



东莞市凡睿电子科技有限公司

DONG GUAN RUI FENG TECHNOLOGY&ELECTRONICS CO., LTD.

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承认书

FOR APPROVAL

客户名称(Customer's Name): _____

客户摘要(Customer Note): _____

承认编号

Sample lot No.:

送样日期:

Issus Date:

客户确认回复/Evaluation Results

客户品名		客户料号		
OK(判定可用)	NG(不可使用)	确 认	核 准	贵公司盖章

如诚蒙贵公司确认合格，敝司将按样品进行生产交货，如规格有变请提前通知！

以下为凡睿资料 FANRUI INFORMATION

机种类别(Product): SK304 直滑电位器

产品规格(Part No.): SK304NH02-15C-B10K±20%

物料编码(Materiel No.): 802300003

产品图号(Drawing No.): GCT-34-002

摘 要(Note): 滑柄材质为铁材表面镀镍/电阻片为玻纤板



凡睿电子科技有限公司专业生产销售各种编码器，电位器及多路旋转开关，公司从前期的产品开发，模具制做，到后期的零件生产，成品组装及销售为一体的一站式完成。并可根据客户要求设计开发各种编码器，电位器及多路旋转开关。欢迎来电咨询！	业务员 Sales Department	曾海发 13925851255
	承 办 Prepared By	陈 炯
	审 核 Proofed By	莫 勤
	核 准 Checked By	刘建国

凡睿，竭诚为您服务！欢迎来电咨询！！



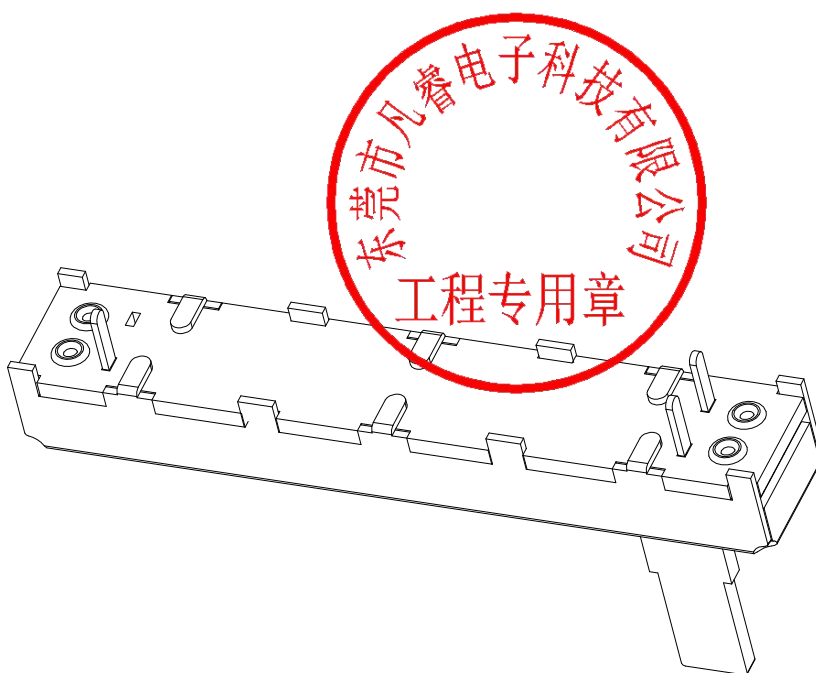
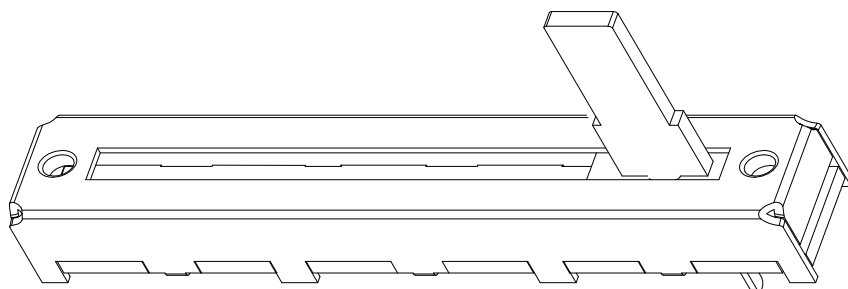
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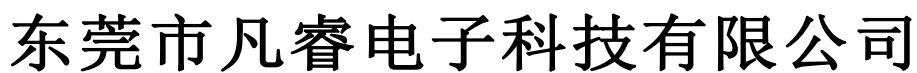
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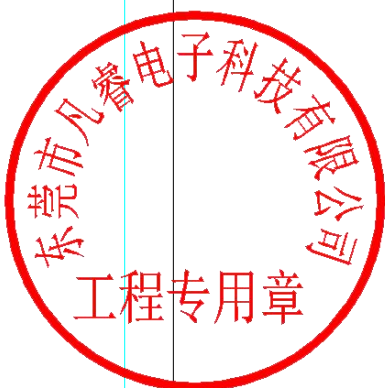
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SK304 系列直滑式电位器规格书





