DYNAMIC CONNECTOR D1100D SERIES TIN PLATING

1. Introduction

1.1 Purpose

This document provides the qualification summary of TE Connectivity Dynamic D-1000 Tin plated connectors produced in TE Suzhou plant (TECC).

1.2 Scope

This specification covers the electrical, mechanical, and environmental performance of Dynamic D-1000H Tin plated connectors. Testing was performed from 2018/01/17 to 2018/01/31.

1.3 Conclusion

Based on the test results, the parts in the table 1 meet the performance requirements of Product Specification, 108-78298 Rev E.

1.4 Product Description

Testing part	Testing part description	Mating housing	Mating contact
1-2271888-4	HDR ASSY (H-TYPE) 2.0mm Pitch 28POS. Tin plating	1-1827863-4	1871745-1

Table 1 test products

2. Qualification Test Sequence

試 験 項 目	Test or Examination	試験グループ Test Group								
		1	2	3	4	5	6	7	8	9
		試 験 順 序 Test Sequence (a)								
製品の確認検査	Confirmation of Product	1,3	1,4	1,3	1,3	1,3	1,4	1,6	1,7	1,4
総合抵抗 (ローレベル)	Termination Resistance (Low Level)							2,5	2,6	2,5
耐電圧	Dielectric withstanding Voltage						3			
絶縁抵抗	Insulation Resistance						2			
温度上昇	Temperature Rising					2				
振動 (高周波)	Vibration (High Frequency)							3		
衝撃	Physical Shock							4		
コネクタ挿入力	Connector Mating Force								3	
コネクタ引抜力	Connector Unmating Force								4	
コンタクト装着力	Contact Insertion Force				2					
コンタクト単ピン挿入力	Contact Mating Force Per Pin		2							
コンタクト単ピン引抜力	Contact Unmating Force Per Pin		3							
圧着部引張強度	Crimp Tensile strength	2								
耐久性 (繰り返し挿抜)	Durability (Repeated Mating/Unmating)								5	
ハウジングロック強度	Housing Locking Strength			2						
パネル保持力	Panel Locking strength									
温湿度サイクリング	Humidity-Temperature Cycling									
熱衝撃	Thermal Shock									3
塩水噴霧	Salt Spray									
コンタクト保持力	Contact Retention Force						5			
高温寿命	Temperature Life(Heat Asing)									
工業ガス(SO_2)	SO_2									
ポスト保持力	Post Retention Force									
はんだ付け性	Solderability									
はんだ耐熱性	Resistance to Soldering Heat									

試験項目	Test or Examination	試験グループ Test Group								
		10	11	12	13	14	15	16	17	
		試験順序 Test Sequence (a)								
製品の確認検査	Confirmation of Product	1,4	1,4	1,4	1,4	1,3	1,3	1,3	1,3	
総合抵抗（ローレベル）	Termination Resistance (Low Level)	2,5	2,5	2,5	2,5					
耐電圧	Dielectric withstanding Voltage	7								
絶縁抵抗	Insulation Resistance	6								
温度上昇	Temperature Rising									
振動（高周波）	Vibration (High Frequency)									
衝撃	Physical Shock									
コネクタ挿入力	Connector Mating Force									
コネクタ引抜力	Connector Unmating Force									
コンタクト装着力	Contact Insertion Force									
コンタクト挿入力	Contact Mating Force									
コンタクト引抜力	Contact Unmating Force									
圧着部引張強度	Crimp Tensile strength									
耐久性（繰り返し挿抜）	Durability (Repeated Mating/Unmating)									
ハウジングロック強度	Housing Locking Strength									
パネル保持力	Panel Locking strength								2	
温湿度サイクリング	Humidity-Temperature Cycling	3								
熱衝撃	Thermal Shock									
塩水噴霧	Salt Spray		3							
コンタクト保持力	Contact Retention Force									
高温寿命	TemperatureLife(Heat Asing)			3						
工業ガス（SO_2）	SO_2				3					
ポスト保持力	Post Retention Force					2				
はんだ付け性	Solderability						2			
はんだ耐熱性	Resistance to Soldering Heat							2		

Notes:

a. Numbers indicate the sequence in which the tests are performed.

