



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE  
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【1. 適用範囲 SCOPE】

本仕様書は、\_\_\_\_\_ 殿 に納入する  
1.25mmピッチFFC/FPC用コネクタ について規定する。  
 This specification covers the 1.25mm PITCH FFC/FPC 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 Parts Number
ハウジング アッセンブリ Housing Assembly (STRAIGHT TYPE) 無鉛 LEAD FREE	52045-**45

\*\* : 図面参照 Refer to the drawing.

【3. 定格 RATINGS】

項目 Item	規格 Standard
最大許容電圧 Rated Voltage(MAXIMUM)	200 V
最大許容電流 Rated Current(MAXIMUM)	1 A
使用温度範囲 Ambient Temperature Range	-40°C ~ +85°C *1

\*1 : 通電による温度上昇分も含む。  
 Including terminal temperature rise.

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D	変更 REVISED J2003-1105 '02/10/22 K.YAMANE		THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				製品仕様書
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DESIGN CONTROL J		STATUS	WRITTEN BY: K.YAMANE	CHECKED BY: M.TOMITA	APPROVED BY: M.SASAO	DATE: YR/MO/DAY 2002/2/5	
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【4. 性能 PERFORMANCE】

4 - 1. 電気的性能 Electrical Performance

項目 Item	条件 Condition	規格 Standard
4-1-1 接触抵抗 Contact Resistance	適合FFC/FPCを装着し、開放電圧20mV以下、 短絡電流10mAにて測定する。 (JIS C5402 5.4)  Mate applicable FFC/FPC, measure by dry circuit, 20mV MAXIMUM, 10mA. (JIS C5402 5.4)	30 milliohms MAXIMUM
4-1-2 絶縁抵抗 Insulation Resistance	適合FFC/FPCを装着し、隣接するターミナル間 及びターミナル、アース間に、DC500Vを印加し 測定する。 (JIS C5402 5.2/MIL-STD-202 試験法 302)  Mate applicable FFC/FPC, apply 500V DC between adjacent terminal or ground. (JIS C5402 5.2/MIL-STD-202 Method 302)	500 Megaohms MINIMUM
4-1-3 耐電圧 Dielectric Strength	適合FFC/FPCを装着し、隣接するターミナル間及びターミナル、 アース間に、AC500V（実効値）を1分間印加する。 (JIS C5402 5.1/MIL-STD-202 試験法 301)  Mate applicable FFC/FPC, apply 500V AC (rms) 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 Condition	規格 Standard
4-2-1 挿入力及び抜去力 Insertion and Withdrawal Force	標準ゲージを用いて、毎分25±3mmの速さで挿入、抜去を行う。  Insert and withdraw the standard gauge at the speed rate of 25±3mm/minute.	第7項参照 Refer to paragraph 7
4-2-2 ターミナル保持力 Terminal/Housing Retention Force	ターミナルを毎分25±3mmの速さで引っ張る。  Apply axial pull out force at the speed rate of 25±3mm/minute on the terminal assembled in the housing.	5.9 N {0.60 kgf} MINIMUM

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4 - 3. その他 Environmental Performance and Others

