

CUSTOMER'S NAME

MOUSER ELECTRONICS

ALPHA REFERENCE NO.




SP19070102

## SPECIFICATION

| PART NO. | ALPHA MODEL NAME      |
|----------|-----------------------|
|          | RV16AF-10-20R1-A1K-LA |
|          | 31JA301-F             |
|          |                       |
|          |                       |
|          |                       |

|            |
|------------|
| MODEL NAME |
| MODEL NO.  |

|          |
|----------|
| APPROVAL |
|----------|

| PREPARED BY  | REVIEWED BY   | APPROVED BY   |
|--|---|---|
| <br>2019.7.13<br>鄧彩霞 | <br>2019.7.13<br>李延玲 | <br>2019.7.15<br>張祖衛 |



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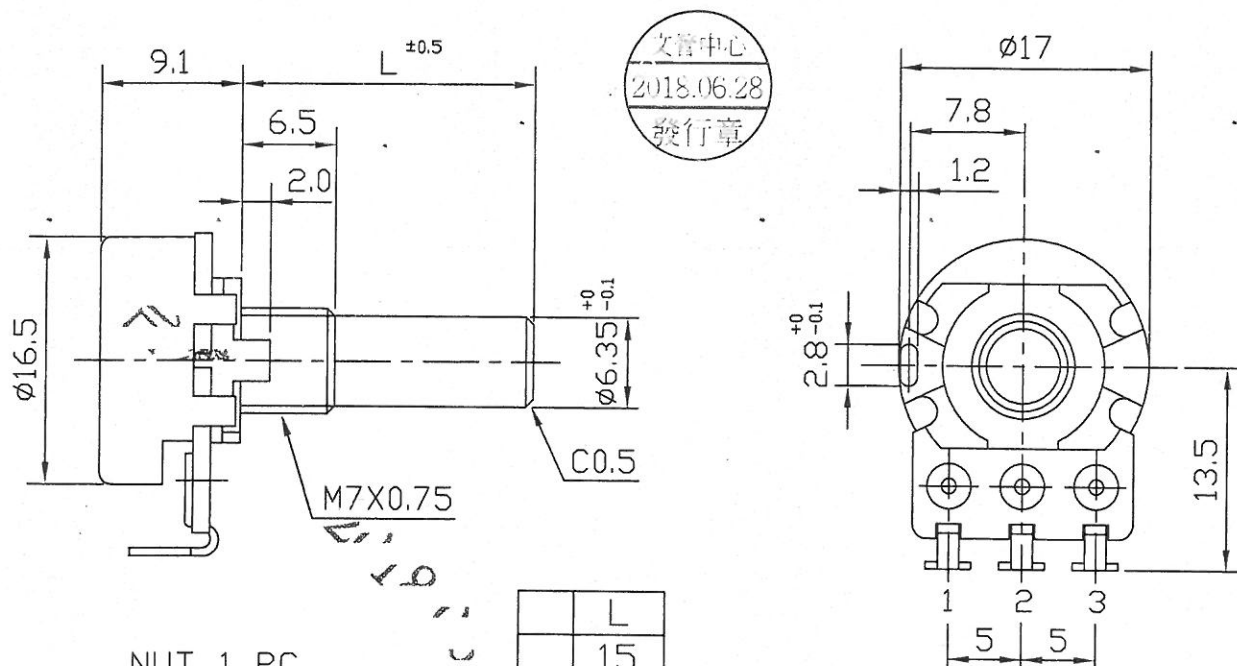
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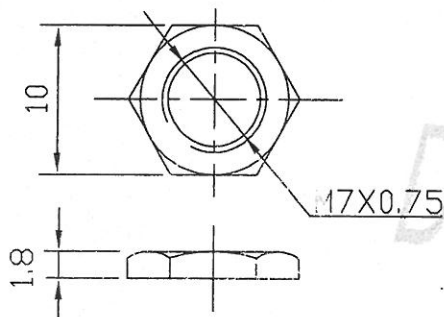
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文管中心  
2018.06.28  
發行章

NUT 1 PC

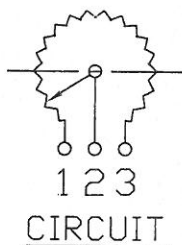
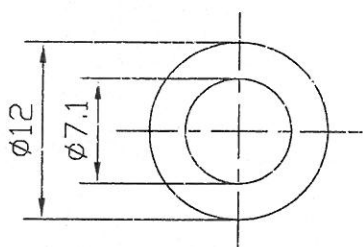


