



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

【4. 性能 PERFORMANCE】

4-1. 電氣的性能 Electrical Performance

項目 Item	条件 Test Condition	規格 Requirement
4-1-1 接触抵抗 Contact Resistance	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. (JIS C5402 5.4)	40 milliohm MAXIMUM
4-1-2 絶縁抵抗 Insulation Resistance	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、DC500Vを印加し測定する。 (JIS C5402 5.2/MIL-STD-202 試験法 302) Mate connectors apply 500V DC between adjacent terminal and ground. (JIS C5402 5.2/MIL-STD-202 Method 302)	100 megohm MINIMUM
4-1-3 耐電圧 Dielectric Strength	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 5.1/MIL-STD-202 試験法 301) Mate connectors, 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 Test Condition	規格 Requirement
4-2-1 挿入及び抜去力 Insertion and Withdrawal Force	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/-3 mm per minute.	第6項参照 Refer to paragraph 6
4-2-2 ターミナル保持力 Terminal Pull-out Force	ハウジングに装着されたターミナルを毎分25±3mmの速さで引っ張る。 Apply axial pull out force on the terminal assembled in the housing at a rate of 25+3/-3mm per minute.	0.49 N { 0.05kgf } MINIMUM

REVISE ON PC ONLY

A

SEE SHEET 1 OF 10

TITLE:

0.5 mm BOARD TO BOARD CONN
(Hgt=2.5)

-LEAD FREE-

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER

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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 Mate / Un-mate	1分間に10回以下の速さで挿入、抜去を30回繰り返す。 When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.	接触抵抗 Contact Resistance	80 milliohm MAXIMUM
4-3-2	温度上昇 Temperature Rise	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 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
4-3-3	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10~55~10 Hz/分、全振幅1.5mmの振動を各2時間加える。 (MIL-STD-202試験法 201) Mate connectors and subject to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, passing DC 1mA during the test. Amplitude : 1.5 mm P-P Frequency : 10-55-10 Hz shall be traversed in 1 minute. (MIL-STD-202, Method 201)	外観 Appearance	異状なきこと No Damage
			接触抵抗 Contact Resistance	80 milliohm 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、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 1mA current during the test. {Total of 18 shocks} Test pulse : Half Sine Peak value : 490 m/s ² {50 G} Duration : 11 ms (JIS C0041/MIL-STD-202 Method 213)	外観 Appearance	異状なきこと No Damage
			接触抵抗 Contact Resistance	80 milliohm MAXIMUM
			瞬断 Discontinuity	1.0microsecond MAXIMUM

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項目 Item		条件 Test Condition	規格 Requirement	
4-3-5	耐熱性 Heat Resistance	コネクタを嵌合させ、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) Mate connectors and expose to 85+2/-2°C 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 C0021/MIL-STD-202 Method 108)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	80 milliohm MAXIMUM
4-3-6	耐寒性 Cold Resistance	コネクタを嵌合させ、-25±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) Mate connectors and expose to -25+3/-3°C 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	80 milliohm MAXIMUM
4-3-7	耐湿性 Humidity	コネクタを嵌合させ、40±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。 (JIS C0022/MIL-STD-202 試験法103) Mate connectors and expose to 40+2/-2°C, 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	80 milliohm 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 megohm MINIMUM

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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	<p>コネクタを嵌合させ、-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。 (JISC0025)</p> <p>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 °C 30 minutes b) +85 °C 30 minutes (Transit time shall be with in 5 minutes) (JISC0025)</p>	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	80 milliohm MAXIMUM
4-3-9	塩水噴霧 Salt Spray	<p>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)</p> <p>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/-1% Spray time : 48+4/-4 hours Ambient temperature : 35+2/-2 °C (JIS C0023/MIL-STD-202 Method 101)</p>	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	80 milliohm MAXIMUM
4-3-10	亜硫酸ガス SO ₂ Gas	<p>コネクタを嵌合させ、40±2℃にて、50±5ppmの亜硫酸ガス中に24時間放置する。</p> <p>Mate connectors and expose to 50+5/-5ppm SO₂ gas, ambient temperature 40+2/-2 degree C for 24 hours.</p>	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	80 milliohm MAXIMUM.

