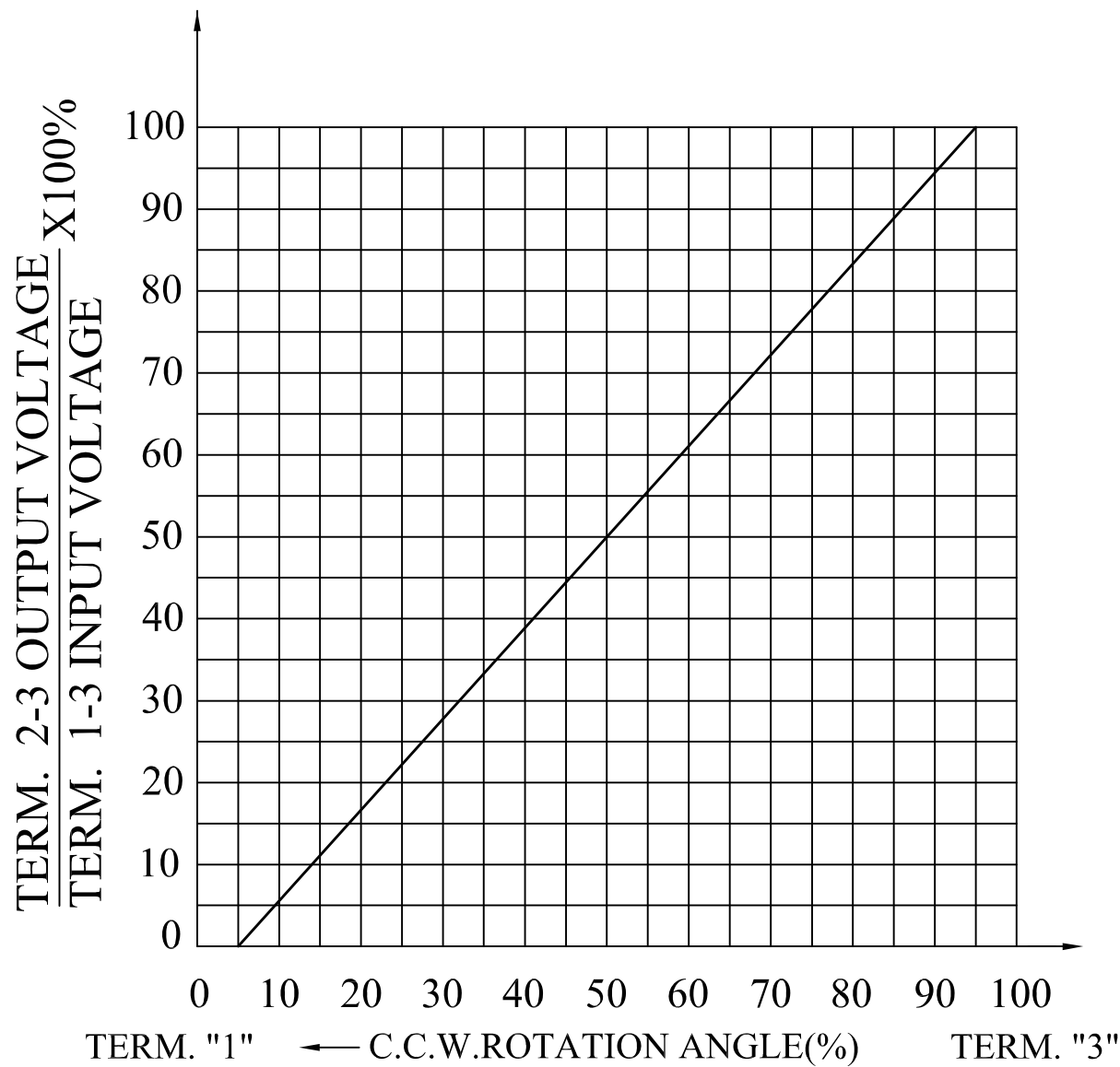
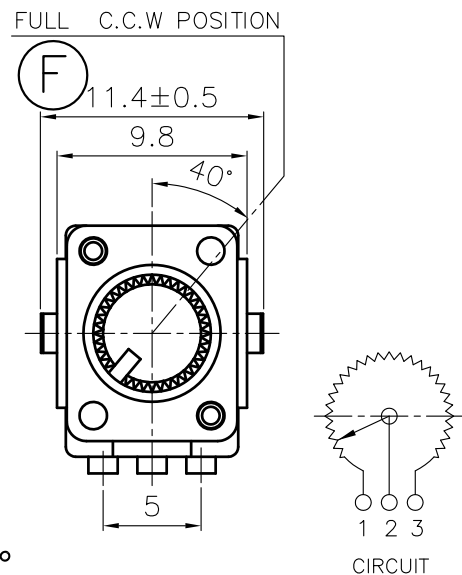
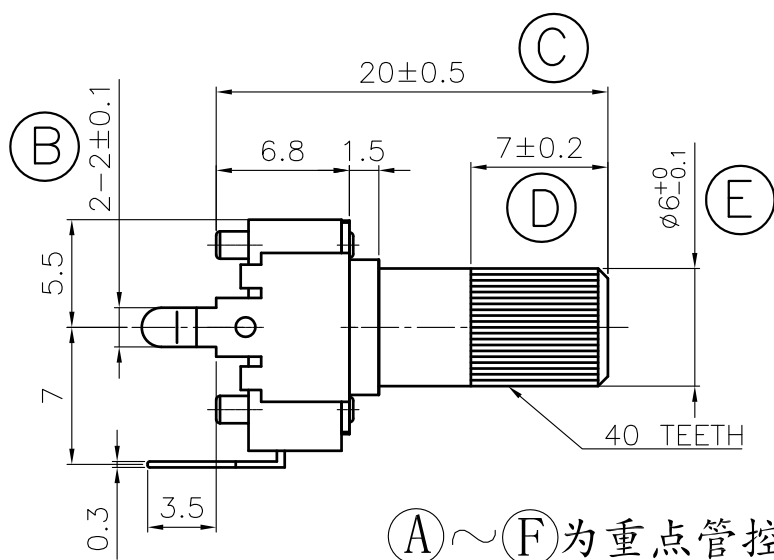


