





# PRODUCT SPECIFICATION



LANGUAGE

JAPANESE  
ENGLISH

## 【4. 性能 PERFORMANCE】

### 4-1. 電気的性能 Electrical Performance

項目 Item	条件 Test Condition	規格 Requirement
4-1-1 接触抵抗 <初期値> Contact Resistance <Initial>	コネクタを嵌合させ、開放電圧 20mV 以下、短絡電流 10mA 以下にて測定する。 (JIS C5402 5.4) Mate connectors, measure by dry circuit , 20mV MAXIMUM, 10mA MAXIMUM. (JIS C5402 5.4)	40 miliohm MAXIMUM
4-1-2 絶縁抵抗 <初期値> Insulation Resistance <Initial>	コネクタを嵌合させ、隣接するピン間及びピン、アース間に、DC 500Vを印加し測定する。 (JIS C5402 5.2/MIL-STD-202 試験法 302) Mate connectors together and apply 500V DC between adjacent terminal and ground. (JIS C5402 5.2/MIL-STD-202 Method 302)	1000 megaohm MINIMUM
4-1-3 耐電圧 Dielectric Strength	コネクタを嵌合させ、隣接するピン間及びピン、アース間に、AC 500V (実効値) を1分間印加する。 (JIS C5402 5.1/MIL-STD-202 試験法 301) Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground. (JIS C5402 5.1/MIL-STD-202 Method 301)	異常なきこと No Breakdown

### 4-2. 機械的性能 Mechanical Performance

項目 Item	条件 Test Condition	規格 Requirement	
4-2-1 総合挿入・抜去力 Insertion Force/ Withdrawal Force	コネクタを毎分 25±3 mm の速さで挿入、抜去を行う。 Mate and un-mate connectors, at a rate of 25±3 mm per minute.	挿入力 Insertion Force	28.8 N { 2.94 kgf } MAXIMUM
		抜去力 Withdrawal Force	4.9 N { 0.5 kgf } MINIMUM 24.5 N { 2.5 kgf } MAXIMUM
	イジェクトボタンを毎分 25±3 mm の速さで押し、カード抜去を10000回行う。 Push eject button at a rate of 25±3 mm per minute. (10000 cycles)	抜去力 Card Pull-out Force	28.8 N { 2.94 kgf } MAXIMUM

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TITLE:

1.27 mm PITCH CF CARD CONN.

製品仕様書

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項目 Item	条件 Test Condition	規格 Requirement
4-2-2 ピン保持力 Male-Pin Pull-out Force	毎分25±3mmの速さでピンを軸方向に押す。 Apply axial compressive force to a pin at a rate of 25±3mm per minute.	9.8 N { 1.0 kgf }MINIMUM

4-3. そ の 他 Environmental Performance and Others

項目 Item	条件 Test Condition	規格 Requirement	
4-3-1 温度上昇 Temperature Rise	コネクタを嵌合させ、最大許容総電流を通電し、 コネクタの温度上昇分を測定する。 (UL 498) Mate connectors and measure the temperature rise of contact when the maximum AC rated current is passed. (UL 498)	温度上昇 Temperature Rise	30 °C MAXIMUM
4-3-2 耐振動性 Vibration	DC 1mA 通電状態にて、嵌合軸を含む互いに垂 直な3方向に掃引割合 10~2000~10 Hz/20分、 全振幅 1.5mm の振動を各 4時間 加える。 (MIL-STD-202試験法 204) Mate connectors and subject to the following vibration conditions, for a period of 4 hours in each of 3 mutually perpendicular axes, passing DC 1 mA during the test. Amplitude : 1.5 mm P-P Frequency : 10-2000-10 Hz shall be traversed in 20 minute. (MIL-STD-202, Method 204)	外 観 Appearance	異状なきこと No Damage
		接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
		瞬 断 Discontinuity	0.1 microsecond MAXIMUM

