

承 认 书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): U318 - 0121 - 36E011

品名规格 (PronameSpec): USB 3.0 AM SMT

送样日期 (Delivery Date): 2021/11/16

承认日期 (Acknowledge Date): 2021/11/18

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
将成英	欠必锋	魏红	唐竹君

地址: 深圳市龙华区观澜街道桂香社区观澜桂花路 307 号

TEL: 0755-28888886 28888866

hua@hlwconn.com

[Http://www.hlwconn.com](http://www.hlwconn.com)

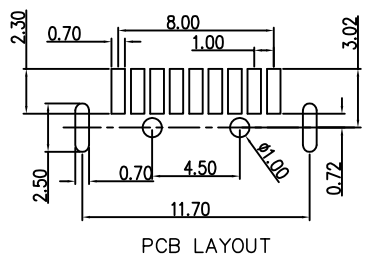
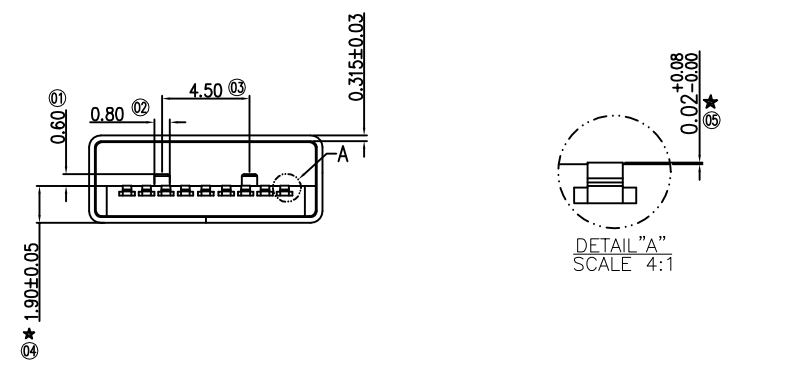


目 录

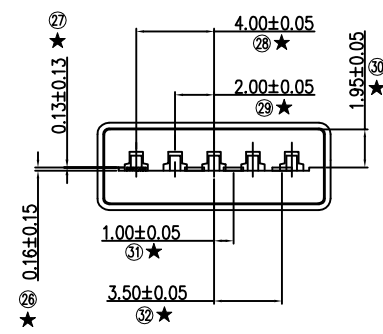
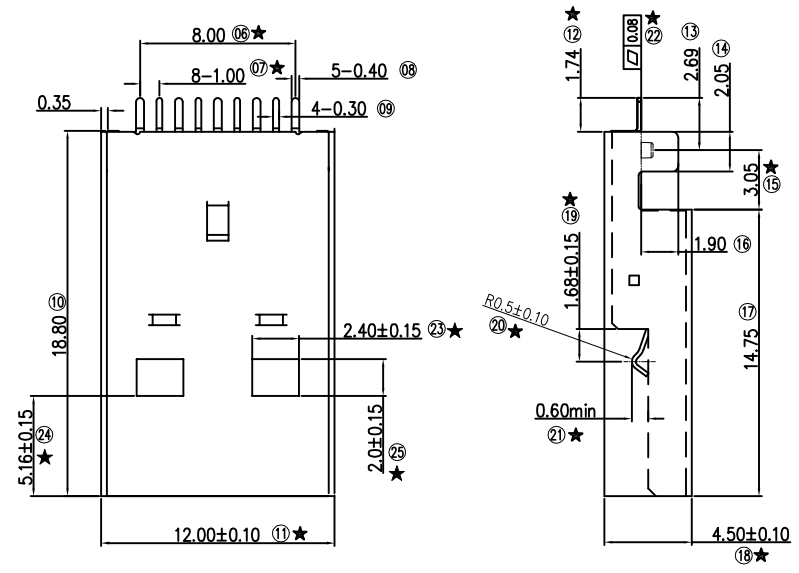
Contents