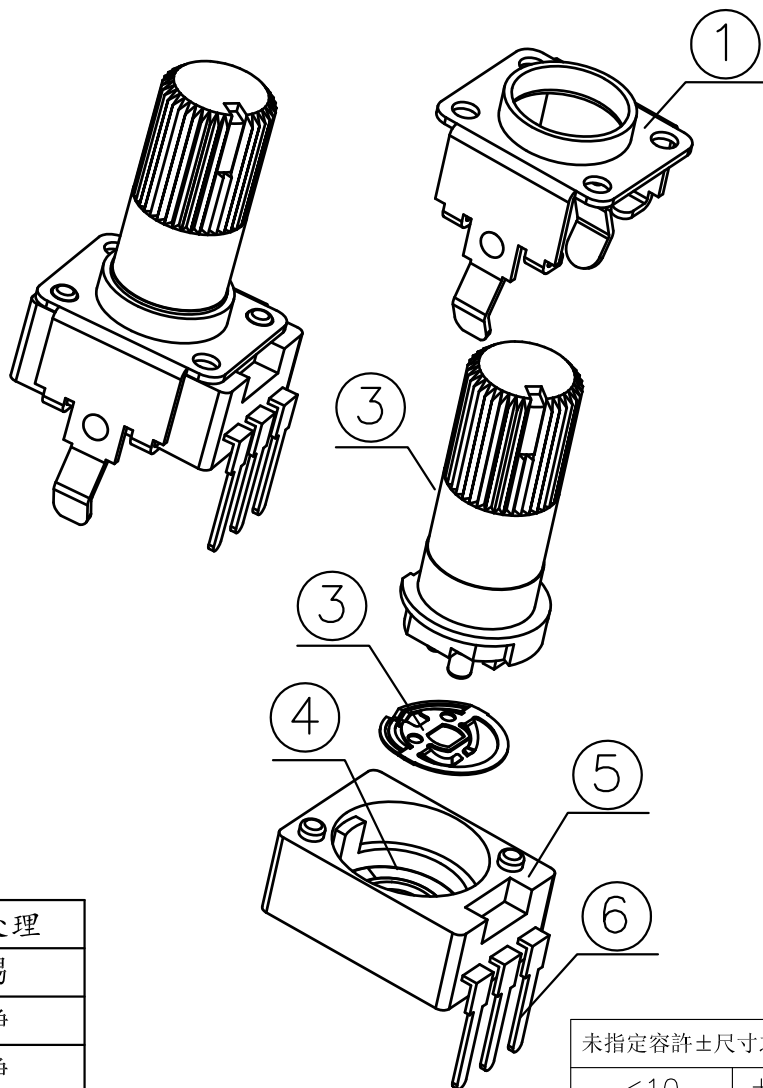
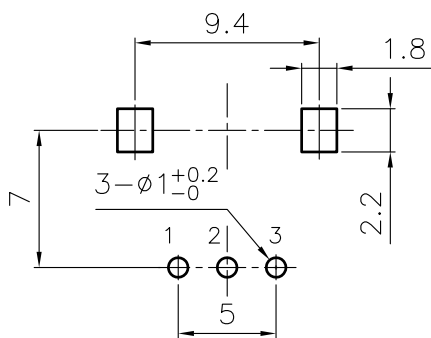
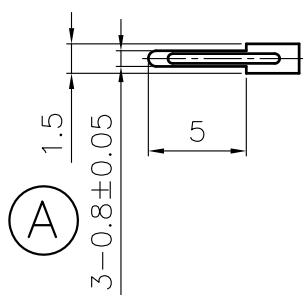
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TAPER (B) SERIES





