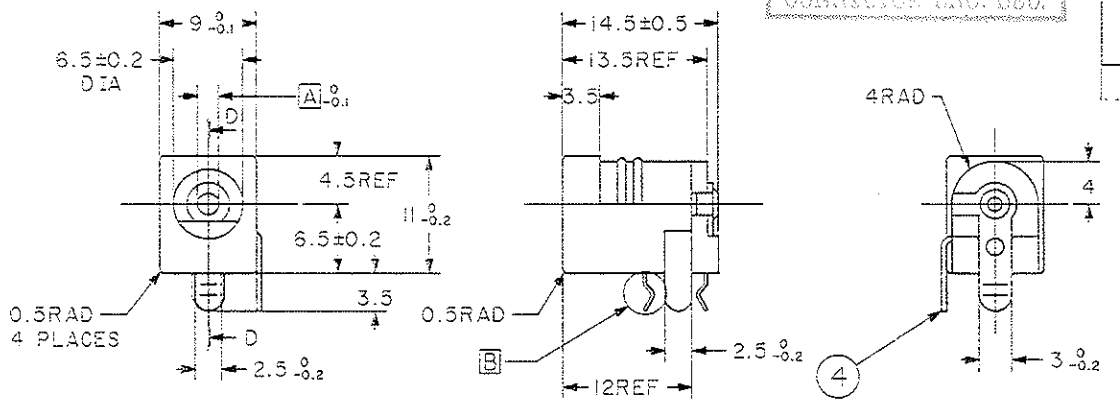


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CONNECTOR ENG. SEC.

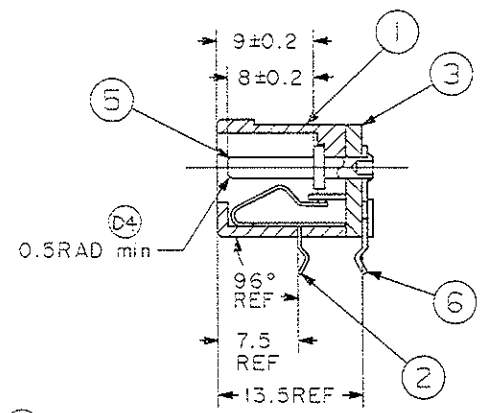
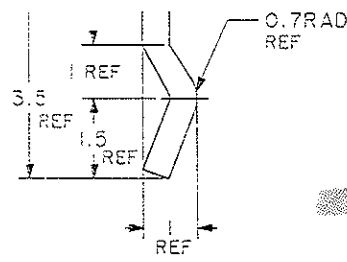
REVISION					
ZONE	LTR	DESCRIPTION	DATE	REVISED	APPROVED
F5		(1) REPLACES REV C WITH CHANGE			
F5		(2) ADDED NOTE 2.			
D10	D	(3) ADDED NOTE 3.	Sep.10.'99	N. Itohara	<i>Z. Nakai</i>
C10		(4) min WAS MIN			
		(5) ADDED SECTION D-D			
B5	B	(1) ADDED NOTES 4.	Apr.13.'00	Y. Higashikawa	<i>Z. Nakai</i>



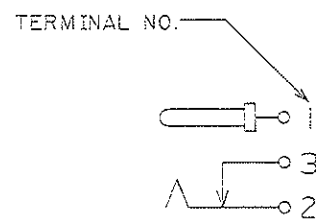
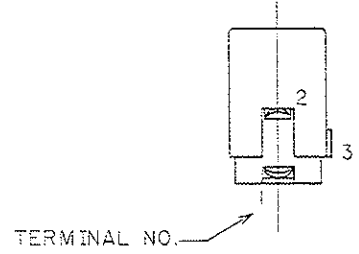
- NOTES:
- The specification of unit shall be accordance with SPEC. HECO998-01AE.
 - It is recommended to do the test of resistance to flux penetration and to soldering heat with customer's actual soldering condition.
 - Customer should not keep the jack in open air condition after opening the package because of silver plating.
 - The jack shall be fixed by case when used as a finished products.

