製品仕様書/Product Specification	No.	IS-9665A	来歴	9
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標題:9665 シリーズ 1.0 mmピッチ FPC/FFC コネクタ	制定年月日/ISSUUED DATE		2006-02-13	
SUBJECT: Series 9665 1.0mm Pitch FPC/FFC Connector	改訂年月日/REV	/ISED DATE	2013-09-	04

1. 適用範囲

本仕様書はイリソ電子工業株式会社製 9665 シリーズ 1.0 mmピッチ FPC/FFC コネクタに関する仕様及び 性能上の必要事項について規定する。

2. 構造及び寸法

構造、寸法、主要部品の材質、表面処理等は添付図による。 適合 FPC/FFC: 1.0mm ピッチ、厚さ: 0.3±0.05mm

適用ソケット: IMSA-9665S-***-TB/TL/TR/TR-1/ GFA/GFA-1/GFN4

3. 定格

(1)最大定格電圧

125V (AC, DC)

(2)最大定格電流

1.0A

(3)使用温度範囲

-40~+105°C

4. 試験環境

特に規定のある場合を除き、性能試験は、下記の試験条件のもとで行う。

常 温 15~35℃

常 湿 25~85% (相対湿度)

5. 性能

5-1. 電気的性能

1. Scope

This product specification is applied to IRISO ELECTRONICS CO.,LTD. Series 9665 1.0mm Pitch FPC/FFC Connector.

2. Configuration, dimensions and materials

See the product drawing attached.

 $\begin{tabular}{ll} FPC/FFC & Mated: 1.0mm Pitch, t=&0.3\pm0.05mm \\ Applied to socket: IMSA-9665S-***-TB/TL/TR/TR-1/GFA/GFA-1/GFN4 \\ \end{tabular}$

3. Rating

- (1) Maximum rating voltage: 125 V(AC,DC)
- (2) Maximum rating current: 1.0A
- (3)Temperature range : $-40 \sim +105^{\circ}$ C

4. Performances

All performance tests, unless otherwise specified, are taken under following environmental conditions.

Ambient temperature: $15\sim35^{\circ}$ C Ambient humidity :25 $\sim85^{\circ}$ RH

5. Performance

5-1.Electrical performance

	項目/Item	条件/Test condition	規格/Specification
1	接触抵抗	短絡電流 1mA、最大開放電圧 20mV、周波数 1kHz のローレベル	初 期 値 : 30mΩ以下
	Contact Resistance	抵抗計にて測定する。	各試験後:50mΩ以下
		It shall be measured by the dry electric circuit specified as follows;	Initial: $30 \mathbf{m} \Omega$ or below.
		1mA, 20mV, 1kHz frequency.	After each test: $50 \text{m} \Omega$ or below
2	耐電圧	隣接する極間にAC250V を1分間印加する。	絶縁破壊等異常のない事。
	Dielectric	AC 250V shall be applied for one minute to between next terminals.	Should not have any changes.
	Withstanding		
	Voltage		
3	絶縁抵抗	隣接する極間に DC250V を印加する。	初期值:100MΩ以上
	Insulation	m DC~250V shall be applied to between next terminals .	耐湿試験後:100MΩ以上
	resistance		Initial: $100 M\Omega$ or more.
			After humidity test: $100 M\Omega$ or more
4	外観	目視	有害となる割れ、剥がれ、ガタ、変形、
	Appearance	Visual	変色のない事。
			Should not have any flaw, scratch,
			discoloration, and crushed.