Ⓐ~Ⓕ为重点管控尺寸。



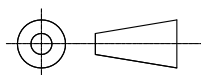
序号	零件名称	零件材质	表面处理
1	支 架	SPCC-SD	镀 锡
2	轴 心	PC	洁 净
3	刷 子	洋白铜	洁 净
4	电阻片	电木板	洁 净
5	电阻片本体	PBT	洁 净
6	端 子	SPCC-SD	镀 锡

未指定容許±尺寸之公差

<10	±0.3
10~100	±0.5
>100	±0.8
ANGLE	±2°

4					
3					
2					
1					
ALTERATION		DATE		DESIGN	
DRAWN	宋工	CHECKED	宋工	APPROVAL	严工
	2024.10.16		2024.10.16		2024.10.16

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TITLE

DWG NAME

YDWQ-0901N-V-L20T7-B10Ka

DWG NO.

UNIT

MM

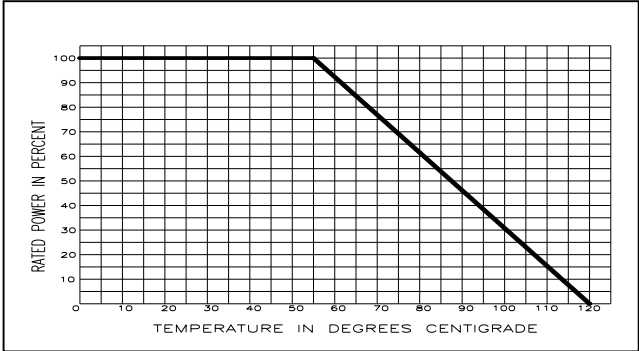
SCALE

1/1

深圳市亚特联科技有限公司

Y D W Q - 0 9 0 1 N - V - L 2 0 T 7 - B 1 0 K a 规格书

一.ELECTRICAL CHARACTERISTICS 电气特性

序 号 NO	项 目 ITEM	性 能 PERFORMANCE	测 试 条 件 TEST CONDITIONS
1.1	Center silver layer angle 中心银层角度	/	/
1.2	Effective angle of carbon film 碳膜有效角度	/	/
1.3	Total resistance and tolerance 总阻值和误差	10K ± 20%	The resistance between terminals 1 and 3 shall be measured. 端子 1-3 间阻值测定.
1.4	Resistance taper 阻抗变化特性	B Taper	Measurement shall be made by voltage method for other procedures (Refer to JISC6443 standard). (fig 1) 用电压法测试，参照 JISC6443 标准.
1.5	Rated power 额定功率	Single unit: ■ Linear taper B: 0.03W 单联: ■B 型: 0.03W	Rated power shall be the maximum value of electric power that can be applied continuously to the whole area of a resistor (between terminals 1 and 2) at the range of -40 & 120°C under a continuous full load. At the range of 50 & 120°C, the power level shall be debated in accordance with the diagram shown below. 额定功率最大时是指施加于端子 1 和 2 的功率在 -40 和 120 度之间在连续的满负荷下,在 50 和 120 度之间功率按下图递减. 功率变化曲线 