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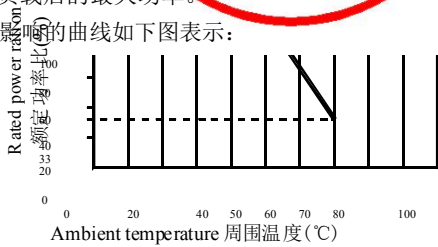


 东莞市凡睿电子科技有限公司 DONG GUAN FAN RUI ELECTRONICS&TECHNOLOGY CO.,LTD.				3 2 1					
Title		SK04 Series		Devision		Date		Design	
Code						Unit MM		Scale 3:1	
Dwg Name		SK304NH02-15C-B10K±20%						TOLERANCE	
Dwg No		CPT-34-002		Version		A		MTL	
DESIGN		CHECK		APPROVAL				UNDER 10 ±0.3	
								10~ 100 ±0.5	
								OVER 100 ±0.8	
								ANGULAR DIMENSION ±5°	

SK304 SERIES GENERAL SPECIFICATION

SK304 系列规格书

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1、GENERAL 一般事项		
1.1、Scope The specification applies to model SK304 type mainly used for consumer products 1.2、Operating temperature range 1.3、Storage temperature range 1.4、Test conditions: Standard atmospheric conditions: Unless otherwise specified,the standard range of atmospheric making measurements and test is as follows: temperature:5~35℃ Relative humidity:45~85% Air pressure:86kpa to 106kpa If there is any doubt about the results,measurements shall be Made within the following limit: Ambient temperature:20±2℃ Relative humidity:60~70% Air pressure:86kpa to 106kpa		
适用范围 此规格书适用于 SK304 机型 使用温度范围 -10℃~70℃ 保存温度范围 -30℃~70℃ 试验状态 标准状态 无特别规定之实验及测定时以温度 conditions for 5~35℃，相对湿度 45~85%，气压 Ambient 86~106kpa 之标准状态测定。 发生判定疑问或另有特别要求则以 基准状态（温度 20±2℃，相对湿度 60~70%，气压 86~106kpa）为标准测定。		
1 ELECTRICAL CHARACTERISTICS 电气特性		
Item 项 目	Conditions 条 件	Specifications 规 格
1、Nominal total resistance and tolerance 公称全阻抗值	The resistance between terminals 1 and 3 shall be measured 端子 1-3 间阻值测定。	10K Ω ☒ ±20% ☐ ±__%
2、Resistance law 阻抗变化特性	Measurement shall be made by the resistance law method. For other procedures(refer JISC5261 standard) 用电压法测试，参照 JISC5261 标准	B Taper 线性 See the potentiometer curve on the last page 参见最后一页电位器曲线图
3、Power rating 额定功率	Power rating is based on continuum full load operation at themaximum voltage between terminals 1 and 3 .Power rating vs.ambient temperature shall be denoted on the following graph. 端子 1-3 间连续负载后的最大功率。 环境温度对功率影响的曲线如下图所示： 	☒ B taper: 0.2W B 曲线: 0.2W ☐ Other taper: __W 其它曲线: __W
4、Rated voltage 额定电压	Rated voltage  额定电压: E= PR	Maximum operating voltage 最高使用电压 200V AC
	Power rating (W) P: 额定功率 Nominal total resistance R: 公称阻抗值 (Ω) When the rated voltage exceeds the maximum operating voltage. the maximum operating voltage shall be the rated voltage . 额定电压大于最高使用电压时,最高使用电压作为额定电压.	
5、Residual resistance 残留电阻	Contact brush stop at the end of the (A). Resistance between terminals 1 and 2, terminals 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:有效滑动行程	R1,2: 20 Ω less R2,3: 30 Ω less 以下
6、Rotational noise 转动噪音	Apply DC 20V between terminals 1-3 to measure the noise voltage (rated voltage ≤20V apply by rated voltage). 在端子 1-3 间加直流电压 20V(额定电压≤20V,则以额定电压值测试)后,测定的杂音电压.	100mVp-p or less ≤ 100mVp-p 以下

