

检 测 报 告
TEST REPORT

报告编号 (No.) :UTS23060026R86 报告日期 (Report Date) : 2023/08/31

委托单位/Client : 浙江新富尔电子有限公司
Zhejiang Xinfuer Electron Co.,Ltd
地 址/Address : 浙江省乐清市虹桥镇溪西工业区标准厂区 9 号
No.9 Xixi industrial park,Hongqiao town,Yueqing,Zhejiang,China

以下样品信息由申请人提供及确认:

The sample(s) information below is/are provided and confirmed by client:

样品名称/Sample Name : PHC 系列连接器/PHC series connectors
料 号/Part No. : PHC-nAWB-NK
PHC-nAB-NK
PHC-T-NK
PHC-nY-NK
PHC-nYK
接样日期/Receiving Date : 2023/06/20
检测项目/Test Item : TG5 机械和热张弛特性;
TG5 Mechanical and thermal relaxation behavior

签
Approved by
检验检测专用章
授权签字人

审 核
Reviewed by

毛贯南

编 制
Prepared by

王彭

Page 1 of 11

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检 测 报 告
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1、测试标准/Test Standard

VW 75174 LV-214 2018 及客户要求; VW 75174 LV-214 2018 and customer requirements

2、测试日期/Test Date

2023/07/01-2023/08/25

3、测试仪器/Test Equipment

设备名称 Test Equipment	设备编号 Equipment Number	校准有效期 Calibration Period of Validity
影像测量仪 Image measuring instrument	CD-1-038	2024/02/21
全自动插拔力试验机 Fully automatic insertion and extraction force testing machine	R-1-559	2024/08/12

4、测试条件/Test Condition

P0.1 目检(所有组);

P0.1 Visual inspection (all parts);

P 5.1 未使用状态的端子开口尺寸-所有试验批次;

P 5.1 Contact opening dimension in the unused condition - all test batches;

L5.1 所有试验批次的一半(各 5 个)在进一步施加载荷前插拔 5 次;

L5.1 One half (5 pieces each) of all test batches is inserted and extracted 5 times before further loading;

P5.1 插入 5 次的被测器件的端子开口尺寸-所有试验批次;

P5.1 Contact opening dimension of the DUTs inserted 5 times (optical measurement) - all test batches;

L5.2 试验批次 2-5 的所有被测器件插入,直到测出端子开口尺寸和正常接触力后不能拔出被测器件;

L5.2 All DUTs of test batches 2 to 5 are inserted. The DUTs must remain connected until the measurement of the contact opening dimension and the normal contact force;

B5.3 干热存放,对插; B5.3 Aging in dry heat, plugged.

持续时间: 1000 小时,最高温度 Tmax :125C,将试验批次 2-5 进行存放,依次在、100 小时、200 小时、500 小时和 1000 小时取出,测量端子插入力和拔出力;

Duration: 1 000 h. Tmax : 125C ; Test batches 2 to 5 are aged and then successively removed at the respective times (100 h, 200 h, 500 h, and 1 000 h), and the Insertion and extraction force is measured;

P0.1 目检;

P0.1 Visual inspection;

检 测 报 告
TEST REPORT

报告编号 (No.) :UTS23060026R86

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P5.1 端子开口尺寸-试验批次 2-5;

P5.1 Contact opening dimension - on test batches 2 to 5;

依据试验大纲要求试验后测量端子插入力和拔出力;

According to the requirements of the test program, Measure the insertion force and extraction force of the terminal after the test.

5、测试结果/Test Result(s)

外观检查 (测试前) Visual inspection before test

样品编号 Sample No.	结果 Result
1#-10#	没有松动、裂纹、变形等缺陷。 No detrimental looseness, cracks, flaws, deformation, etc.
11#-20#	没有松动、裂纹、变形等缺陷。 No detrimental looseness, cracks, flaws, deformation, etc.
21#-30#	没有松动、裂纹、变形等缺陷。 No detrimental looseness, cracks, flaws, deformation, etc.
31#-40#	没有松动、裂纹、变形等缺陷。 No detrimental looseness, cracks, flaws, deformation, etc.
41#-50#	没有松动、裂纹、变形等缺陷。 No detrimental looseness, cracks, flaws, deformation, etc.

