

YUEQING HONGYI ELECTRONICS CO., LTD

乐清市宏一电子有限公司

SPECIFICATION FOR APPROVAL

承 认 书

CUSTOMER 客户名称	
DESCRIPRION 产品名称	2510 系列连接器
ITEM NO 编 号	HY-A25412 (A97)
DATE 日 期	2022-09-18

CUSTOMER ACKNOWLEDGEMENT SEAL

客 户 承 认 印 签

(APPROVAL) 核准	(ENGINEERING) 工程	(PURCHASE) 采购	(QUALITY) 品质
承认结果： ☐ 通过 ☐ 不通过 ☐ 重新送样			

ISO9001

ISO14001

ISO45001

IATF16949 体系认证

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修订履历

[illegible]

产 品 承 认 书 目 录

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PRODUCT SPECIFICATION

产 品 规 范

1、Scope

适用范围

This specification includes the following specifications, including the specification of 2.54mm pitch 2510 series connector

本规范包括下列此种规格包括 2.54mm 间距 2510 系列连接器规格说明

2、Appearance and Dimension

外观及尺寸

2.1 Appearance:Product surface without defect、dirt、crack、and mechanical damang,Contactwithout rust,plating not oxidized and not peeled.

产品表面不应有对制品有害的缺陷、污垢、裂痕及机械损伤；接触件无锈蚀、镀层氧化脱落等现象

2.2 Dimension:According to drawings

外形尺寸：依照附图

3、Disposal of Material and surface

材料与表面处理

Specification 规格内容		Material 材 质	Finish 表面处理	Environmental protection grade 环保等级
Terminal 端 子		Phosphor bronze 磷铜 厚 0.20mm	Tin Plating:2.5-5 μ m 镀锡：2.5-5 μ m	RoHS2.0
Housing 胶 壳		PA66 UL94V-0	Color:White 颜色：白色	
Wafer 直针座	Plastic 塑 壳	PA66 UL94V-0	Color:Beige 颜色：米色	
	Contact 插 针	Brass 黄铜 厚 0.64mm	Tin Plating:2.5~5 μ m 镀锡：2.5~5 μ m	
Wafer 弯针座	Plastic 塑 壳	PA66 UL94V-0	Color:Beige 颜色：米色	
	Contact 插 针	Brass 黄铜 厚 0.64mm	Tin Plating:2.5~5 μ m 镀锡：2.5~5 μ m	

4、Ratings and applicable wires

额定等级

Item 项 目	Standard 规 格
Rated Voltage 额定电压	250V AC/DC
Rated Current 额定电流	4A AC/DC
Ambient temperature Range 使用温度范围	-25℃- +85℃
Applicable wire insulation 适用线径	AWG24#-30#

5、Electrical Performance

电 气 性 能

N0. 序号	Ltem 项 目	Test mode 试验方法	Requirement 技术要求
5.1	ContactResistance 接触电阻	Male female cooperation, open voltage less than 20mV, current 100mA detection connector at both ends 公母配合, 开放电压20mV 以下, 电流100mA 检测连接器连接器两端	Initial:20mΩ Max 初始: 20mΩ Max After Test: 30mΩ Max 试验后: 30mΩ Max
5.2	Withstandvoltage 耐电压	Mate connectors, apply 1000V AC for 1 minute between adjacent terminal or ground 公母配合, 在相邻端子, 端子与地片之间, 使用1000V 的交流电1 分钟, 检测连接器	No Breakdown and Flashover 外观无损伤, 无打火花
5.3	InsulationResistance 绝缘电阻	Mate connectors, apply 500V DC between adjacent terminal or ground 公母配合, 在相邻端子, 端子与地片之间, 使用500V 的直流电, 检测连接器	1000MΩ Min

6、机械性能

Mechanical Performance

N0. 序号	Ltem 项 目	Test mode 试验方法		Requirement 技术要求
6.1	Terminal crimping wire strength 端子压接导线强度	Fix the crimped terminal, apply axial pull out force on thewire 固定铆线后的端子，使电线与端 子分离时所需的最小力量	AWG#24 wire AWG#24 导线	30N Min
			AWG#26 wire AWG#26 导线	20N Min
			AWG#28 wire AWG#28 导线	13N Min
			AWG#30 wire AWG#30 导线	8N Min
6.2	Terminal/ Housing Retention Force 端子保持力	Apply axial pull out force at the speed rate of25.4±3mm/minute on the terminal assembled in the Housing 以每分25.4±3mm 的速率,将端子从Housing 内轴 向拔出力		Per contact: 20N Min 单一接触点: 20N Min
6.3	Insertion & withdraw Force 插拔力	Insert and withdraw Connectors at the speed rate of 25.4±3mm/minute 以每分 25.4±3mm 的速率插入和拔出		Refer to paragraph 8 参照第 8 项
6.4	Pin Retention Force Pin 针保持力	Apply axial push force at the speed rate of 25.4±3mm/minute 以每分 25.4±3mm 的速率,将 PIN 针从 Wafer 内轴向拔出力		Per contact: 15N Min 单一接触点: 15N Min