1.6	Rated voltage 额定电压	Rated voltage shall comply with the right. 额定电压将遵循右侧.	$E = \sqrt{PR}$ E:额定电压 Rated voltage(V) P:额定电力 Rated power(W) R:公称阻值 Normal total resistance(Ω) The rated voltage is calculated by above formula. When the rated voltage exceeds the maximum operating voltage, the maximum operating voltage should be the rated voltage. 额定电压按以上公式计算,当额定电压超过最大工作电压时,最大工作电压即为额定电压.
1.7	Max. operating voltage 最高使用电压	AC 50V ; DC 10V	/
1.8	Residual resistance 残留电阻	Term. 1~2 : < 20 Ω Term. 2~3 : < 20 Ω	The wiper remains at the (A) end position. Between terminals 1 and 2, 2 and 3 shall be measured. A: Angle of effective rotation 接触刷停留在(A)终端位置,在端子 1-2 间,端子 2-3 间测定之电阻值. A:有效回转角度.
1.9	Insulation Resistance 绝缘阻抗值	50M Ω Min	Measure to Apply DC 250V. (Between terminal for reinforcing and the other terminals) DC 250V 测试(在终端之间加强和其他终端).
1.10	Withstand Voltage 耐电压	AC 250V 1 分钟	Apply AC 250V for 1min(Between terminal for reinforcing and the other terminals) AC 250V 1 分钟 No damage. Arc and dielectric breakdown. 无损伤、电弧和电故障.
1.11	Rotational noise 旋转杂音	Less than 100mV of the rotational noise. 100mV 以下.	A specimen shall be rotated at rate of 20 cycles per minute (one cycles means turning clockwise, and then turning counterclockwise). Rotational noise shall be measured according to JIS C 6443 (issued in 1993) para.5.8 Testing method C& rotational noise measuring curt as show in fig.2. 旋转的速度为 20 周/分钟(一周是指顺时针方向转,然后逆时针方向转),旋转杂音测量参照 JIS C6443 (在 1993 发行)参数 5.8 试验方法,旋转杂音测试回路如图 2 所示.

二.MECHANICAL CHARACTERISTICS 机械特性			
序 号 NO	项 目 ITEM	性 能 PERFORMANCE	测 试 条 件 TEST CONDITIONS
2.1	Angle of effective rotation 有效回转角度	280° ±10°	
2.2	Rotational Torque 旋转力矩	5 ~ 100 gf.cm	Rotational speed 旋转速度: 60°/ Sec. Standard atmospheric conditions : 常温 5℃至 35℃
2.3	Anti-rotation strength 止档强度	3.0 Kgf.cm Max	The following torsion moment load of 3.0Kgf.cm shall be applied to the shaft for 5sec at both ends (after soldering) 焊锡后于旋转前后两端末加 3.0K gf.cm 力矩并持续 5 秒. Without significant looseness or poor contact. 无显著松动或接触不良.
2.4	Push-Pull Strength of Shaft 推拔强度	There shall be neither shaft wobble nor breakage. Variation rate of total resistance shall be within ±5%. Para . 1.11 Rotational noise shall be satisfied. 轴心任何地方没有摇晃也无破损。总的抵抗变化率在 ±5%以内, 旋转杂音应该符合 1.11 部分.	A static force of 4.0kgf shall be applied to the side surface of the shaft in a perpendicular direction to tangent line of the shaft and then in the opposite direction for 10±1s each. 施加一个 4.0kgf 的静止的力与轴心切线垂直的方向一边侧面上,然后在相反方向施加,每次 10S ± 1S.
2.5	Terminal strength 端子强度	Without significant looseness or poor contact. 无显著松动或接触不良.	A static load of 0.5Kgf shall be applied to the terminals for 5 seconds in any direction 在端子任意方向施加 0.5Kgf 的静载荷并保 5 秒.