HECO470-01-640	2.35 DIA	
HECO470-01-630	2.00 DIA	
MODEL NO.	DIM. Δ	REMARK

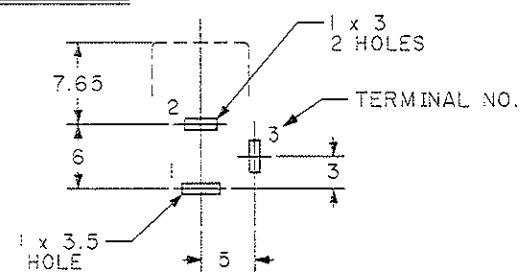
TABLE



SECTION D-D



CIRCUIT



P.C.B HOLE LAYOUT (REF.) (11.6)
(BOTTOM VIEW: TOLERANCE ±0.1)

LTR	PART NAME	QTY	MATERIAL	PLATING	COLOR	REMARK
6	P IN TERMINAL	1	0.5THK BRASS	SILVER		
5	P IN	1	BRASS	SILVER		
4	BREAK TERMINAL	1	0.5THK BRASS	SILVER		
3	PLATE	1	PBTP		BLACK	94V-0
2	MOVABLE TERMINAL	1	0.3THK Cu-TI ALLOY	SILVER		
1	BODY	1	PBTP		BLACK	94V-0

DWN	N. Itohara	DATE	Sep.10.'99	SCALE	2:1	NAME	HECO470 POWER JACK
CHKD	<i>A. Shikida</i>	DATE	Sep.22.'99	3RD ANGLE PROJECTION		MODEL NO.	SEE TABLE
APVD	<i>Z. Nakai</i>	DATE	Sep.22.'99			DWG NO.	HECO470-01-600AE No. 1

Hosiden Corporation
FACTORY: OSAKA TOKYO F.D.
 TOHOKU KYUSHU SEIKO

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCE ON DECIMALS ± 0.3 FRACTIONALS ± ANGLES ± DO NOT SCALE DRAWING

C.HEC.0470.010604.E

HOSIDEN CORPORATION SPECIFICATION

SPEC No. SPEC HEC0998-01AE

ISSUE DATE Nov, 27, 2003

PAGE 1 of 4

APPLICABLE DIVISION
Connector Engineering Department

MODEL No. Shown in the applicable drawing.

	NAME	DATE	SIGNATURE
WRITTEN BY	Y. Nakai	Nov, 27, 2003	<i>Y. Nakai</i>
CHECKED BY	K. Matsumoto	Nov, 27, 2003	<i>K. Matsumoto</i>
AUTHORIZED BY	Y. Shibano	Nov, 27, 2003	<i>Y. Shibano</i>

DATE	PAGE	LTR	REVISED	AUTHORIZED	DESCRIPTION
Nov. 27. 2003	/	△ (D)	Y. Nakai		Replaces rev. C with change.
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FOR THE FILE
 NOV 27 2003
 Hosiden Corporation
 CONNECTOR ENG. DIV.

Hosiden Corporation
 Factory

OSAKA
 TOKYO
 KOBE
 Hosiden F.D.
 Hosiden TOHOKU
 Hosiden KYUSHU
 Hosiden SEIKO

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REV. - 3, 2007

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SPECIFICATIONS

TITLE SPECIFICATION FOR DC POWER JACK NUMBER SPEC HEC0998-01 AE PAGE

1. General

1A Scope

This specification is applied to products that specify this specification in their drawing.
Whenever this specification conflicts with the applicable drawing or the individual specification, the latter shall govern.

2. Outline and dimensions

Outline and dimensions shall be shown in the applicable drawing and/or the individual specification to be applied.

3. Components and materials

Components and material shall be shown in the applicable drawing and/or the individual specification to be applied.

4. Mating Plug

4A Actual Plug

The actual plug shall be as shown on drawing of HEC0998-36GB.

4B Gauge Plug

The gauge plug shall be as shown on drawing of HEC0998-31GB.

5. Construction

Test Item		Test Condition	Requirement
5A	Contact gap	Gap of the break-contact after inserting plug. Gap of the make-contact before inserting plug.	0.3 mm or more.
5B	Distance between conductors	Distance between conductors not to make contact at normal condition, at process of inserting plug and at condition after inserting plug.	
5C	Contact timing	Timing connected to a jack in the process of inserting plug.	Not specified

6. Mechanical

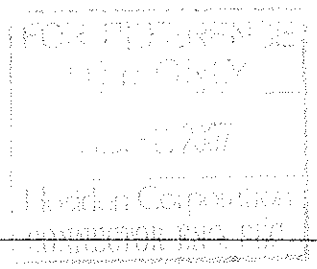
Test Item		Test Condition	Requirement
6A	Operation force	The force when a jack shall be inserted and extracted slowly after fixing a mating plug as shown in Section 4 to the push-pull scale.	Insertion force : 29.4 N or less Withdrawl force : 2.95 to 14.7 N
6B	Terminal strength	The force of 4.9 N shall be applied to the terminal for 10 sec in every direction.	Without loosening and breakdown. Terminal bend shall be accepted.