5-2. 機械的特性 5-2. Functional Performance

<u> </u>	4. 7成7队[17]工	5-2. Punctional Lenorman	<u>ice</u>
	項目/Item	条件/Test condition	規格/Specification
1	端子の保持力	端子に 25mm/分の速度で荷重を加え、端子がハウジングより抜け始め	0.98N 以上
		るまでの荷重を測定する。	
	Contact retention	It shall be pulled to the contact at the speed of 25mm per	0.98N or more
	force	minute, and measured the force when the contact begins to	
		remove from the housing.	
2	挿抜耐久性	FPC/FFC を 20 回繰返し挿抜を行ない接触抵抗を測定する。	50mΩ以下
	Insertion	(スライダーを開閉し、開時毎に挿抜する。)	
	/Extraction	The FPC/FFC shall be mated and unmated 20 times and measured	50 m Ω or below.
	endurance	The contact resistance.	
3	振動試験	FPC/FFC を嵌合した状態にて、振動周波数 10~500~10H z / 掃引時	試験中1µs以上の瞬断の無き事。
	Vibration test	間 12 分、振幅 1.5mm、又は加速度 98m/s²のいずれか小さい方にて X	50mΩ以下
		YZ軸方向に各2時間計6時間の振動を加える。試験中、瞬断の有無の	外観:異常なきこと
		確認、試験後の接触抵抗の測定及び外観観察をする。	
		The connector and FPC/FFC mated is vibrated in the frequency	
		range of $10 \sim 500 \sim 10$ Hz/12min and in the constant vibration	Discontinuity : 1μ s or less.
		amplitude 1.5mm or the acceleration of 98m/s2. This motion is	50 m Ω or below.
		applied for period of 6 hours in one of 3 multilateral perpendicular	Should not have any damages.
		directions (X,Y,Z-axis) including mating axis. It shall be tested the	
		discontinuity of the contact current during the test and measured the	
		contact resistance and observed its appearance after the test.	

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	項目/Item	条件/Test condition	規格/Specification
4	衝擊試験	FPC/FFC を嵌合した状態にて治具に取り付け、加速度 980m/s²、	試験中1μs以上の瞬断の無き事。
	Shock test	衝撃作用時間 6ms を X,Y,Z,方向の 6 面に各10回加え、試験中の	50mΩ以下
		瞬断の有無の確認、試験後の接触抵抗の測定及び外観観察する。	外観:異常なきこと
		The connector and FPC/FFC mated are installed in the machine.	Discontinuity : 1μ s or less.
		They are applied pulses 10 times to each 6 faces of 3 mutually	$50 \mathrm{m}\Omega$ or below.
		perpendicular directions(X,Y,Z); under conditions as specified ;	Should not have any damages.
		acceleration of 980m/s ² and shock pulses for a duration of 6ms.	
		It shall be tested the discontinuity of the contact current during the	
		test and measured the contact resistance and observed its	
_	ΔΨ-1-α-1-Ε-2-1-ΕΔ	appearance after the test.	%人拉梅托拉沙加州 体内 9 位以工
5	微加振試験	微加振試験機にて、コネクタを試験基板に取付け、全極直列に接続する。	総合接触抵抗が初期値の2倍以下
	Contact Pressure	The connector shall be set on a P.C.B and all of their terminals are	m :
		wired in series then tested by test facility. 通電電流 current : 1mA以下 1mA or below	Twice or less from the initial specified value in total.
		通电电流 current . ImA以下 ImA or below 衝撃値 shock : 980m/s ²	value in wtai.
		周波数 frequency: 1Hz 衝撃回数 cycling: 20000回 20000 times	
		上記条件にて、試験中及び試験後の接触抵抗を測定する。 It shall be measured the contact resistance after the test.	
6	FPC/FFC 保持力	FPC/FFC に 25mm/分の速度で加重を加え、ハウジングより	0.29N/極 以上
0	FPC/FFC	FFC/FFC に Z5mm/ 力の速度 C加重を加え、パワンプラより 抜け始めたときの荷重を測定する。	0.29IN/ 198 V/L
	retention force	The FPC/FFC shall be pulled at the speed of 25mm per minute and	0.29N/PIN or more.
	Terettrion force	measured the force when the FPC/FFC begins to remove from the	0.2011/ I III OI IIIOIE.
		housing.	

