.3</td> </tr> </tbody> </table> <p>△1</p>	No. of pos.	Insertion force		Withdrawal force		Initial	After test	Initial	After test	30	49	49	5	3	40	52	52	6.3	4.3
No. of pos.	Insertion force			Withdrawal force																	
	Initial	After test	Initial	After test																	
30	49	49	5	3																	
40	52	52	6.3	4.3																	
3-5	Temperature life	<p>When tested in accordance with the following conditions, there shall be no remarkable physical damage to the connector.</p> <p>After test, the insulation resistance shall meet the item No.3-1, dielectric withstanding voltage shall meet the item No.3-2, contact resistance shall meet item No.3-3 and connector insertion and withdrawal force shall meet item No.3-4.</p> <p>Temperature: 85 °C Test time: 1000 hours</p>																			
3-6	Cold resistance	<p>When tested in accordance with the following conditions, there shall be no remarkable physical damage to the connector.</p> <p>After test, the insulation resistance shall meet the item No.3-1, dielectric withstanding voltage shall meet the item No.3-2, contact resistance shall meet item No.3-3 and connector insertion and withdrawal force shall meet item No.3-4.</p> <p>Temperature: -40 °C Test time: 1000 hours</p>																			
3-7	Thermal shock	<p>When tested in accordance with the following conditions, there shall be no remarkable physical damage to the connector.</p> <p>After test, the insulation resistance shall meet the item No.3-1, dielectric withstanding voltage shall meet the item No.3-2, contact resistance shall meet item No.3-3 and connector insertion and withdrawal force shall meet item No.3-4.</p> <p>Temperature: -40 to 85 °C Test cycle: 200 cycles</p> 																			

No.	Item	Specification
3-8	Mixed flowing gas 	When tested in accordance with EIA364-65, environment class 1, there shall be no remarkable physical damage to the connector. After test, contact resistance shall meet item No.3-3. Concentration: Cl ₂ gas: 10 ppb NO ₂ gas: 200 ppb H ₂ S gas: 10 ppb Temperature: 30 °C Relation humidity: 70 % Test time: 7 days
3-9	Vibration	When tested in accordance with the following conditions, there shall be no remarkable physical damage to the connector. During test, there shall be no discontinuity of the test circuit greater than 1 microsecond (100 mA DC of current is applied to the circuit). After test, contact resistance shall meet item No.3-3. Sweep time (10 to 150 Hz): 20 minutes Amplitude: 1.5 mm (10 to 55 Hz) Acceleration: 49 m/s ² (55 to 150 Hz) Test time: 2 hours in each of 3 mutually perpendicular directions.
3-10	Physical shock	When tested in accordance with the following conditions, there shall be no remarkable physical damage to the connector. During test, there shall be no discontinuity of the test circuit greater than 1 microsecond (100 mA DC of current is applied to the circuit). After test, contact resistance shall meet item No.3-3. Half sine wave Acceleration: 980 m/s ² Standard holding time: 6 msec. Number of test time: 3 times in each of 6 mutually perpendicular directions.

No.	Item	Specification
3-11	Durability	<p>When tested in accordance with the following conditions, there shall be no remarkable physical damage to the connector.</p> <p>After test, the insulation resistance shall meet the item No.3-1, dielectric withstanding voltage shall meet the item No.3-2, contact resistance shall meet item No.3-3 and connector insertion and withdrawal force shall meet item No.3-4.</p> <p>Test cycles: 30 cycles Mating speed: 200 cycles per hour</p>
3-12	Humidity	<p>When tested in accordance with the following conditions, there shall be no remarkable physical damage to the connector.</p> <p>After test, the insulation resistance shall meet the item No.3-1, dielectric withstanding voltage shall meet the item No.3-2, contact resistance shall meet item No.3-3 and connector insertion and withdrawal force shall meet item No.3-4.</p> <p>Temperature: 60 °C Relation humidity: 95 % Test time: 24 hours</p>
3-13	Temperature rise	<p>When 0.2 A DC is passed through each contacts, the change in connector temperature before and after test shall not exceed 30 °C.</p>

4. Recommended Re-flow soldering temperature profile

Solder paste: Sn96.5 / Ag3.0 / Cu0.5



- (1) A (Pre-Heating starting point)
150 to 170 °C
- (2) B (Pre-Heating terminal point)
170 to 190 °C
- (3) Time between A and B
90 +/- 30 seconds.
- (4) C (Peak temperature)
230 to 250 °C
- (5) D (Time more than 220 °C)
30 to 40 seconds.

Note: Adjust re-flow soldering condition with the re-flow machine using connector samples before production because the condition is affected by the circumstance with PC Board size and devices to be mounted.