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4-3-3 耐衝撃性 Shock	DC 1mA 通電状態にて、嵌合軸を含む互いに垂直な 6 方向に、490 m/s <sup>2</sup> (50G) の衝撃を各3回加える。 (JIS C0041/MIL-STD-202 試験法 213) Mate connectors and subject to the following shock conditions. 3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 1 mA current during the test. (Total of 18 shocks) Peak value : 490 m/s <sup>2</sup> (50 G) (JIS C0041/MIL-STD-202 Method 213)	外観 Appearance	異常なきこと No Damage
		接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
		瞬断 Discontinuity	0. 1 microsecond MAXIMUM
4-3-4 耐熱性 Heat Resistance	コネクタを嵌合させ、85±2℃ の雰囲気中に 250時間 放置後取り出し、1~2時間 室温に放置する。 ( JIS C0021/MIL-STD-202 試験法 108 ) Mate connectors and expose to 85±2℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. ( JIS C0021/MIL-STD-202 Method 108 )	外観 Appearance	異常なきこと No Damage
		接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
4-3-5 耐寒性 Cold Resistance	コネクタを嵌合させ、-55±3℃ の雰囲気中に 96時間 放置後取り出し、1~2時間 室温に放置する。 ( JIS C0020 ) Mate connectors and expose to -55±3℃ for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. ( JIS C0020 )	外観 Appearance	異常なきこと No Damage
		接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM

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項目 Item		条件 Test Condition	規格 Requirement	
4-3-6	耐湿性 定常状態  Humidity Steady State	コネクタを嵌合させ、40±2℃、相対湿度90~95%の 雰囲気中に 96時間 放置後取り出し、1~2時間室温に 放置する。 ( JIS C0022/MIL-STD-202 試験法 103 ) Mate connectors and expose to 40±2℃,relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. ( JIS C0022/MIL-STD-202 Method 103 )	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
			耐電圧 Dielectric Strength	4-1-3項 満足 のこと Must meet 4-1-3
			絶縁抵抗 Insulation Resistance	100 megaohm MINIMUM
4-3-7	熱衝撃 Thermal Shock	コネクタを嵌合させ、-55 +0/-3℃に30分、85 +3/-0℃ に30分、これを1サイクルとし、5サイクル繰り返す。 但し、温度移行時間は、3分以内とする。試験後1~2 時間室温に放置する。(MIL-STD-202 試験方法107) Mate connectors and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 1 cycle a) -55 +0/-3℃ 30 minutes b) +85 +3/-0℃ 30 minutes (Transit time shall be with in 3 minutes) (MIL-STD-202 Method 107)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 miliohm MAXIMUM
			絶縁抵抗 Insulation Resistance	100 megaohm MINIMUM

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項目 Item		条件 Test Condition	規格 Requirement	
4-3-8	塩水噴霧 Salt Spray	コネクタを嵌合させ、35±2℃にて、重量比 5±1% の塩水を48±4時間噴霧し、試験後常温で水洗いした後、室温で乾燥させる。 ( JIS C0023/MIL-STD-202 試験法 101 ) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed. NaCl solution Concentration : 5±1% Spray time : 48±4 hours Ambient temperature : 35±2℃ ( JIS C0023/MIL-STD-202 Method 101 )	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
4-3-9	硫化水素ガス H <sub>2</sub> S Gas	コネクタを嵌合させ、40±2℃、相対湿度 約80%にて、3±1 ppm の硫化水素ガス中に96時間放置する。(JEIDA-38) Mate connectors and expose them to the following H <sub>2</sub> S gas atmosphere. Temperature 40±2 °C Relative Humidity approx 80% Gas Density 3±1 ppm Duration 96 hours (JEIDA-38)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
4-3-10	耐湿性 (温湿度サイクル) Moisture Resistance	コネクタを嵌合させ、第6項に示す条件にて9サイクル行い、10サイクル目は段階6迄の試験を行う。但し、段階7aは初めの9サイクルのうち5サイクルについて行う。試験後、室温に24時間放置する。 ( MIL-STD-202 試験法 106 ) Mate connectors and subject to the conditions specified on per [6] for 9cycles. The test specimens shall be exposed to STEP 7a during only 5 out of 9 cycles. A 10 <sup>th</sup> cycles consisting of only step 1 through 6 is then performed, after which the test specimens shall be conditioned at ambient room conditions for 24 hours. (MIL-STD-202 Method 106)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
			耐電圧 Dielectric Strength	4-1-3項を満足のこと Must meet 4-1-3
			絶縁抵抗 Insulation Resistance	100 megaohm MINIMUM