7、Endurance Characteristics:

环境性能

N0. 序号	Ltem 项 目	Test mode 试验方法	Requirement 技术要求	
7.1	Repeated Insertion/ Withdrawal 重复插拔	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute 以每分钟不超过 10 次的速率, 将公母插 拔 30 次	Contact Resistance 接触电阻	30 mΩ Max
7.2	Temperature Rise 温升测试	Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the termperature rise 公母连接器配合后, 加载额定电流直到温 度上升到稳定 状态, 然后再测量温升	Temperature Rise 温升测试	30℃ Max
7.3	Vibration test 振动测试	Amplitude: 1.5mm P-P Sweep time: 10~55~10 HZ in 1 minute Duration: 2 hours in each X.Y.Z axials 振幅: 1.5mm P-P 时间: 10~55~10 HZ in 1 minute 持续时间: 每轴向 2 小时	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
			Discontinuity 瞬断	1 micro- second Max.
7.4	Heat Resistance 耐热性	85±2℃,96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
7.5	Cold Resistance 耐寒性	-25±3℃,96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
7.6	Humidity 耐湿性	Temperature: 60±2℃ Relative Humidity: 90~95% Duration: 96 hours 温度: 60±2℃ 湿度: 90~95%(RH) 持续时间: 96 hours	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
			Withstand Voltage 耐电压	No Breakdown and Flashover 外观无损伤, 无打火花
			Insulation Resistance 绝缘电阻	1000MΩ Min

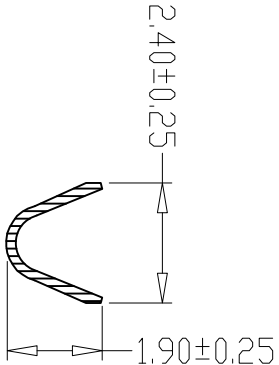
N0. 序号	Ltem 项 目	Test mode 试验方法	Requirement 技术要求	
7.7	温度变化 Temperature Cycling	5 cycles of: a) -25℃ 30 minutes b) +85℃ 30 minutes 从-25℃持续30 分锺升至+85℃持续30 分锺, 循环5 次	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
7.8	Salt spray 盐雾	24±1 hours exposure to a salt spray from the 5±1% solution at 35±2℃ 在温度35±2℃, 盐水浓度5±1%下, 盐水 喷雾24±1 小时	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	30 mΩ Max
7.9	Solderability 焊锡附着性	Soldering Time: 3-5sec solder Temperature: 245±5℃ 焊接时间: 3-5 秒 焊接温度: 245±5℃	Solder Wetting 焊料润湿	Immersion area above 95% 浸渍面积 95% 以上
7.10	Solder- Resistance 焊锡耐热性	DIP type PA66 material welding heat resistance range: Soldering time:3~5sec solder. Temperature:230±5℃ DIP 型 PA66 材质焊接耐热范围: 焊接时间: 3~5 秒. 焊接温度: 230±5℃ DIP type PA46 material welding heat resistance range: Soldering time:3~5sec solder. Temperature:245±5℃ DIP 型 PA46 材质焊接耐热范围: 焊接时间: 3~5 秒. 焊接温度: 245±5℃	Appearance 外观	No damage 无异常

8、INSERTION/WITHDRAWAL FORCE

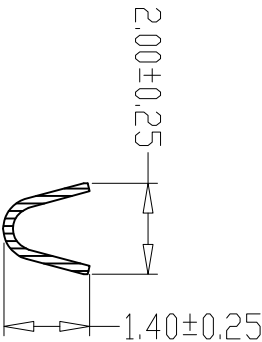
综合插入力及拔出力

No. of CTK PIN 数	At Initial 初始值		At 30th 插拔 30 次	No. of CTK PIN 数	At Initial 初始值		At 30th 插拔 30 次
	I. F (N Max) 插入力	W. F (N Min) 拔出力	W. F (N Min) 拔出力		I. F (N Max) 插入力	W. F (N Min) 拔出力	W. F (N Min) 拔出力
2	20	5	4	12	70	20	18
3	25	5	4	13	75	22	20
4	30	9	8	14	80	22	20
5	35	9	8	15	85	24	22
6	40	13	12	16	90	24	22
7	45	15	14	17	95	26	24
8	50	15	14	18	100	26	24
9	55	18	16	19	105	28	26
10	60	18	16	20	110	28	26
11	65	20	18				

