

JAPAN AVIATION ELECTRONICS IND., LTD. CONNECTOR DIVISION 日本航空電子工業株式会社 コネクタ事業部			SPECIFICATION TABLE 製品規格表		Connector Specification No. JACS-50001-E																																									
THIS SPECIFICATION TABLE CANNOT BE REPRODUCED WITHOUT WRITTEN CONSENT OF JAE. この製品規格表は日本航空電子工業株式会社の 許可のない限り複写を禁じます。					Connector Series Name 品名 JB5 Series																																									
					Applicable Drawing No. 製品図面 SJ100060、SJ100061																																									
					TK C																																									
Rev. 版数	Date 発行日	DCN No	Drawn by 担当	Checked by 査閲	Approved by 承認																																									
1	26.Aug.2003	—	T.Shimoyama T.Okamura	—	S. Nanao																																									
Standard data 定格																																														
Applicable Wire			AWG#28 MAX																																											
Rated Current			2A MAX per Contact																																											
Rated Voltage			200VAC																																											
Temperature Range			-55°C ~ +85°C																																											
<table border="1"> <thead> <tr> <th>Item</th> <th>Procedure 試験方法</th> <th>Requirement 規定</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">MECHANICAL 機械的性能</td> </tr> <tr> <td>Construction, Dimension & marking</td> <td>—</td> <td>As specified in the drawing</td> </tr> <tr> <td>Materials, Finish & Processing</td> <td>—</td> <td>As specified in the drawing</td> </tr> <tr> <td>Contact engagement and separation forces</td> <td>Measure the engagement and separation force of socket contact by pin contact. (MIL-STD-1344, METHOD 2014)</td> <td> <table border="1"> <tr> <th>Engagement force</th> <th>Separation force</th> </tr> <tr> <td>2.23N MAX</td> <td>0.14N MIN</td> </tr> </table> </td> </tr> <tr> <td>Vibration</td> <td>The current of 100mA is applied to the contacts connected in series, and the current discontinuities are measured Amplitude : 1.52mm or 98 m/s² Frequency : 10~500Hz 10~500~10Hz(15min/1 cycle) Each 3 hours for 3 axes.(Total : 9 hours) (MIL-STD-1344,METHOD 2005.1)</td> <td> During test : No electrical discontinuities more than 1μs After test : No mechanical failure of the parts. Dielectric withstanding voltage (750VAC) shall meet the requirement. </td> </tr> <tr> <td>Shock</td> <td>The current of 100mA is applied to the contacts connected in series, and the current discontinuities are measured Acceleration : 294m/s² Time : 11ms Wave form : Half-sine 3 times for 3 axes.(Total : 9 times) (MIL-STD-1344, METHOD 2004.1)</td> <td> During test : No electrical discontinuities more than 1μs After test : No mechanical failure of the parts. Dielectric withstanding voltage (750VAC) shall meet the requirement. </td> </tr> <tr> <td>Durability</td> <td>Mating and unmating of connector 5000 times at a speed not exceeding 300 times per hour. (MIL-STD-1344, METHOD 2016)</td> <td>Contact resistance, Contact engagement and separation force shall meet each requirement.</td> </tr> <tr> <td>Contact retention</td> <td>The axial load is applied to the contact from the mating side. (MIL-STD-1344, METHOD 2007)</td> <td> Contact retention force <table border="1"> <tr> <td>Initial</td> <td>9.8N MIN</td> </tr> <tr> <td>After test</td> <td>4.9N MIN</td> </tr> </table> </td> </tr> <tr> <td>Cable pull-out</td> <td>The load of 20N shall be applied to the connector cable installed as being used, in the direction shown as Fig.1. (MIL-STD-1344, METHOD 2009.1)</td> <td> <table border="1"> <tr> <td>Cable pull-out force</td> </tr> <tr> <td>20N MIN</td> </tr> </table> </td> </tr> </tbody> </table>							Item	Procedure 試験方法	Requirement 規定	MECHANICAL 機械的性能			Construction, Dimension & marking	—	As specified in the drawing	Materials, Finish & Processing	—	As specified in the drawing	Contact engagement and separation forces	Measure the engagement and separation force of socket contact by pin contact. (MIL-STD-1344, METHOD 2014)	<table border="1"> <tr> <th>Engagement force</th> <th>Separation force</th> </tr> <tr> <td>2.23N MAX</td> <td>0.14N MIN</td> </tr> </table>	Engagement force	Separation force	2.23N MAX	0.14N MIN	Vibration	The current of 100mA is applied to the contacts connected in series, and the current discontinuities are measured Amplitude : 1.52mm or 98 m/s ² Frequency : 10~500Hz 10~500~10Hz(15min/1 cycle) Each 3 hours for 3 axes.(Total : 9 hours) (MIL-STD-1344,METHOD 2005.1)	During test : No electrical discontinuities more than 1μs After test : No mechanical failure of the parts. Dielectric withstanding voltage (750VAC) shall meet the requirement.	