7. Electrical

Test Item		Test Condition	Requirement
7A	Contact resistance	To be measured at 1 kHz and 100 mA max. (When the measurement shall be made by a mating plug, oxidation film on the surface must be wiped.)	1) Between sleeve spring and plug : 50 mΩ or less. 2) Break terminals, Make terminals : 30 mΩ or less.
7B	Insulation resistance	To be measured between adjacent terminals at 500 V DC.	100 MΩ or more.
7C	Dielectric strength	500 V AC shall be applied between adjacent terminals for one minute at 50 Hz or 60 Hz.	No insulation breakdown

8. Environmental

Test Item		Test Condition	Requirement
8A	Life test	<p>Insertions and extractions of 5,000 cycles shall be made at rate of 20 to 30 cycles per minute.</p> <p>* Mating plug (made from steal or an actual plug) shall be applied a conductive grease for protection of overheating and abrasion produced by friction.</p>	<p>Insertion force : 29.4 N or less</p> <p>Withdrawl force : 1.97 to 14.7 N</p> <p>Contact resistance : Twice or less than the value of section 7A.</p>
8B	Heat test	<p>70±2 °C for 96 hours</p> <p>Measurement shall be made after remaining at room condition for 30 minutes.</p>	<p>To meet the requirements of Section 6A and Section 7</p> <p>No damage of sturcture and appearance.</p>
8C	Cold test	<p>-40±2 °C for 96 hours</p> <p>Measurement shall be made after remaining at room condition for 30 minutes.</p>	
8D	Humidity test	<p>40±2 °C, 90 to 95 % RH for 96 hours.</p> <p>Measurement shall be made after remaining at room condition for 30 minutes. Any water drops must be blown off.</p>	<p>Insulation resisitance : 50 MΩ or more.</p> <p>Others</p> <p>To meet the requirements of Section 6A and Section 7.</p> <p>No damge of structure and apperance.</p>
8E	Resistance of soldering heat	<p>This test shall be made at the condition as shown below after putting product on the PCB (one side copper foil).</p> <p>Solder material : Sn-3.0Ag-0.5Cu</p> <p>Thickness of PCB : refer to applicable drawing</p> <p>1) Dipped soldering</p> <p>The terminal shall be dipped in molten solder up to the surface of copper foil under following condition.</p> <p style="padding-left: 40px;">Solder pod temperature : 260±3 °C</p> <p style="padding-left: 40px;">Immersion time : 5⁺¹₀ s</p> <p>2) Hand soldering</p> <p>Hand soldering shall be made under following condition to be connected with solder between P.C.B and each terminals over all around.</p> <p style="padding-left: 40px;">Temperature : 380±10 °C</p> <p style="padding-left: 40px;">Time : 3⁺¹₀ s</p> <p>* Any accident by the flux flow in this test shall not be regared as a failure.</p>	<p>To meet the requirements of Section 6A and Section 7</p> <p>No damage of sturcture and appearance.</p>
8F	Solderability test	<p>The jack shall be maded with following condition.</p> <p>Solder material : Sn-3.0Ag-0.5Cu</p> <p>Solder temperature : 245±3 °C</p> <p>Immersion depth : 1 to 2 mm from the terminal tip</p> <p>Immersion speed : 1.75 to 2.0 mm/s</p> <p>Flux material : NA200 (TAMURA KAKEN) or equivalent.</p> <p>Flux immersion time : 3 to 5 s</p>	<p>Solder wetting time shall be 3 s or less.</p>





SPECIFICATIONS

TITLE SPECIFICATION FOR DC POWER JACK

NUMBER

SPEC HEC0998-01 AE

PAGE

9. Measurement Condition

Unless otherwise specified herein this specification, all measurement and test shall be made at following condition.

Temperature : 5 to 35 °C
Humidity : 45 to 85 %RH
Air pressure : 860 to 1060 hPa.

In case there is a doubt in a decision, however, they shall be made at at following condition.

Temperature : 20±2 °C
Humidity : 60 to 70 %RH
Air pressure : 860 to 1060 hPa.

10. Change of Specification

Change of this specification shall be made by the mutual agreement between manufacture and user.

In case there is a boubt on the production, you may ask issue and follow the indication.

11. Rating : 16V DC, 3A

