

承 认 书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): DS412-1711-G2A7

品名规格 (PronameSpec): D-SUB 9 母铆锁

送样日期 (Delivery Date): 2021/12/2

承认日期 (Acknowledge Date): 2021/12/2

Approved No:		客 户 Customer	
采 购 部 Purchasing Dept	品 质 部 QC Dept	工 程 部 Engineering Dept	确 认 Approved By
深 圳 市 华 联 威 电 子 科 技 有 限 公 司 SHEN ZHEN SHI HUA LIAN WEI ELECTRONICS TECHNOLOGY CO; LTD.			
业 务 部 Sales Dept	品 管 部 QC Dept	工 程 部 Engineering Dept	核 准 Checked By
陈少萍	欠必锋	魏红	唐竹君

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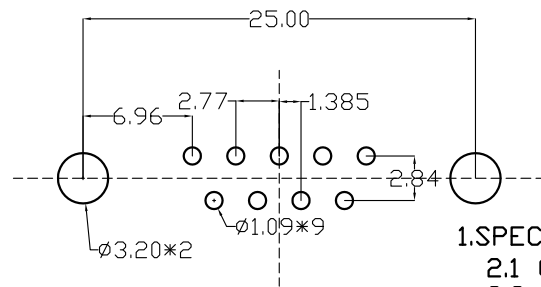
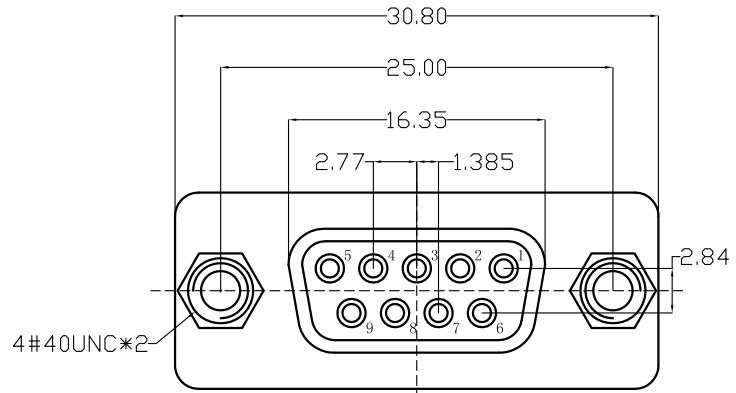
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REV.	ECN.NO.	APPD.
A	/	/



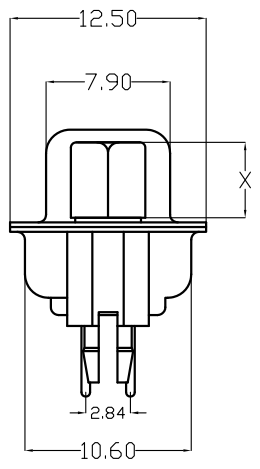
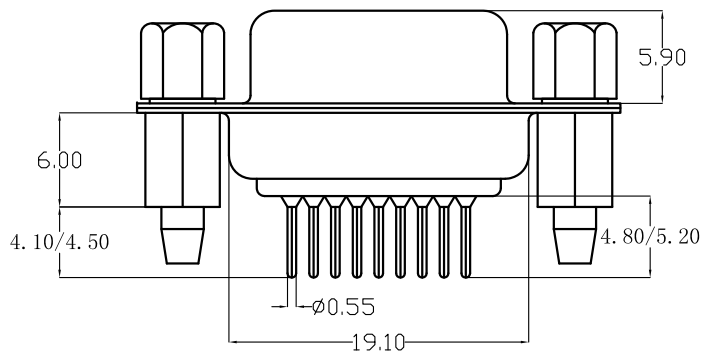
P.C.B LAYOUT

1.SPECIFICATION

- 2.1 Current Rate:5 Amps
- 2.2 Insulator Resistance:1000MΩ Min.
- 2.3 Dielectric Strength:500V AC PER MIN
- 2.4 Operation Temperature:-55℃~+105℃
- 2.5 Contact Resistance:30mΩ Max