图纸.....	Page03
产品规格书.....	Page04-06
产品检测报告.....	Page07-08
尺寸测试报告.....	Page09
电镀报告.....	Page10-11
盐雾报告.....	Page12
材质证明.....	Page13-15
SGS.....	Page16-53

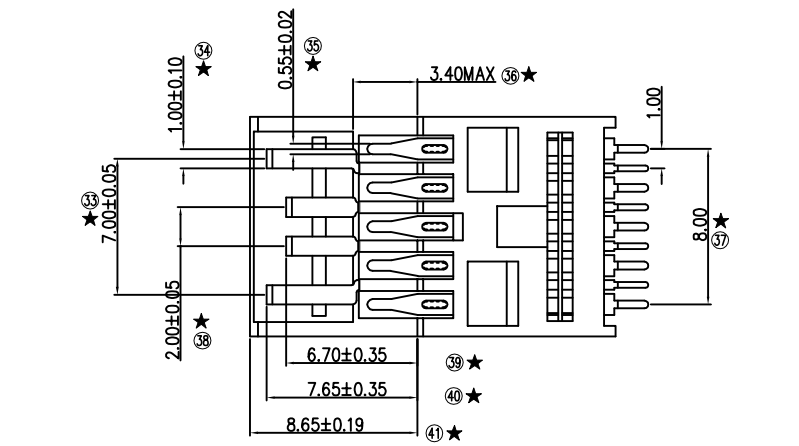
REV.	ECN.NO.	APPD.
A	/	pcy
B	/	chenyiting



Remark:
 1.MATERIAL:
 1.1 Housing:thermoplastic plastics.
 1.2 terminals:Copper Alloy
 1.3 Shell:Copper Alloy/SPCC.
 2.characteristics:
 2.1 Rating Voltage : 30V AC.
 2.2 Rating Current:PIN1&PIN4(Vbus&Correponding ground PIN) 1.8A MAX Other PINS 0.25A min.
 2.3 Contact Resistance:PIN1&PIN4:30 mΩ MAX. Other PINS: 50 mΩ
 2.4 Insulation Resistance:100 MΩ MIN.
 2.5 Withstanding Voltage:AC 100V between adjacent contacts
 2.6 Mating force: 3.57Kgf MAX(35N MAX)
 2.7 Extraction force:1Kgf Min(9.8N Min)
 2.8 Life test:1500Cycles MIN.
 2.9 Temperature Range: -30℃~+80℃.



U318-0121-36E011
 1:铁壳镀镍 1:吸塑盒
 3:3u" Au E:蓝色
 6:LCP



Pin Number	Signal Name	Pin Number	Signal Name
1	VBUS	5	SSRX-
2	D-	6	SSRX+
3	D+	7	GND
4	GND	8	SSTX-
Shell	Shield	9	SSTX+

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	.X' ±3'							
.XX ±0.20	.XX' ±2'	APPROVED	PART NAME:	USB 3.0 AM SMT				
.X ±0.30		CHECKED	PART No:	U318-0121-36E011	C			
DATE	2023.04.25	DRAWN	chenyiting	PROJECTION:	UNIT:	SCALE:	SHEET:	REV.
				mm	1:1	1 OF 1	B	