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項目 Item		条件 Test Condition	規格 Requirement	
4-3-11	耐アンモニア性 NH ₃ Gas	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) 40 minutes exposure to NH ₃ gas evaporating from 28% Ammonia solution.	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	80 milliohm MAXIMUM
4-3-12	半田付け性 Solderability	端子先端より0.3mm、金具先端より0.3mmの位置まで245±3℃の半田に3±0.5秒浸す。 Dip terminal and fitting nail (held at 245±3℃) up to 0.3mm from the tip for 3±0.5seconds.	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	(リフロー時) <u>When reflowing</u> 第7項の条件にて、2回リフローを行う。 Refer to paragraph 7, two times.	外観 Appearance	端子ガタ 割れ等 異常なきこと No Damage
		(手半田) <u>Soldering iron method</u> 端子先端より0.3mm、金具先端より0.3mmの位置まで370~400℃の半田ゴテにて最大5秒加熱する。 Dip terminal and fitting nail(held at 370~400℃) Up to 0.3mm from the tip for 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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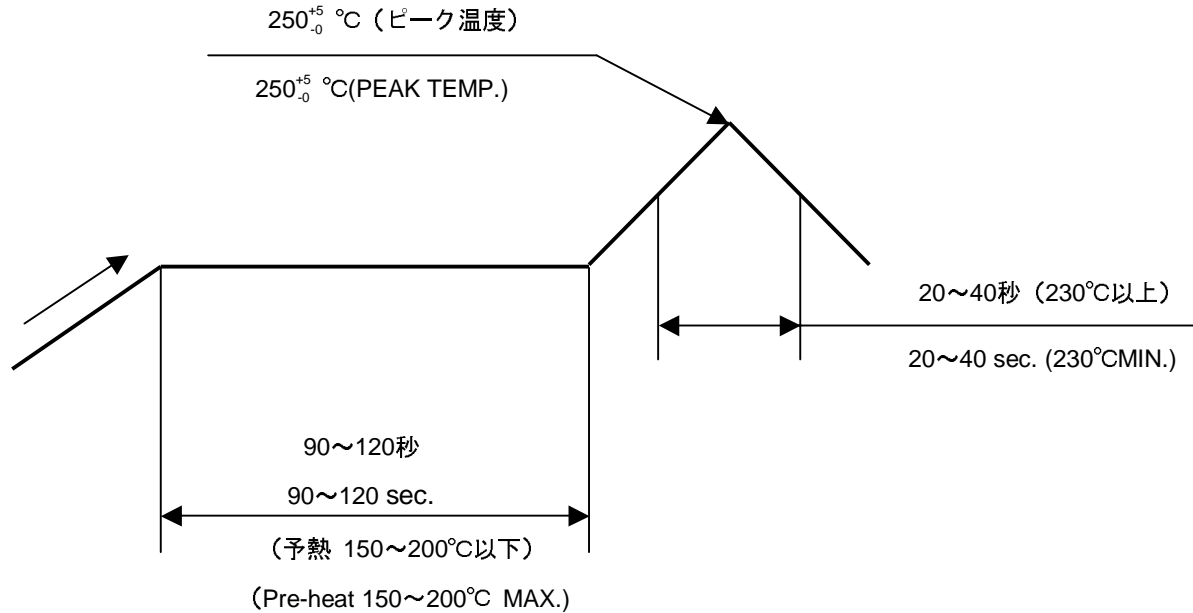
【6. 挿入力及び抜去力 INSERTION/WITHDRAWAL FORCE】

極数 No of CKT	単位 UNIT	挿入力 (最大値) Insertion (MAXIMUM)			抜去力 (最小値) Withdrawal (MINIMUM)		
		初回 1st	6回目 6th	30回目 30th	初回 1st	6回目 6th	30回目 30th
50	N {kgf}	49.0 {5.0}	49.0 {5.0}	49.0 {5.0}	6.86 {0.70}	4.90 {0.50}	4.90 {0.50}
60	N {kgf}	49.0 {5.0}	49.0 {5.0}	49.0 {5.0}	6.86 {0.70}	4.90 {0.50}	4.90 {0.50}
70	N {kgf}	49.0 {5.0}	49.0 {5.0}	49.0 {5.0}	6.86 {0.70}	4.90 {0.50}	4.90 {0.50}
80	N {kgf}	49.0 {5.0}	49.0 {5.0}	49.0 {5.0}	6.86 {0.70}	4.90 {0.50}	4.90 {0.50}

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【7. 赤外線リフロー条件 INFRARED REFLOW CONDITION】



温度条件グラフ
TEMPERATURE CONDITION GRAPH
(基板表面温度)
(TEMPERATURE ON BOARD PATTERN SIDE)

注記：本リフロー条件に関しては、リフロー装置及び基板などにより条件が異なりますので
事前に実装評価(リフロー評価)の御確認を御願い致します。

NOTE : Please check the mount condition (reflow soldering condition) by your own devices beforehand,
because the condition changes by the soldering devices, p.c.boards, and so on.

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【 8 .使用上の注意事項 INSTRUCTION UPON USAGE】

1. セットへの組込み後、コネクタに直接大きな振動及び負荷等が加わらない様、取り付け基板に固定対策をして下さい。
After mounting of connectors, pc boards which mounted connectors, shall be given fasten measure that connectors are used in the conditions of free from excessive vibration and load directry.
2. 挿抜時ゴジリ挿抜などを行わない様に、真っすぐに挿抜して下さい。
Do not twist or wrench connectors during mating and un-mating.
3. 嵌合の際、嵌合が不十分にならない様、注意して下さい。
又、セットへの組込み後も、嵌合の浮きが発生しない様な状態にて使用して下さい。
After mating , please check if it is mated surely.
After mounting of connectors to pc boards, please use the connector in the conditions that it is not lifted up.

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REV.	REV. RECORD	DATE	ECN NO.	WRITTEN BY :	CHECKED BY :
A	RELEASED	'04/04/01	J2004-3502	E.SUZUKI	K.TOJO

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