

【1. 適用範囲 SCOPE】

本仕様書は、0.8 mm ピッチ 基板対基板 コネクタ について規定する。

This product specification covers the performance requirements for 0.8 mm PITCH BOARD TO BOARD CONNECTOR series.

【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	
				Connector Number	Order Number
リセプタクル Receptacle	嵌合高さ Stacking Height H=4.5mm	ボス無し Without Boss	無鉛 LEAD FREE	52465-**29	52465-**71
		ボス有り With Boss	無鉛 LEAD FREE	52465-**19	52465-**70
プラグ Plug (ストレートタイプ) (Straight type)	嵌合高さ Stacking Height H=4.5mm	ボス無し Without Boss	無鉛 LEAD FREE	53307-**28	53307-**71

** : 図面参照 Refer to the drawing

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REVISION DESCRIPTION	REVISED	0.8 MM PITCH B-TO-B CONN. PRODUCT SPECIFICATION					
CHANGE NO.	653485						
REVISED BY	AHMADI2	DATE	2021/01/20	DOC TYPE	DOC TYPE DESCRIPTION	DOC PART	SERIES
REV APPR BY	SHOSHIKAWA	DATE	2021/02/08	PS	ENGINEERING SPECIFICATION WORD	001	52465
INITIAL RELEASE				CUSTOMER	DOCUMENT NUMBER	REVISION	SHEET
INITIAL DRWN	NAIDA	DATE	2005/03/23	GENERAL MARKET	PS-52465-015	G	1 OF 16
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【3. 定 格 RATINGS】

項 目 Item	規 格 Standard	
最大許容電圧 Rated Voltage (MAX.)	50 V	[AC (実効値 rms) / DC]
最大許容電流 Rated Current (MAX.)	0.5 A	
使用温度範囲*1 Ambient Temperature Range	-40°C ~ + 105°C*2	

*1 : 基板実装後の無通電状態は、使用温度範囲が適用されます。

Non-operating connectors after reflow must follow the operation temperature range condition.

*2 : 通電による温度上昇分を含む。

This includes the terminal temperature rise generated by conducting electricity.

【4. 性 能 PERFORMANCE】

標準状態； 特に指定がない限り、測定は以下の条件にて行う。

Standard atmospheric conditions;

Unless otherwise specified, the standard range of atmospheric conditions for conducting measurements and tests are as follows.

気温 Ambient temperature	: 15°C to 35°C
湿度 Relative humidity	: 25% to 85%
気圧 Air pressure	: 86kPa to 106kPa

但し判定に疑義を生じた場合は、測定は以下の条件にて行う。

If there is any doubt on the results, the measurement shall be conducted with the following test conditions.

気温 Ambient temperature	: 20±1°C
湿度 Relative humidity	: 63% to 67%
気圧 Air pressure	: 86kPa to 106kPa

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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 Contact Resistance	実装したコネクタを嵌合させ、開放電圧 20mV以下、短絡電圧 10mA にて測定する。 (JIS C5402-2-1) Mate mounted connectors and measure contact resistance at less than 20mV of open circuit voltage and less than 10mA of short circuit current. (JIS C5402-2-1)	20 milliohm MAX.
4-1-2 絶縁抵抗 Insulation Resistance	実装したコネクタを嵌合させ、隣接するターミナル間及びターミナル、アース間に、DC 200V を印加し測定する。 (JIS C5402-3-1/MIL-STD-202 試験法 302) Mate mounted connectors and apply 200V DC between adjacent terminal or ground. (JIS C5402-3-1/MIL-STD-202 Method 302)	100 Megohm MIN.
4-1-3 耐電圧 Dielectric Strength	実装したコネクタを嵌合させ、隣接するターミナル間及びターミナル、アース間に、AC(rms) 500V (実効値) を 1分間 印加する。 (JIS C5402-4-1/MIL-STD-202 試験法 301) Mate mounted connectors and apply 500V AC(rms) for 1 minute between adjacent terminal or ground. (JIS C5402-4-1/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 挿入力及び抜去力 Insertion and Withdrawal Force	毎分 25±3mm の速さで挿入、抜去を行う。 Insert and withdraw connectors at the speed rate of 25±3mm/minute.	第6項参照 Refer to paragraph 6
4-2-2 ターミナル保持力 Terminal / Housing Retention Force	ハウジングに装着されたターミナルを軸方向に毎分 25±3mmの速さで引張る。 Apply axial pull out force at the speed rate of 25±3mm/minute on the terminal assembled in the housing.	3.0N {0.3 kgf} MIN.
4-2-3 ピン保持力 Pin Retention Force	毎分 25±3mm の速さでピンを軸方向に押す。 Apply axial push force at the speed rate of 25±3mm/minute.	3.0N {0.3 kgf} MIN.