DS412-1711-G2A7

G. 半金G/FU" A. 黑色
2. PBT



螺丝规格

	零件编号	X尺寸	内牙
	5	4.8	4#40
	6	5.8	4#40

TOLERANCE UNLESS OTHERWISE SPECIFIED		FLW 深圳市华联威电子科技有限公司 HUA LIAN WEI TECHNOLOGY ELECTRONICS CO;LTD.			
.XXX ±0.10	.XX ±0.20	.X ±0.30	.X' ±3'	.XX' ±2'	
APPROVED		PART NAME:	DP9 母铆锁		
CHECKED		PART No:	DS412-1711-G2A7	C	
DRAWN		PROJECTION:	UNIT:	SCALE	SHEET
DATE			mm	1:1	10F1
					REV. A

D-SUB系列產品SPEC

TEST ITEM		REQUIREMENT	PROCEDURE
1	Examination of Product	Meets requirements of product drawing. No physical damage.	Visual inspection.
2	Operating Temperature	-55°C ~+85°C	
3	Storage Temperature	-55°C ~+105°C	
ELECTRICAL REQUIREMENT			
4	Rating Voltage	300VDC max	on any signal pin with respect to the shield
5	Rating Current	1Amperes DCmax	55°C ,maximum ambient 85°C ,maximum temperature change (ANSI/EIA 364-70,TP-70)
6	Contact Resistance	[30] m Ohm Max(Initial) [50] m Ohm Max(Final)	Subject mated contacts assembled in housing to 20mV Max open circuit at 100mA Max. EIA-364-23.
7	Dielectric withstanding Voltage	No flashover,No sparkover,No excess leakage,No breakdown	[500]VAC for 1minute Test between adjacent circuits of unmated connector. EIA-364-20C
8	Insulation Resistance	[1000] M Ohm Min.	Impressed voltage 500 VDC. Test between adjacent circuits of unmated connector. EIA-364-21C.
9	Temperature Rising	30°C Max. Under loaded rating current	Contact series-wired, apply test current of loaded rating current to the circuit, and measure the temperature rising by probing on soldered areas of contacts, after the temperature becomes stabilized deduct ambient temperature from the measured value.
Mechanical Requirement			
10	Connector Mating Force	<u>4.44</u> kgf Max 9pin <u>7.72</u> kgf Max 15pin <u>12.71</u> kgf Max 25pin <u>17.71</u> kgf Max 37pin	Operation Speed : [25] mm/min. Measure the force required to mate connector. EIA-364-13

11	Connector Unmating Force	0.33kgf Max 9pin 15pin 0.79kgf Max 25pin 37pin 0.45kgf Max 1.14kgf Max	Operation Speed : [25] mm/min. Measure the force required to unmate connector. EIA-364-13
12	Durability	Contact Resistance Shall be less than 40 mohms after 1000 cycles for 30 μ in gold plated,750 cycles for gold flash plated	Operation Speed : [25] mm/minute. EIA-364-09C
13	Vibration	No discontinuity at 1 μ s or longer(each contact) when continuity is tested per ANSI/EIA-364-46	Condition III,Method 5A,15 minute/axis ANSI/EIA-364-28
14	Mechanical Shock	No discontinuity at 1 μ s or longer(each contact) when continuity is tested per ANSI/EIA-364-46	Subject mated connector to 50g half sine in 11 msec from shocks in the X,Y,Z axis(9 shocks total)
15	Solder ability	At least 95% of the immersed area shall be covered with new solder	1)Temperature of fused solder: 245+5 $^{\circ}$ C. 2)Dipping time:5+0.5s EIA 364-52
Environmental Requirements			
16	Resistance to Solder Heat	Forming resin shall not be distorted, and terminations shall not be separated.	1) Depth of dipping termination: the distance between the mounting surface and solder surface shall be 1 mm to 2mm. 2)Temperature:260+5 $^{\circ}$ C . 3) Dipping time: 5+0.5s Socket EIA 364-56
17	Thermal Shock	No physical damage to the samples and LLCR-50 m Ω max per contact	Mated connectors exposed to 10 cycles between -55 $^{\circ}$ C to 85 $^{\circ}$ C, 30 minutes duration at both temperature extremes EIA 364-32
18	Steady State Humidity	No physical damage to the samples and can pass the Dielectric Withstanding Voltage & Insulation Resistance	Expose mated connectors to a temperature of 40 \pm 2 $^{\circ}$ C with relative humidity of 90-95% for 168 hours Min(seven complete cycles). Remove surface moisture and air dry for 24 hours. prior to measurement. EIA 364-31
19	Temperature Life (Heat Aging)	Contact Resistance shall be less than 40 ohms	Mated Connector 85 $^{\circ}$ C , 250 hours, EIA-364-17B.
20	Salt Spray	Visual Inspection-No physical damageLLCR-50 m Ω max per contact	Mated connector expose to 5% salt concentration for 12 hours at temperature 35+2 $^{\circ}$ C .After the test specimens shall be washed with running water and dried naturally EIA 364-26