开口尺寸 Contact opening dimensions

样品编号 Sample No.	高温老化时长 High temperature aging duration	开口尺寸(测试前) Contact opening dimension(before test)	开口尺寸(拔插 5 次) Contact opening dimension(DUTs inserted 5times)	开口尺寸(测试后) Contact opening dimension(after test)
1#	/	0.282	0.345	0.314
2#		2.284	0.333	0.332
3#		0.293	0.345	0.367
4#		0.291	0.332	0.336
5#		0.272	0.335	0.345
6#		0.290	/	0.345
7#		0.298	/	0.327
8#		0.292	/	0.367
9#		0.299	/	0.371
10#		0.291	/	0.369

检 测 报 告

TEST REPORT

报告编号 (No.) :UTS23060026R86 报告日期 (Report Date) : 2023/08/31

样品编号 Sample No.	高温老化时长 High temperature aging duration	开口尺寸(测试前) Contact opening dimension(before test)	开口尺寸(拔插 5 次) Contact opening dimension(DUTs inserted 5times)	开口尺寸(测试后) Contact opening dimension(after test)
11#	100h	0.296	0.363	0.398
12#		0.299	0.362	0.418
13#		0.295	0.339	0.379
14#		0.283	0.356	0.404
15#		0.291	0.347	0.394
16#		0.296	/	0379
17#		0.296	/	0.377
18#		0.292	/	0.392
19#		0.291	/	0.476
20#		0.292	/	0.376
21#	200h	0.284	0.373	0.407
22#		0.286	0.346	0.412
23#		0.294	0.341	0.376
24#		0.280	0.327	0.374
25#		0.281	0.356	0.395
26#		0.298	/	0.410
27#		0.290	/	0.395
28#		0.291	/	0.453
29#		0.291	/	0.384
30#		0.287	/	0.389

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TEST REPORT

报告编号 (No.) :UTS23060026R86

报告日期 (Report Date) : 2023/08/31

样品编号 Sample No.	高温老化时长 High temperature aging duration	开口尺寸(测试前) Contact opening dimension(before test)	开口尺寸(拔插 5 次) Contact opening dimension(DUTs inserted 5times)	开口尺寸(测试后) Contact opening dimension(after test)
31#	500h	0.297	0.395	0.416
32#		0.291	0.331	0.407
33#		0.299	0.349	0.411
34#		0.296	0.377	0.451
35#		0.290	0.338	0.411
36#		0.289	/	0.380
37#		0.288	/	0.402
38#		0.291	/	0.394
39#		0.296	/	0.394
40#		0.289	/	0.398
41#	1000h	0.284	0.341	0.457
42#		0.291	0.358	0.478
43#		0.298	0.355	0.441
44#		0.294	0.373	0.435
45#		0.282	0.363	0.434
46#		0.293	/	0.417
47#		0.292	/	0.422
48#		0.290	/	0.418
49#		0.292	/	0.450
50#		0.292	/	0.418

检 测 报 告
TEST REPORT

报告编号 (No.) :UTS23060026R86 报告日期 (Report Date) : 2023/08/31

拔插力试验结果 Insertion and extraction force test result

样品编号 Sample No.	高温老化时长 High temperature aging duration	插入力 (N) Insertion force	拔出力 (N) Extraction force
1#	/	1.35	1.79
2#		1.22	1.62
3#		0.85	0.77
4#		0.81	1.03
5#		1.31	1.35
6#		1.34	2.30
7#		1.05	1.70
8#		0.60	1.87
9#		0.97	2.73
10#		1.40	1.06
11#	100h	2.01	2.01
12#		1.52	1.42
13#		0.94	1.63
14#		1.06	2.00
15#		1.18	1.76
16#		1.05	1.85
17#		1.41	2.83
18#		2.66	1.88
19#		0.90	2.48
20#		1.59	2.69
21#	200h	1.23	1.87
22#		1.41	1.52
23#		0.72	1.94
24#		0.96	1.48
25#		0.75	1.23
26#		0.89	1.13
27#		1.27	1.83
28#		1.29	2.02
29#		0.60	2.13
30#		0.60	1.78

