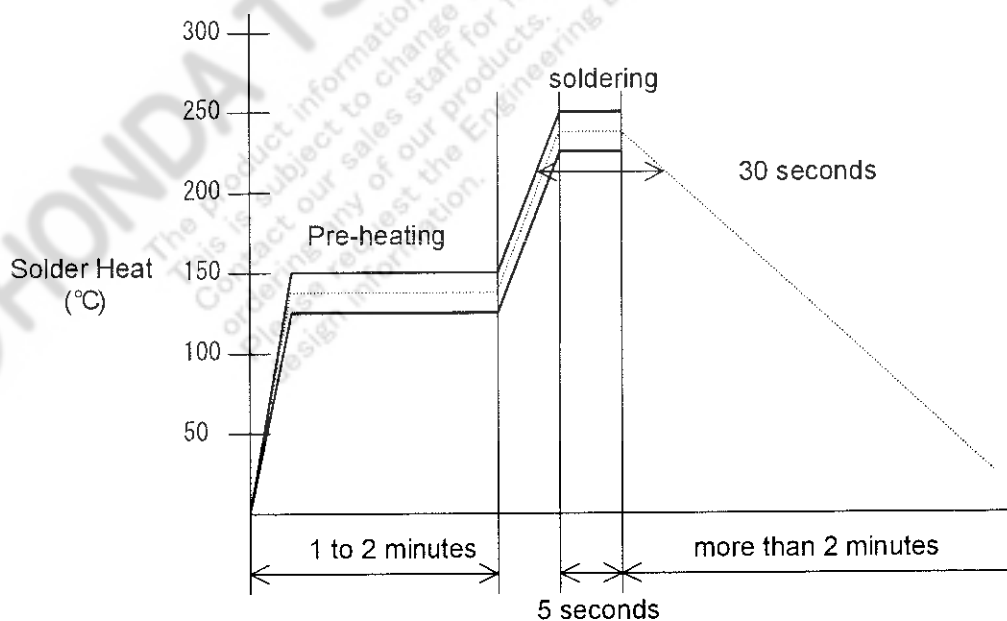


HONDA TSUSHIN KOGYO CO., LTD. TOKYO JAPAN		Sheet	1 of 4							
		Date	Dec.1.2005							
PRODUCT SPECIFICATION  SERIAL ATA CONNECTOR		Approved by	Checked by	Written by						
		<i>K. Ohnishi</i> K. Ohnishi	<i>K. Kasai</i> K. Kasai	<i>M. Kasahara</i> M. Kasahara						
		LTR.	Date	By						
				Description						
<u>Connector part number</u>										
		<table border="1"> <thead> <tr> <th>Connector part number</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>HSA-SP22SFDG</td> <td>22 pos. vertical DIP host receptacle connector</td> </tr> <tr> <td>HSA-SP22LMYG</td> <td>22 pos. right-angle SMT Device plug connector</td> </tr> </tbody> </table>			Connector part number	Description	HSA-SP22SFDG	22 pos. vertical DIP host receptacle connector	HSA-SP22LMYG	22 pos. right-angle SMT Device plug connector
Connector part number	Description									
HSA-SP22SFDG	22 pos. vertical DIP host receptacle connector									
HSA-SP22LMYG	22 pos. right-angle SMT Device plug connector									
<u>CHARACTERISTICS</u>										
No.	Item	Specification								
1	Current rating	1.5 A DC maximum per contact								
2	Voltage rating	100 V AC (r.m.s.)								
3	Operating temperature	-20 °C to 85 °C								
4	Storage temperature	-20 °C to 85 °C								
5	Humidity	95 % RH maximum								
6	Insulation resistance	When tested in accordance with of EIA 364-21, the insulation resistance shall be a minimum of 1000 MΩ after test at 500 V DC for a minute.								
7	Dielectric withstanding voltage	When tested in accordance with Method B of EIA 364-20 , there shall be no breakdown of insulation or flashover at 500 V AC (r.m.s) for a minute.								
8	Contact resistance (Low level)	When tested in accordance with EIA 364-23, the contact resistance shall not exceed 30 mΩ including the conductor resistance. After test, change in the contact resistance shall not be more than 15 mΩ.								