5-3. **Environmental** performan

用語		<u>5-3. 環境特性</u>	5-3.Environmental perform	nance
Heat resistance 1000 時間放置し、放置後接触抵抗測定及び外観観察を行う。 The connector and FPC/FFC mated are ummated at 5 times mated is exposed in the heat chamber 105±2°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. PFC/FFC を 5回挿技後低合した状態にて温度 60±2°C、相対湿度 90~95%RH の恒温恒湿槽に 1000 時間放置し、放置後接触抵抗測定 及び外観製察を行う。 The connector and FPC/FFC mated are ummated at 5 times mated is exposed in the heat chamber60±2°C、90~95%RH for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 3 低温保存試験 Chilly resistance 1000 時間放置し、放置後接触抵抗測定及び外観觀察を行う。 The connector and FPC/FFC mated are ummated at 5 times mated is exposed in the chilly chamber 40±3°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 4 低温負荷試験 Load of chill FPC/FFC 参 5回挿技後嵌合状態にて通電電流 ImA、 -40±2°Cの低温槽中に 96 時間放置する。 The connector and FPC/FFC mated are ummated at 5 times mated is exposed in the chilly chamber 40±3°C for 1000 hours. It shall be measured the contact resistance after the test. FPC/FFC を 5回挿技後嵌合した状態にて通電電流 ImA、 -40±2°Cの低温槽中に 96 時間放置する。 The connector and FPC/FFC mated are ummated at 5 times mated is exposed in the chilly chamber 40±3°C for 1000 hours. It shall be measured the contact resistance after the test. FPC/FFC を 5回挿技後嵌合した状態にて下図の温度条件を 1 封/かとして 100 寸が実施し、記載後接触抵抗測定及び外観觀察を行う。 The connector and FPC/FFC mated are ummated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2°C ***al Ambient temperature** -55±3°C 30min → 30min → 30min → 30min → 50min → 5		項目/Item	条件/Test condition	規格/Specification
The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the heat chamber 105±2°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 2 高温高湿保存試験 Humidity PPC/FFC 5 5回挿技後嵌合した状態にて温度 60±2°C、相対温度 90~95%RH の恒温恒湿槽に1000 時間放置し、放置後接触抵抗測定及び外觀觀察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the heat chamber60±2°C, 90~95%RH for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 3 低温保存試験 Chilly resistance 1000 時間放置し、放置後接触抵抗測定及び外觀觀察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber-40±3°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 4 低温負荷試験 FPC/FFC を 5 回挿技後嵌合状態にて通電電流 ImA、一40±2°Cの低温槽に 1000 時間放置する。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber-40±3°C, ImA for 96 hours. It shall be measured the contact resistance after the test. 5 冷熱衝撃試験 FPC/FFC を 5 回挿技後嵌合した状態にて活躍電流 ImA、一40±2°Cの機器標底がが到閉値の 2 倍以下外觀異常なき事。 Thic connector and FPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. PPC/FFC を 5 回挿技後嵌合した状態にて通電電流 ImA、一40±2°Cの / 類異常なき事。 Thic connector and FPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2°C / 常温 Ambient temperature — 30min	1	高温保存試験	FPC/FFC を 5 回挿抜後嵌合した状態にて温度 105±2℃の恒温槽に	50mΩ以下
exposed in the heat chamber 105±2°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 2 高温高湿保存試験 FPC/FFC を 5回挿技後嵌合した状態にて温度 60±2°C、相対湿度 90~95%RH の恒温恒湿槽に 1000 時間放置し、放置後接触抵抗測定及び外親膜察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the heat chamber 60±2°C、90~95%RH for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 3 低温保存試験 Chilly resistance 1000 時間放置し、放置後接触抵抗測定及び外親觀察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber 40±3°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 4 低温負荷試験 Load of chill FPC/FFC 5 5回挿技後嵌合比水態にて温度 40±3°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 5 冷熱衝撃試験 Thermal shock test FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber 40±2°C, 1mA for 96 hours. It shall be measured the contact resistance after the test. PPC/FFC 5 5 回挿技後嵌合比水態にて通常電流 1mA、 -40±2°Cの 機器常なき事。 50mΩ or below. %治接触抵抗が初期値の2倍以下外親異常なき事。 50mΩ or below. %治接触抵抗が初期値の2倍以下外親異常なき事。 50mΩ or below. **** **** *** *** *** *** ** ** ** **		Heat resistance	1000 時間放置し、放置後接触抵抗測定及び外観観察を行う。	外観異常なき事。
masured the contact resistance and observed its appearance after the test. FPC/FFC を 5回棒接後除合した状態にて温度60±2°C、相対温度90~95%RH の恒温恒温槽に1000時間放置し、放置後接触抵抗測定及び外観観察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the heat chamber60±2°C、90~95%RH for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. FPC/FFC を 5 回棒接後嵌合した状態にて温度40±3°C の低温槽に 1000時間放置し、放置後接触抵抗測定及び外観観察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber 40±3°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. FPC/FFC を 5回棒技後嵌合状態にて通電電流 1mA、 -40±2°Cの 低温槽中に 96時間放置する。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber -40±2°C、1mA for 96 hours. It shall be measured the contact resistance after the test. FPC/FFC を 5回棒技後嵌合した状態にて適電電流 1mA、 -40±2°Cの 低温槽中に 96時間放置する。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber -40±2°C、1mA for 96 hours. It shall be measured the contact resistance after the test. FPC/FFC を 5回棒技後嵌合した状態にて下図の温度条件を 1 竹かとして 100 竹が実施し、試験後接触抵抗測定及び外観製察を行う。 The connector and FPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2°C ***al Ambient temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2°C **al Ambient temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. **al Ambient temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. **al Ambient temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. **al Ambient temperature conditions. It shall be measured the contact resistance and observed its appearance after the t				50 m Ω or below.
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2 高温高湿保存試験 Humidity			1	
Humidity 90~95%RH の恒温恒湿槽に 1000 時間放置し、放置後接触抵抗測定 及び外観頻察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the heat chamber60±2°C, 90~95%RH for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 3 低温保存試験 Chilly resistance 1000 時間放置し、放置後接触抵抗测定及び外観観察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber 40±3°C for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 4 低温負荷試験 FPC/FFC を5回挿技後嵌合状態にて通電電流 1mA、一40±2°Cの 低温槽に 96 時間放置する。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber 40±2°C, 1mA for 96 hours. It shall be measured the contact resistance after the test. 5 冷熱衝撃試験 FPC/FFC を5回挿技後嵌合した状態にて下図の温度条件を1 サイクルとして100 サイルタ実施し、試験後接触抵抗測定及び外観観察を行う。 The connector and FPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2°C 常温 Ambient temperature — 55±3°C				
及び外観観察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the heat chamber60±2℃、90~95%RH for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 3 低温保存試験 Chilly resistance FPC/FFC を 5 回挿技後嵌合した状態にて温度・40±3℃の低温槽に 1000 時間放置し、放置後接触抵抗測定及び外観観察を行う。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber 40±3℃ for 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. 4 低温負荷試験 Load of chill FPC/FFC を 5 回挿技後嵌合状態にて通電電流 1mA、 −40±2℃の 低温槽中に 96 時間放置する。 The connector and FPC/FFC mated are unmated at 5 times mated is exposed in the chilly chamber −40±2℃、1mA for 96 hours. It shall be measured the contact resistance after the test. FPC/FFC を 5 回挿技後嵌合した状態にて下図の温度条件を 1 サイクルとし 50mΩ以下 外観異常なき事。 Twice or less from the initial specific value in total. Should not have any damages. 5 冷熱衝撃試験 Thermal shock test The connector and FPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2℃ 常温 Ambient -55±3℃ **Call PPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2℃ **Call PPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2℃ **Call PPC/FFC mated are unmated at 5 times is exposed 100 cycles under the following temperature conditions. It shall be measured the contact resistance and observed its appearance after the test. +85±2℃ **Call PPC/FFC mated are unmated at 5 times is exposed in the chilly chamber 1000 hours. It shall be measured the contact resistance and observed its appearance after the test. +85±2℃	2			
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常温 Ambient temperature -55±3℃ -55±3℃				
_55±3℃				
_55±3℃				

