

12Ø 單軸單連回轉式可變電阻器制品規格書

12Ø SINGLE SHAFT SINGLE UNIT ROTARY POTENTIOMETERS SPECIFICATIONS

1. 一般事項 General

1.1 適用範圍：此規範適用於電子機器之可變電阻器。

Application: This specification is applied to potentiometers used for electronic equipment .

1.2 使用溫度範圍 Operating temperature: -10~+55°C

1.3 試驗狀態：若無特別規定限制，則以溫度5~35°C，相對濕度45~85%，氣壓860~1060mbar之標準狀態測之。
但對此標準狀態之測定值發生判定疑問或有特別要求則以基準狀態(溫度20±2°C,相對濕度

$65 \pm 5\%$, 氣壓860~1060mbar)為準測定。

Test conditions : the standard test conditions shall be 5~35°C in temperature ,45~85%RH

and 860~1060mbar in atmospheric , should any doubt arise in judgement ,

tests shall be conducted at 20±2°C , 65±5%RH and 860~1060mbar .

2. 構造、尺寸 Construction and dimensions 依組立圖 Refer to attached drawing

3. 電氣性能 Electrical characteristics

NO.	項目 Item	試驗條件 Test conditions	規 格 Specifications
3-1	全阻抗值 Total resistance	軸置於端子1或3終端，測定端子1-3間的阻抗值 Measurement shall be made by the resistance between terminal 1 and 3 with shaft setted at terminal 1 or 3 .	R<250KΩ許容差±20% R≥250KΩ許容差±30% R<250KΩTolerance ±20% R≥250KΩTolerance ±30%
3-2	額定電力 Power rating	端子1和3間所能連續負荷之最大電力 Power rating is based on continuous full load operation at the maximum voltage between terminal 1 and terminal 3 .	0.05W
3-3	額定電壓 Rated voltage	額定電壓 Rated voltage $E=\sqrt{PR}$ (V) 額定電力 P: Power rating (W) 公稱全阻抗值R: Nominal total resistance (Ω) 當額定電壓超過最高使用電壓的時候， 最高使用電壓即為額定電壓。 When the rated voltage exceeds the maximum operating voltage , the maximum operating voltage shall be the rated voltage .	
3-4	最高使用電壓 Max operating voltage		A.C 50V D.C 10V

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NO.	項目 Item	試驗條件 Test conditions				規格 Specifications
3-5	阻抗變化特性 Taper	電壓法測定(*記號表示第3端子測起) Measurement shall be made by the resistance law method . (*With respect to terminal 3)				
		變化特性 taper	測定位置 test point	V1-2 V1-3	V2-3 V1-3	
		05A	150°	✓	—	0~10%
		10A	150°	✓	—	6~15%
		15A	150°	✓	—	10~25%
		25A	150°	✓	—	18~34%
		30A	150°	✓	—	25~35%
		1B,2B,3B	150°	✓	—	40~60%
		4B	90±5°	✓	—	5~15%
			150°	✓	—	40~60%
			210±5°	✓	—	85~95%
		05C	*150°	—	✓	0~10%
		10C	*150°	—	✓	6~15%
		15C	*150°	—	✓	10~25%
		25C	*150°	—	✓	18~34%
		30C	*150°	—	✓	25~35%
3-6	殘留阻抗 Residual resistance	滑動子置于全回轉角度的終端時，端子1-2間，端子2-3間的阻抗值測定。 The resistances at each end of the mechanical rotation between terminal 1 and 2, terminal 2 and 3 shall be measured .				
		公稱全阻抗值(KΩ) Nominal total resistance (KΩ)				
		R≤10				20Ω MAX. 20Ω 以下
		10<R<50				30Ω MAX. 30Ω 以下
		50≤R				全阻值的0.1%以下 0.1%MAX of total resistance
3-7	旋轉雜音 Rotational noise	端子1-3間印加直流電壓20V(額定電壓20V以下時，則印加此額定電壓)，以30回/分的轉速所測定之雜音。 Applying 20V D.C between the terminals 1 and 3 (When the rated voltage is small than the 20V D.C, it shall be applied the rated voltage.) And then the noise shall be measured by the specified speed 30 cycles / min .				100mV 以下 100mV MAX.

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可正欣有限公司
TOP-UP INDUSTRY CORP.

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NO.	項目 Item	試驗條件 Test conditions	規格 Specifications
3-8	絕緣阻抗 Insulation resistance	施加 250V 之直流電壓, 1分鐘後測試。 測試位置：端子和外蓋之間 Test voltage : 250V D.C measure after 1 min Test position : Between terminal and cover.	100MΩ 以上 100MΩ MIN.
3-9	耐電壓 Voltage proof	以300V之交流電壓, 測試1分鐘 測試位置：端子和外蓋間 Applying 300V A.C measure for 1 min . Applied position : Between terminal and cover.	不可有損傷, 電弧, 絶緣, 破壞 Without damage to parts arcing or breakdown .

