



PRODUCT SPECIFICATION

LANGUAGE
JAPANESE
ENGLISH

【1. 適用範囲 SCOPE】

本仕様書は、_____ 殿 に納入する
1.27 mm ピッチ CF カード用コネクタ について規定する。

This specification covers the 1.27mm PITCH CF CARD CONNECTOR series.
For limited use by YOKOGAWA ELECTRIC CORPORATION.

【2. 製品名称及び型番 PRODUCT NAME AND PART NUMBER】

製品名称 Product Name	製品型番 Material Number
イジェクト アッセンブリ 無鉛 Eject Assembly LEAD FREE	5 5 3 6 4 - 0 0 1 1

* : 図面参照 Refer to the drawings.

【3. 定格 RATINGS】

項目 Item	規格 Standard
最大許容電圧 Rated Voltage(MAXIMUM)	100 V [AC(実効値 rms)]
最大許容電流 Rated Current (MAXIMUM)	0.5 A [DC]
使用温度範囲 Ambient Temperature Range	-20°C ~ +90°C ^{*1}
保存温度範囲 Storage Temperature Range	-40°C ~ +70°C
使用湿度範囲 Ambient Humidity Range	95% R.H. MAXIMUM ^{*2}

* 1 : 通電による温度上昇分を含む。
Including terminal temperature rise.

* 2 : 結露なきこと。
Storage area to be free of dew formation.

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SHEET	1~12						
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C	変更 REVISED J2013-1600 '13/06/25 D.FUJII		THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
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DESIGN CONTROL J02		STATUS	WRITTEN BY: T.HIRATA	CHECKED BY: M.SASAO	APPROVED BY: M.SASAO	DATE: YR/MO/DAY 2003/09/02	
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【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)	異状なきこと 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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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	60 miliohm MAXIMUM
		瞬 断 Discontinuity	0.1 microsecond MAXIMUM

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項目 Item		条件 Test Condition	規格 Requirement	
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 ² (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 ² (50 G) (JIS C0041/MIL-STD-202 Method 213)	外 観 Appearance	異状なきこと No Damage
			接触抵抗 Contact Resistance	60 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	異状なきこと No Damage
			接触抵抗 Contact Resistance	60 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℃ for96 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	異状なきこと No Damage
			接 触 抵 抗 Contact Resistance	60 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	異状なきこと No Damage
			接触抵抗 Contact Resistance	60 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	異状なきこと No Damage
			接触抵抗 Contact Resistance	60 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	60 miliohm MAXIMUM
4-3-9	硫化水素ガス H ₂ 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 ₂ 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	60 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 th 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	60 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	60 miliohm MAXIMUM
4-3-12	半田付け性 Solderability	端子先端より0.5mmの位置まで245±3℃の半田に2~3秒浸す。 (使用半田 : Sn-3Ag-0.5Cu) Dip solder tails into the molten solder(held at 245 ±3°C)up to 0.5mm from the bottom of the housing for 2-3 seconds. (Sn-3Ag-0.5Cu)	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 ₂ 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	60 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	<p>赤外線リフロー条件 <u>INFRARED REFLOW CONDITION</u></p> <p>240°C以下 (ピーク温度) maximum(PEAK TEMPERATURE)</p> <p>230°C以上 minimum</p> <p>30 ± 10秒 sec.</p> <p>90秒 sec.</p> <p>30秒 sec. (Reflow)</p> <p>(予熱 : 150-200°C) (Preheat temperature : 150-200°C)</p> <p>温度条件グラフ <u>TEMPERATURE CONDITION GRAPH</u> (基板表面温度) (TEMPERATURE ON BOARD PATTERN SIDE)</p>	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