Product Qualification and Requalification test										
Test or Examination	Test Group									
	A	B	C	D	E	F	G	H	I	J
	Test Sequence (a)									
Examination of Product	1, 7	1, 9	1, 6	1, 5	1, 5	1, 5	1, 5	1, 3	1, 3	1, 3
Contact Resistance		2, 8	2, 5	2, 4	2, 4	2, 4	2, 4			
Dielectric withstanding	3, 6									
Insulation Resistance	2, 5									
Temperature Rising								2		
Mating Force		3, 7								
Unmating Force		4, 6								
Durability		5								
Vibration			3							
Mechanical Shock			4							
Solderability										2
Resistance to Soldering									2	
Thermal Shock				3						
Humidity Temperature	4				3					
Temperature Life						3				
Salt Spray							3			
備注	無客戶指定增加測試項目外，依照此標準進行產品可靠性評估。									

核准：唐竹君

制作人：覃裕华

4	Temperature cycling test	Temperature: 70—25 °C Duration:5 cycle	PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
四.物理測試 PHYSICAL TEST											
序號 NO.	測試項目 Testing Item	測試條件 Testing Conditions	測試設備 Testing Equipment	規格 SPEC	測試記錄 Testing Result					判定 Judge	
					2	3	4	5	Pass	Fail	
1	Salt spray test	Temperature: 35 ± 2°C Concentration: 5±1 % Duration :12H	SALT SPRAY TESTER	No Oxidation	Pass	Pass	Pass	Pass	Pass	P	
2	Resistance to soldering heat test	Temperature: 260±5°C Duration :10±1sec	OVEN	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
3	Solder ability test	Temperature: 245±5°C Duration:5±0.5 sec	CONTROLLED CONSTANT-TEMP SOLDER POT	Soldering area 95%	Pass	Pass	Pass	Pass	Pass	P	
判定 Result		<input checked="" type="checkbox"/> 合格(ACCEPT) <input type="checkbox"/> 不合格(REJECT)									

核准(Approver): 欠必鋒

測試(Tester): 但芬



深圳市华联威电子科技有限公司

檢驗報告

首件檢驗 入庫檢驗 出貨檢驗 客退檢驗 退料檢驗 其他

2021年12月2日 版次:A1

料號	DS412-1711-G2A7	制令單號	/					送檢單位	工程部	首件製作者	裝配		
品名	D-SUB 9母铆锁	客戶代號	/					批 量	/	送檢時間	/		
								數 量	5PCS	確認時間	/		
抽樣標準		<input checked="" type="checkbox"/> 單次 <input type="checkbox"/> 雙次					抽樣數	AQL	CRI:0	MAJ:0.4	MIN:0.65		
MIL-STD-105E(II)		<input checked="" type="checkbox"/> 正常 <input type="checkbox"/> 加嚴 <input type="checkbox"/> 減量					(5PCS)	ACC/REJ	0	/	/		
不良數:		CRI (/)		MAJ (/)		MIN (/)		不良率(%)		/			
NO.	檢驗項目 單位:MM/G	檢測 儀器	檢 驗 記 錄					品管判定		CRI	MAJ	MIN	備注
			1	2	3	4	5	AC	RE				
尺 寸 測 量	30.80±0.20	D	30.82	30.85	30.86	30.84	30.86	√					
	25.00±0.20	D	25.06	25.03	25.04	25.06	25.04	√					
	16.35±0.20	D	16.38	16.34	16.37	16.35	16.34	√					
	2.77±0.20	D	2.79	2.80	2.78	2.79	2.81	√					
	2.84±0.20	D	2.95	2.93	2.90	2.91	2.90	√					
	5.90±0.20	D	5.96	5.93	5.94	5.95	5.96	√					
	19.10±0.20	D	19.15	19.17	19.16	19.20	19.18	√					
	6.00±0.20	D	6.05	6.07	6.03	6.07	6.05	√					
	12.50±0.20	D	12.56	12.58	12.59	12.60	12.58	√					
	7.90±0.20	D	7.93	7.95	7.96	7.98	7.96	√					
	10.60±0.20	D	10.65	10.67	10.68	10.69	10.67	√					