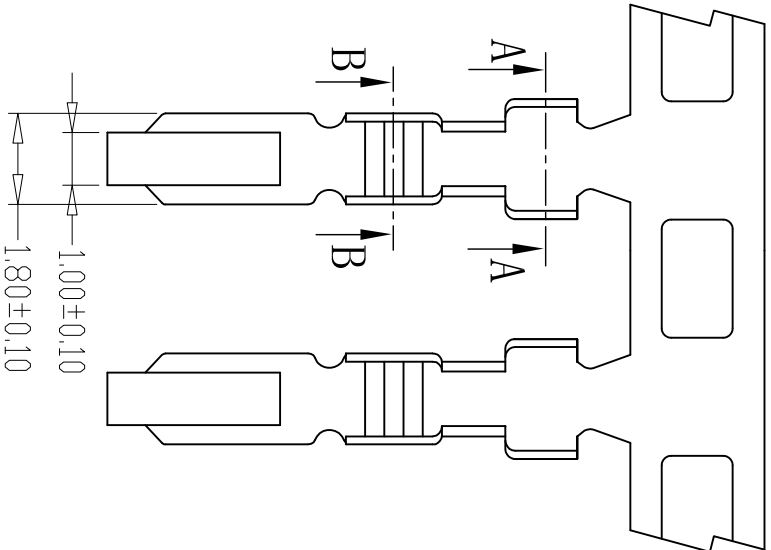
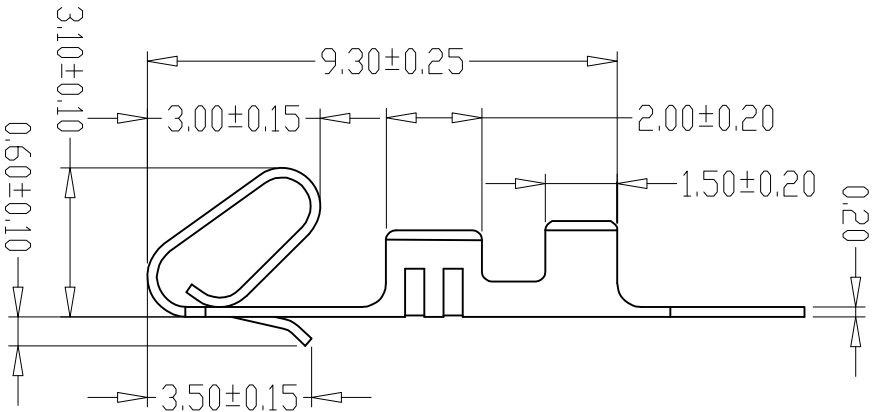
版本 REV.	日期 DATE	ECN NO.	变更内容 DESCRIPTION	制图 DRAWN



SEC: A-A



SEC: B-B



SPECIFICATIONS

- Current Rating: 4A AC, DC
- Voltage Rating: 250V AC, DC
- Temperatuer Range: -25℃~+85℃
- Contact Resistance: 20mΩ Max
- Insulation Resistance: 1000MΩ Min
- Withstanding Voltang: 1000V AC/minute
- Material: Phosphoric bronze Tin-plated
- Applicable Wire Sizes: AWG#24~30#

GENERAL TOLERANCE		制图 Mapping	张迎春 2022、09、17	料号 PART NO.	A25412-T	版本 REV.	A
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.XXX±0.10	.XXX°±0.5°	单位 Units	mm	比例 SCALE			

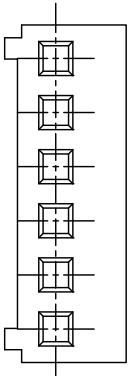
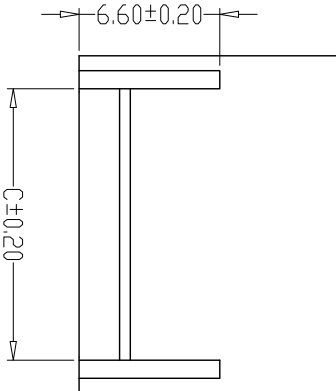
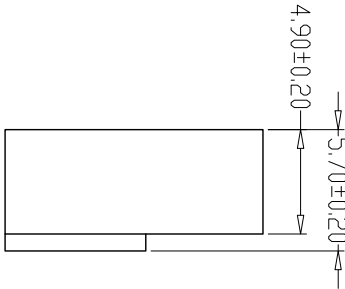
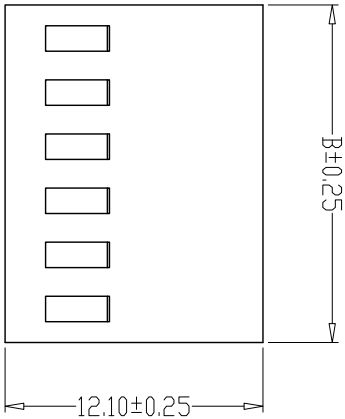
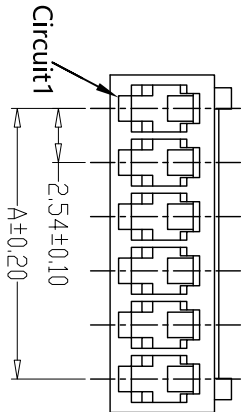
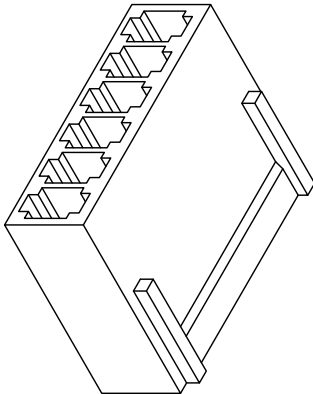
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Yueding HongYi Electronics Co., Ltd