() : 参考規格
Reference Standard

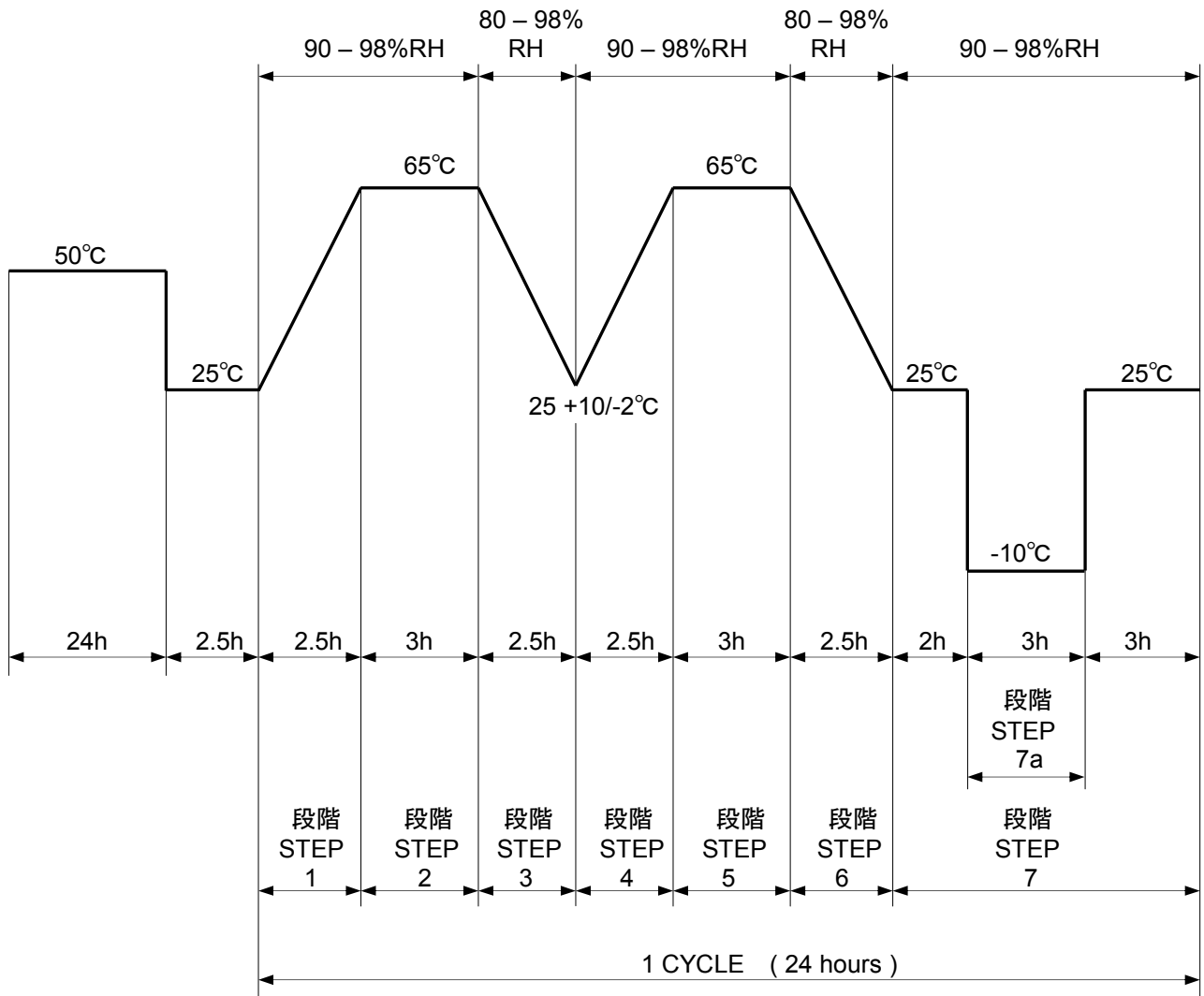
【5. 外観形状、寸法及び材質 PRODUCT SHAPE, DIMENSIONS AND MATERIALS】

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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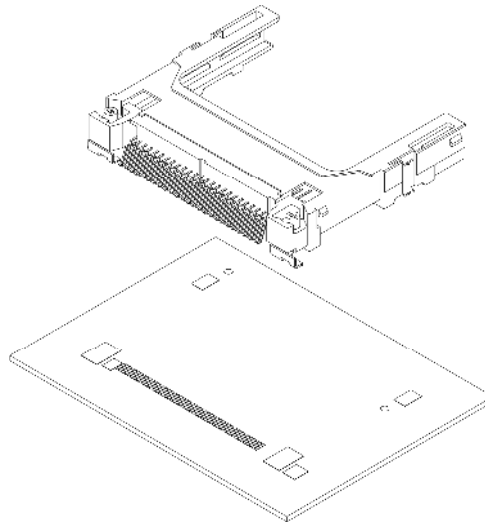
【7. 実装方法 MOUNTING METHOD】

注記; コネクタ1個につき、M2のネジを1個ご用意下さい。

NOTE ; Please prepare a M2 screw per connector before mounting.