TEST ITEM		REQUIREMENT	PROCEDURE
1	Examination of Product	Meets requirements of product drawing. No physical damage.	Visual inspection.
2	Operating Temperature	-55°C to 85 °C	
3	Storage Temperature	-20°C to 60 °C	
ELECTRICAL REQUIREMENT			
4	Rating Voltage	30VAC max	on any signal pin with respect to the shield
5	Rating Current	PIN1&PIN4(Vbus&Correponding ground PIN)1.8A MAX Other PINS 0.25A min.	55°C ,maximum ambient 85°C ,maximum temperature change (ANSI/EIA 364-70,TP-70)
6	Contact Resistance	30 mΩ maximum for pin1 & pin4 (50 mΩ maximum for others) when measured at 20 mV maximum open circuit at 100 mA. Mated test contacts must be in a connector housing. Measurements to include Power, Ground, D+ and D- contacts of connector. 10 mΩ maximum change for post test LLCR	The object of this test is to detail a standard method to measure the electrical resistance across a pair of mated contacts such that the insulating films, if present, will not be broken or asperity melting will not occur. Measurement to use Kelvin 4-wire method. Measurements shall be taken form receptacle terminal to plug terminal. EIA 364-23
7	Dielectric withstanding Voltage	The dielectric must withstand 100 VAC for one minute at sea level.100 V AC for Mini/Micro Series.	The object of this test procedure is to detail a test method to prove that a USB connector can operate safely at its rated voltage and withstand momentary over potentials due to switching, surges and/or other similar phenomena. EIA 364-20
8	Insulation Resistance	Pre test Standard — 1,000 MΩ minimum. MicroUSB — 1,00 MΩ minimum Mini Series — 100 MΩ minimum. Post test 100 MΩ minimum final.	The object of this test procedure is to detail a standard method to assess the insulation resistance of USB connectors. This test procedure is used to determine the resistance offered by the insulation materials and the various seals of a connector to a DC potential tending to produce a leakage of current through or on the surface of these members. EIA 364-21
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	35 Newtons maximum at a maximum rate of 12.5 mm (0.492") per minute.	The object of this test is to detail a standard method for determining the mechanical forces that are required for inserting a USB connector. EIA 364-13



TEST ITEM		REQUIREMENT	PROCEDURE
11	Connector Unmating Force	9.8 Newtons minimum 8 Newtons minimum after the specified at a maximum rate of 12.5 mm (0.492") per minute.	The object of this test is to detail a standard method for determining the mechanical forces that are required for extracting a USB connector. EIA 364-13
12	Durability	1500 cycles Min(standard durability class) 5000 cycles Min (High durability class) 10,000 cycles Min(Micro series)	The object of this test procedure is to detail a uniform test method for determining the effects caused by subjecting a USB connector to the conditioning action of insertion and extraction, simulating the expected life of the connectors. Durability cycling with a gauge is intended only to produce mechanical stress. Durability performed with mating components is intended to produce both mechanical and wear stress. EIA 364-09
13	Vibration	No discontinuities of 1 μ S or longer duration when mated USB connectors are subjected to 5.35 GRMS. 15 minutes in each of three mutually perpendicular planes.	Test Condition V Test Letter A This test procedure tests the ability of USB connectors to withstand conditions involving vibration. EIA 364-28
14	Mechanical Shock	No discontinuities of 1 μ S or longer duration when mated USB connectors are subjected to 11 ms duration 30 Gs halfsine shock pulses. Three shocks in each direction applied along three mutually perpendicular planes for 18 shocks.	Test Condition H The object of this test procedure is to detail a standard method to assess the ability of a USB connector to withstand specified severity of mechanical shock EIA 364-27
15	Solder ability	USB contact solder tails shall pass 95% coverage after 8-hour steam age. Note: If lead free solder is required, solder temperature is 245 \pm 5 $^{\circ}$ C .	1)Temperature of fused solder: 245 \pm 5 $^{\circ}$ C . 2)Dipping time:10 \pm 1s 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:245 \pm 5 $^{\circ}$ C . 3) Dipping time: 10 \pm 1s Socket EIA 364-56
17	Thermal Shock	10 Cycles - 55OC and +85OC. The USB connectors under test must be mated. There shall be no evidence of damage.	Test Condition I The object of this test is to determine the resistance of a USB connector to exposure at extremes of high and low temperatures and to the shock of alternate exposures to these extremes, simulating the worst case conditions for storage, transportation and application. EIA 364-32