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版本 REV.	日期 DATE	变更内容 DESCRIPTION	制图 DRAWN

SPECIFICATIONS

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4、Contact Resistance: 20mΩ Max
5、Insulation Resistance: 1000MΩ Min
6、Withstanding Voltang: 1000V AC/minute
7、Material: PA66, UL94V-0



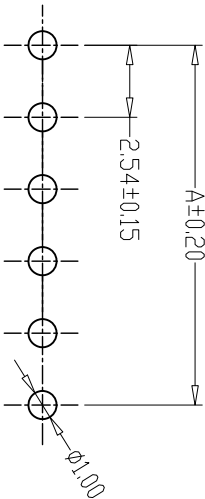
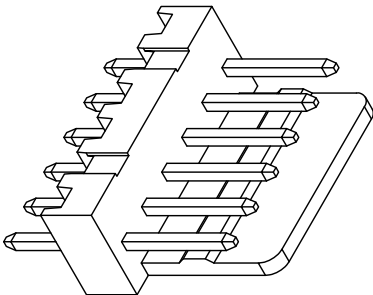
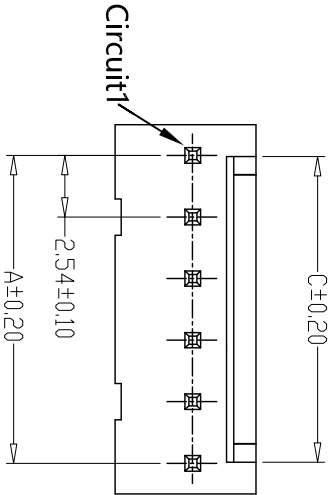
PIN	尺寸 (mm)		
	A	B	C
-02V	2.54	5.68	2.77
-03V	5.08	8.22	5.31
-04V	7.62	10.76	7.85
-05V	10.16	13.30	10.39
-06V	12.70	15.84	12.93
-07V	15.24	18.38	15.47
-08V	17.78	20.92	18.01
-09V	20.32	23.46	20.55
-10V	22.86	26.00	23.09
-11V	25.40	28.54	25.63
-12V	27.94	31.08	28.17
-13V	30.48	33.62	30.71
-14V	33.02	36.16	33.25
-15V	35.56	38.70	35.79
-16V	38.10	41.24	38.33
-17V	40.64	43.78	40.87
-18V	43.18	46.32	43.41
-19V	45.72	48.86	45.95
-20V	48.26	51.40	48.49

GENERAL TOLERANCE		制 图 Mapping	张迎春 2022、09、17	料 号 PART NO.	A25412-nY	版 本 REV.	A
X.±0.25	X.°±2°	审 核 Audit	钱岳生 2022、09、17	品 名 TITLE	2510-孔座	页 次 SHEET	1/1
.X.±0.25	.X.°±1°			客户料号 CITM. NO.			
.XX±0.15	.XX°±0.5°	核 准 Approved	张 名 2022、09、18	乐清市宏一电子有限公司 Yueqing Hongyi Electronics Co., Ltd			
.XXX±0.10	.XXX°±0.5°						