SK304 SERIES GENERAL SPECIFICATION

SK304 系列规格书

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1 ELECTRICAL CHARACTERISTICS 电气特性			
Item 项 目	Conditins 条 件		Specifications 规 格
7、Insulation resistance 绝缘阻抗	Apply voltage of 250V DC and measure for	Between individual terminals and frame 端子-固定板	10M Ω or more 10M Ω 以上
8、Dielectric strength 耐电压	Measuring frequency : 50~60Hz; 300V AC for 1 minute.	Between individual terminals and frame 端子-固定板	Electrical characteristics shall be satisfied with specification. 电气性能符合规定要求
2 MECHANICAL CHARACTERISTICS 机械特性			
1、Total Sliding Travel 滑动行程	Effective slip strok 有效滑动行程		30 ±0.5 mm
2、Operating Force 滑動力	Standard atmospheric conditions 常温 5℃ 至 35℃ Traveling speed: 20mm/sec 每秒 20mm 滑动速度测定		20~120 gf.cm
3、Number of Detemts Click 定位数目	For with-detent type. 加中段功能机种使用		☐ 1C(Center Detent 中段功能)
4、Click slip out force 定位推动力	For with-detent type 加中段功能机种使用		30~90gf.cm
5、Shaft stop strenght 止档强度	After fixation, slide the handle to the end and add 5kg torque for 5 seconds. 固定后与柄滑至末端加 5Kg 力矩并持续 5 秒。		Electrical characteristics shall be satisfied with specification. 电气性能符合规定要求
6、Shaft push&pullStreng 轴向推拉强度	Push &pull static load of 3kgf.cm shall be applied to the shaft in vertical with axial directions for 10 seconds.(After fixation). 固定后与轴垂直的端面方向加 3Kgf 并保持 10 秒。		Shaft without damage, ratational torque. without abnormality . Electrical characteristics shall be satisfied with specification 柄无破损，滑动无异常。 电气性能符合规定要求
7、Handle Wobble 滑柄晃动	Apply 0.5kgf force perpendicular to the handle at the position of 5mm to the topend of the handle. 在距轴心顶端 5mm 处加 0.5kgf 且与滑柄垂直的力。		2(2×L)/20mm Max. L—Handle length L—滑柄长度
3.ENDURANCE CHARACTERISTICS 耐久性能			
1、Solder ability 焊錫性	Temperature of solder: 235 ± 5 °C duration:3±0.5s. 焊錫溫度 235±5℃，浸錫時間 3±0.5 秒。		Not less than 3/4 of the surface dipped shall be covered with new solder. 浸錫部分表面最少 3/4 被新錫覆蓋。
2、Resistance to soldering heat 焊錫耐热性	Solder dip:浸焊 Preheating condition: Surface temperature of the substrate shall be settled within 100℃ in one min. 預熱: 基板表面溫度 100℃ 以下，1 分鐘內。 Solder temperature 260±5℃ for 5 sec. 焊錫溫度 260±5℃，5 秒。 Manual Soldering: Less than 300 °C and quicker than 3 seconds. 手鐸: 300℃ 以下，3 秒以內		Change in total resistance is relative to the value before test : ±5% Without visual deformation or twrm- inals loosing,Electrical characteristics shall be satisfied with specification 总阻变化值: ±5%外观无变形，端子无松动， 电气性能符合规定要求

SK304 SERIES GENERAL SPECIFICATION

SK304 系列规格书

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3 ENDURANCE CHARACTERISTICS 耐久性能

