



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

製品名称 Product Name				製品型番 Material Number
プラグ アッセンブリ Plug Assembly	嵌合高さ Stacking Height H=8,14mm	吸着カバー無し Without Cover	無鉛 LEAD FREE	5 3 5 5 1 - * * 7 7
		吸着カバー付き With Cover	無鉛 LEAD FREE	5 3 6 4 7 - * * * 9
	嵌合高さ Stacking Height H=9,15mm	吸着カバー無し Without Cover	無鉛 LEAD FREE	5 3 5 5 2 - * * * 6
		吸着カバー付き With Cover	無鉛 LEAD FREE	5 3 6 4 9 - * * 7 2
	嵌合高さ Stacking Height H=10,16mm	吸着カバー無し Without Cover	無鉛 LEAD FREE	5 3 5 5 3 - * * 7 7
		吸着カバー付き With Cover	無鉛 LEAD FREE	5 3 6 2 7 - * * 7 2

* * * : 極数 (添付図面参照)

CKTS(Refer to the drawing)

- * * 6 8 : 吸着カバー無しエンボス梱包
EMBOSSED PACKAGING OF PRODUCT WITHOUT COVER
- * * 7 4 : 吸着カバー付きエンボス梱包
EMBOSSED PACKAGING OF PRODUCT WITH COVER
- * * 7 5 : 吸着カバー付きスティック梱包
STICK PACKAGING OF PRODUCT WITH COVER
- * * 7 6 : 吸着カバー無しトレイ梱包
TRAY PACKAGING OF PRODUCT WITHOUT COVER
5 3 5 5 1 - * * 7 7 のトレイ梱包品は、5 3 9 3 6 - * * 7 6 です。
- * * 7 8 : 吸着カバー無しエンボス梱包
EMBOSSED PACKAGING OF PRODUCT WITHOUT COVER
5 2 7 6 0 - * * 7 0 のエンボス梱包品は、5 4 9 1 4 - * * 7 8 です。
- * * 7 9 : 吸着カバー無しスティック梱包
STICK PACKAGING OF PRODUCT WITHOUT COVER
- * * 9 4 : 吸着カバー付きエンボス梱包
EMBOSSED PACKAGING OF PRODUCT WITH COVER

【3. 定格 RATINGS】

項 目 Item	規 格 Standard	
最大許容電圧 Rated Voltage (MAXIMUM)	100 V	[AC(実効値 rms)/DC]
最大許容電流 Rated Current (MAXIMUM)	0.5 A	
使用温度範囲 Ambient Temperature Range (Operating and Non-operating)	-55°C ~+85°C *1	

* 1 : 通電による温度上昇分を含む。
Including terminal temperature rise

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【4. 性能 PERFORMANCE】

4-1. 電気的性能 Electrical Performance

項目 Item		条件 Test Condition	嵌合高さ Stacking Height	規格 Requirement
4-1-1	接触抵抗 Contact Resistance	適合する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 applicable connectors, measure by dry circuit, 20mV MAXIMUM, 10mA MAXIMUM. (JIS C5402 5.4)	H= 4 - 7mm	40 milliohm MAXIMUM
			H= 8 -10mm	50 milliohm MAXIMUM
			H= 11 -13mm	60 milliohm MAXIMUM
			H= 14 -16mm	70 milliohm MAXIMUM
4-1-2	絶縁抵抗 Insulation Resistance	適合する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 250V を印加し測定する。 (JIS C5402 5.2/MIL-STD-202 試験法 302) Mate applicable connectors together and apply 250V DC between adjacent terminal and ground. (JIS C5402 5.2/MIL-STD-202 Method 302)	1000 Megohm MINIMUM	
4-1-3	耐電圧 Dielectric Strength	適合する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 250V (実効値) を 1分間 印加する。 (JIS C5402 5.1/MIL-STD-202 試験法 301) Mate applicable connectors, apply 250V AC for 1 minute between adjacent terminal or ground. (JIS C5402 5.1/MIL-STD-202 Method 301)	異状なきこと 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・抜去力 Insertion Force/ 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±3mm/minute.	挿入力 Insertion Force	0.690N {70gf} / CIRCUIT MAXIMUM
			抜去力 Withdrawal Force	0.118N {12gf} / CIRCUIT MINIMUM

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項 目 Item		条 件 Test Condition	規 格 Requirement	
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±3mm/ minute.	52883-**70 52883-**92 52760-**70 52885-**72 52837-**70 52901-**72 55091-**71 55091-**72 53481-**67 53481-**77 53625-**72 53551-**77 53647-***9 53552-***6 53649-**72 53553-**77 53627-**72	1.96 N { 0.2kgf } MINIMUM
			53623-**72 53475-**70 53643-**72	3.9 N { 0.4kgf } MINIMUM

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 50回 繰り返す。 When mate / un-mated up to 50 cycles repeatedly at a rate of 10 cycles / minute.	接触抵抗 Contact Resistance	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM
4-3-2	温 度 上 昇 Temperature Rise	適合する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 applicable 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

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項 目 Item		条 件 Test Condition	規 格 Requirement	
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 10~55~10Hz/分、全振幅 1.5mm の振動を 各2時間 加える。 (MIL-STD-202試験法 201) 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 : 1.5mm P-P Frequency : 10-55-10Hz (MIL-STD-202, Method 201)	外 観 Appearance	異状なきこと No Damage
			接触抵抗 Contact Resistance	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM
			瞬 断 Discontinuity	0.1 microsecond MAXIMUM
4-3-4	耐 衝 撃 性 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、パルス幅 11ms 衝撃波形が正弦半波 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 applicable 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 : 490m/s^2 {50G} Duration : 11ms (JIS C60068-2-27/MIL-STD-202 Method 213)	外 観 Appearance	異状なきこと No Damage
			接触抵抗 Contact Resistance	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM
			瞬 断 Discontinuity	0.1 microsecond MAXIMUM