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4-3. その他 Environmental Performance and Others

項目 Item		条件 Test Condition	規格 Requirement	
4-3-1	繰返し挿抜 Repeated Insertion / Withdrawal	1分間 10回以下の速さで挿入、抜去を30回繰返す。 When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.	接触抵抗 Contact Resistance	40 milliohm MAX.
4-3-2	温度上昇 Temperature Rise	実装したコネクタを嵌合させ、最大許容電流を通電し、コネクタの温度上昇分を測定する。 (UL 498) Mate mounted connectors and measure the temperature rise of contact when the maximum rated current is passed. (UL 498)	温度上昇 Temperature Rise	30 °C MAX.
4-3-3	耐振動性 Vibration	実装したコネクタを嵌合させ、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 10~55~10 Hz/分、全振幅 1.5mm の振動を各2時間加える。 (JIS C60068-2-6/MIL-STD-202 試験法 201) Mate mounted connectors and add to each 2 hours with ratio sweep 10-55-10 Hz per minute and total amplitude 1.5 mm vibration at 3 directions mutually vertical including fitting axis in DC 1mA electricity state. (JIS C60068-2-6/MIL-STD-202 Method 201)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
			瞬断 Discontinuity	1 microsecond MAX.

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項目 Item		条件 Test Condition	規格 Requirement	
4-3-4	耐衝撃性 Shock	実装したコネクタを嵌合させ、DC 1mA 通電状態にて、嵌合軸を含む互いに垂直な 6方向に 490m/s ² {50G} の衝撃を各3回加える。 (JIS C60068-2-27/MIL-STD-202 試験法 213) Mate mounted connectors add to each 3 times with impact of 490m/s ² {50G} at 6 directions mutually vertical including fitting axis in DC 1mA electricity state. (JIS C60068-2-27/MIL-STD-202 Method 213)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
			瞬断 Discontinuity	1 microsecond MAX.
4-3-5	耐熱性 Heat Resistance	実装したコネクタを嵌合させ、105±2°C 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 C60068-2-2/MIL-STD-202 試験法 108) Mate mounted connectors, exposing for 96 hours in the atmosphere of 105±2°C. After the test, allowed to stand at room temperature for 1 to 2 hours before checking functionality. (JIS C60068-2-2/MIL-STD-202 Method 108)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
4-3-6	耐寒性 Cold Resistance	実装したコネクタを嵌合させ、-40±3°C 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 C60068-2-1) Mate mounted connectors, exposing for 96 hours in the atmosphere of -40±3°C. After the test, allowed to stand at room temperature for 1 to 2 hours before checking functionality. (JIS C60068-2-1)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
4-3-7	耐湿性 Humidity	実装したコネクタを嵌合させ、60±2°C、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。 (MIL-STD-202 試験法 103) Mate mounted connectors, exposing for 96 hours in an atmosphere of 60±2°C, relative humidity 90 to 95%. After the test, allowed to stand at room temperature for 1 to 2 hours before checking functionality. (MIL-STD-202 Method 103)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
			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	50 Megohm MIN.