乐清市宏一电子有限公司
YueQing HongYi Electronics Co., Ltd

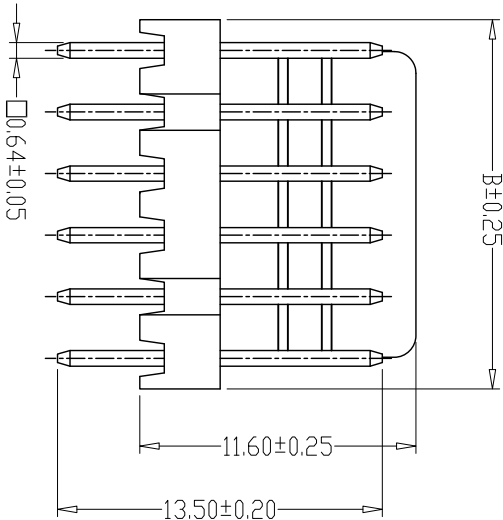
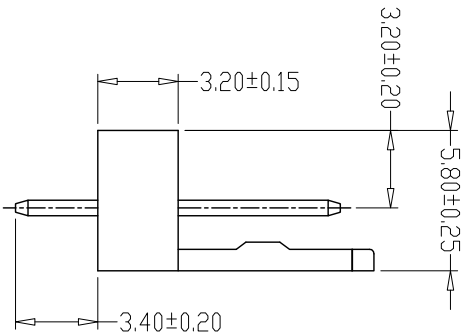
版本 REV.	日期 DATE	ECN NO.	变更内容 DESCRIPTION	制图 DRAWN

- SPECIFICATIONS
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 - Contact Resistance: 20mΩ Max
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 - Withstanding Voltage: 1000V AC/minute
 - Material: Wafer PA66, UL94V-0
PIN Brass Tin-plated



PCB LAYOUT

PIN	尺寸 (mm)		
	A	B	C
-02A	2.54	5.08	2.25
-03A	5.08	7.62	4.79
-04A	7.62	10.16	7.33
-05A	10.16	12.70	9.87
-06A	12.70	15.24	12.41
-07A	15.24	17.78	14.95
-08A	17.78	20.32	17.49
-09A	20.32	22.86	20.03
-10A	22.86	25.40	22.57
-11A	25.40	27.94	25.11
-12A	27.94	30.48	27.65
-13A	30.48	33.02	30.19
-14A	33.02	35.56	32.73
-15A	35.56	38.10	35.27
-16A	38.10	40.64	37.81
-17A	40.64	43.18	40.35
-18A	43.18	45.72	42.89
-19A	45.72	48.26	45.43
-20A	48.26	50.80	47.97

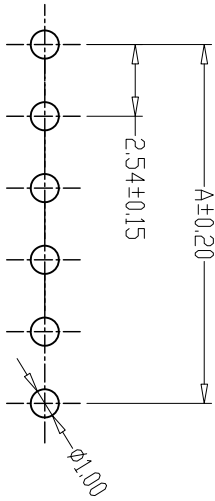
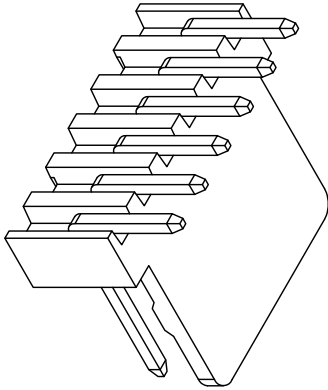
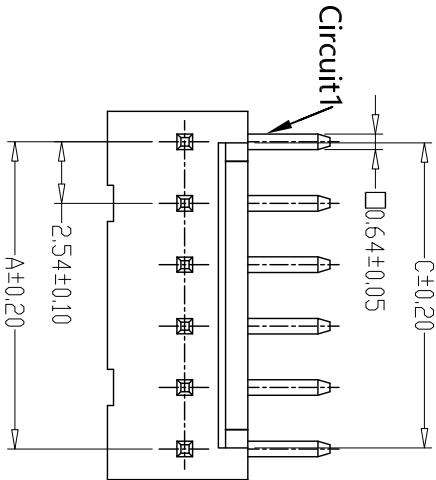


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X.±0.25	X.°±1°	核准 Approved	张名 2022. 09. 18	客户料号 CSTM. NO.		1/1
.XX±0.15	.XX°±0.5°	单位 Units	mm	比例 SCALE		
.XXX±0.10	.XXX°±0.5°					

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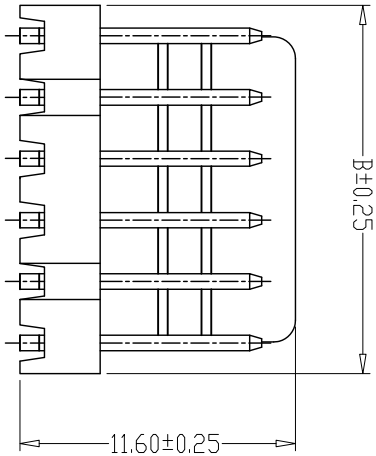
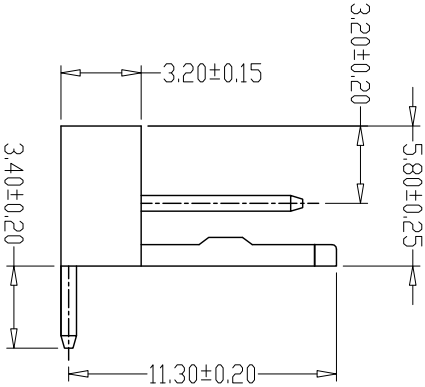
SPECIFICATIONS