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項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-5	耐 熱 性 Heat Resistance	適合するコネクタを嵌合させ、 $85\pm 2^{\circ}\text{C}$ 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 applicable connectors and expose to $85\pm 2^{\circ}\text{C}$ 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	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM
4-3-6	耐 寒 性 Cold Resistance	適合するコネクタを嵌合させ、 $-55\pm 3^{\circ}\text{C}$ 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 applicable connectors and expose to $-55\pm 3^{\circ}\text{C}$ 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 C60068-2-1)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM

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項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-7	耐湿性 Humidity	適合する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 applicable 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	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 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
4-3-8	温度サイクル Temperature Cycling	適合するコネクタを嵌合させ、-55±3℃ に 30分、+85±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、3分以内 とする。試験後 1～2時間 室温に放置する。 (JISC0025) Mate applicable 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±3℃ 30 minutes b) +85±2℃ 30 minutes (Transit time shall be within 3 minutes) (JISC0025)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM

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項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-9	塩水噴霧 Salt Spray	適合するコネクタを嵌合させ、 $35\pm 2^{\circ}\text{C}$ にて、重量比 $5\pm 1\%$ 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 C60068-2-11/MIL-STD-202 試験法101) Mate applicable 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: $5\pm 1\%$ Spray time: 48 ± 4 hours Ambient temperature: $35\pm 2^{\circ}\text{C}$ (JIS C60068-2-11/MIL-STD-202 Method 101)	外 観 Appearance	異状なきこと No Damage
			接触抵抗 Contact Resistance	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM
4-3-10	亜硫酸ガス SO_2 Gas	適合する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 applicable connectors and expose to $50\pm 5\text{ppm}$ SO_2 gas, ambient temperature $40\pm 2^{\circ}\text{C}$ for 24 hours.	外 観 Appearance	異状なきこと No Damage
			接触抵抗 Contact Resistance	初期規格値からの 変化量: 20 milliohm以下 Change from initial requirement : 20 milliohm MAXIMUM
4-3-11	半田付け性 Solder-ability	端子先端より 0.5mm の位置まで $245\pm 3^{\circ}\text{C}$ の半田に 3 ± 0.5 秒 浸す。 Dip soldertails into the molten solder {held at $245\pm 3^{\circ}\text{C}$ } up to 0.5mm from the bottom of the housing 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

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項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-12	半田耐熱性 Resistance to Soldering Heat	(リフロー時) 第6項の条件にて、2回リフローを行う。 (When reflowing) Repeat paragraph 6, two times.	外 観 Appearance	端子ガタ 割れ等 異状無きこと No Damage
		(手半田) 端子先端より 0.5mm、金具先端より 0.5mm の位置まで 370~400℃ の半田ゴテにて 最大5秒 加熱する。 (Soldering iron method) 0.5mm from terminal tip and fitting nail tip. Soldering time : 5 seconds MAX. Solder temperature : 370~400℃		

() : 参考規格 Reference Standard

{ } : 参考単位 Reference Unit

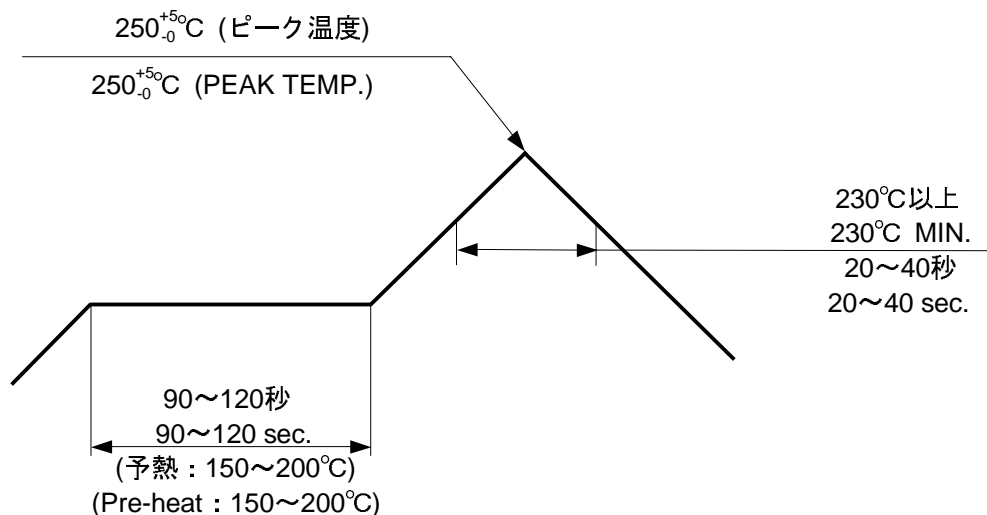
【5. 外観形状、寸法及び材質 PRODUCT SHAPE, DIMENSIONS AND MATERIALS】

図面参照 Refer to the drawing.

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



温度条件グラフ
(温度は基板パターン面)

TEMPERATURE CONDITION GRAPH
(TEMPERATURE ON THE SURFACE OF P.C.BOARD PATTERN)

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、事前にリフロー評価の確認をお願い致します。

NOTE ; Please check the 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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A	RELEASED	'04/03/01	J2004-2758	N.AIDA	K.TOJO
B	REVISED	'04/04/23	J2004-3983	E.SUZUKI	K.TOJO
C	REVISED	'05/01/19	J2005-2076	N.AIDA	K.TOJO
D	REVISED	'05/02/24	J2005-2773	N.AIDA	K.TOJO
E	REVISED	'07/10/16	J2008-1357	R.TSURUOKA	T.HARUYAMA

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