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項目 Item		条件 Test Condition	規格 Requirement	
4-3-8	温度サイクル Temperature Cycling	実装したコネクタを嵌合させ、 $-55\pm 3^{\circ}\text{C}$ に 30 分、 $+105\pm 2^{\circ}\text{C}$ に 30 分 これを 1 サイクルとし、5 サイクル 繰返す。但し、温度移行時間は 5 分以内とする。試験後 1~2 時間 室温に放置する。 (JIS C60068-2-14) Mate mounted connectors, exposing to $-55\pm 3^{\circ}\text{C}$ and $+105\pm 2^{\circ}\text{C}$ temperature for 30 minutes each including a 0-5 minutes transition time. The above-mentioned condition is repeated 5 cycles. After the test, allowed to stand at the room temperature for 1 to 2 hours before checking functionality. (JIS C60068-2-14)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
4-3-9	塩水噴霧 Salt Spray	実装したコネクタを嵌合させ、 $35\pm 2^{\circ}\text{C}$ にて $5\pm 1\%$ 重量比の塩水を 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 C60068-2-11/MIL-STD-202 試験法101) Mate mounted connectors and expose to a salt spray from the $5\pm 1\%$ solution at $35\pm 2^{\circ}\text{C}$ for 48 ± 4 hours. After the test, they should be washed well by water and dried at room temperature before checking functionality. (JIS C60068-2-11/MIL-STD-202 Method 101)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
4-3-10	亜硫酸ガス SO ₂ Gas	実装したコネクタを嵌合させ、 $40\pm 2^{\circ}\text{C}$ にて $50\pm 5\text{ppm}$ の亜硫酸ガス中に 24 時間 放置する。 Mate mounted connectors, exposing to the SO ₂ gas atmosphere of $50\pm 5\text{ppm}$ at $40\pm 2^{\circ}\text{C}$ for 24 hours.	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.
4-3-11	耐アンモニア性 NH ₃ Gas	実装したコネクタを嵌合させ、濃度 28% のアンモニア水を入れた容器中に 40 分間 放置する。 (1L に対して 25ml の割合) Mate mounted connectors and 40 minutes exposure to NH ₃ gas evaporating from 28% Ammonia solution. (Ratio of 25mL to 1L)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohm MAX.

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項目 Item		条件 Test Condition	規格 Requirement	
4-3-12	半田付け性 Solderability	ターミナルまたはピンをフラックスに浸し、245±3℃の半田に3±0.5秒浸す。 Dip the terminal in flux, then dip into solder molten at 245±3℃ for 3±0.5 seconds.	濡れ性 Solder Wetting	浸漬面積の95%以上 95% of immersed area must show no voids, pin holes.
4-3-13	半田耐熱性 Resistance to Soldering- Heat	<u>リフロー時 (Reflow soldering method)</u> 第7項の推奨温度プロファイル条件にて、2回リフローを行う。 Using the reflow profile condition in paragraph 7, the product was reflowed two times.	外 観 Appearance	端子ガタ 割れ等 異状無きこと No Damage
		<u>手半田時 (Reflow by Manual Soldering iron)</u> 端子先端を350±10℃の半田ゴテにて最大5秒間加熱する。 <u>Soldering iron method</u> Soldering Iron Temperature : 350±10℃ Soldering Time : 5 seconds MAX.		

() : 参考規格 Reference Standard
{ } : 参考単位 Reference Unit

【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. 挿入力及び抜去力 INSERTION/WITHDRAWAL FORCE】