检 测 报 告
TEST REPORT

报告编号 (No.) :UTS23060026R86

报告日期 (Report Date) : 2023/08/31

样品编号 Sample No.	高温老化时长 High temperature aging duration	插入力 (N) Insertion force	拔出力 (N) Extraction force
31#	500h	1.82	1.96
32#		1.90	2.55
33#		0.85	1.58
34#		1.14	1.40
35#		1.53	2.04
36#		0.83	1.44
37#		0.98	1.86
38#		1.69	2.58
39#		1.58	1.71
40#		1.35	1.52
41#	1000h	1.44	1.20
42#		1.19	1.61
43#		1.13	2.16
44#		0.60	1.59
45#		1.16	2.06
46#		0.95	1.56
47#		1.17	2.31
48#		0.82	1.86
49#		2.08	2.36
50#		1.95	2.16

拟合 3000h 后的插入力和拔出力 Insertion force and extraction force after 3000h of fitting

Time (h)	插入力 Insertion force (average value)	拔出力(平均值) Extraction force (average value)
0	1.09	1.62
100	1.43	2.06
200	0.97	1.69
500	1.37	1.86
1000	1.25	1.89

检测报告

TEST REPORT

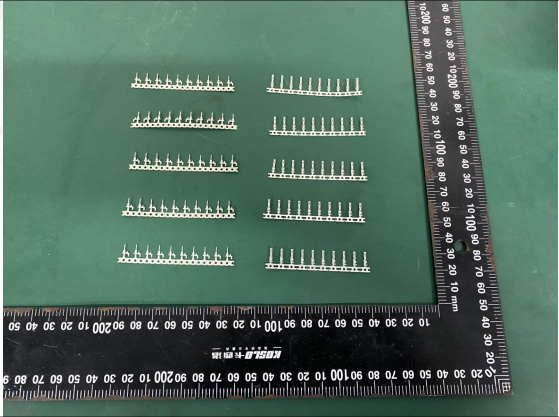
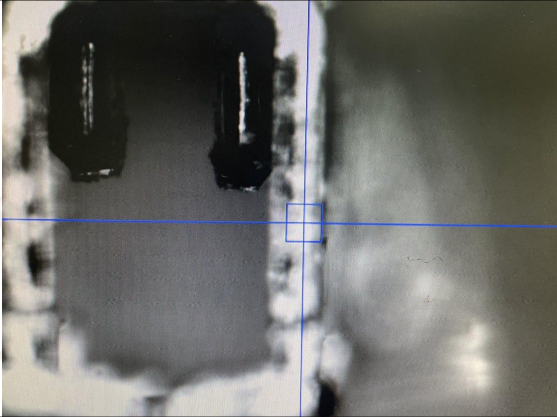
报告编号 (No.) :UTS23060026R86 报告日期 (Report Date) : 2023/08/31

外观检查 (测试后) Visual inspection after test

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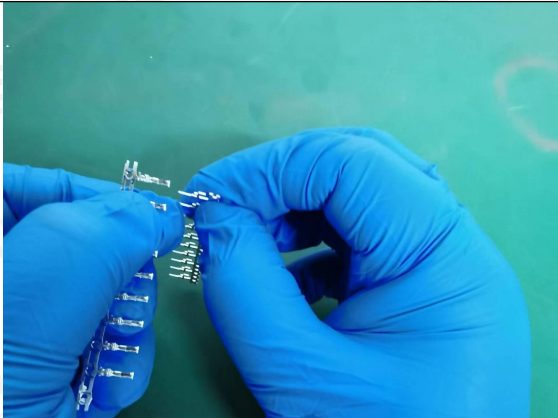
备注/Remark: 判定限值依 VW 75174 LV-214 2018。/The prescribed limit(s) is/are according to VW 75174 LV-214 2018.