No.	Item	Specification
9	Insertion force	The force required to insert connector into the mating one shall not exceed 20N .
10	Removal force	The force required to withdraw connector from the mating one shall not be less than 5N.
11	Durability	When subjected to 500 cycles of insertion and withdrawal with mating connector at the rate of 200 cycles per hour, there shall be no evident damage to the connector such as cracking. After the test, the change in the contact resistance shall not exceed 15 mΩ.
12	Random Vibration	When tested in accordance with EIA 364-28, Condition V Test letter A (Frequency: 50 Hz to 2000 Hz) there shall be no physical damage to the connector. During vibration, there shall be no discontinuity of the test circuit greater than 1 micro sec. (100 mA DC of current is applied to the circuit.) After the test, the with out evidence of deformation or other physical damage.
13	Physical Shock	When tested in accordance with EIA 364-27, Test condition H (h-sine wave, Acceleration: 294 m/s <sup>2</sup> , Normal duration: 11 msec.), there shall be no physical damage to the connector. During the test, there shall be no discontinuity of the test circuit greater than 1 micro sec. (100 mA DC of current is applied to the circuit.) After the test, the change in the contact resistance shall not exceed 15 mΩ.
14	Humidity	When tested in accordance with Method II of EIA 364-31 , Test condition A (Temperature: 40 °C, Humidity: 90 to 95 %RH, Test time: 96 hours) with the mating connector engaged. After the test, the insulation resistance shall be a minimum of 1000 Mohms, there shall be no breakdown of insulation or flashover at 500 VAC (r.m.s) for a minute
15	Thermal shock	When tested in accordance with EIA 364-32 , Test Condition I (Subject mated connectors to 10 cycles between -55° C and +85° C) , there shall be no evident physical damage to the connector. After the test, the with out evidence of deformation or other physical damage.

No.	Item	Specification
16	Temperature life	When tested in accordance with Method A of EIA 364-17 , Test Condition III (Temperature: 85 °C, Test time: 500 hours), there shall be no evident physical damage to the connector. After the test, the change in the contact resistance shall not exceed 15 mΩ.
17	Mixed flowing gas	When tested in accordance with EIA 364-65, Class 2A , there shall be no any excessive corrosion on the every part of connector. After the test, the change in the contact resistance shall not exceed 15 mΩ.
18	Solderability	<p>In the following condition, there shall be no any excessive thermal damage on the every part of connector.</p> <p>Soldering                      Solder bath temperature: 260°C ± 5°C                      Soldering time: : 10± 1 seconds                      Soldering iron temperature: 350 °C ± 10 °C                      Soldering time: : 3<sup>+0.5/-0</sup> seconds</p> <p>Re-flow soldering (Device plug):                      Temperature : 250 °C ± 5 °C (Peak) for 5 seconds,                      220 °C for 30 seconds (MAX.)</p>

Re- flow soldering temperature profile



No.	Item	Specification
19	Mated connector impedance (Signal receptacle, Device plug)	When measured the maximum and minimum values of the near end connector differential impedance by a time domain reflectometer (input risetime : 70 ps (20%-80%)), the differential impedance shall be a minimum of 85 ohms, a maximum of 115 ohms.(100 ohm +/- 15%)
20	Insertion loss(differential) (Signal receptacle, Device plug)	When measured the differential Insertion loss by a network analyzer (Frequency : 10 to 4500 MHz), the connector absolute differential Insertion loss shall be a maximum of 6 dB.
21	Near end crosstalk(differential) (Signal receptacle, Device plug)	When measured the near end crosstalk by a time domain reflectometer, the near end crosstalk shall be a maximum of 5 %.



**HONDA TSUSHIN KOUYO CO., LTD.**

The product information in this data is for reference only.  
 This is subject to change without notice.  
 Contact our sales staff for further information before consideration.  
 Please request the Engineering Drawing for the most current and accurate design information.