2.6	Solder ability 可焊性	With no less than 90%, the surface immersed into solder shall be covered with new solder, expect for cutting surface. 浸入的表面的新焊料所覆盖不少于 90%, 切断表面除外.	Specimen shall be immersed into solution of rosin ethanol for 3~5 seconds, and specimen shall be put in the laminated board (1.6 mm thick), and then specimen shall be immersed into solder bath on to the bottom surface of board for 3+/-0.5 seconds. As follows: 1) In case of Pb free solder (Sn-3Ag-0.5Cu) Solder Temp: 245+0/-3℃ 2) In case of Pb solder (Sn-37Pb) Solder Temp: 235+0/-3℃ 将样品浸入调好松香酒精的溶液 3~5 秒, 并且将样品装入积层薄板(1.6 毫米厚), 然后将样品浸入焊液冲洗端面 3+0/-0.5 秒。 如下: 1) 如果为无铅焊料 (Sn-3Ag-0.5Cu) 焊接温度 :245 +0 /-3℃. 2) 如果有铅焊料 (Sn-37Pb) 焊接温度: 235+0/-3℃.
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2.7	Resistance to soldering heat 焊锡耐热性	Variation rate of total resistance shall be within $\pm 5\%$. There are no any loosened terminal which may cause intermittence. 全阻值变化在 $\pm 5\%$ 以内, 端子不能松动及引起断路.	1、 Solder dip: 浸焊 Preheating condition: Surface temperature of the substrate shall be settled within 100℃ in one min. 预热: 基板表面温度 100℃ 以下, 1 分钟内. Solder temperature 260$\pm$5℃ for 5 sec. 焊锡温度 260$\pm$5℃, 5 秒. 2、 Manual Soldering: Less than 350℃ and quicker than 3 seconds. 手焊: 350℃ 以下, 3 秒以内.
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三. ENDURANCE CHARACTERISTICS 耐久性能

序号 NO	项 目 ITEM	性 能 PERFORMANCE	测 试 条 件 TEST CONDITIONS
3.1	Cold 耐寒性	The total resistance change should be within $\pm 20\%$. 全阻值变化要在 $\pm 20\%$ 以内.	Temperature: -30$\pm$2℃ Time: 96$\pm$2 hours Surface moisture shall be removed, and then the controller shall be subjected to standard atmospheric conditions for 1-2 hours after which measurement shall be made 温度在 -30$\pm$2℃ 放置 96$\pm$2 小时, 表面水份摄取后 1-2 小时正常状态下测试.