b. Test group as below table 2 shown

Testing part	Testing part description	Test group	Plating
1-2271888-4	HDR ASSY (H-TYPE) 2.0mm Pitch 28POS.Tin plating	5,8,9,10,11,12,13	1.0um Tin

Table 2 test group

3. Test result

Group	Sequence	Test items	Requirements	Test data	Result
Group 5	1	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	2	Temperature rising	Temperature rising: 30°C Max.	8.94~13.53°C	Accept
	3	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept

Group	Sequence	Test items	Requirements	Test data	Result
Group 8	1	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	2	Termination Resistance (Low Level)	10mΩ Max. (Initial)	2.51~4.17mΩ	Accept
	3	Connector Mating Force	5.88N Max. Per Contact	2.47~3.62N	Accept
	4	Connector Unmating Force	1.0.58N Min. Per Contact (1^{ST} Cycle) 2.0.29 N Min. (30^{th} Cycle)	1.2.07~2.98N 2.1.61~2.29N	Accept
	5	Durability (Repeated Mate / Unmating)	1.No physical damage 2.Temination Resistance	1.No physical damage 2. Refer to sequence 6	Accept
	6	Termination Resistance (Low Level)	20mΩ Max. (Final)	2.98~5.86mΩ	Accept
	7	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept

Group	Sequence	Test items	Requirements	Test data	Result
Group 9	1	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	2	Termination Resistance (Low Level)	10mΩ Max. (Initial)	1.58~3.74mΩ	Accept
	3	Thermal Shock	1.No physical damage 2.Temination Resistance	1.No physical damage 2. Refer to sequence 4	Accept
	4	Termination Resistance (Low Level)	20mΩ Max. (Final)	2.42~4.15mΩ	Accept
	5	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept

Group	Sequence	Test items	Requirements	Test data	Result
Group 10	1	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	2	Termination Resistance (Low Level)	10mΩ Max. (Initial)	2.28~3.88mΩ	Accept
	3	Insulation Resistance	1000MΩ Min.	>9999 MΩ	Accept
	4	Dielectric withstanding Voltage	Neither creeping discharge nor flashover shall occur. Current leakage: 0.5 mA Max.	1.No breakdown 2. 0.025~0.031mA	Accept
	5	Humidity-Temperature Cycling	Dielectric Strength; Insulation resistance; Termination resistance (Low Level)	Refer to sequence 8 Refer to sequence 7 Refer to sequence 6	Accept
	6	Termination Resistance (Low Level)	20mΩ Max. (Initial)	2.25~3.90mΩ	Accept
	7	Insulation Resistance	100MΩ Min.	>9999 MΩ	Accept
	8	Dielectric withstanding Voltage	Neither creeping discharge nor flashover shall occur. Current leakage: 0.5 mA Max.	1.No breakdown 2. 0.027~0.033mA	Accept

Group	Sequence	Test items	Requirements	Test data	Result
Group 11	1	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	2	Termination Resistance (Low Level)	10mΩ Max. (Initial)	2.11~3.54mΩ	Accept
	3	Salt Spray	1.No corrosion influence performance 2.Termination Resistance	1.Slight corrosion external, no impact on performance 2.Refer to sequence 4	Accept
	4	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	5	Termination Resistance (Low Level)	20mΩ Max. (Final)	1.78~8.17mΩ	Accept

Group	Sequence	Test items	Requirements	Test data	Result
Group 12	1	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	2	Termination Resistance (Low Level)	10mΩ Max. (Initial)	2.11~3.74mΩ	Accept
	3	Temperature life	Termination Resistance	Refer to sequence 5	Accept
	4	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	5	Termination Resistance (Low Level)	20mΩ Max. (Final)	2.12~4.19mΩ	Accept

Group	Sequence	Test items	Requirements	Test data	Result
Group 13	1	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	2	Termination Resistance (Low Level)	10mΩ Max. (Initial)	3.07~3.87mΩ	Accept
	3	Industrial Gas (SO2)	1.No physical damage impact performance 2.Termination Resistance	1.Refer to sequence 4 2.Refer to sequence 5	Accept
	4	Examination of Product	Meets requirements of product drawing and Specification 114-5377	No physical damage	Accept
	5	Termination Resistance (Low Level)	20mΩ Max. (Final)	2.08~4.35mΩ	Accept