



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

【1. 適用範囲 SCOPE】

本仕様書は、_____ 殿 に納入する。
1.25mm ピッチ 電線 対 基板用コネクタ _____ について規定する。

This specification covers the 1.25mm Pitch Wire 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 Part Number
圧接リセプタクル ハウジングアセンブリ I.D.T. Receptacle Housing Assembly 無鉛 LEAD FREE	5 4 5 9 6 - * * 1 *
ウェハーアセンブリ 1列 S/T ポジティブロック Wefer Assembly 1-ROW S/T Positive Lock 無鉛 LEAD FREE	5 5 4 4 7 - * * 7 *
ウェハーアセンブリ 1列 S/T フリクションロック Wefer Assembly 1-ROW S/T Friction Lock 無鉛 LEAD FREE	5 5 4 4 8 - * * 7 *
ウェハーアセンブリ 1列 R/A フリクションロック Wefer Assembly 1-ROW R/A Friction Lock 無鉛 LEAD FREE	5 5 4 5 4 - * * 7 *

* : 図面参照 Refer to the drawings.

【3. 定格及び適用電線 RATINGS AND APPLICABLE WIRE】

項目 Item	規格 Standard	
最大許容電圧 Rated Voltage(MAX.)	1 0 0 V	
最大許容電流 及び適用電線 Rated Current(MAX.) and Applicable Wires	AWG #26	1.5 A
	AWG #28	1.0 A
使用温度範囲*1 Ambient temperature Range	- 4 0 °C ~ + 1 0 5 °C*2*3	

*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 operating temperature range condition.

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

*3: 適合電線も本使用温度範囲を満足すること。

Applicable wires must also meet the specified temperature range.

REV.	B	C														
SHEET	1~9	1~10														
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C	REVISED J2012-0805 '11/12/12 R.HORI					THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION										
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DOCUMENT NUMBER PS-54596-018																



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

【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 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 MAX., 10mA MAX. (JIS C5402 5.4)	20 milliohms 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に AC500V を印加し測定する。 (JIS C5402 5.2 / MIL-STD-202 試験法 302) Mate connectors, apply 500V AC between adjacent terminal. (JIS C5402 5.2 / MIL-STD-202 Method 302)	1000 Megaohms 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に、AC500V (実効値) を 1 分間 印加する。 「漏洩電流1mA 以下」 (JIS C5402 5.1 / MIL-STD-202 試験法 301) Mate connectors, apply 750V AC for 1 minute between adjacent terminal. 「Current leakage 1mA maximum」 (JIS C5402 5.1 / MIL-STD-202 Method 301)	異常なきこと No Breakdown
4-1-4	圧接部接触抵抗 Contact Resistance on I.D.T. Portion	ターミナルに適合電線を圧接接続し、開放電圧 20mV 以下、短絡電流 10mA にて測定する。 I.D.T. the applicable wire on to the terminal, measure by dry circuit, 20mV MAX., 10mA.	10 milliohms maximum

REVISE ON PC ONLY

C

SEE SHEET 1 OF 10

TITLE:

1.25mm PITCH WIRE TO BOARD CONN.

製品仕様書

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

REV.

DESCRIPTION

DOCUMENT NUMBER

PS-54596-018

FILE NAME

PS54596018.doc

SHEET

2 of 10

EN-37-1(019)



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

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 / Withdrawal force	毎分 25 ± 3 mmの速さで挿入、抜去を行う。 Insert and withdraw connectors, at a rate of 25±3 mm per minute.			第 6 項参照 Refer to paragraph 6		
4-2-2	圧接部引張り強度 I.D.T. pull out force	圧接されたターミナルを治具に固定し、電線を軸方向に毎分 25 ± 3 mmの速さで引っ張る。 (JIS C5402 6.8)	軸方向 Axial direction	AWG#26	14.7 N minimum		
				AWG#28	11.8 N minimum		
				UL3619 (ハロゲンフリー電線) AWG#26	14.7 N minimum		
				Fix the I.D.T terminal, apply axial pull out force on the speed rate of 25±3 mm/minute. (JIS C5402 6.8)	垂直方向 Vertical direction	AWG#26	9.8 N minimum
						AWG#28	8 N minimum
						UL3619 (ハロゲンフリー電線) AWG#26	7.8 N minimum
4-2-3	ピン保持力 Pin Retention Force	毎分 25±3 mmの速さでピンを軸方向に押す。 Apply axial push force at the speed rate of 25±3 mm per minute.			9.8 N minimum		

REVISE ON PC ONLY

C

SEE SHEET 1 OF 10

TITLE:

1.25mm PITCH WIRE TO BOARD CONN.