6、测试照片/Test Photo(s)

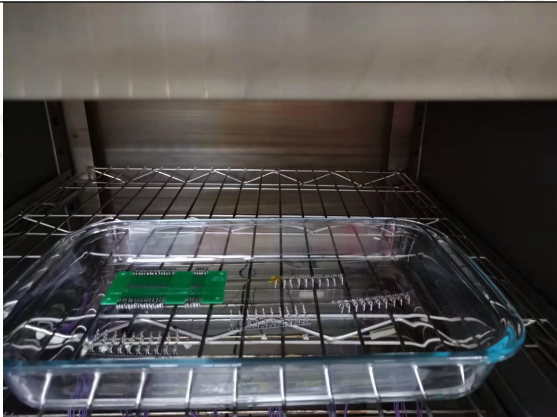
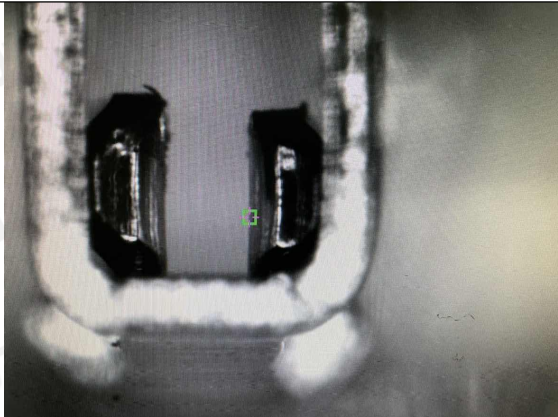
	
测试前外观检查;Visual inspection before test	开口尺寸;Contact opening dimension

检 测 报 告
TEST REPORT

报告编号 (No.) :UTS23060026R86 报告日期 (Report Date) : 2023/08/31

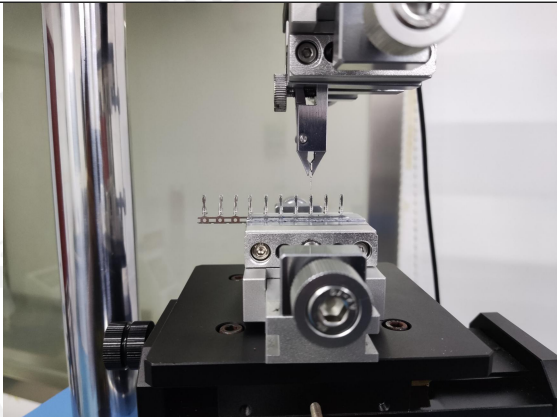


拔插 5 次; 5 times



开口尺寸(拔插 5 次后);Contact opening dimension

高温老化; Aging in dry heat



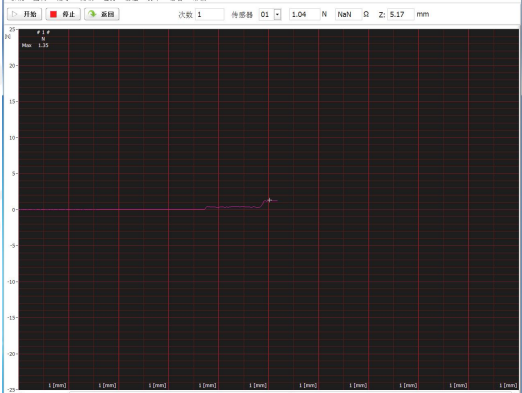
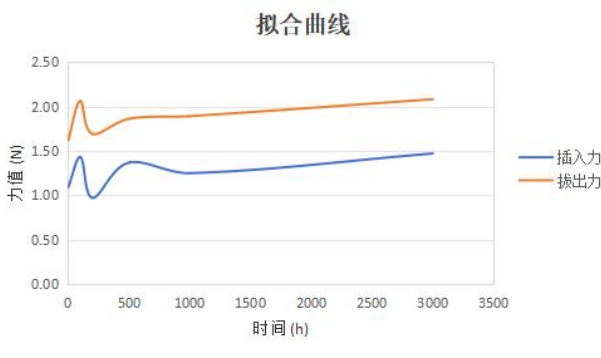
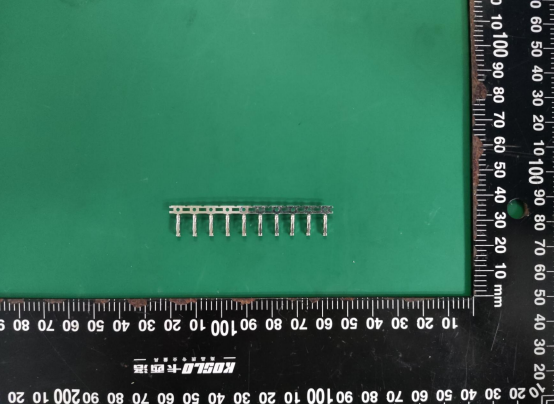
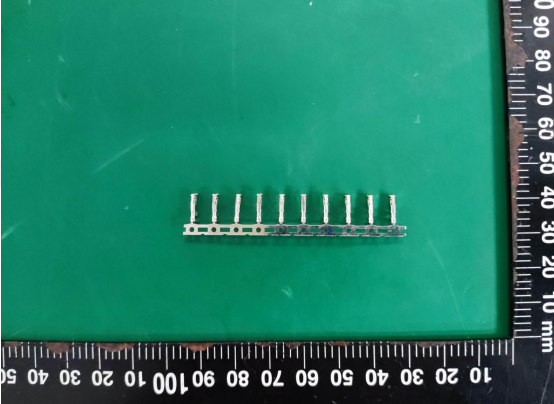
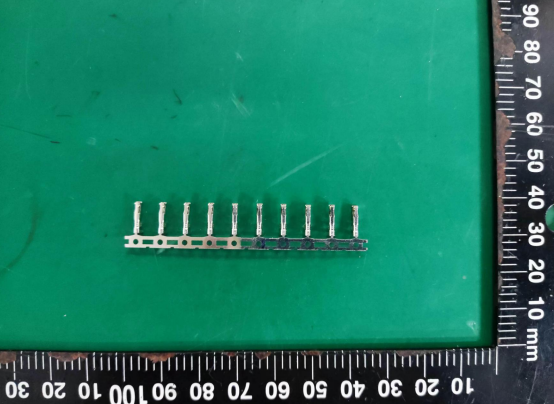
温度界面;Temperature interface