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	項目/Item	条件/Test condition	規格/Specification
6	温湿度	FPC/FFC を 5 回挿抜後嵌合した状態にて下図の温度条件を 1 サイクルとし	50mΩ以下
	サイクル試験	て 7 サイクル実施し、試験後接触抵抗測定及び外観観察を行う。	外観異常なき事。
	Humidity	The connector and FPC/FFC mated are unmated at 5 times mated is	50 m Ω or below.
	resistance	exposed 7 cycles under the following temperature conditions. It shall	Should not have any damages.
		be measured the contact resistance and observed its appearance	
		after the test.	
		+80±2°C	
		95%RH	
		-20±3℃	
		3h 9h 3h 9h	
		< → < → < → 	
		1cycle	
7	H2S ガス試験	FPC/FFC を 5 回挿抜後嵌合した状態にて、温度 40±2℃、相対湿度	50mΩ以下
	H ₂ S gas test	75%、濃度 3±1ppm の雰囲気中に 96 時間放置し、試験後接触抵抗を	外観異常なき事。
		測定する。	50 m Ω or below.
		The connector and FPC/FFC mated are unmated at 5 times mated is	Should not have any damages
		exposed in the H ₂ S gas chamber $40\pm2^{\circ}$ C,75% RH 3 ± 1 ppm for 96	
		hours. It shall be measured the contact resistance after the test.	
8	SO2ガス試験	FPC/FFC を 5 回挿抜後嵌合した状態にて、温度 40±2℃、相対湿度	50mΩ以下
	SO ₂ gas test	75%、濃度 10±3ppm の雰囲気中に 96 時間放置し、試験後接触抵抗を	外観異常なき事。
		測定する。	50 m Ω or below.
		The connector and FPC/FFC mated are unmated at 5 times mated is	Should not have any damages
		exposed in the SO ₂ gas chamber 40±2°C,75% RH 10±3ppm for	
_	上午」Lon本自上等上版会	96 hours. It shall be measured the contact resistance after the test.	FO. ONT
9	塩水噴射試験	FPC/FFC を 5 回挿抜後嵌合した状態にて、温度 35±2℃、濃度 5±1%	50mΩ以下
	Salt spray test	の塩水噴霧中に48時間放置し、試験後接触抵抗を測定する。	外観異常なき事。
		The connector and FPC/FFC mated are unmated at 5 times mated is	$50 \text{m} \Omega$ or below.
		exposed in the salt spray chamber 35 ± 2 °C, 5 ± 1 % salt density for 48 hours. It shall be measured the contact resistance after the test.	Should not have any damages
		40 hours. It shall be measured the contact resistance after the test.	