製品仕様書

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

REV.

DESCRIPTION

DOCUMENT NUMBER

PS-54596-018

FILE NAME

PS54596018.doc

SHEET

3 of 10

EN-37-1(019)



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

4-3. その他 Environmental Performance and Others

項目 Item		条件 Test Condition	規格 Requirement	
4-3-1	繰り返し挿抜 Repeated Mate/Un-mate	1 分間 10 回以下の速さで挿入、抜去を 30 回繰り返す。 (イジェクターを外した状態にて) When mate and un-mated up to 30 cycles repeatedly at a rate of 10 cycles per minute. (Removed ejector)	接触抵抗 Contact Resistance	40 milliohms maximum
4-3-2	温度上昇 Temperature Rise	コネクタを嵌合させ、最大許容電流を通电しコネクタの温度上昇分を測定する。 (UL 498) Mate connector 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 Exposure	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 毎分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 1 mA during the test. Amplitude : 1.5 mm P-P Frequency : 10-55-10 Hz in 1 minute. Duration : 2 hours in each of 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	40 milliohms maximum
			瞬断 Discontinuity	1 microsec. maximum

REVISE ON PC ONLY

C

SEE SHEET 1 OF 10

TITLE:

1.25mm PITCH WIRE TO BOARD CONN.

製品仕様書

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

REV.

DESCRIPTION

DOCUMENT NUMBER

PS-54596-018

FILE NAME

PS54596018.doc

SHEET

4 of 10

EN-37-1(019)



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

Environmental Performance and Others (Continued)

項目 Item		条件 Test Condition	規格 Requirement	
4-3-4	耐衝撃性 Mechanical 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 C60068-2-27/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) Test pulse : Half Sine Peak value : 490 m/s ² (50 G) Duration : 11 ms (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 milliohms maximum
			瞬断 Discontinuity	1 microsec. maximum
4-3-5	耐熱性 Heat Resistance	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 connectors and expose to 105±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 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 milliohms maximum

REVISE ON PC ONLY

C

SEE SHEET 1 OF 10

TITLE:

1.25mm PITCH WIRE TO BOARD CONN.

製品仕様書

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

REV.

DESCRIPTION

DOCUMENT NUMBER

PS-54596-018

FILE NAME

PS54596018.doc

SHEET

5 of 10

EN-37-1(019)



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

Environmental Performance and Others (Continued)

項目 Item		条件 Test Condition	規格 Requirement	
4-3-6	耐寒性 Cold Resistance	コネクタを嵌合させ、-40±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 C60068-2-1) Mate connectors and expose to -40±3℃ 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 C60068-2-1)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
4-3-7	耐湿性 Humidity Exposure	コネクタを嵌合させ、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 C60068-2-3/MIL-STD-202 試験法 103) Mate connectors and expose to 60±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 C60068-2-3/MIL-STD-202 Method 103)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 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	100 Megaohms minimum
4-3-8	温度サイクル Temperature Cycling	コネクタを嵌合させ、-55±3℃に30分、+105±2℃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) Mate connectors and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the 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±2℃ . . . 30 minutes b) +105±2℃ . . . 30 minutes Transit time shall be within 5 minutes. (JIS C0025)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum

REVISE ON PC ONLY

C

SEE SHEET 1 OF 10

TITLE:

1.25mm PITCH WIRE TO BOARD CONN.

製品仕様書

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

REV.

DESCRIPTION

DOCUMENT NUMBER

PS-54596-018

FILE NAME

PS54596018.doc

SHEET

6 of 10

EN-37-1(019)



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

Environmental Performance and Others (Continued)

項目 Item		条件 Test Condition	規格 Requirement	
4-3-9	塩水噴霧 Salt Spray Exposure	コネクタを嵌合させ、35±2 °C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 C60068-2-11/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 °C (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 milliohms maximum
4-3-10	亜硫酸ガス SO ₂ Gas	コネクタを嵌合させ、40±2 °Cにて 50±5 ppm の亜硫酸ガス中に、24時間放置す る。 Mate connectors and expose to 50±5 ppm SO ₂ Gas, ambient temperature 40±2 °C for 24 hours.	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
4-3-11	半田付け性 Solderability	ターミナルをフラックスに浸し、本体の取り 付け基準面より1.2 mm 迄 245±3 °C半田に 3±0.5秒浸す。 Dip soldertails in flux then immerse in solder bath at 245±3°C up to 0.8 mm from the bottom of the housing for 3±0.5 sec.	濡れ性 Solder Wetting	浸漬面積の90% 以上 90% of immersed area must show no voids, pin holes