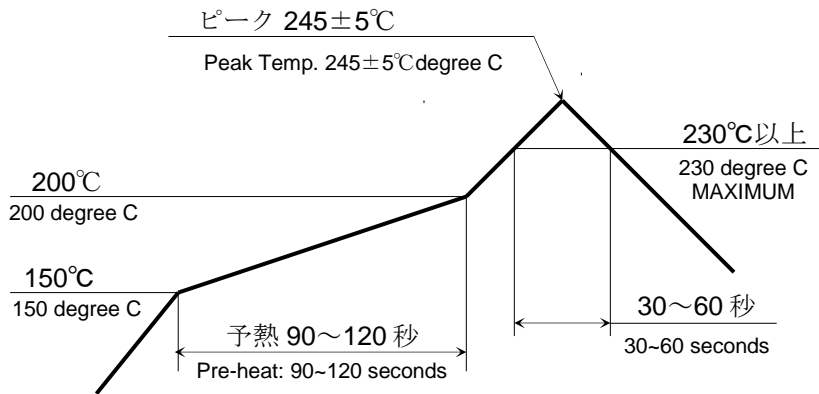
極数 No. of CKT	単位 UNIT	挿入力 (最大値) Insertion (MAX.)			抜去力 (最小値) Withdrawal (MIN.)		
		初回 1st	6回目 6th	30回目 30th	初回 1st	6回目 6th	30回目 30th
10	N {kgf}	34.3 {3.50}	35.2 {3.60}	35.2 {3.60}	3.5 {0.35}	3.3 {0.33}	3.3 {0.33}
12	N {kgf}	37.2 {3.80}	38.2 {3.90}	38.2 {3.90}	4.5 {0.45}	4.3 {0.43}	4.3 {0.43}
14	N {kgf}	40.1 {4.10}	41.1 {4.20}	41.1 {4.20}	5.4 {0.55}	5.2 {0.53}	5.2 {0.53}
16	N {kgf}	43.1 {4.40}	44.1 {4.50}	44.1 {4.50}	6.4 {0.65}	6.2 {0.63}	6.2 {0.63}
18	N {kgf}	46.0 {4.70}	47.0 {4.80}	47.0 {4.80}	7.4 {0.75}	7.2 {0.73}	7.2 {0.73}
20	N {kgf}	49.0 {5.00}	49.9 {5.10}	49.9 {5.10}	8.4 {0.85}	8.2 {0.83}	8.2 {0.83}
22	N {kgf}	51.9 {5.30}	52.9 {5.40}	52.9 {5.40}	9.4 {0.95}	9.2 {0.93}	9.2 {0.93}
24	N {kgf}	54.8 {5.60}	55.8 {5.70}	55.8 {5.70}	10.3 {1.05}	10.1 {1.03}	10.1 {1.03}
26	N {kgf}	57.8 {5.90}	58.8 {6.00}	58.8 {6.00}	11.3 {1.15}	11.1 {1.13}	11.1 {1.13}
28	N {kgf}	60.7 {6.20}	61.7 {6.30}	61.7 {6.30}	12.3 {1.25}	12.1 {1.23}	12.1 {1.23}
30	N {kgf}	63.7 {6.50}	64.6 {6.60}	64.6 {6.60}	13.3 {1.35}	13.1 {1.33}	13.1 {1.33}
36	N {kgf}	72.5 {7.40}	73.5 {7.50}	73.5 {7.50}	16.2 {1.65}	16.0 {1.63}	16.0 {1.63}
40	N {kgf}	78.4 {8.00}	79.3 {8.10}	79.3 {8.10}	18.2 {1.85}	18.0 {1.83}	18.0 {1.83}

{ } : 参考単位 Reference Unit

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【7. 推奨温度プロファイル RECOMMENDED REFLOW PROFILE】



温度条件グラフ
TEMPERATURE CONDITION GRAPH

半田接合部の基板表面にて測定

(Temperature is measured at the soldering area on the surface of the print circuit board)

本リフロー条件に関しては、実装条件（大気／N2リフロー、温度プロファイル、半田ペースト、メタルマスク板厚・開口率、基板パターンレイアウト、実装基板種別などの種々の要素）により条件が異なりますので、必ずご使用前に、顧客様のご使用環境で事前に実装評価（リフロー評価）を実施願います。実装条件によっては、接点部への半田上がりやフラックス上りが発生するなど製品性能に影響を及ぼす場合があります。
Please make sure to do test run under the mounting condition (reflow soldering condition) on your own devices before use because reflow condition may change due to the local condition (Air / N2 reflow / temperature profile / solder paste, metal mask thickness / aperture rate / pattern layout of PWB / types of PWB / and other factors). Depending on the mounting condition, product's performance might be influenced by occurrence of solder-wicking or flux wicking at contact area.

- ・ 推奨ランド寸法 Recommended Pattern dimension SDをご参照ください。
Refer to the Sales Drawing.

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【 8. 取り扱い上の注意事項 INSTRUCTION UPON USAGE】

[嵌合]

嵌合は極力嵌合軸に沿って平行に行ってください。(図-1)
 その際、リセハウジングの外壁とプラグの内壁を合わせる様に位置決めした後に押し込み嵌合して下さい。
 斜めの嵌合になる場合は10°以下の角度でリセハウジングの外壁とプラグの内壁を軽く当て、位置決めした後に平行にしてから嵌合して下さい。(図-2)

[Mating]

Mate connectors parallel to the mating axis as much as possible. (Figure-1)
 In doing so, priory determine the position with temporary fitting outside wall of the Receptacle and inner wall of Plug housing, then mate those fully.
 If angled mating is inevitable, determine the position priory with temporary fitting outside wall of the Receptacle and inner wall of Plug housing softly within an angle less than 10 degree, and mate the connector parallel. (Figure-2)

[抜去]