TEST ITEM		REQUIREMENT	PROCEDURE
18	Steady State Humidity	168 Hours minimum (seven complete cycles). The USB connectors under test shall be tested in accordance with EIA 364-31.	Test Condition A Method III The object of this test procedure is to detail a standard test method for the evaluation of the properties of materials used in USB connectors as the effects of high humidity and heat influences them.
19	Temperature Life (Heat Aging)	Must meet the minimum requirements specified by the most current version of Chapter 6 of the USB Specification and must be free of cosmetic and/or mechanical imperfections that will prevent normal use.	Test Condition 4 - Method A. The object of this test procedure is to detail a standard method to assess the ability of a USB connector to withstand $+85^{\circ}\text{C} \pm 2$ temperatures without applied voltage for 500 hours EIA 364-17
20	Salt Spray	Visual Inspection-No physical damage LLCR-50 mΩ max per contact	Mated connector expose to 5% salt concentration for 12 hours at temperature $35 \pm 2^{\circ}\text{C}$. 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。									

審核：黃國華

制定：趙晶

3	Cold test	Temperature: $-25 \pm 3^{\circ}\text{C}$ Duration:168H	PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
4	Temperature cycling test	Temperature: $70 \sim -25^{\circ}\text{C}$ 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	
					1	2	3	4	5	Pass	Fail
1	Salt spray test	Temperature: $35 \pm 2^{\circ}\text{C}$ Concentration: $5 \pm 1\%$ Duration:12H	SALT SPRAY TESTER	No Oxidation	Pass	Pass	Pass	Pass	Pass	P	
2	Resistance to soldering heat test	Temperature: $245 \pm 5^{\circ}\text{C}$ Duration: $10 \pm 1\text{sec}$	OVEN	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
3	Solder ability test	Temperature: $245 \pm 5^{\circ}\text{C}$ Duration: $10 \pm 1\text{sec}$	CONTROLLED CONSTANT-TEMP SOLDER POT	Soldering area $\geq 95\%$	Pass	Pass	Pass	Pass	Pass	P	
判定 Result		<input checked="" type="checkbox"/> 合格 (ACCEPT) <input type="checkbox"/> 不合格 (REJECT)									

審核(Approver): 汪志根

測試(Tester): 陈晓宇



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11月18日 版次:A

料號	U318-0121-36E011	制令單號	/	送檢單位	工程部	首件製作者	裝配	
品名	USB 3.0 AM SMT	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 (5PCS)	AQL	CRI:0	MAJ:0.40	MIN:0.65
MIL-STD-105E(II)		<input checked="" type="checkbox"/> 正常 <input type="checkbox"/> 加嚴 <input type="checkbox"/> 減量			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				
	0.80±0.20	D	0.76	0.74	0.73	0.74	0.75	✓					
	4.50±0.10	D	4.52	4.50	4.52	4.50	4.51	✓					
	0.60±0.20	D	0.62	0.61	0.62	0.60	0.61	✓					
	1.00±0.10	D	1.02	1.01	1.00	1.02	1.01	✓					
	8.00±0.20	D	8.02	8.01	8.02	8.01	8.03	✓					
	0.40±0.05	D	0.42	0.41	0.42	0.41	0.42	✓					
	0.30±0.05	D	0.31	0.30	0.31	0.32	0.31	✓					
	18.80±0.20	A	18.82	18.81	18.82	18.83	18.80	✓					
	12.00±0.10	A	12.02	12.01	12.03	12.01	12.03	✓					
	1.90±0.20	D	1.92	1.90	1.93	1.90	1.92	✓					
	1.74±0.20	D	1.75	1.73	1.76	1.75	1.76	✓					
	1.90±0.20	D	1.92	1.90	1.93	1.92	1.91	✓					
	2.05+0.05/-0.10	D	2.05	2.06	2.05	2.03	2.05	✓					
	3.05±0.20	D	3.06	3.05	3.07	3.06	3.07	✓					
	14.75±0.20	A	14.76	14.77	14.73	14.75	14.76	✓					
	4.50±0.10	D	4.52	4.51	4.50	4.52	4.51	✓					