項目 Item		条件 Condition	規格 Standard	
4-3-1	繰り返し挿抜 Repeated Insertion/ Withdrawal	1分間に10回以下の速さで挿入、抜去を10回繰り返す。 When mated up to 10 cycles repeatedly by the rate of 10 cycles per minute.	接触抵抗 Contact Resistance	50 milliohms MAXIMUM
4-3-2	温度上昇 Temperature Rise	適合FFC/FPCを装着し、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) Carrying rated current load. (UL 498)	温度上昇 Temperature Rise	30 °C MAXIMUM
4-3-3	耐振動性 Vibration	DC1mA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10~55~10Hz/分、全振幅1.5mmの振動を各2時間加える。 (MIL-STD-202 試験法 201) Amplitude : 1.5mm P-P Sweep time : 10~55~10Hz in 1 minute Duration : 2 hours in each X, Y, Z axes (MIL-STD-202 Method 201)	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM
			瞬断 Discontinuity	1.0 microsecond MAXIMUM
4-3-4	耐衝撃性 Shock	DC1mA通電状態にて、嵌合軸を含む互いに垂直な6方向に490m/s <sup>2</sup> {50G}の衝撃を各3回加える。 (JIS C0041/MIL-STD-202 試験法 213) 490m/s <sup>2</sup> {50G}, 3 strokes in each X,Y,Z axes. (JIS C0041/MIL-STD-202 Method 213)	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM
			瞬断 Discontinuity	1.0 microsecond MAXIMUM
4-3-5	耐熱性 Heat Resistance	適合FFC/FPCを装着し、85±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 C0021/MIL-STD-202 試験法 108) 85±2°C, 96hours (JIS C0021/MIL-STD-202 Method 108)	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM
4-3-6	耐寒性 Cold Resistance	適合FFC/FPCを装着し、-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 C0020) -40±3°C, 96hours (JIS C0020)	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM

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項目 Item		条件 Condition	規格 Standard	
4-3-7	耐湿性 Humidity	適合FFC/FPCを装着し、60±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)  Temperature : 60±2℃ Relative Humidity : 90~95% Duration : 96hours (JIS C0022/MIL-STD-202 Method 103)	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms 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	50 Megaohms MINIMUM
4-3-8	温度サイクル Temperature Cycling	適合FFC/FPCを装填し、-55℃に30分、 +85℃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 5分以内とする。試験後、1~2時間室温に放置 する。 (JIS C0025)  5 cycles of : a) -55℃ 30minutes b) +85℃ 30minutes (JIS C0025)	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM
4-3-9	塩水噴霧 Salt Spray	適合FFC/FPCを装填し、35±2℃にて 5±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 C5028/MIL-STD-202 試験法 101)  48±4hours exposure to a salt spray from the 5±1% solution at 35±2℃. (JIS C5028/MIL-STD-202 Method 101)	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM
4-3-10	亜硫酸ガス SO <sub>2</sub> Gas	適合FFC/FPCを装填し、40±2℃にて 50±5ppmの亜硫酸ガス中に24時間放置する。  24hours exposure to 50±5ppm SO <sub>2</sub> gas at 40±2℃.	外観 Appearance	異常なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM

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項目 Item		条件 Condition	規格 Standard	
4-3-11	耐アンモニア性 NH <sub>3</sub> Gas	適合FFC/FPCを装填し、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)  40 minutes exposure to NH <sub>3</sub> gas evaporating from 28% Ammonia solution.	外観 Appearance	異状なきこと No damage
			接触抵抗 Contact Resistance	50 milliohms MAXIMUM
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、本体の取り付け基準面より1.6mm迄、255±5°Cの半田に3+0/-1秒浸す。  Dip terminal and pin into the molten solder (held at 255±5°C) up to 1.6mm from the standard surface for 3+0/-1seconds.	濡れ性 Solder Wetting	浸漬面積の75%以上 75% of immersed area must show no voids, pin holes
4-3-13	半田耐熱性 Resistance to Soldering Heat	ターミナルまたはピンを本体の取り付け、基準面より1.6mm迄、260±5°Cの半田に10±1秒浸す。  Dip terminal and pin into the molten solder (held at 260±5°C) up to 1.6mm from the standard surface for 10±1seconds.	外観 Appearance	端子ガタ、割れ等 異状なきこと No Damage

( ) : 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.

【6. 適合導体 APPLICABLE CONDUCTOR】

錫または半田メッキ (1µm以上) 軟銅箔

Soft copper foil, tin or solder plating (1 micrometer MINIMUM).

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## 【7. 挿入力及び抜去力 INSERTION AND WITHDRAWAL FORCE】

挿入力及び抜去力を下記の標準ゲージを使用した場合において規定する。

Insertion and withdrawal force are specified using with the following standard gauge.