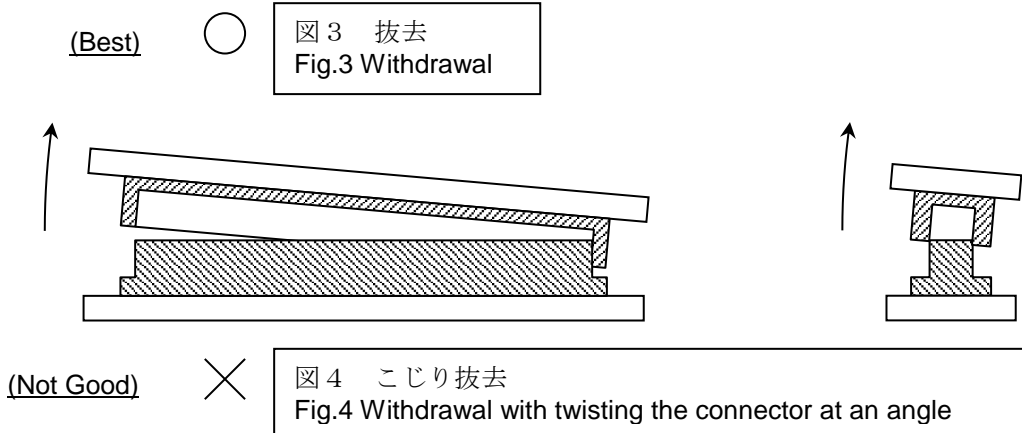
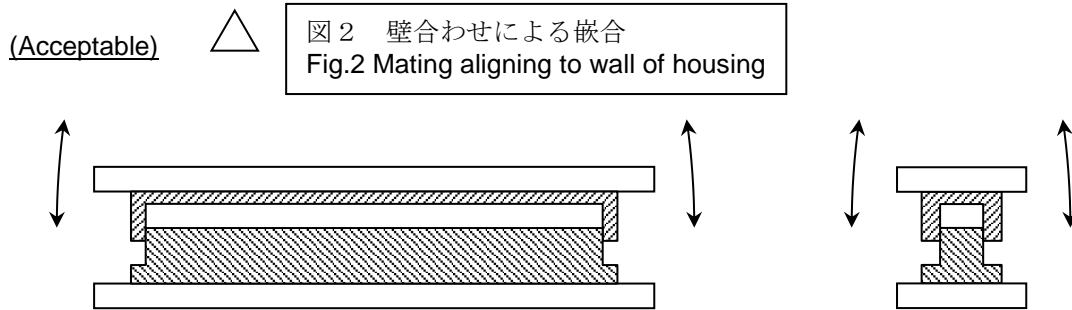
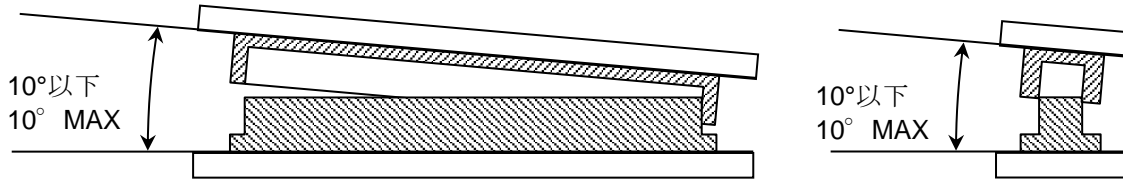
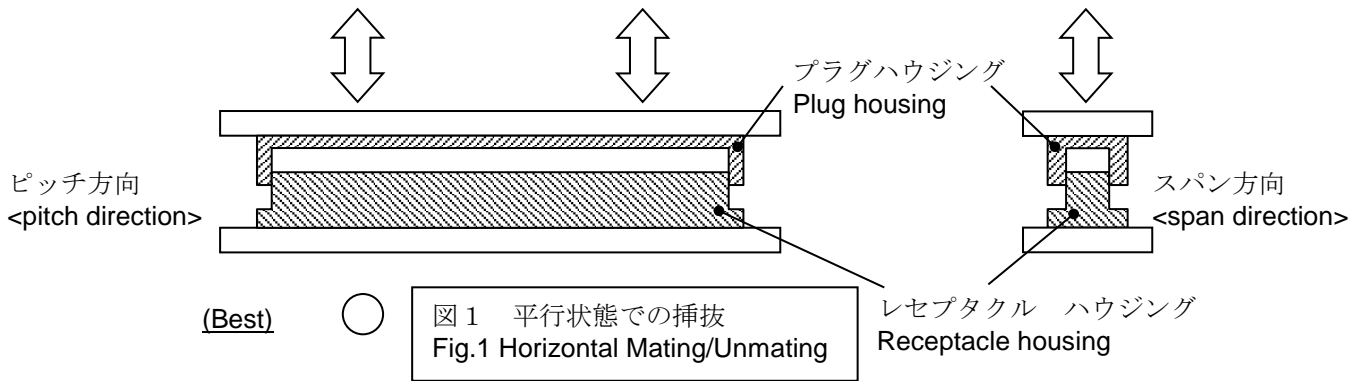
抜去は極力嵌合軸に沿って平行に行ってください。(図-1)
 または、左右に少しづつ振りながら行って下さい。(図-3)
 (過度のこじり抜去には注意して下さい。ハウジングの破壊およびピン損傷の原因となります。)(図-4)