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項目 Item	条件 Test Condition	規格 Requirement	
4-3-11 繰り返し挿抜 Repeated Insertion / Extraction	1時間に400~600回の速さで挿入・抜去を10000回繰り返す。 Repeat insertion and extraction up to 10000 cycles at the rate of 400 – 600 cycles per hour.	外 観 Appearance	異状なきこと No Damage
		接 触 抵 抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM
4-3-12 半田付け性 Solderability	端子先端より0.5mmの位置まで230±5℃の半田に3±0.5秒漬す。 Dip solder tails into the molten solder(held at 230±5℃)up to 0.5mm from the bottom of the housing for 3±0.5 seconds.	濡れ性 Solder Wetting	浸水面積の 95%以上 95% of immersed area must show no voids, pin holes.
4-3-13 接触寿命 Durability	下記順序にて試験を行う。 ① 挿入・抜去 : 1000 回 ② 耐湿性試験 ③ 挿入・抜去 : 1000 回 ④ 耐湿性試験 ⑤ 挿入・抜去 : 3000 回 ⑥ 耐湿性試験 ⑦ 硫化水素ガス試験 挿抜速度 : 400 ~ 600 回 / 1h 耐湿性試験 : 4-3-1項 (但し1サイクル24時間) 硫化水素ガス試験 : 4-3-9項 Test Sequence ① 1000 cycles Insertion / Extraction. ② Moisture Resistance Test. [4-3-10 , 1cycle 24 hours] ③ 1000 cycles Insertion / Extraction. ④ Moisture Resistance Test. [4-3-10 , 1cycle 24 hours] ⑤ 3000 cycles Insertion / Extraction. ⑥ Moisture Resistance Test. [4-3-10 , 1cycle 24 hours] ⑦ H <sub>2</sub> S Gas Test. [4-3-9] Insertion / Extraction Test Condition. Repeat insertion and extraction at the rate of 400 – 600 cycles per hour.	外 観 Appearance	異状なきこと No Damage
		接 触 抵 抗 Contact Resistance	変化量 20 miliohm 以下 Change of 20 miliohm MAXIMUM

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項目 Item	条件 Test Condition	規格 Requirement	
4-3-14 半田耐熱性 Resistance to Soldering Heat	赤外線リフロー条件 <b>INFRARED REFLOW CONDITION</b> 230°C以下 (ピーク温度) maximum (PEAK TEMPERATURE)	外 観 Appearance	リフロー 2回後 端子ガタ 割れ等 異状無きこと No Damage After 2 times of reflow
<p>90秒 sec.</p> <p>200°C以上 minimum</p> <p>30秒</p> <p>30秒 sec. (Reflow)</p> <p>(予熱 : 150°C以下) (Preheat temperature : 150°C MAXIMUM)</p> <p><b>温度条件グラフ</b>  <b>TEMPERATURE CONDITION GRAPH</b>            (基板表面温度)            (TEMPERATURE ON BOARD PATTERN SIDE)</p>			