5-4. その他の性能 <u>5-4.Other specification</u>

	項目/Item	条件/Test condition	規格/Specification
1	半田付け性	コネクタの半田付け部をフラックスに浸漬した後、245±5℃の Sn-Ag-Cu 系	浸した面積の95%以上に半田が
	Solderability	の鉛フリー半田槽に 3±0.5 秒浸す。	むらなく付着する事。
		The terminal of connector shall be put into the flux and dipped into	Solder shall cover 95% or more
		Pb free solder bath(Type of Sn-Ag-Cu) 245 ± 5 °C, 3 ± 0.5 s.	of the area that is dipped into the
			solder bath.
2	半田耐熱性	下記条件にて、半田耐熱性試験を行う。	実使用上の問題無き事
	Soldering heat test	The connector shall be tested resistance to soldering heat under the	Should not have any problems.
		following conditions.	
		条件①:リフローの場合(2回)/In case of reflow(2times)	
		250℃MAX.(ピ-ウ温度)、10s MAX.	
		(Peak temperature)	
		7	
		<u>180℃</u>	
		150℃ .	
		1500	
		90±30s 230°CMIN.	
		30~60s	
		(予熱 150~180℃)	
		(pre-heat: from 150 to 180°C)	
		温度は製品上面の温度とする。	
		The temperature shall be measured on the surface of the Product.	
		The temperature shall be measured on the surface of the Froduct.	
		条件②:手半田の場合/In case of manual soldering.	
		半田鏝温度/Solder iron : 350±5℃	
		時間/time : 3±0.5s	
3	温度上昇試験	最大許容電流を通電し、熱電対法にてコネクタの温度上昇を測定する。	温度上昇:30℃以下
	Rise of	The connector shall be operated in the maximum rise of current and	Rise of temperature:
	temperature test	measured rise of the temperature at contact point.	30°C or below

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6. 製品の保管期限

製造日より1年とする。

7.保存保管条件

室温で-10~+40℃の温度、75%以下の相対湿度で保管 してください。

8.故障率

MIL-HDBK-217D,2-11,2 プリント配線板コネクタに基づいて

算出を行う。(単位: FIT)

6.Term of a guarantee 1 year from production date.

7.Storage conditions

Shall be stored in the house at -10 \sim +40 $^{\circ}$ C,75 $^{\circ}$ RH or less .

