

CUSTOMER'S NAME

MOUSER ELECTRONICS

ALPHA REFERENCE NO.




SP19070075

# SPECIFICATION

PART NO.	ALPHA MODEL NAME
	RD901F-20-15R1-B100K-00L1
	311-1902F-100K

MODEL NAME
MODEL NO.

APPROVAL
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PREPARED BY	REVIEWED BY	APPROVED BY
 鄧彩霞 2019.7.13	 陳延玲 2019-7-16	 吉祖衛 2019.7.16



## 台灣艾華電子工業股份有限公司

33045 桃園市桃園區中正路 1221 號 9 樓

### TAIWAN ALPHA ELECTRONIC CO., LTD.

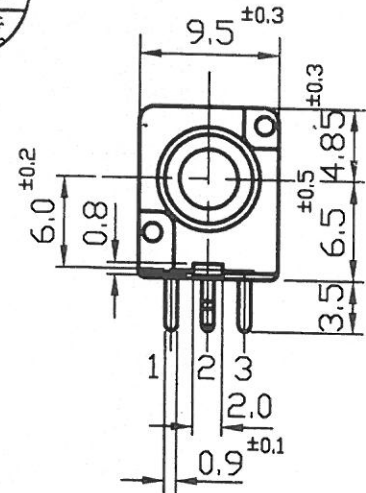
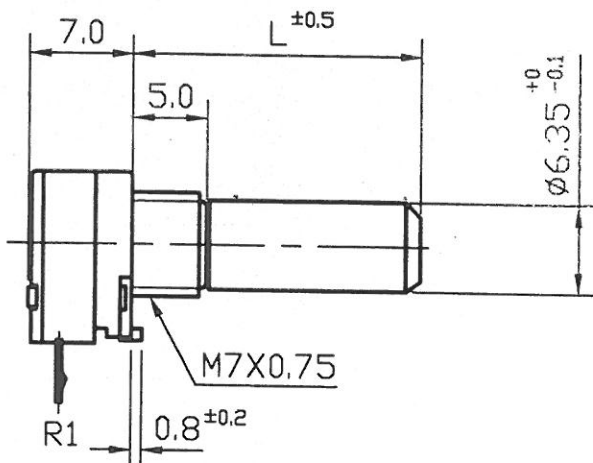
9F, No. 1221, Chung Cheng Rd., Taoyuan Dist., Taoyuan City, 330 Taiwan

Tel: 886-3-3577799 Fax: 886-3-3577700

EMAIL: sales@taiwanalpha.com.tw

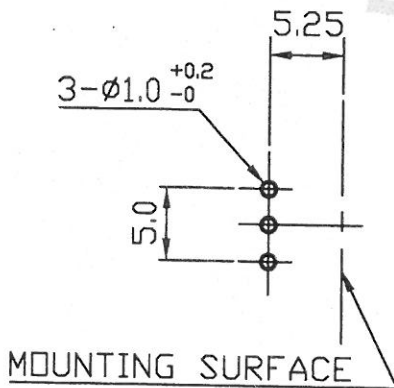
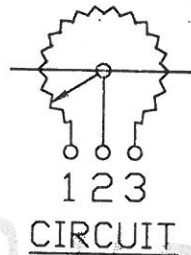
URL: <http://www.taiwanalpha.com>

文管中心  
2015.02.17  
發行章



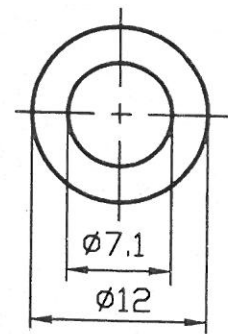
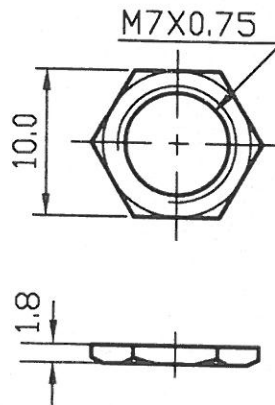
● 300° ROTATION  
MONO UNIT

	L
	15



NUT 1PC

WASHER 1PC



P.C.B. MOUNTING HOLE DETAIL

						(-00L1)	
						RD901F-20-(L)R1-XXX(-0X)	
NO.	DATE	DESCRIPTION		MODEL NAME			
TOL. UNLESS OTHERWISE STATED		DIMENSION	SCALE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NO.
less than	10	±0.2	2:1	鄧 2015.2.13 焯校		章 2015.2.13 祖衛	
above	10 ~ 30	±0.5					
above	30 ~ 100	±1.0					
above		±0.5					

## 9Ø 單軸單連迴轉型規格書

## SPECIFICATIONS OF ROTARY POTENTIOMETER

## 一、電氣規格：

Electrical characteristics :