[Withdrawal]

Withdraw the connector parallel to mating axis as much as possible (Figure-1).
 Or do it with slightly swinging them right to left. (Figure-3)
 (Please take care NOT to do excess twist extraction. It could cause the housing or pin breakage.) (Figure-4)

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【9. その他 注意事項 OTHERS】

・ 外観について Appearance

1. 本製品の樹脂部に黒点、多少の傷、微小な気泡等が生じることがありますが、性能上問題ありません。
Although this product may have a small black dot, a scratch and minimal air bubble on the housing, it doesn't impact the product's performance.
2. 成形品の色相に多少の違いを生じる場合がありますが、製品性能には影響ありません。
Although there may be slight differences in the housing color tone, it doesn't impact the product's performance.
3. 紫外線によりハウジングが変色する場合がありますが、製品性能に影響ありません。
Although the housing color tone could be changed by ultraviolet light, it doesn't impact the product's performance.
4. 本製品の錫めっきを使用しているため、外観に摺動痕がつく場合が御座いますが、製品性能に影響はありません。
Although the surface of the product could have scratch marks by frictions because of the Tin plating, it doesn't impact the product's performance.

・ 実装について Mount

5. 本リフロー条件に関しては、実装条件(大気/N2リフロー、温度プロファイル、半田ペースト、メタルマスク板厚・開口率、基板パターンレイアウト、実装基板種別などの種々の要素)により条件が異なりますので、必ずご使用前に、顧客様のご使用環境で事前に実装評価(リフロー評価)を実施願います。実装条件によっては、接点部への半田上がりやフラックス上りが発生するなど製品性能に影響を及ぼす場合があります。
Please make sure to do test run under the mounting condition (reflow soldering condition) on your own devices before use because reflow condition may change due to the local condition (Air / N2 reflow / temperature profile / solder paste, metal mask thickness / aperture rate / pattern layout of PWB / types of PWB / and other factors). Depending on the mounting condition, product's performance might be influenced by occurrence of solder-wicking or flux wicking at contact area.
6. 本製品の一般性能確認はリジッド基板にて実施しております。フレキシブル基板等の特殊な基板へ実装する場合は、事前に実装確認等を行った上でご使用願います。
The product performance was tested using rigid PWB. In case the product needs to be mounted onto FPC, please conduct a reflow test on the FPC before use.
7. フレキシブル基板に実装する場合は、基板の変形を防止するため、補強板をご使用願います。
In case of mounting the connector onto FPC, add a stiffener on the FPC in order to prevent the deformation.
8. 弊社の推奨基板パターン寸法を変更して設計を行なう際は、致命的な不良の原因にもなりますので、あらかじめご相談ください。
In case of designing with changing our recommended board pattern size, please consult the contact person in advance because it may cause a fatal defect.
9. 実装性能(平坦度)は、実装基板の反りの影響を含まないものと致します。基板の反りによってはコネクタの実装不良が発生します。事前に実装確認等を行った上で、ご使用願います。
The mounting specification for coplanarity does not include the influence of warpage of the printed circuit board. Mounting failure of the connector is caused by the warpage of the printed circuit board. Please conduct a reflow test on the flexible circuit board in advance.