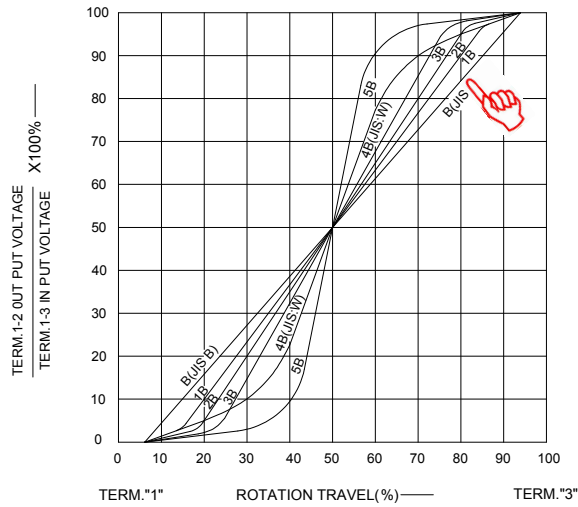
Item 项 目	Conditios 条件	Specifications 规 格
3、Resistance to heat 耐热性	The potentiometer shall be stored at a temperature of $70^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for $240\pm 8\text{H}$ in a thermostatic chamber. Then the potentiometer shall be measured after maintaining at standard atmospheric conditions for 1.5H, in order to remove surface moisture. 温度 $70^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 恒温槽中 240 ± 8 小时放置后,置于常温常湿 1.5 小时除去水滴后测定。	Change in total resistance is relative to the value before test : $\pm 20\%$ 总阻变化值: 初期值的 $\pm 20\%$
4、Resistance to cold 耐寒性	The potentiometer shall be stored at a temperature of $-25\pm 3^{\circ}\text{C}$ for $96\pm 4\text{H}$ in a thermostatic chamber. Then the potentiometer shall be taken out of the chamber and its surface moisture shall be removed. And measure the potentiometer which shall be subjected to standard atmospheric conditions for 1.5H. 温度 $-25\pm 3^{\circ}\text{C}$ 恒温槽中 96 ± 4 小时放置后, 置于常温常湿 1.5 小时除去水滴后,1.5 小时内测定。	Change in total resistance is relative to the value before test : $\pm 20\%$ 总阻变化值: 初期值的 $\pm 20\%$
5、Damp heat 耐湿性	The potentiometer shall be stored at a temperature of $40\pm 2^{\circ}\text{C}$, with relative humidity of 90% to 95% for $96\pm 4\text{H}$ in a thermostatic chamber. Then the potentiometer shall be taken out of the chamber and its surface moisture shall be removed. and measure the potentiometer which shall be subjected to standard atmospheric conditions for 1.5H. 温度 $40\pm 2^{\circ}\text{C}$,湿度 90-95%,恒温恒湿槽中放置 96 ± 4 小时后, 置于常温常湿 1.5 小时除去水滴后,1.5 小时内测定。	Change in total resistance is relative to the value before test : $+35\%, -5\%$ 总阻变化值: 初期值的 $+35\%, -5\%$ Insulation resistance: $10\text{M}\Omega$ or more 绝缘阻抗: $10\text{M}\Omega$ 以上 Rotational Noise: 150mV p-p less than 滑动噪音: 150mV p-p 以下
6、Endurance 耐久性	Handle with (600 back and forth/hour) speed sliding, 24 hours sliding 5000~8000 times, effective The sliding Angle is over 90%, with a total of 10,000 200 times 柄以 (600 来回/小时) 的速度滑动, 24 小时滑动 5000~8000 次, 有效滑动角度超过 90%, 共 10,000 $\pm$ 200 次	Variable Value of Total Resistance: specified value $\pm 15\%$ 总阻变化值: 规格值范围的 $\pm 15\%$ Noise 150mV p-p less than 滑动噪音: 150mV p-p 以下 Rotational torque shall not deviate from the previously specified value. 滑动力矩满足规格值

REVISION 变更记事	变更时间	东莞市凡睿电子科技有限公司			
		DSGD.主办	CHKD.审查	APPD.核准	TITLE 标题:
		莫 勤	莫 勤	刘建国	POTENTIOMETER 电位器规格书
					Model. 机种:
					SK304 系列