- 1.1 全阻值：阻值適用範圍：1 KΩ- 500 KΩ (容許差±20%) 1000 KΩ 以上 (容許差±30%)  
Overall resistance range : 1 KΩ- 500 KΩ (Tolerance±20%) 1000 KΩ Min (Tolerance±30%)  
(500Ω 適用 B Taper) (500Ω B Taper Only)
- 1.2 額定功率：B 特性 0.05W B 特性以外 0.02W  
Power rating : B Taper 0.05W Except B Taper 0.02W
- 1.3 阻抗變化特性 Taper :

阻抗變化 特性 Taper	測定角度 Test point	端子 1-2 間輸出電壓	V1-2	端子 2-3 間輸出電壓	V2-3
		端子 1-3 間輸入電壓	V1-3 (%)	端子 1-3 間輸入電壓	V1-3 (%)
A	150°	10-25			
B	150°	40-60			
C	*150°			10-25	
D(10A)	150°	6-15			
X(10C)	*150°			6-15	
E(25C)	*150°			18-34	
K(25A)	150°	18-34			
M	75±5°	40-60			
	150°	98-100			
*N	*75±5°			40-60	
	*150°			98-100	

(註) \*記號表示自第三端子測起

\*With respect to terminal 3

- 1.4 殘留阻值：1-2 端子/2-3 端子同。

Residual resistance : 1-2/2-3 Same

公稱阻值(KΩ) Overall resistance(KΩ)	殘留阻值 (Ω) Residual resistance(Ω)
$R \leq 10$	20 以下      20MAX
$10 < R \leq 50$	30 以下      30MAX
$50 < R \leq 500$	全阻值的 0.1% 以下 0.1% Max Of Total Resistance

- 1.5 轉動雜音：依 J I S 測定法 100mV 以下。  
Rotation noise (Refer to J I S) : 100mV max.
- 1.6 絕緣阻抗：D.C 250V 須在 100MΩ 以上。  
Insulation resistance : 100MΩ min. At D.C 250 Volts
- 1.7 耐電壓：A.C 300V 可耐 1 分鐘以上。  
Dielectric test : Units shall be designed to withstand 300 volts between resistance elements and case  
for a period of one minute without damage or arcing.
- 1.8 最高使用電壓：A.C 50V (A.C 專用)。  
Maximum operating voltage : 50V A.C (A.C voltage only)

9Ø 單軸單連迴轉型規格書  
SPECIFICATIONS OF ROTARY POTENTIOMETER

## 二、機械規格：

## Mechanical :

2.1 全迴轉角度：300±5 度

Total rotation angle : 300±5°

2.2 回轉轉矩：20~250gf-cm (迴轉速度 60 度 / 1 秒)

Rotation torque : 20~250gf-cm. (Rotational speed 60° / 1 sec)

2.3 軸鬆動：固定腳銲錫後軸前端加上 250gf-cm 之力矩，於軸前端移動 0.8  
×L/20mm P-P 以內。Play of shaft : The resistor shall be mounted by soldering the mounting legs on the panel ,and  
an end thrust of 250gf-cm at the end of the shaft shall be applied. Then the  
total play of the shaft shall not exceed 0.8xL/20mm P-P.

2.4 軸擠壓引張強度：在軸之方向加壓力或張力之靜負荷 10kgf,10 秒鐘無異常。

Axis push-pull strength : No damages with an application of push or pull force 10kgf for 10 sec.

2.5 軸之迴轉止動強度：4kgf-cm 以上。

Shaft end stop strength : 4kgf-cm min.

2.6 軸承螺絲固定強度：7kgf-cm 以上。

Bushing mount strength : 7kgf-cm min.

2.7 銲錫耐熱性能：銲錫後,不可發生顯著之鬆動接觸不良。

Resistance to soldering heat : After soldering ,there shall be no evidence of poor contact between  
resistance element and terminals ,or any physical damages as a result  
of the test .

2.8 Click 位置： 150 ± 5 度 (center click)

Click position : 150 ± 5° (center click)

2.9 Click 脫出力：30~250gf-cm (回轉速度 60° / 1 秒)

Click torque : 30~250gf-cm (Rotational 60° / 1 sec)

2.10 Click 壽命：5,000 轉以上。

Click life : 5,000cycles min.

☆ ( 2.8,2.9,2.10 僅適用於附 CLICK 時 )

( 2.8,2.9,2.10 IS USED FOR CLICK ONLY )

## 三、耐久性：

## Reliability test :

3.1 電阻體迴轉壽命特性：15,000 轉以上。(阻值 500Ω 5,000 回轉)

Rotational life : 15,000 cycles min.