8.Failure rate

Failure rate shall be calculated as MIL-HDBK-217D,2-11,2

(Unit: FIT)

極数/ckt	故障率/Failure rate	極数/ckt	故障率/Failure rate	極数/ckt	故障率/Failure rate
4	2.04	17	4.23	30	6.65
5	2.22	18	4.41	31	6.85
6	2.40	19	4.58	32	7.05
7	2.57	20	4.76	33	7.26
8	2.73	21	4.93	34	7.47
9	2.90	22	5.12	35	7.69
10	3.06	23	5.30	36	7.91
11	3.23	24	5.48	37	8.13
12	3.39	25	5.67	38	8.35
13	3.56	26	5.86	39	8.58
14	3.72	27	6.05	40	8.80
15	3.89	28	6.25		
16	4.06	29	6.45		

9.ウィスカーに関して(錫系めっきの場合) **人** 本製品は、錫系のめっきを施しておりますので、ウィスカーが発生する 可能性がございます。その為、ウィスカー発生に対する保証は困難であ り、御社にて御判断の上御使用をお願いします。

10. 和文と英文の差異について

和文と英文の内容に差異が生じた場合には、和文の内容を優先致します。

9. About a whisker(In case of Sn plate)/9

This product utilizes lead-free tin plating. Any product with lead-free tin plating is susceptible to tin whisker. Iriso provides no assurances against the growth of tin whisker even under normal operating conditions. Customers assume all responsibility for any product failures due solely to the growth of tin whiskers.

10. Difference between Japanese and English

When difference is found between Japanese Specifications and English Specifications, Priority shall be given to Japanese.

FPC/FFC 用コネクタ

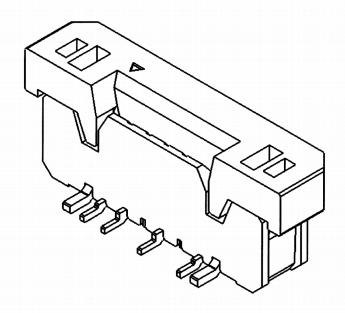
Connector for FPC/FFC

I-Lock コネクタ 取り扱い説明書

I-Lock Connector Manual

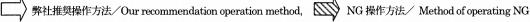
適用製品:9665 シリーズ

Application product: 9665series



《コネクタの操作方法と注意点/Operation method and notes of connector》

- 9665 シリーズ I LOCK 1.0mm ピッチ I型/9665 series I LOCK 1.0mm pitch I type.
- ※ 図表記号の説明/Explanation for mark in below table

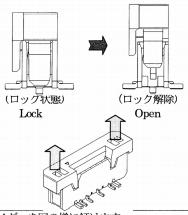




操作方法/Operation method

1. FPC/FFC 挿入方法 Method of inserting FPC/FFC

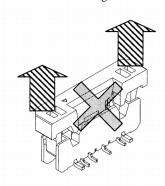
①スライダーの両端を引き出し、ロックを解除します。 Both ends of the slider are drawn out and the lock is released.



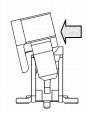
使用上の注意点/Directions point

スライダーは軽い力で引き出せます。無理な力をかけると 破損の原因になります。

The slider can be drawn out by light load. Please note too much load. It causes damage.



② スライダーを図の様に傾けます。 これにより FPC/FFC を挿入し易くなります。 The slider is inclined only a little as shown in figure.



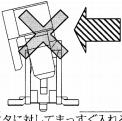
As a result, FPC/FFC can be made easy to insert.

反対側には傾けないで下さい。

Please do not incline it to the other side.

傾ける際には無理な力を掛けないで下さい。 破損の原因となります。

When inclined slider, Please do not multiply too much load. It causes damage.



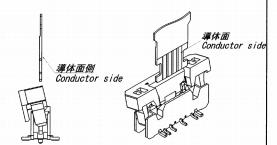
③ FPC/FFC を図の向きで挿入します。 奥まで確実に挿入して下さい。

> FPC/FFC を挿入する際には FPC/FFC の補強板部分 を持って挿入すると、確実な作業ができます。その為、 FPC/FFC は補強板の長さが 15mm 以上のものを推奨 致します。

> Insert FPC/FFC like the direction of figure. Please insert it in the interior surely.

> Please insert the FPC/FFC holding the supporting tape. It makes insertion to easy.