- 1、Current Rating: 4A AC, DC
2、Voltage Rating: 250V AC, DC
3、Temperature Range: -25℃~+85℃
4、Contact Resistance: 20mΩ Max
5、Insulation Resistance: 1000MΩ Min
6、Withstanding Voltage: 1000V AC/minute
7、Material: Wafer PA66, UL94V-0
PIN Brass Tin-plated



PCB LAYOUT

PIN	尺寸 (mm)		
	A	B	C
-02AW	2.54	5.08	2.25
-03AW	5.08	7.62	4.79
-04AW	7.62	10.16	7.33
-05AW	10.16	12.70	9.87
-06AW	12.70	15.24	12.41
-07AW	15.24	17.78	14.95
-08AW	17.78	20.32	17.49
-09AW	20.32	22.86	20.03
-10AW	22.86	25.40	22.57
-11AW	25.40	27.94	25.11
-12AW	27.94	30.48	27.65
-13AW	30.48	33.02	30.19
-14AW	33.02	35.56	32.73
-15AW	35.56	38.10	35.27
-16AW	38.10	40.64	37.81
-17AW	40.64	43.18	40.35
-18AW	43.18	45.72	42.89
-19AW	45.72	48.26	45.43
-20AW	48.26	50.80	47.97

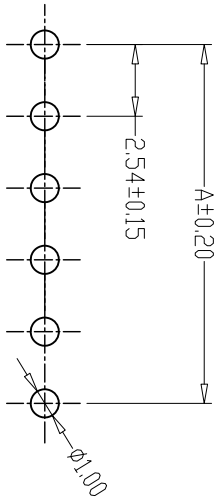
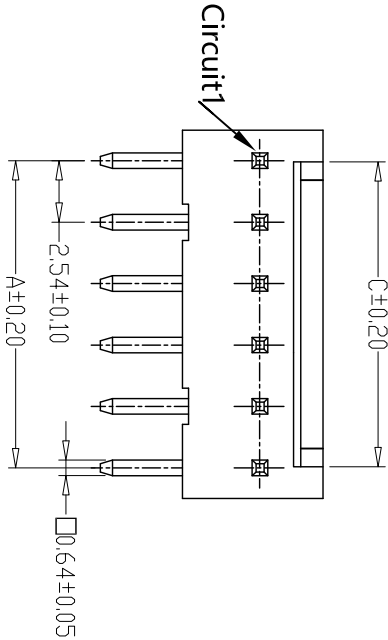


GENERAL TOLERANCE		制图	张迎春
X.±0.25	X.°±2°	Mapping	2022. 09. 17
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XX±0.15	XX°±0.5°	核准	2022. 09. 17
XXX±0.10	XXX°±0.5°	Approved	张名
		单位	2022. 09. 18
		Units	mm
		比例	SCALE
			7
料号		PART NO.	A25412-nAW
品名		TITLE	2510平弯
客户料号		WAFER DIP TYPE	
CITL NO.			
		版本	REV. A
		页次	1/1

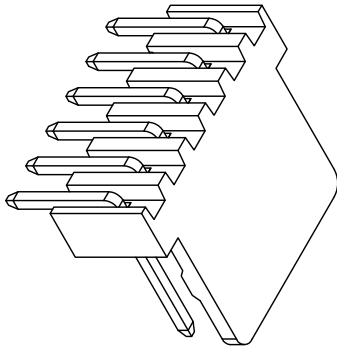
版本 REV.	日期 DATE	ECN NO.	变更内容 DESCRIPTION	制图 DRAWN

SPECIFICATIONS

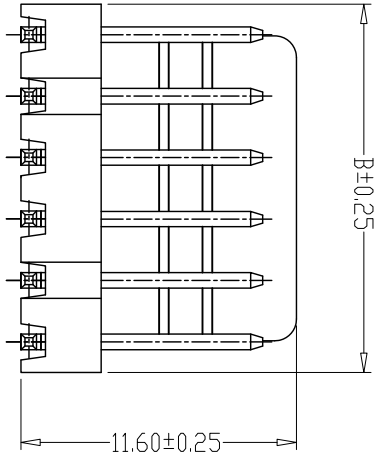
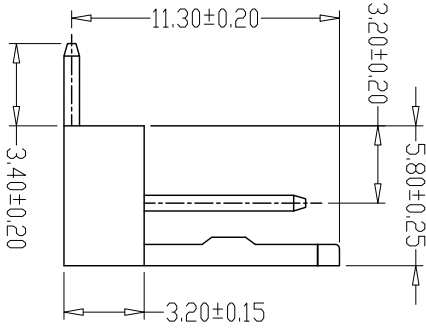
- Current Rating: 4A AC, DC
- Voltage Rating: 250V AC, DC
- Temperature Range: -25°C~+85°C
- Contact Resistance: 20mΩ Max
- Insulation Resistance: 1000MΩ Min
- Withstanding Voltage: 1000V AC/minute
- Material: Wafer PA66, UL94V-0
- PIN Brass Tin-plated