1. ヘッダーアッセンブリを実装します。

Mount the header assembly.

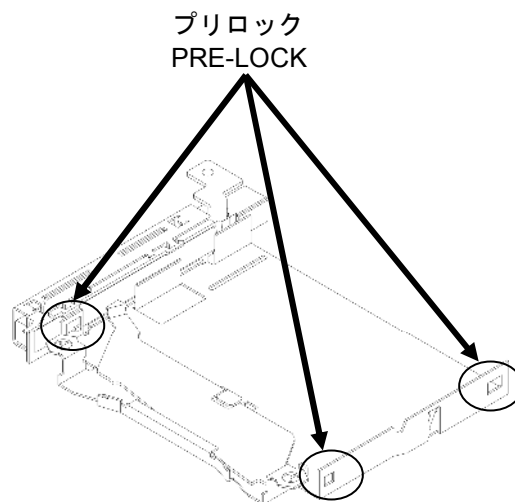
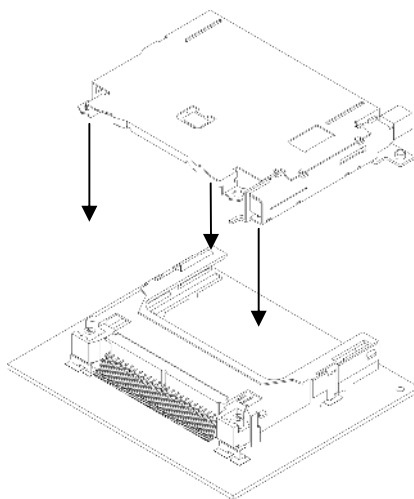


2. イジェクトアッセンブリを水平に保ったまま、真っ直ぐ取り付けます。

その際、図に示す側面の3つのプリロックが全て掛かっているのを確認します。

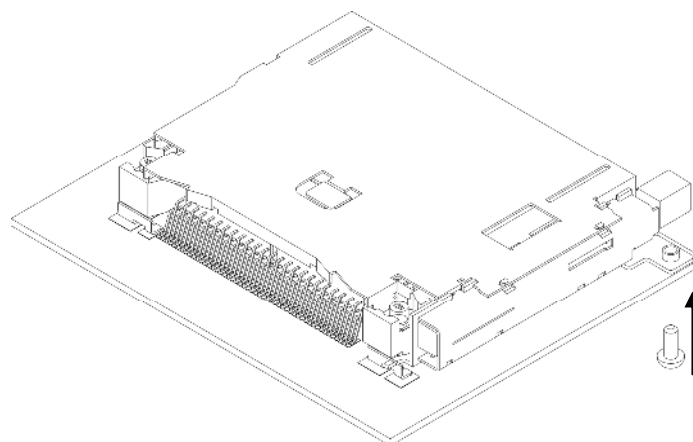
Attach the eject assembly with keeping it horizontal

And, confirm the fastening of 3 pre-locks on lateral side as below.

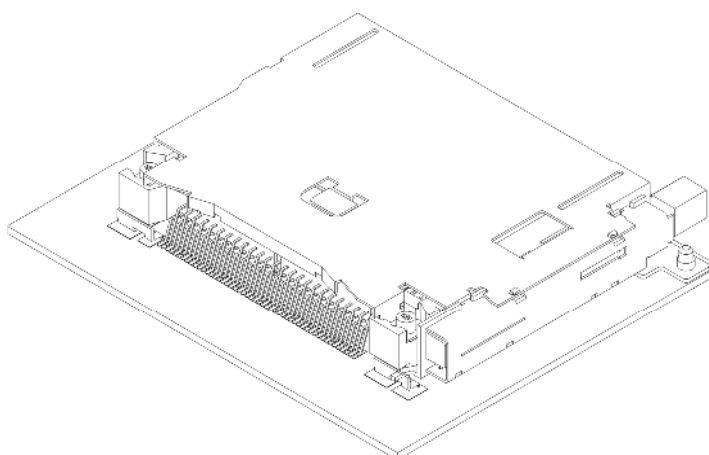


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- 3 . M2ネジを裏側から挿入していきます。
Put the M2 screw from back side.



- 4 . (完成図)
(Completion drawing)



注記; ネジ長については、ご使用の基板厚および筐体に合わせ選定して下さい。
NOTE ; Please adopt screw length with consideration for the substrate and the chassis in use.

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