檢驗依據: 《工程圖紙》 《檢驗規範》 《承認書》 樣品 其它

檢測儀器:A游標卡尺 B千分尺 C厚薄儀 D投影鏡 E放大鏡 F顯微鏡 G錫爐 H插拔力器 I間位尺 J其它

品保判定: 合格Accept 退貨Reject 特采Waive 挑選Sort

核准: 欠必鋒

審核: 刘联英

檢驗員: 但芬

电镀报告表

品名:D-SUB 9母铆锁(端子)		版次:A.0			
电镀规格:Ni40u", Sn40u", Au G/Fu"		日期:2021-08-25			
页次:1/1					
厂商:同华					
测试设备:CMI X-射线膜厚测试仪					
1、底层电镀测试(Ni)					
数据	测试标准	实测值	判定	测试日期	测试时间
1	40u"MIN	60.5u"	OK	2021/8/25	10:20:15
2	40u"MIN	58.3u"	OK	2021/8/25	10:20:17
3	40u"MIN	67.5u"	OK	2021/8/25	10:20:19
4	40u"MIN	62.4u"	OK	2021/8/25	10:20:21
2、表层电镀测试(Sn)					
数据	测试标准	实测值	判定	测试日期	测试时间
1	40u"MIN	115.3u"	OK	2021/8/25	10:25:10
2	40u"MIN	124.7u"	OK	2021/8/25	10:25:12
3	40u"MIN	118.9u"	OK	2021/8/25	10:25:14
4	40u"MIN	112.4u"	OK	2021/8/25	10:25:16
3、表层电镀测试(Au)					
数据	测试标准	实测值	判定	测试日期	测试时间
1	0.5u"MIN	0.55u"	OK	2021/8/25	10:30:32
2	0.5u"MIN	0.53u"	OK	2021/8/25	10:30:34
3	0.5u"MIN	0.58u"	OK	2021/8/25	10:30:36
4	0.5u"MIN	0.59u"	OK	2021/8/25	10:30:38

核准: 欠必锋

审核: 刘联英

检验员: 但芬

电镀报告表

品名: D-SUB 9母铆锁外壳		版次:A. 0			
电镀规格:Cu:40u"Ni:50u"MIN	日期:2021/9/12	页次:1/1			
厂商:金和源					
测试设备:CMI X-射线膜厚测试仪					
1、底层电镀测试(Cu)					
数据	测试标准	实测值	判定	测试日期	测试时间
1	40u"min	45.3u"	OK	2021/9/12	19:55:05
2	40u"min	48.5u"	OK	2021/9/12	19:55:57
3	40u"min	44.2u"	OK	2021/9/12	19:56:48
4	40u"min	45.6u"	OK	2021/9/12	19:57:31
2、表层电镀测试(Ni)					
数据	测试标准	实测值	判定	测试日期	测试时间
1	50u"min	57.3u"	OK	2021/9/12	19:58:12
2	50u"min	55.6u"	OK	2021/9/12	19:59:04
3	50u"min	56.2u"	OK	2021/9/12	20:01:44
4	50u"min	58.3u"	OK	2021/9/12	20:02:36

核准: 欠必锋

审核: 刘联英

检验员: 但芬

盐水喷雾实验报告

试验方法	盐水喷雾腐蚀试验法	参考资料	MIL-STD-1216
METHOD	NEUTRL SALT SPRAY CORROSION TEST	REF	
客户	/	试验起始日期	2021年12月01日 20:00 时起
		DATE	2021年12月02日 08:00 时止
样品名称	D-SUB 9母铆锁	试验数量	5PCS
P/N	DS412-1711-G2A7		

试验条件 (TEST CONDITON)