插拔力;Insertion and extraction force

检测报告 TEST REPORT

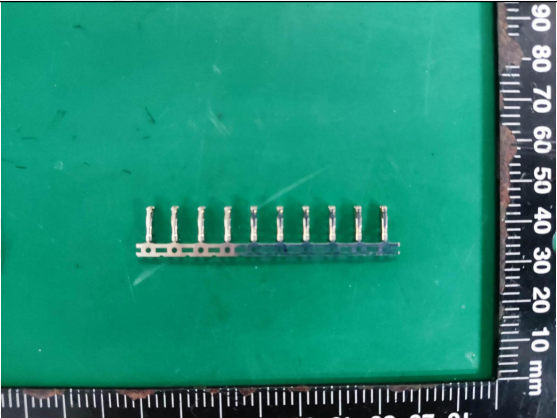
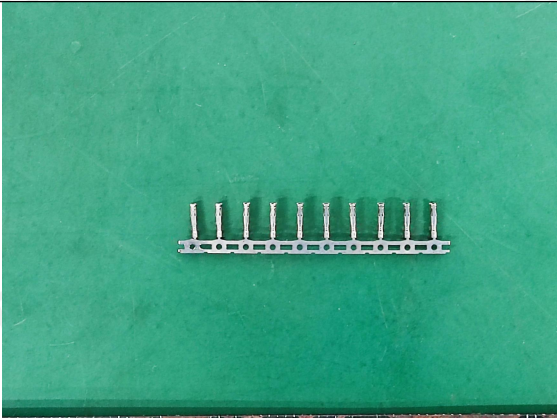
报告编号 (No.) : UTS23060026R86

报告日期 (Report Date) : 2023/08/31

	
插入力曲线;Insertion force curve	拔出力曲线;Extraction force curve
	
拟合曲线;Curve fitting	测试后外观检查;Visual inspection after test 0h
	
测试后外观检查;Visual inspection after test 100h	测试后外观检查;Visual inspection after test 200h

检 测 报 告
TEST REPORT

报告编号 (No.) :UTS23060026R86 报告日期 (Report Date) : 2023/08/31

	
测试后外观检查;Visual inspection after test 500h	测试后外观检查;Visual inspection after test 1000h

.....报告结束/End of Report.....

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Test results in this report are only used for scientific research, teaching and internal quality control.