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10. 本製品は大気リフローでの実装を想定しています。N2リフローで実装した場合、リフロー後、半田上がりを生じる恐れがあります。N2リフローでの実装をお考えの場合、別途評価が必要になります。
This product is designed to be mounted by air reflow. So, if this product is mounted by N2 reflow, solder wicking may cause after reflow. Therefore if it is plan to adopt N2 reflow for this connector, an evaluation is needed separately.
11. 弊社評価では本仕様書(7項)記載の推奨条件に基づき評価を実施しています。
Our evaluation is conducted based on Molex-recommended condition specified in this product specification.
12. 本製品の平坦度については、実装前での保証のみであり、実装中および実装後での平坦度については、保証の限りではありません。
Only coplanarity before reflow is guaranteed. Coplanarity in and after reflow is not guaranteed.
13. 本製品のハウジング材料は耐熱性ナイロンを使用しており、ハウジングの吸水状態、或いは、はんだ付け条件によっては、リフローはんだ付け時にハウジング表面に「ふくれ」が発生する可能性があります。この「ふくれ」に関しましては、ナイロン材の物性変化を伴うものではなく、製品機能を損なうものではありません。
The housing material of this product is made from a highly-heat-resistant Nylon, therefore blisters could be occurred on the housing surface depending on the soldering condition and the water absorption properties of the housing material. However, it does not damage the product's function since the blister is not caused by change of the material property.
14. 半田実装部の未半田は、ターミナル脱落、ピン間ショート、ターミナル座屈、またコネクタの基板からの外れが懸念されます。従って全てのターミナルテール部及び、ネイル部に半田付けを行って下さい。
If you leave any soldering area on this product open, it could occur terminal disengagement, short circuit between pins, terminal buckling or connector disengagement from the PWB. Therefore, please solder all of the soldering tails and fitting nails on the PWB.
15. 本製品は低背の為、端子コンタクト部以外の場所へフラックス上りが発生することがありますが、製品性能には影響ありません。
Since this product is low profile product, flux wicking could be occurred on the areas except for the terminal contacts. However it does not impact on the product's performance.
16. 実装機によってコネクタに負荷が加わると変形、破損する場合がありますので事前にご確認下さい。
If accidental contact is added onto connectors in the reflow machine, connectors could be deformed or damaged. Therefore review the reflow machine before use of the connectors.
17. リフロー条件によっては、樹脂部の変色や端子めっき部にヨリが発生する場合がありますが、製品性能に影響はございません。
Although color tone of housing or surface of terminal plating could be varied depending on reflow conditions, it does not impact on the product's performance.
18. リフロー後、半田付け部に変色が見られることがありますが、製品性能に影響はありません。
Although some discoloration could be seen on the soldering tail after reflow, it does not impact on the product's performance.

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・製品の仕様について Product specification

19. 本製品をご使用時には、1PIN 当りの定格以上の電流を複数の回路に分岐しての使用は避けて下さい。
When using this product, ensure that the specification for rated current per a circuit is followed. Do not allow the sum of the current used on several circuits to exceed the maximum allowable current.
20. 本製品をご使用時に取り付けられた電線・プリント基板の共振や、機器の回転構造や可動部分の動作によりコネクタ嵌合部(接点部)が常に動いてしまう状態での御使用は避けて下さい。接触部の摺動磨耗等による接触不良の原因となります。従って、機器内で電線・プリント基板を固定し、共振を抑える等の処置をお願い致します。
Do not use the connector in a condition where the mating area (contact area) are constantly moved due to sympathetic vibration of wires and PWB or constant movement of devices. It may cause contact failure due to the worn out. Therefore fix wires and PWB on the chassis to reduces sympathetic vibration.
21. コネクタに外力が加わらないようにクリアランスをあげた筐体構造にして下さい。
Keep enough clearance between connector and chassis of your application in order to avoid pressure on the connector.
22. 本製品を結露・水濡れが発生する環境でのご使用の場合は、適切な防滴処置をお願い致します。結露・水濡れにより、回路間で絶縁不良を起こす可能性が御座います。
When using this product in an environment where dew condensation and water wetting occur, apply an appropriate drip-proof treatment. Dew condensation and water wetting could cause insulation failure between the circuits.
23. コネクタのみで基板を支えることは避け、コネクタ以外での基板固定対策を行ってください。
Avoid using a connector alone to mechanically support the PWB. Adopt separate fixture to support PWB besides the connector in the chassis.
24. 活電状態の電気回路で、挿入、抜去ができることを前提に作られていません。スパーク等による危険の発生、性能不良につながりますので、活電状態での挿入、抜去はしないで下さい。
Do not mate and un-mate connectors while those are energized since this connector is not designed to allow it. It may cause danger due to sparks and functional failure of the product.
25. 一枚の基板にコネクタを複数実装する場合は、嵌合相手側はそれぞれ個別の基板に実装してご使用を願います。
When mounting several board to board connectors on a same PWB, ensure to mount the each mating connector on a separate PWB.
26. 本製品及び加工工程品(仕掛品)や加工品(ハーネス品)の梱包及び輸送・保管時において、コネクタ間での絡みや衝撃、積み重ね等による負荷が掛からないようにして下さい。変形・破損等による性能不良の原因となります。
At packaging, transportation and storing, avoid applying loads to connectors by handling, interference of connectors or piling-up packages. It could cause functional defect such as connector deformation or breakage.
27. 基板実装後に基板を直接積み重ねない様に注意してください。
Do not stack PWB directly after mounting the connector on it.
28. コネクタの性能を損なう恐れがある為、コネクタの洗浄は、行わないで下さい。
Do not wash connector because it may impact the product's function.