Shock	The current of 100mA is applied to the contacts connected in series, and the current discontinuities are measured Acceleration : 294m/s ² Time : 11ms Wave form : Half-sine 3 times for 3 axes.(Total : 9 times) (MIL-STD-1344, METHOD 2004.1)	During test : No electrical discontinuities more than 1μs After test : No mechanical failure of the parts. Dielectric withstanding voltage (750VAC) shall meet the requirement.	Durability	Mating and unmating of connector 5000 times at a speed not exceeding 300 times per hour. (MIL-STD-1344, METHOD 2016)	Contact resistance, Contact engagement and separation force shall meet each requirement.	Contact retention	The axial load is applied to the contact from the mating side. (MIL-STD-1344, METHOD 2007)	Contact retention force <table border="1"> <tr> <td>Initial</td> <td>9.8N MIN</td> </tr> <tr> <td>After test</td> <td>4.9N MIN</td> </tr> </table>	Initial	9.8N MIN	After test	4.9N MIN	Cable pull-out	The load of 20N shall be applied to the connector cable installed as being used, in the direction shown as Fig.1. (MIL-STD-1344, METHOD 2009.1)	<table border="1"> <tr> <td>Cable pull-out force</td> </tr> <tr> <td>20N MIN</td> </tr> </table>	Cable pull-out force	20N MIN
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Dielectric Withstanding voltage	The test voltage is applied between the nearest two contacts／between the contact and shell for 1 minute. (MIL-STD-1344, METHOD 3001.1)	No flashover or breakdown to occur. Test voltage <table><tr><td>Initial</td><td>750VAC</td></tr><tr><td>After test (Humidity, Waterproof)</td><td>400VAC</td></tr></table>	Initial	750VAC	After test (Humidity, Waterproof)	400VAC											
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Insulation resistance	The test voltage (500VDC) is applied between the nearest two contacts／between the contact and shell. (MIL-STD-1344, METHOD 3003.1)	Insulation resistance <table><tr><td>Initial</td><td>1000M Ω MIN</td></tr><tr><td>After test(Humidity)</td><td>500M Ω MIN</td></tr></table>	Initial	1000M Ω MIN	After test(Humidity)	500M Ω MIN											
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Contact resistance	The voltage drop shall be measured on the connector mated as being used, or on the contacts shown in Fig.2, and the specified value shall be satisfied. (MIL-STD-1344, METHOD 3004.1)	<table><tr><th rowspan="2">Wire size</th><th rowspan="2">Test current</th><th colspan="2">Contact resistance</th></tr><tr><th>Initial</th><th>After test</th></tr><tr><td>AWG#28</td><td>100mA</td><td>50mΩ MAX</td><td>60mΩ MAX</td></tr></table>	Wire size	Test current	Contact resistance		Initial	After test	AWG#28	100mA	50mΩ MAX	60mΩ MAX					
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ENVIRONMENTAL 環境的性能																	
Temperature cycling	5 cycles. <table><tr><th></th><th>Temperature(°C)</th><th>Time</th></tr><tr><td>1</td><td>-55⁰₋₃</td><td>30 minutes</td></tr><tr><td>2</td><td>25 ±¹⁰</td><td>Within 5 minutes</td></tr><tr><td>3</td><td>85⁺³₀</td><td>30 minutes</td></tr><tr><td>4</td><td>25 ±¹⁰</td><td>Within 5 minutes</td></tr></table> (MIL-STD-1344, METHOD 1003.1)		Temperature(°C)	Time	1	-55 ⁰ ₋₃	30 minutes	2	25 ± ¹⁰	Within 5 minutes	3	85 ⁺³ ₀	30 minutes	4	25 ± ¹⁰	Within 5 minutes	No crack or breakdown to occur Dielectric withstanding voltage(750VAC) shall meet the requirement.
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4	25 ± ¹⁰	Within 5 minutes															
Humidity	Temperature : 40℃ Humidity : 90～98%RH Time : 240hours (MIL-STD-1344, METHOD 1002.2)	After leaving the conditioned connector for 24h. Dielectric withstanding voltage : 400VAC Insulation resistance :500MΩ MIN at 500VDC															
Salt spray	Temperature : 35℃ Salt concentration : 5% Time : 48hours (MIL-STD-1344, METHOD 1001.1)	No corrosion detrimental to base metal or to the connection of contacts. Contact resistance shall meet the requirement.															
Waterproof	1) Mating condition The connector mated as being used shall be left in the water depth 2m for 24 hours. 2) Receptacle (unmated) The receptacle fixed to a jig shall be left in the water depth 2m for 24 hours, shown in Fig.3	1) After test, there shall be no water inside of connector and satisfy the dielectric -withstanding voltage (400VAC). 2) After test, there shall be no water inside of jig.															
Resistance to Soldering heat	Through hole connection part of receptacle shall be soaked into the solder(pot). Temperature of solder : 260±5 °C Time : 3 seconds	There shall be no transformation and damages that will affect performance.															