0

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	汪志根	/	檢 驗 員	陈晓宇
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保存期限:三年 QR-M-003



深圳市华联威电子科技有限公司
电镀报告表

品名:USB 3.0 AM SMT (端子)	版次:A.0
电镀规格:Ni40u", Sn40u", Au3u"	日期:2021-11-5
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	55.4u"	OK	2021-11-5	14:10:25
2	40u"MIN	56.1u"	OK	2021-11-5	14:10:27
3	40u"MIN	62.7u"	OK	2021-11-5	14:10:29
4	40u"MIN	51.3u"	OK	2021-11-5	14:10:31

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	127.5u"	OK	2021-11-5	14:15:02
2	40u"MIN	118.6u"	OK	2021-11-5	14:15:04
3	40u"MIN	122.3u"	OK	2021-11-5	14:15:06
4	40u"MIN	115.5u"	OK	2021-11-5	14:15:08

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	3u"MIN	3.36u"	OK	2021-11-5	14:20:13
2	3u"MIN	3.20u"	OK	2021-11-5	14:20:15
3	3u"MIN	3.17u"	OK	2021-11-5	14:20:17
4	3u"MIN	3.22u"	OK	2021-11-5	14:20:19

核准:汪志根

审核:唐竹君

检验员:陈晓宇



深圳市华联威电子科技有限公司

电镀报告表

品名:USB 3.0 AM SMT (外壳)		版次:A.0																														
电镀规格:Cu:40u",Ni:40u"	日期:2021-11-5	页次:1/1																														
厂商:同华																																
测试设备:CMI X-射线膜厚测试仪																																
1、表层电镀测试 (Ni)																																
<table border="1"><thead><tr><th>数据</th><th>测试标准</th><th>测点实测值</th><th>判定</th><th>测试日期</th><th>测试时间</th></tr></thead><tbody><tr><td>1</td><td>40u"min</td><td>54.8u"</td><td>OK</td><td>2021-11-5</td><td>14:52:10</td></tr><tr><td>2</td><td>40u"min</td><td>66.2u"</td><td>OK</td><td>2021-11-5</td><td>14:52:12</td></tr><tr><td>3</td><td>40u"min</td><td>60.7u"</td><td>OK</td><td>2021-11-5</td><td>14:52:14</td></tr><tr><td>4</td><td>40u"min</td><td>52.5u"</td><td>OK</td><td>2021-11-5</td><td>14:52:16</td></tr></tbody></table>			数据	测试标准	测点实测值	判定	测试日期	测试时间	1	40u"min	54.8u"	OK	2021-11-5	14:52:10	2	40u"min	66.2u"	OK	2021-11-5	14:52:12	3	40u"min	60.7u"	OK	2021-11-5	14:52:14	4	40u"min	52.5u"	OK	2021-11-5	14:52:16
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4	40u"min	49.6u"	OK	2021-11-5	14:57:14																											

核准:汪志根

审核:唐竹君

检验员:陈晓宇



深圳市华联威电子科技有限公司

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-1344
METHOD	NEUTRL SALT SPRAY CORROSION TEST	REF	
客户		试验起始日期	2021年11月17日 20::00 时起
		DATE	2021年11月18日 08:00 时止
样品名称	USB 3.0 AM SMT	试验数量	5PCS
P/N	U318-0121-36E011	QTY	
试验条件 (TEST CONDDITION)			
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, 不包含镀锡区), 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:汪志根2020-04-05

审核:唐竹君2020-04-05

试验员:陈晓宇2020-04-05

东莞市煜春塑料科技有限公司

材质证明

主成份	含 量 LCP E130i 蓝色	备 注
LCP 树脂	69%±5%	
玻纤	30%±5%	
抗氧化剂	0.3%	
润滑剂	0.3%	
蓝色粉	0.4%	

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: _____				产品名称: _____ SPCC-SD											
检验标准SPECIFICATION: JIS G 3141				检验情况: _____ 合格											
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