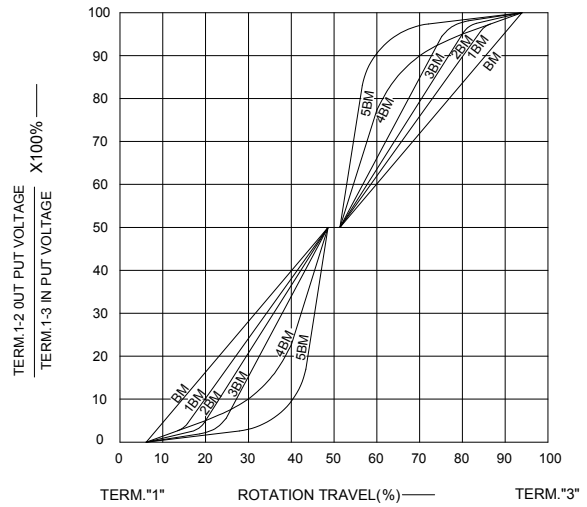
SK304 SERIES GENERAL SPECIFICATION

电位器曲线图

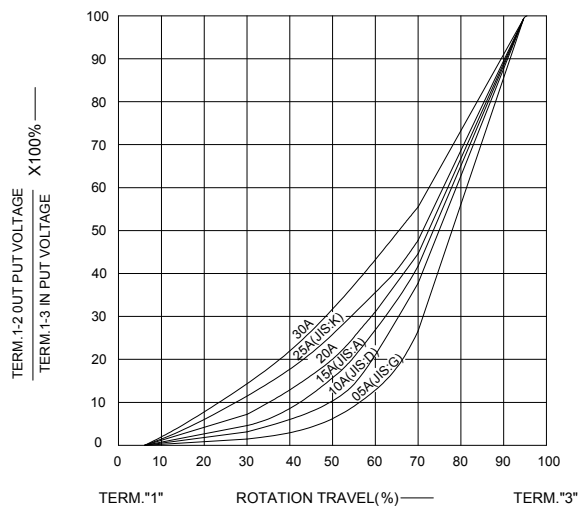
TAPERS B SERIES



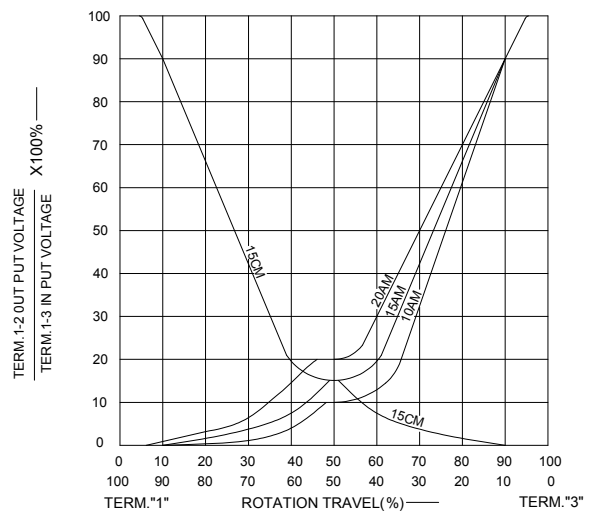
TAPERS B WITH 50% TAP



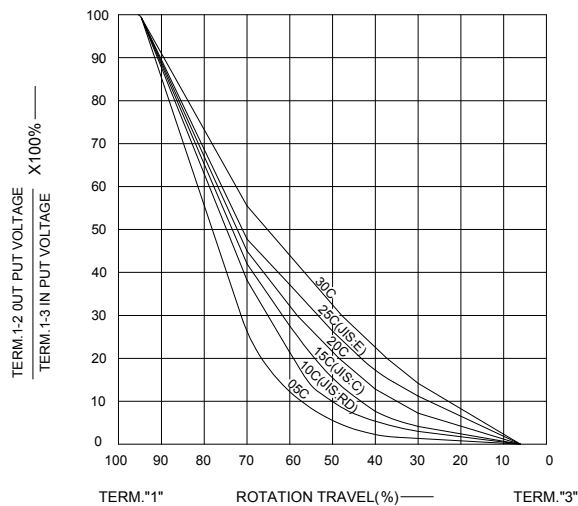
TAPERS A SERIES



TAPERS A & C WITH 50% TAP



TAPERS C SERIES



TAPERS M & N