PCB LAYOUT



PIN	尺寸 (mm)		
	A	B	C
-02AWF	2.54	5.08	2.25
-03AWF	5.08	7.62	4.79
-04AWF	7.62	10.16	7.33
-05AWF	10.16	12.70	9.87
-06AWF	12.70	15.24	12.41
-07AWF	15.24	17.78	14.95
-08AWF	17.78	20.32	17.49
-09AWF	20.32	22.86	20.03
-10AWF	22.86	25.40	22.57
-11AWF	25.40	27.94	25.11
-12AWF	27.94	30.48	27.65
-13AWF	30.48	33.02	30.19
-14AWF	33.02	35.56	32.73
-15AWF	35.56	38.10	35.27
-16AWF	38.10	40.64	37.81
-17AWF	40.64	43.18	40.35
-18AWF	43.18	45.72	42.89
-19AWF	45.72	48.26	45.43
-20AWF	48.26	50.80	47.97



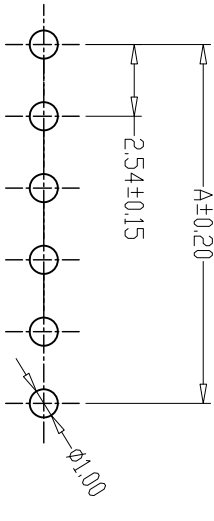
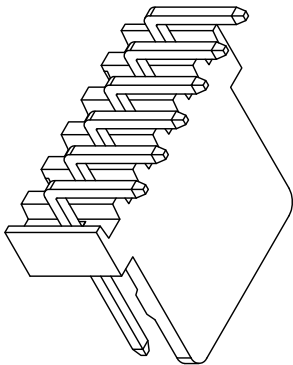
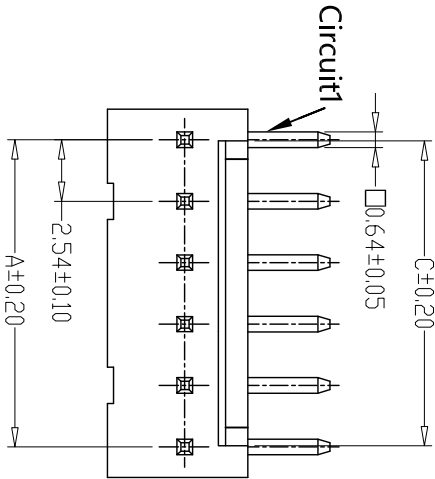
GENERAL TOLERANCE		制图 Mapping	张迎春 2022. 09. 17
X.±0.25	X.°±2°	审核 Audit	钱岳生 2022. 09. 17
X.±0.25	X.°±1°	核准 Approved	张名 2022. 09. 18
.XX±0.15	.XX°±0.5°		
.XXX±0.10	.XXX°±0.5°	单位 Units	mm
		比例 SCALE	7

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YueQing HongYi Electronics Co., Ltd

版本 REV.	日期 DATE	ECN NO.	变更内容 DESCRIPTION	制图 DRAWN

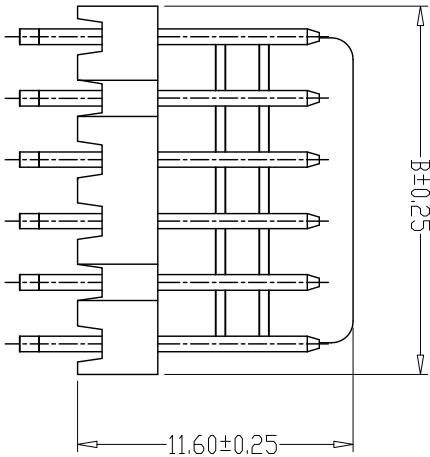
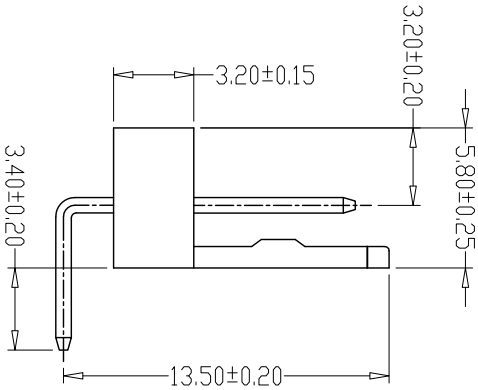
SPECIFICATIONS