( ) : 参考規格  
Reference Standard

【5. 外観形状、寸法及び材質 PRODUCT SHAPE, DIMENSIONS AND MATERIALS】

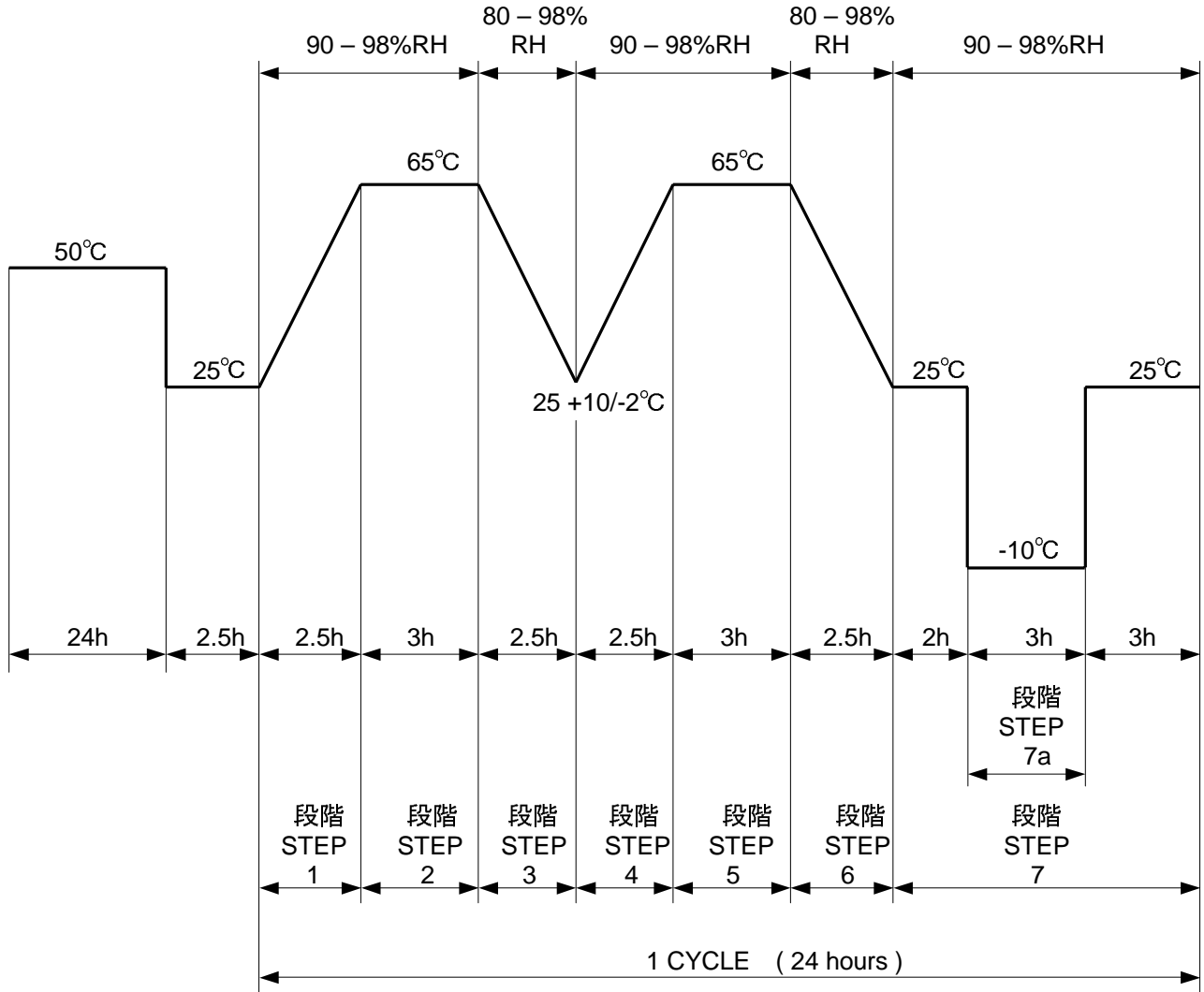
図面参照 Refer to the drawing.

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【6. 耐湿性試験条件 MOISTURE RESISTANCE CONDITIONS】

MIL-STD-202 試験法106  
MIL-STD-202 Method 106



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