4. 機械性能: Mechanical characteristics

NO.	項目 Item	試驗條件 Test conditions	規格 Specifications
4-1	全回轉角度 Total rotational angle		300° ±5°
4-2	回轉轉矩 Operating torque	回轉速度60° /秒, 但指針之瞬間下滑不計 Rotational speed 60° /sec, but torque meter indicator dropping in an instant shall be excepted .	10~80 gf-cm
4-3	軸止動強度 Shaft stopper strength	在1端子側或3端子側施加回轉力矩3Kgf-cm 1秒鐘. A torsion moment of 3Kgf-cm shall be applied at shaft in terminal 1 or terminal 3 for 1 sec .	操作部和關連部不可有變形,破損 Without deformation or breaks in the operating part and contact part .
4-4	焊錫耐熱 Resistance to soldering heat	請參照DIP鋸錫條件. Condition of DIP soldering.	全阻抗值變化在初期的±5%以內, 端子不可有接觸不良或明顯松動 Change in total resistance is relative to the value before test ±5% . Without excessive looseness of terminals and failure contact .
4-5	軸承螺絲固定 強度 Bushing mount strength		10Kgf-cm 以上, 在12Kgf-cm以下使用 10Kgf-cm MIN. Don't over 12Kgf-cm when operating .

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4-6	軸之張力壓力 強度 Shaft push-pull strength	在軸之方向加壓力或張力之靜負荷10Kgf 10秒 Push and pull static load 10Kgf shall be applied in the shaft direction for 10 sec .	電氣性能須滿足 Electrical characteristics shall be satisfied .
4-7	軸松動 Shaft wobble	在軸前端施加500gf-cm之撓矩 (L=固定面至測定點之距離) A side thrust of 500gf-cm at the end of shaft shall be applied (Distance L is between mounting surface to test point)	0.6xL/20mmP-P以下 0.6xL/20mmP-P MAX

5. 耐久性能 Endurance

NO.	項目 Item	試驗條件 Test conditions	規格 Specifications
5-1	回轉壽命 Rotational life	無負荷狀態，軸回轉速度600回/小時，有效回轉角度的90%以上，總次數15,000回以上。 The moving contact without electrical load, shall be rotated from one end stop to the other end returned to its original position extend over 90% or more effective angle . Rotation speed: 600 cycle / hour Total cycles: 15,000 cycles	全阻抗值的變化為初期值±15%以內 旋轉雜音：150mV以下 其它須滿足(3項) (4項) Change in total resistance is relative to the value before test ±15% . Noise : 150mV MAX Clause (3), (4) shall be satisfied .

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DIP鉀錫條件 DIP Condition of soldering

鉀錫條件 Condition of soldering:

浸漬焊錫處理時,請確保在下列工作條件

Soldering shall be certifide with following condition

1. 使用基板: t1.6厚單面銅箔積層板

Substrate to be soldered: copper clad laminated phenol board in one surface of 1.6mm thickness

2. 助焊劑: 使用發泡式比重0.82以上的焊劑,發泡面高大致在基板厚度一半的位置,而助焊劑

不可流入基板表面上

Solder flux: Flux of 0.82 specific weight in bubbling type solder flux coating apparatus shall be usde and bubbling surface height shall be defined substantially as half thickness of substrate. Flux shall not flow up on the substrate surface.

3. 預熱: 基板表面溫度100°C 以下,2分鐘以內.

Preheating: Surface temperature of the substrate shall be settled within 100°C in two minutes.

4. 焊錫: 260°C±5°C 以下, 5+1/-0秒以內.(手焊溫度:350°C 以下,3秒以內)

Soldering : 260°C MAX. within 5+1/-0 sec. (Manual solder temperature 350°C MAX. Within 3 sec.)

以上工程1回通過即可.

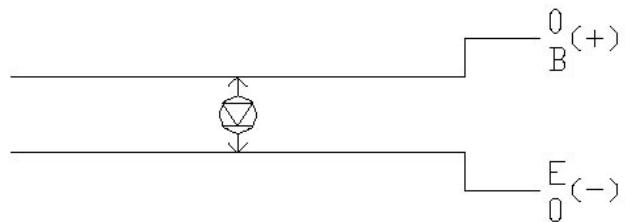
Please use the above process only one times.

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L. E. D. 共通規格書

L. E. D. COMMON SPECIFICATIONS

一. 回路: Circuit:



二. LED 特性

LED Characteristic

1. 逆電流: [IR]=10uA [VR]=5V

Reverse Current: [IR]=10uA [VR]=5V

2. 反轉電壓: 5V

Reverse Voltage: 5V

3. 工作溫度: -40°C~85°C

Operating Temperature: -40°C~85°C

4

發光色 Emitted color	功率消耗 Power dissipation	直流正向電流 DC Forward Current	Vf(V) (@IF=20mA)	
			Surafce-mount type	
			Max.	Typ.
藍色 Blue color	120mW	30mA	3.6	2.9
紅色 Red color	75mW	30mA	2.6	1.5
綠色 Green color	120mW	30mA	2.6	1.9
橘色 Orange color	75mW	30mA	2.6	1.9
白色 White Color	120mW	20mA	4	3.1

ROHS COMPLIANCE

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