- Current Rating: 4A AC, DC
- Voltage Rating: 250V AC, DC
- Temperature Range: -25℃~+85℃
- Contact Resistance: 20mΩ Max
- Insulation Resistance: 1000MΩ Min
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- Material: Wafer PA66, UL94V-0
- PIN Brass Tin-plated



PCB LAYOUT

PIN	尺寸 (mm)		
	A	B	C
-02AWG	2.54	5.08	2.25
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-05AWG	10.16	12.70	9.87
-06AWG	12.70	15.24	12.41
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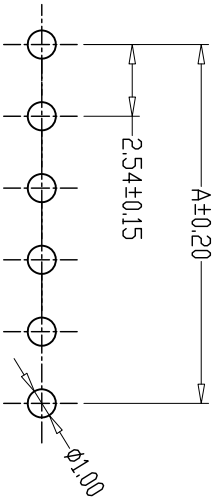
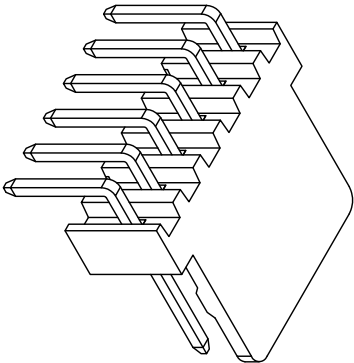
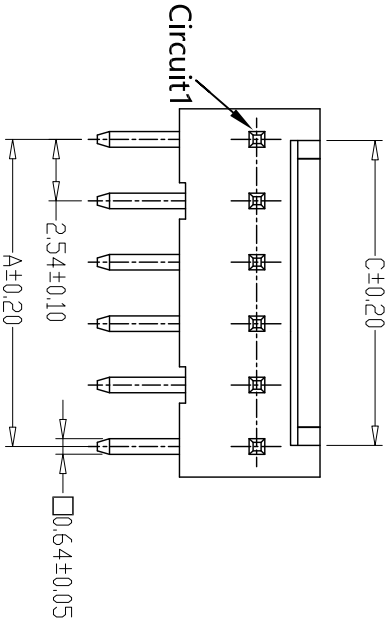
GENERAL TOLERANCE		制图 Mapping	张迎春
X.±0.25	X.°±2°	审核 Audit	钱岳生
X.±0.25	X.°±1°	批准 Approved	张名
.XX±0.15	.XX°±0.5°	单位 Units	2022. 09. 18
.XXX±0.10	.XXX°±0.5°	比例 SCALE	7
料号 PART NO.		A25412-nAWG	版本 REV.
品名 TITLE		2510高弯 WAFER DIP TYPE	A
客户料号 CSTM. NO.			页次 SHEET
			1/1

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YueQing HongYiElectronics Co., Ltd

版本 REV.	日期 DATE	ECN NO.	变更内容 DESCRIPTION	制图 DRAWN

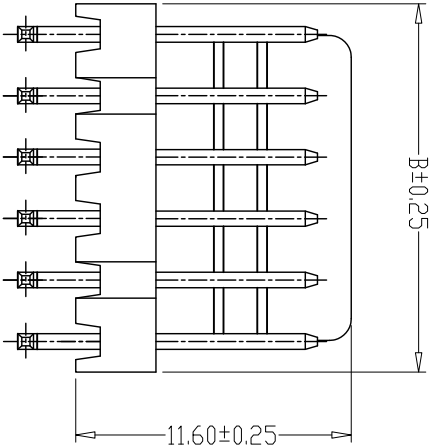
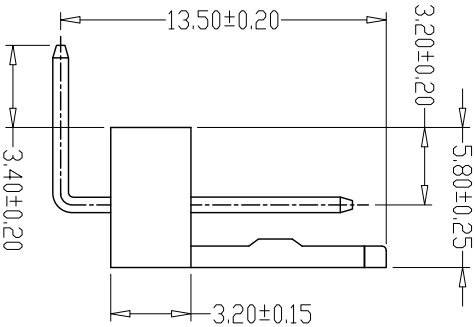
SPECIFICATIONS

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 - Temperature Range: -25°C~+85°C
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PCB LAYOUT

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GENERAL TOLERANCE		制图 Mapping	张迎春
X.±0.25	X.°±2°	审核	钱岳生
X.±0.25	X.°±1°	批准	2022. 09. 17
XX±0.15	XX°±0.5°	核 准	张 名
XXX±0.10	XXX°±0.5°	单位 Units	2022. 09. 18
		mm	比例 SCALE
			7
料号 PART NO.		A25412-nAWGF	版本 REV.
品 名 TITLE		2510反高弯	A
客户料号 CSTM. NO.		WAFER DIP TYPE	页次 SHEET
			1/1

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