WASHER 1 PC t=0.4

|  |    |
|--|----|
|  | L  |
|  | 15 |
|  | 16 |
|  | 20 |

DG ALPHA

● 300° ROTATION MONO UNIT



東莞艾普電子有限公司  
2018-06-29  
收文日

(-0XLA) (-3XLA)

(-0XH4) (-3LA)

(-LA) (-3X)

RV16AF-10-(L)R1-XXX(-0X) (-3) (-3XH4)

|     |      |             |            |
|-----|------|-------------|------------|
| No. | DATE | DESCRIPTION | MODEL NAME |
|-----|------|-------------|------------|

| TOL. UNLESS OTHERWISE STATED | DIMENSION | SCALE | DRAWN BY             | CHECKED BY | APPROVED BY          | DRAWING No. |
|------------------------------|-----------|-------|----------------------|------------|----------------------|-------------|
| less than 10 ±0.3            | mm        | 2     | 姚<br>2018.6.26<br>榕偉 |            | 章<br>2018.6.26<br>祖衛 |             |
| above 10~30 ±0.5             |           |       |                      |            |                      |             |
| above 30~100 ±1.0            |           |       |                      |            |                      |             |
| above ±5'                    |           |       |                      |            |                      |             |

## 16Ø 單軸單連迴轉式 VR 規格書

## SPECIFICATIONS OF 16Ø ROTARY POTENTIOMETER

## 一、機械規格 MECHANICAL CHARACTERISITICS :

## 1.1 全迴轉角度：300 ± 5 度

OVERALL ROTATION ANGLE : 300 ± 5° .

## 1.2 迴轉轉矩：20~200gf-cm (迴轉速度 60 度 / 1 秒)

OPERATION TORQUE : 20 ~ 200gf-cm . ( ROTATIONAL SPEED 60° / 1 sec )

## 1.3 起動迴轉轉矩：450gf-cm 以下

STARTING TORQUE : 450gf-cm MAX .

1.4 軸鬆動：固定腳焊錫後軸前端加上 500gf-cm 之力矩，於軸前端移動之  
0.7 × L / 30 mm 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 500gf-cm AT THE END OF THE SHAFT SHALL BE APPLIED .

THEN THE TOTAL PLAY OF THE SHAFT SHALL BE NOT EXCEED 0.7 × L / 30 mm P-P .

## 1.5 軸擠壓引張強度：焊錫後擠壓，引張耐 8kgf，3 秒（指施加於垂直軸之端面而言）不可有電氣或機械上的異常 .

STRENGTH OF SHAFT AGAINST END THRUST :

THE SHAFT SHALL WITHSTAND AGAINST END THRUST OF NOT LESS THAN 8kgf FOR 3 SECONDS .

## 1.6 軸之迴轉止動強度：6kgf-cm 以上 .

SHAFT END STOP STRENGTH : 6kgf-cm MIN .

## 1.7 軸橫擠壓強度：鉚錫後軸前端垂直方向耐 3kgf-cm，3 秒後不可有電氣或機械上的異常 . ( 1.6，1.7 項並不包含鉚錫部位之浮起 )

ROBUSTNESS OF SHAFT AGAINST SIDE THRUST :

THE SHAFT SHALL WITHSTAND AGAINST SIDE THRUST OF NOT LESS THAN 3kgf-cm FOR 3 SECONDS ON THE END OF THE SHAFT AT RIGHT ANGLES TO THE AXIS OF THE SHAFT AFTER MOUNTING THE RESISTOR BY SOLDERING .

## 1.8 鉚錫耐熱性：鉚錫後,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 ELLEMENT AND TERMINALS , OR ANY PHYSICAL DAMAGES AS A RESULT OF THE TEST .