() : 参考規格

Reference Standard

REVISE ON PC ONLY		TITLE: 1.25mm PITCH WIRE TO BOARD CONN. 製品仕様書	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO INC. AND MUST NOT BE USED WITHOUT WRITTEN PERMISSION
C	SEE SHEET 1 OF 10		
REV.	DESCRIPTION		
DOCUMENT NUMBER PS-54596-018		FILE NAME PS54596018.doc	SHEET 7 of 10
EN-37-1(019)			



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-12	半田耐熱性 Resistance to Soldering Heat	<p><u>ディップ時 Solder bath method</u> ターミナルを本体の取り付け基準面より1.2mmまで、260±5°Cの半田に5±0.5秒浸す。</p> <p>Dip soldertails into the molten solder <held at 260±5°C> up to 1.2 mm from the bottom of the housing. The dwell time shall be 5±0.5 sec.</p>	外 観 Appearance	端子ガタ、割れ等 異常なきこと No Damage
		<p><u>手半田時 Soldering iron method</u> コテ先温度を380±10°Cに設定した半田ゴテを、コネクタの端子部に3~4秒間当てて加熱する。 この際コネクタに機械的ストレスの加わらないよう留意する。</p> <p>Apply a 380±10°C of soldering iron to solder tails for 3~4 seconds. However, without too much pressure to the connector.</p>		

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

図面参照 Refer to the drawing.

REVISE ON PC ONLY		TITLE: 1.25mm PITCH WIRE TO BOARD CONN. 製品仕様書	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO INC. AND MUST NOT BE USED WITHOUT WRITTEN PERMISSION
C	SEE SHEET 1 OF 10		
REV.	DESCRIPTION		
DOCUMENT NUMBER PS-54596-018		FILE NAME PS54596018.doc	SHEET 8 of 10



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

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

極数 No. of CKT.	単位 Unit	挿入力（最大値） Insertion force (MAX.)			抜去力（最小値） Withdrawal force (MIN.)					
					ポジティブロックタイプ* ² Positive lock type			フリクションロックタイプ Friction lock type		
		初回 1 st.	6回目 6 th.	30回目 30 th.	初回 1 st.	6回目 6 th.	30回目 30 th.	初回 1 st.	6回目 6 th.	30回目 30 th.
2	N	27.4	25.4	25.4	0.3	0.3	0.3	2.9	2.5	2.2
3	N	30.4	28.4	28.4	0.45	0.45	0.45	3.5	2.8	2.5
4	N	33.4	31.4	31.4	0.6	0.6	0.6	4.1	3.1	2.8
5	N	36.4	34.4	34.4	0.75	0.75	0.75	4.7	3.4	3.1
6	N	39.4	37.4	37.4	0.9	0.9	0.9	5.3	3.7	3.4
7	N	42.4	40.4	40.4	1.05	1.05	1.05	5.9	4	3.7
8	N	45.4	43.4	43.4	1.2	1.2	1.2	6.5	4.3	4
9	N	48.4	46.4	46.4	1.35	1.35	1.35	7.1	4.6	4.3
10	N	51.4	49.4	49.4	1.5	1.5	1.5	7.7	4.9	4.6
11	N	54.4	52.4	52.4	1.65	1.65	1.65	8.3	5.2	4.9
12	N	57.4	55.4	55.4	1.8	1.8	1.8	8.9	5.5	5.2
13	N	60.4	58.4	58.4	1.95	1.95	1.95	9.5	5.8	5.5
14	N	63.4	61.4	61.4	2.1	2.1	2.1	10.1	6.1	5.8
15	N	66.4	64.4	64.4	2.25	2.25	2.25	10.7	6.4	6.1
16	N	69.4	67.4	67.4	2.4	2.4	2.4	11.3	6.7	6.4
17	N	72.4	70.4	70.4	2.55	2.55	2.55	11.9	7	6.7
18	N	75.4	73.4	73.4	2.7	2.7	2.7	12.5	7.3	7
19	N	78.4	76.4	76.4	2.85	2.85	2.85	13.1	7.6	7.3
20	N	81.4	79.4	79.4	3	3	3	13.7	7.9	7.6

*2: ポジティブロックを解除して測定。
Released a positive lock, and measure.

REVISE ON PC ONLY		TITLE: 1.25mm PITCH WIRE TO BOARD CONN. 製品仕様書
C	SEE SHEET 1 OF 10	
REV.	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO INC. AND MUST NOT BE USED WITHOUT WRITTEN PERMISSION
DOCUMENT NUMBER PS-54596-018		FILE NAME PS54596018.doc
		SHEET 9 of 10
EN-37-1(019)		