3.2	Dry heat 耐热性	The total resistance change should be within +5/-30%. 全阻值变化要在+5/-30%以内.	Temperature: 70±2℃ Time: 240±8 hours The controller shall be subjected to standard atmospheric conditions for 1 to 2 hours after which measurement shall be made. 温度在 70±2℃ 放置 240±8 小时. 1~2 小时后正常状态下测试.															
3.3	Damp heat 耐湿性	The total resistance change should be within ±20%. 全阻值变化要在±20%以内.	The specimen shall be subjected in a test chamber at 60±2℃,90~95%r.h at no load for 96±2 hours and then left in the standard conditions for 1 to 2 hours. 温度 60±2℃, 湿度 90~95%之槽内, 无负载放置 96±2 小时后,在常温常湿放置 1~2 小时后测量.															
3.4	Temperature cycle 温度循环	The total resistance change should be within ±20%. 全阻值变化要在±20%以内.	The potentiometer shall be subjected to 5 successive changes of temperature cycles, each as shown in table below. Then its surface moisture shall be removed. And then the potentiometer shall be subjected to standard atmospheric conditions: 1~2hours,after which measurements shall be made. 下表所示连续进行 5 次温度循环。擦除表面水分于常温常湿中放置 1~2 小时测定. <table><tr><td>Step 阶段</td><td>Temperature 温度</td><td>Duration 放置时间</td></tr><tr><td>1</td><td>-10±3℃</td><td>30 minutes</td></tr><tr><td>2</td><td>Standard atmospheric conditions 常温</td><td>10 to 15 min</td></tr><tr><td>3</td><td>70±2℃</td><td>30 minutes</td></tr><tr><td>4</td><td>Standard atmospheric conditions 常温</td><td>10 to 15 min</td></tr></table>	Step 阶段	Temperature 温度	Duration 放置时间	1	-10±3℃	30 minutes	2	Standard atmospheric conditions 常温	10 to 15 min	3	70±2℃	30 minutes	4	Standard atmospheric conditions 常温	10 to 15 min
Step 阶段	Temperature 温度	Duration 放置时间																
1	-10±3℃	30 minutes																
2	Standard atmospheric conditions 常温	10 to 15 min																
3	70±2℃	30 minutes																
4	Standard atmospheric conditions 常温	10 to 15 min																
3.5	Rotational Life 旋转寿命	Variation rate of total resistance should be within ±20%. Rotational noise shall be less than 200mV. 全阻值变化在±20%以内, 旋转杂音少于 200mV.	Rotational Life 10,000 cycles (Operating travel is at 90%~95% of effective rotation angle , effective electrical rotational angle, and then temperature is 25℃±2℃ without loading, the speed is 0.5cycles/second). 旋转寿命 10,000 次(运作行程在有效回转角度 90%~95%之间,温度为 25℃±2℃且无负载,速度为 0.5 圈/秒).															

四.General 一般事项

序 号 NO	项 目 ITEM	
4.1	Operating temperature range 使用温度范围	-10℃ ~ +70℃ (normal humidity, normal air pressure 常湿常压)
	Storage temperature range 保存温度范围	-25℃ ~ +85℃ (normal humidity, normal air pressure 常湿常压)
	Test Condition 试验状态	Unless otherwise specified, the standard range of atmospheric conditions for making measurements 除另有规定外，量测应在标准状态下进行： Normal temperature 常 温： (Temperature 温度 15℃~35℃) Normal humidity 常 温： (Relative humidity 相对湿度 25~75%) Normal Air pressure 常 温： (Air pressure 气 压 86~106kPa) If there is any doubt arise from judgment , test shall be conducted at the following conditions: 遇有疑虑时，则测试应在以下状态下进行： Ambient temperature 温 度： 20℃±2℃ Relative humidity 相对湿度： 60~70% Air pressure 气 压： 86~106 K.Pa
4.2	Appearance, Style and Dimensions 外观、形状、尺寸	
	Appearance 外观	Refer to the assembly drawings . 参考成品图
	Style and Dimensions 形状和尺寸	Refer to the assembly drawings . 参考成品图
	Type of actuating 动作形式	Rotation 旋转
	Contact arrangement 回路形式	Refer to the assembly drawings . 参考成品图
Approval 核 准		Auditing 审 查
Projected 经 办		
严工		宋工
		宋工

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1. 成品包装方式 PACKAGING METHOD:

1.1 将 V.R 成品放置于单个胶袋内，并将胶袋放在内箱里，再将其扎好。

Let the V.R Placed in a single plastic bag , and put the plastic bag in the inner box, and use adhesive tape them together.

1.2 将扎好的内箱放置外箱内，放好后用胶纸将外箱封口。

Let the packed inner box be placed of the carton and use adhesive tape to seal.

Fig.1



2. 规格与数量 SPECIFICATION AND QUANTITY:

2.1 胶袋包装 V.R 数量:1 个胶袋放置 250PCS

Plastic bag: 1 plastic bag for 250PCS

2.2 内箱规格(长×宽×高): 345mm×120mm×195mm

Inner box(length×width×high):345mm×120mm×195mm

2.3 内箱包装 V.R 数量:10X250=2500PCS

Inner box packing: 10×250=2500PCS of V.R

2.4 外箱规格(长×宽×高): 500mm×355mm×225mm

Carton(length×width×high): 500mm×355mm×225mm

2.5 外箱包装 V.R 数量:4×2500=10000PCS

A carton contain:4×2500=10000PCS of V.R