- 1、盐水溶解 (SALT SOLUTION: 浓度 $50 \pm 10\text{g/L}$, PH值6.5-7.2).
- 2、试验室温度 (TEMP. IT THE SPRAY DHAMBR): $35 \pm 1^\circ\text{C}$.
- 3、盐水桶温度 (TEMP. OF SALE SOL' N TANK): $35 \pm 1^\circ\text{C}$.
- 4、压力桶温度 (TEMP. OF SAR SUPPLIERY): $47 \pm 1^\circ\text{C}$.
- 5、试验室相对湿度 (R. H IN THE CHAMBER) 85%.
- 6、压缩空气压力 (COMPRESSED AIR PRESSURE): $1.00 \pm 0.01\text{Kg/cm}^2$.
- 7、样品放置位置 (SPECIMEN SUPPORTED ANGLE): 尼龙绳吊挂 $70^\circ - 90^\circ$.
- 8、喷雾收集量 (COLLECT RATE OF SALT SOL' N) $1-2\text{mL}/(8 \text{ cm}^2\text{hr})$.
- 9、盐雾测试时间: 12小时 (H)

判定方法 (ADFUSGD METHOD)

试验后以20倍放大镜观察、无蓝、绿色腐蚀物之现象 (不包含折弯处), 即判定合格. (Inspext the ecimen at 20 xmagnification no blue or green corrosion products are acceptable)

样品序号	试验后现象	判定
	PHENOMENON AFTER TEST	COMMENT
1	无蓝、绿色腐蚀物之现象	OK
2	无蓝、绿色腐蚀物之现象	OK
3	无蓝、绿色腐蚀物之现象	OK
4	无蓝、绿色腐蚀物之现象	OK
5	无蓝、绿色腐蚀物之现象	OK

核准: 欠必锋

审核: 刘联英

试验员: 但芬

材 质 证 明

兹有我司邦奇塑料科技有限公司为贵司所提供的产品不防火原料 PBT 不防火加纤 15%300C-1 蓝，由以下物质组成：

物品名称：PBT 不防火加纤 15%300C-1 蓝色

组成物质：PBT 环保树脂	65-75%
玻纤	15%
增韧剂	5%
润滑剂	0.2%
抗氧化剂	0.2%-0.3%
偶联剂	0.3%
其他	0.5%

建议成型：

1. 烘干温度 120-140℃
2. 烘干时间 2-4 小时
3. 成型温度 240-260℃

特此证明！

东莞市邦奇塑料科技有限公司



佛山市顺德区天硕贸易有限公司

Foshan Shunde Tianshuo Trade Company Limited

日期: 2021-10-19

编号: FB2110136

收货单位PURCHASER: _____ 检验标准SPECIFICATION: <u>JIS G 3141</u>				产品名称: <u>SPCC-SD</u> 检验情况: <u>合格</u>											
产品规格 SPECIFICATION MM	钢卷号 COIL. NO	材质牌号 SYMBOL OF QUALITY	净重 WEIGHT KG	化学成份CHEMICAL COMPOSITION							力学性能MECHANICAL PROPERTIES				
				Fe %	C %	Mn %	Si %	P %	S %	AI %	抗拉强度T.S Mpa	延伸率EL (%)	屈服强度Y.S Mpa	杯突 (mm)	硬度 (HV)
0.30x1250	DL45657	SPCC-SD	7835	99	0.031	0.17	0.07	0.22	0.24		361	29	259		143
0.30x1250	DL45658	SPCC-SD	7690	99	0.032	0.16	0.07	0.21	0.22		362	30	256		141

质量控制中心:

审核: 谢和钢

制表人: 胡万银



鉅鼎銅材廠檢驗報告單

公司名稱 Customer	鉅鼎銅材廠檢驗報告單				重量 Weight(kg)	1078	出貨日期 Date	2021/11/23		
品名 Article	標準 Standard No				尺寸 Dimension		狀態 Tenper	銅卷編號 Coil No		
C2680	JISH3100:2017				0.18*400		EH	1021-C-08		
化學成分Chemical Compositions(%)										
元素 Element	Cu %	Zn%	Pb%	Fe%	\	\	\	\	化學成分	雜質
規範 Spec	64.0-68.0	餘量	<0.05	<0.05	\	\	\	\	合格	合格
實測 Actual	64.32	餘量	0.0036	0.0136	\	\	\	\	合格	合格
機械性質Mechanical Properties										
項目 Item	結晶粒度 Grain Size Mm	硬度 Hardness Hv	抗拉強度 TensionStrength Mpa	伸長度 Elongation %	導電率 Electrical Conduc %IACS	彎曲試驗 Bending Test 180	表面粗度 Surface Roughness Ra(u m)	彎曲度 Camber mm/n		
規範MAX Spec	\	170-190	490-610	\	\	\	\	\		
實測 Actual	\	178	574	5	\	\	\	\		

品質部