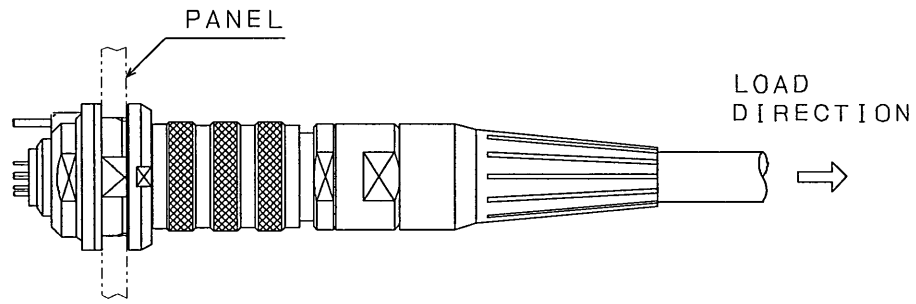
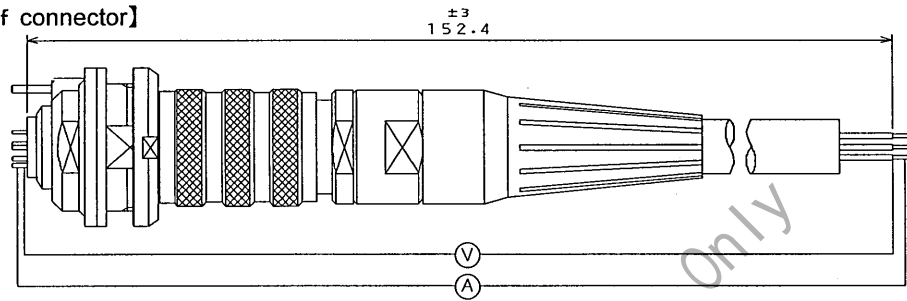


Fig.1

【In case of connector】



【In case of contact】

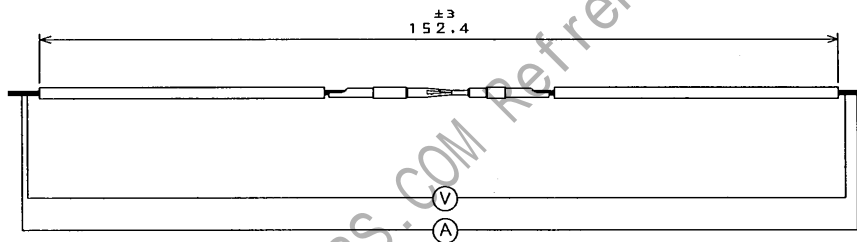


Fig.2

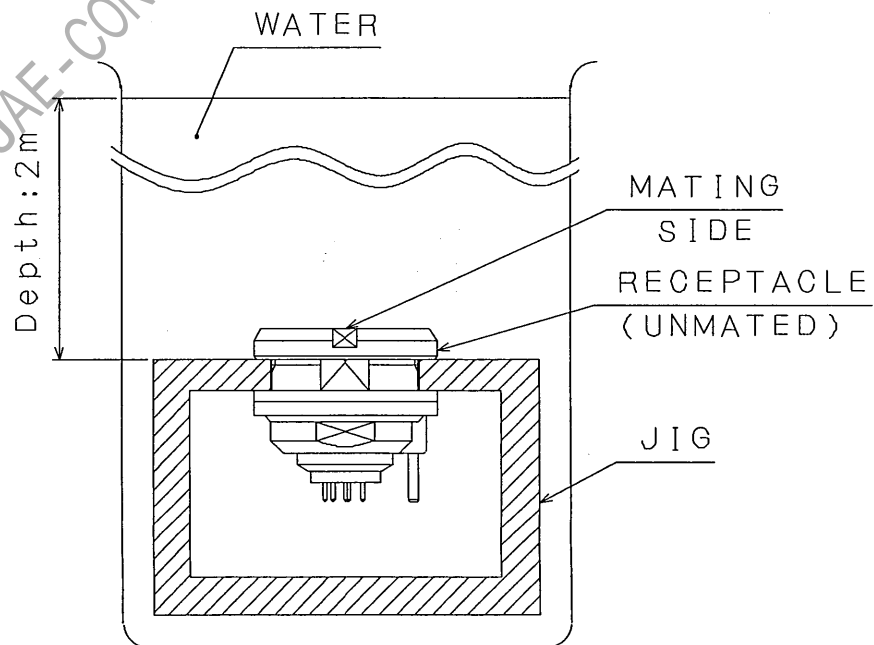


Fig.3