- 1.9 軸承螺絲固定強度：7kgf-cm 以上。  
BUSHING MOUNT STRENGTH：7kgf-cm MIN.
- 1.10 CLICK 位置：150 ± 2.5°  
POSITION OF CLICK：150 ± 2.5°
- 1.11 CLICK 脫出力：30~250gf-cm  
TORQUE OF CLICK：30~250gf-cm  
☆ (1.10, 1.11 僅適用於附 CLICK 時)  
(1.10, 1.11 IS USED FOR CLICK ONLY)

二、電器規格 ELECTRICAL CHARACTERISTICS：

- 2.1 全阻值：阻值適用範圍 1KΩ~500KΩ (容許差 ± 20%)  
OVERALL RESISTANCE RANGE：1KΩ~500KΩ (TOLERANCE± 20%)
- 2.2 額定功率：B 線性 0.125W， B 以外線性 0.06W  
POWER RATING：B TAPER 0.125W， EXCEPT B 0.06W
- 2.3 殘留阻值：1~2 端子 / 2~3 端子同。  
RESIDUAL RESISTANCE：terminal 1~2 / 2~3

| 公稱阻抗值 (KΩ)<br>OVERALL RESISTANCE (KΩ) | 殘留阻值 (Ω)<br>MAXIMUM ATTENUATION LEVEL (Ω) |
|---------------------------------------|---|
| R ≤ 20                                | 10 以下 10MAX                               |
| 20 < R ≤ 100                          | 20 以下 20MAX                               |
| 100 < R ≤ 1M                          | 50 以下 50MAX                               |

2.4 阻抗變化特性 TAPER：

| 阻抗變化<br>特性<br>Taper | 測定角<br>度 Test<br>point | 端子 1-2 間輸出電壓 $\frac{V_{1-2}}$        | 端子 2-3 間輸出電壓 $\frac{V_{2-3}}$        |
|---------------------|------------------------|--------------------------------------|--------------------------------------|
|                     |                        | 端子 1-3 間輸出電壓 $\frac{V_{1-3}}$<br>(%) | 端子 1-3 間輸出電壓 $\frac{V_{1-3}}$<br>(%) |
| A                   | 150°                   | 10-25                                |                                      |
| B                   | 150°                   | 40-60                                |                                      |
| * C                 | * 150°                 |                                      | 10-25                                |
| D(10A)              | 150°                   | 6-15                                 |                                      |
| * E(25C)            | * 150°                 |                                      | 15-35                                |
| K(25A)              | 150°                   | 15-35                                |                                      |
| W(4B)               | 90±5°                  | 5-15                                 |                                      |
|                     | 150°                   | 40-60                                |                                      |
|                     | 210±5°                 | 85-95                                |                                      |
| M                   | 75±5°                  | 40-60                                |                                      |
|                     | 150°                   | 98-100                               |                                      |
| * N                 | * 75±5°                |                                      | 40-60                                |
|                     | * 150°                 |                                      | 98-100                               |
| * X(10C)            | * 150°                 |                                      | 6-15                                 |

(註) \* 記號表示自第三端子測起 \* WITH RESPECT TO TERMINAL 3

- 2.5 轉動雜音：依 JIS 測定法 47mV 以下 ( W : 200mv 以下 ) .  
ROTATION NOISE ( REFER TO JIS ) : 47mV MAX . ( W : 200mV MAX ) .
- 2.6 絕緣阻抗：D.C 500V 須在 100M $\Omega$ 以上  
INSULATION RESISTANCE : 100M $\Omega$  MIN . AT D.C 500 VOLTS
- 2.7 耐電壓：A.C 500V 可耐 1 分鐘以上  
DIELECTRIC TEST : UNITS SHALL BE DESIGNED TO WITHSTAND  
500 VOLTS BETWEEN RESISTANCE ELEMENTS  
AND CASE FOR A PERIOD OF ONE MINUTE  
WITHOUT DAMAGE OR ARCING .
- 2.8 最高使用電壓：A.C 150V .  
MAXIMUM OPERATING VOLTAGE : 150V A.C

三、耐久性能 ENDURANCE CHARACTERISTICS :