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・製品操作について Product operation

- 29. 基板実装前後に端子、補強金具に触らないでください。
Do not touch the terminals and fitting nails of connectors before or after mounting onto the PWB.
- 30. 嵌合後、コネクタピッチ方向、スパン方向及び回転方向への負荷がかかるような動作またはセットはしないでください。コネクタ破壊やはんだクラックを引き起こします。
Avoid move or assembly of connector which could apply loads to the direction of the connector pitch, span or rotation. It may damage the connector and crack the soldering.
- 31. 嵌合の際、嵌合が不十分にならないようご注意ください。また、セットへの組み込み後も、振動、衝撃等で嵌合の浮きが発生しないような状態にて使用してください。
Ensure to mate connectors fully. Also mount and assemble the connector in your application unit with disengagement proof to avoid connector disengagement due to vibration or shocks.
- 32. 本製品のレセプタクルハウジング材料はナイロンを使用しており、吸水状態によって挿抜力・挿入感が変化します。過度な吸水により、挿入時に嵌合相手と若干干渉する場合や、クリック感が弱くなる場合がありますが、製品性能、機能には問題ございません。
Because the receptacle housing of this product use Nylon, insertion/withdrawal force or insertion feeling might change by its water absorption state. Its excess water absorption might cause interference with the mating part a little bit or weaken the click feeling of the lock when mating. However it does not impact the product's features and functions.

・リペアについて Repair

- 33. 実装後において半田こてによる手修正を行う際は、必ず仕様書掲載の条件以内で行って下さい。条件を超えて実施した場合、端子の抜け、接点ギャップの変化、モールドの変形、溶融等、破損の原因になります。
When conducting manual repairs using a soldering iron, follow the soldering conditions shown in the product specification. If the conditions in the product specification are not followed, it may cause the terminal disengagement, contact gap change, housing deformation, housing melting, and connector damage.
- 34. 半田こてによる手修正を行なう際、過度の半田やフラックスを使用しないで下さい。半田上がりやフラックス上がりにより接触、機能不良に至る場合があります。
When conducting manual repairs using a soldering iron, do not use excess solder and flux than needed. It may cause solder wicking and flux wicking issues, and also eventually cause a contact defect and functional issues.

【10. 環境指令への適合 COMPLIANCE WITH ENVIRONMENTAL DIRECTIVE】

ELV及びRoHS適合品
ELV and RoHS Compliant.

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C	変更 REVISED	'10/06/02	J2010-2446	K.TOYODA	H.HIRATA
D	変更 REVISED	'10/06/22	J2010-2557	K.TOYODA	S.MARUYAMA
E	変更 REVISED	'14/08/04	J2015-0176	N.NAITO	T.ASAKAWA
F	変更 REVISED	'15/12/15	J2016-0624	S.TERUKI	K.TANAKA
G	変更 REVISED	2021/1/25	653485	AHMADI2	HSHIMOYAMA

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