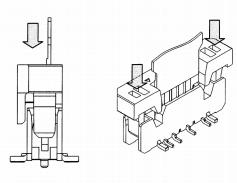
> Therefore, FPC/FFC will recommend dimention of supporting tape is 15mm or more.



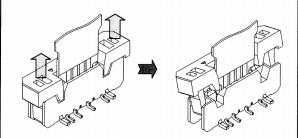
- FPC/FFC はコネクタに対してまっすぐ入れるようにし て下さい。
- 補強板部分を持たないで挿入すると、カードが曲がり、作 業性が悪くなる可能性があります。
- Please insert FPC/FFC straight into the connector.
- There is a possibility that work efficiency worsens by the card bending if it tries to insert it without holding the supporting tape.

操作方法/Operation method

④ スライダーを垂直に戻し、両端を押し込みます。Returned slider to straight, and push both ends of slider the same time.

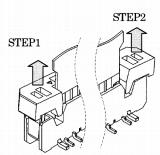


- 2. FPC/FFC 抜去方法 Method of pulling out FPC/FFC
- ① スライダーの両端を引き出し、ロックを解除します。Drawn out both ends of the slider. And release the lock.



%Note

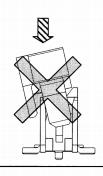
多極数などでスライダーが引き出しにくい場合は、片側ずつ引き出す事により、操作が容易になる場合があります。 When the number of poles is large the slider is not drawn out easily. It becomes easy to operate if it at each side draws it out.

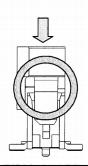


使用上の注意点/Directions point

スライダーを傾けたまま押し込まないで下さい。必ずスライダーを垂直な状態に戻してから押し込んで下さい。 破損の原因になります。

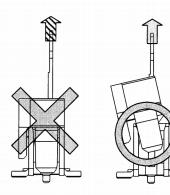
Please do not push it when the slider is inclining. Please push slider after it return to straight. It causes damage.





スライダーをロックした状態で、FPC/FFC を引き抜かないで下さい。引き抜く際は必ずロックを解除した状態で行って下さい。

Please do not pull out FPC/FFC with the slider locked. Please pull it out with the lock released without fail.

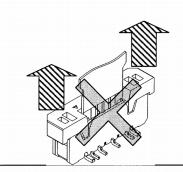


FPC/FFC を挿入した状態でスライダー引き出し時、過度の荷重をかけないで下さい。

破損の原因になります。特に FPC/FFC 抜去時には十分 ご注意下さい。

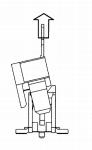
Please do not apply an excessive load when you draw out the slider with FPC/FFC inserted.

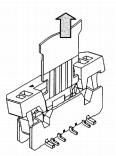
It causes damage. Especially, be careful enough when ${\it FPC/FFC}$ is pulled out.



操作方法/Operation method

② FPC/FFC を垂直に引き出します。 Pull out the FPC/FFC straight.

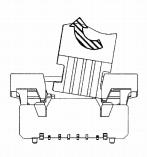




使用上の注意点/Directions point

 FPC/FFCを引き抜く際、斜めに傾けて引き抜きますと、 下図のように FPC/FFC の切欠き部分がコネクタに引っ かかる事があります。この様な状態で、FPC/FFCを無理 に引き抜くと破損の原因になります。必ず、一度押し戻し てから引き抜いて下さい。

There is a thing caught to the cut out part of FPC/FFC at connector when FPC/FFC is pulled out with incline like the figure below. Under such a condition, when FPC/FFC is forcibly pulled out, it causes damage. Please pull it out after it pushes once and it returns it.



・その他/Others

FPC/FFCの挿抜に関して、FPC/FFCの種類によっては、下記切かき部(丸枠)の剥がれ等が発生する場合があります。 剥がれ等が発生した場合、接触不良になる可能性がありますので、事前にご確認の上、使用する FFC/FPC の選定をお願い致します。 また、挿抜回数を少なくすることにより剥がれの抑制が出来ます。

Please confirm A of FPC/FFC (see below) after durability.

Insulation occurs to fall off surface of FPC/FFC due to material of FPC/FFC by scratch. Then electrical contact open.