標準ゲージ Standard Gauge : 材料 Material : SKS - 3 (熱処理済 Heat treatment)

厚さ Thickness : 0.3±0.005 (mm)

仕上げ Finish : 上仕上げ G

幅 Width : 1.25×N+0.5 (mm)

研磨方向 Grinding direction : 挿抜方向 Mating Direction

極数 No. of CKT.	単位 UNIT	挿入力 (最大値) INSERTION FORCE (MAXIMUM)			抜去力 (最小値) WITHDRAWAL FORCE (MINIMUM)		
		初回 1st	6回目 6th	10回目 10th	初回 1st	6回目 6th	10回目 10th
3	N {kgf}	5.2 {0.54}	5.2 {0.54}	5.2 {0.54}	0.6 {0.06}	0.6 {0.06}	0.6 {0.06}
4	N {kgf}	7.0 {0.72}	7.0 {0.72}	7.0 {0.72}	0.8 {0.08}	0.8 {0.08}	0.8 {0.08}
5	N {kgf}	8.8 {0.90}	8.8 {0.90}	8.8 {0.90}	1.0 {0.10}	1.0 {0.10}	1.0 {0.10}
6	N {kgf}	10.5 {1.08}	10.5 {1.08}	10.5 {1.08}	1.2 {0.12}	1.2 {0.12}	1.2 {0.12}
7	N {kgf}	12.3 {1.26}	12.3 {1.26}	12.3 {1.26}	1.4 {0.14}	1.4 {0.14}	1.4 {0.14}
8	N {kgf}	14.1 {1.44}	14.1 {1.44}	14.1 {1.44}	1.6 {0.16}	1.6 {0.16}	1.6 {0.16}
9	N {kgf}	15.8 {1.62}	15.8 {1.62}	15.8 {1.62}	1.8 {0.18}	1.8 {0.18}	1.8 {0.18}
10	N {kgf}	17.6 {1.80}	17.6 {1.80}	17.6 {1.80}	2.0 {0.20}	2.0 {0.20}	2.0 {0.20}
11	N {kgf}	19.4 {1.98}	19.4 {1.98}	19.4 {1.98}	2.2 {0.22}	2.2 {0.22}	2.2 {0.22}
12	N {kgf}	21.1 {2.16}	21.1 {2.16}	21.1 {2.16}	2.4 {0.24}	2.4 {0.24}	2.4 {0.24}
13	N {kgf}	22.9 {2.34}	22.9 {2.34}	22.9 {2.34}	2.6 {0.26}	2.6 {0.26}	2.6 {0.26}
14	N {kgf}	24.6 {2.52}	24.6 {2.52}	24.6 {2.52}	2.8 {0.28}	2.8 {0.28}	2.8 {0.28}
15	N {kgf}	26.4 {2.70}	26.4 {2.70}	26.4 {2.70}	3.0 {0.30}	3.0 {0.30}	3.0 {0.30}