\* ( 500Ω resistance shall be endurable with life test of more than 5,000 cycles. )

## 四、其它 NOTE

4.1 依照 J I S C - 6 4 4 3 普通級碳素系可變電阻器。

Meet or exceed J I S C - 6 4 4 3 Requirements .

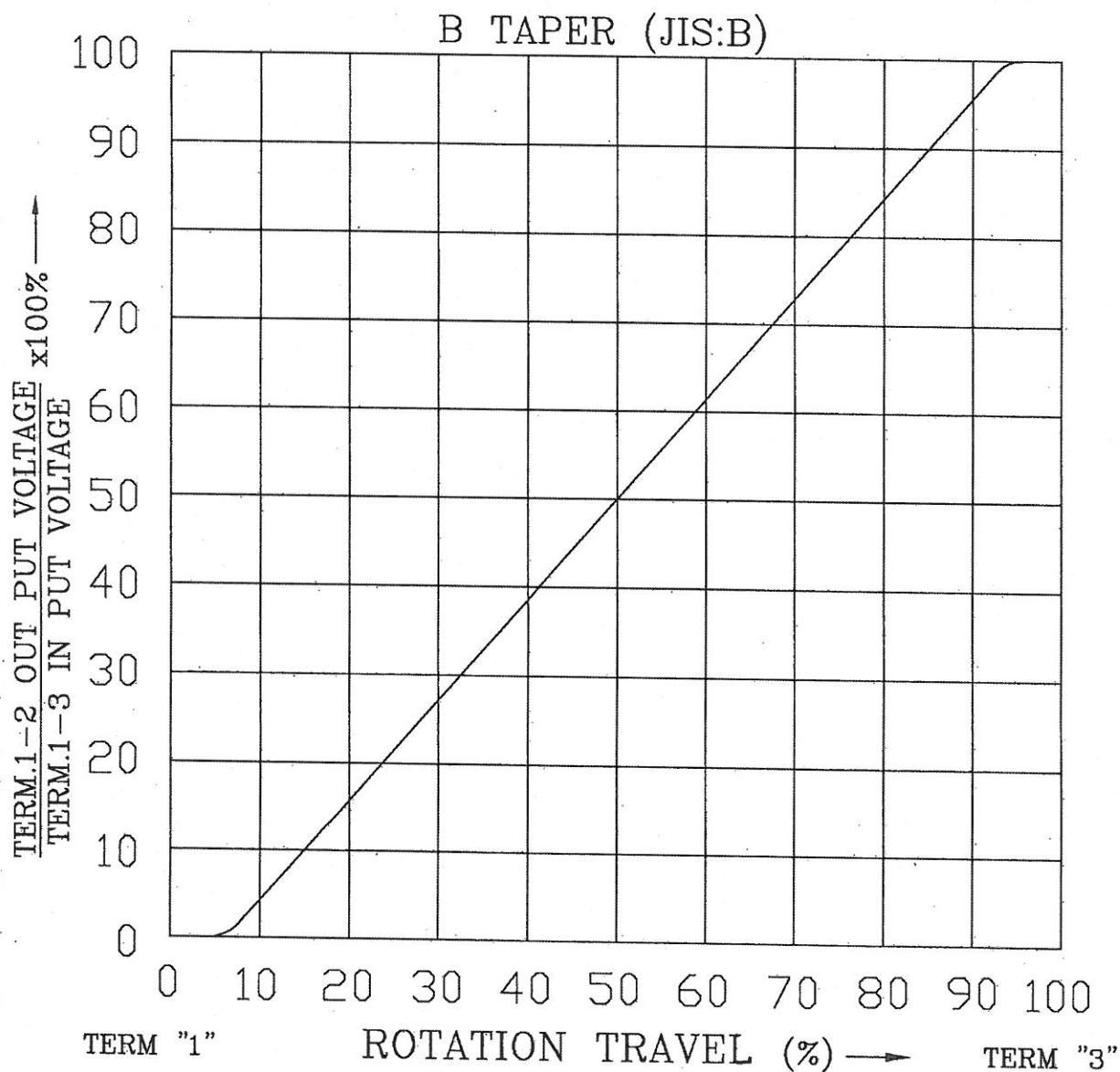
4.2 使用溫度：10°C~+70°C

Operating temperature range: 10°C~+70°C

4.3 儲存溫度：-20°C~+80°C

Storage temperature range : -20°C~+80°C

# STANDARD RESISTANCE TAPER



NO.	DATE	DESCRIPTION	MODEL NAME
TOL. UNLESS OTHERWISE STATED		DIMENSION	SCALE
less than	10	±0.3	
above	10 ~ 30	±0.5	
above	30 ~ 100	±1.0	
above		±5°	
		mm	
		DRAWN BY	CHECKED BY
		APPROVED BY	DRAWING NO.
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