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極数 No. OF CKT.	単位 UNIT	挿入力 (最大値) INSERTION FORCE (MAXIMUM)			抜去力 (最小値) WITHDRAWAL FORCE (MINIMUM)		
		初回 1st	6回目 6th	10回目 10th	初回 1st	6回目 6th	10回目 10th
16	N {kgf}	28.2 {2.88}	28.2 {2.88}	28.2 {2.88}	3.2 {0.32}	3.2 {0.32}	3.2 {0.32}
17	N {kgf}	29.9 {3.06}	29.9 {3.06}	29.9 {3.06}	3.4 {0.34}	3.4 {0.34}	3.4 {0.34}
18	N {kgf}	31.7 {3.24}	31.7 {3.24}	31.7 {3.24}	3.6 {0.36}	3.6 {0.36}	3.6 {0.36}
19	N {kgf}	33.5 {3.42}	33.5 {3.42}	33.5 {3.42}	3.8 {0.38}	3.8 {0.38}	3.8 {0.38}
20	N {kgf}	35.2 {3.60}	35.2 {3.60}	35.2 {3.60}	4.0 {0.40}	4.0 {0.40}	4.0 {0.40}
21	N {kgf}	37.0 {3.78}	37.0 {3.78}	37.0 {3.78}	4.2 {0.42}	4.2 {0.42}	4.2 {0.42}
22	N {kgf}	38.8 {3.96}	38.8 {3.96}	38.8 {3.96}	4.4 {0.44}	4.4 {0.44}	4.4 {0.44}
23	N {kgf}	40.5 {4.14}	40.5 {4.14}	40.5 {4.14}	4.5 {0.46}	4.5 {0.46}	4.5 {0.46}
24	N {kgf}	42.3 {4.32}	42.3 {4.32}	42.3 {4.32}	4.7 {0.48}	4.7 {0.48}	4.7 {0.48}
25	N {kgf}	44.1 {4.50}	44.1 {4.50}	44.1 {4.50}	4.9 {0.50}	4.9 {0.50}	4.9 {0.50}
26	N {kgf}	45.8 {4.68}	45.8 {4.68}	45.8 {4.68}	5.1 {0.52}	5.1 {0.52}	5.1 {0.52}
27	N {kgf}	47.6 {4.86}	47.6 {4.86}	47.6 {4.86}	5.3 {0.54}	5.3 {0.54}	5.3 {0.54}
28	N {kgf}	49.3 {5.04}	49.3 {5.04}	49.3 {5.04}	5.5 {0.56}	5.5 {0.56}	5.5 {0.56}
29	N {kgf}	51.1 {5.22}	51.1 {5.22}	51.1 {5.22}	5.7 {0.58}	5.7 {0.58}	5.7 {0.58}
30	N {kgf}	52.9 {5.40}	52.9 {5.40}	52.9 {5.40}	5.9 {0.60}	5.9 {0.60}	5.9 {0.60}
31	N {kgf}	54.6 {5.58}	54.6 {5.58}	54.6 {5.58}	6.1 {0.62}	6.1 {0.62}	6.1 {0.62}
32	N {kgf}	56.4 {5.76}	56.4 {5.76}	56.4 {5.76}	6.3 {0.64}	6.3 {0.64}	6.3 {0.64}
33	N {kgf}	58.2 {5.94}	58.2 {5.94}	58.2 {5.94}	6.5 {0.66}	6.5 {0.66}	6.5 {0.66}
34	N {kgf}	59.9 {6.12}	59.9 {6.12}	59.9 {6.12}	6.7 {0.68}	6.7 {0.68}	6.7 {0.68}
35	N {kgf}	61.7 {6.30}	61.7 {6.30}	61.7 {6.30}	6.9 {0.70}	6.9 {0.70}	6.9 {0.70}

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		初回 1st	6回目 6th	10回目 10th	初回 1st	6回目 6th	10回目 10th
36	N {kgf}	63.5 {6.48}	63.5 {6.48}	63.5 {6.48}	7.1 {0.72}	7.1 {0.72}	7.1 {0.72}
37	N {kgf}	65.2 {6.66}	65.2 {6.66}	65.2 {6.66}	7.3 {0.74}	7.3 {0.74}	7.3 {0.74}
38	N {kgf}	67.0 {6.84}	67.0 {6.84}	67.0 {6.84}	7.5 {0.76}	7.5 {0.76}	7.5 {0.76}
39	N {kgf}	68.7 {7.02}	68.7 {7.02}	68.7 {7.02}	7.7 {0.78}	7.7 {0.78}	7.7 {0.78}
40	N {kgf}	70.5 {7.20}	70.5 {7.20}	70.5 {7.20}	7.9 {0.80}	7.9 {0.80}	7.9 {0.80}

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