- 3.1 電阻體迴轉壽命特性：15,000 迴轉以上  
ROTATIONAL LIFE : MORE THAN 15,000 CYCLES

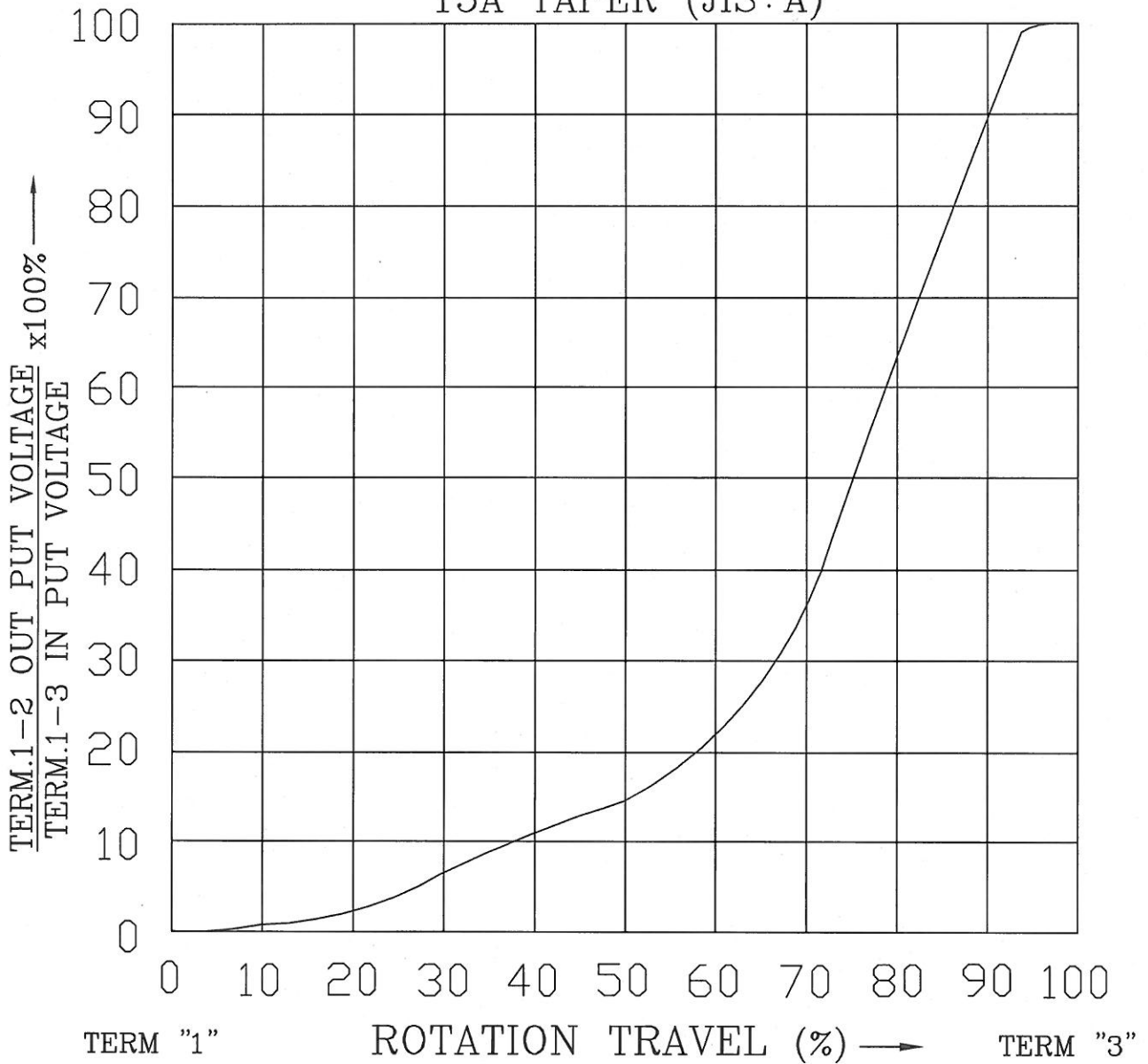
四、其他之性能 依照 JISC 6443 普通級碳素系可變電阻器：

NOTE MEET OR EXCEED JISC 6443 REQUIREMENTS .

- 4.1 使用溫度：-10 $^{\circ}$ C~+70 $^{\circ}$ C  
Operating temperature range: -10 $^{\circ}$ C~+70 $^{\circ}$ C
- 4.2 儲存溫度：-25 $^{\circ}$ C~+75 $^{\circ}$ C  
Storage temperature range : -25 $^{\circ}$ C~+75 $^{\circ}$ C

# STANDARD RESISTANCE TAPER

## 15A TAPER (JIS: A)



|                              |          |                    |                    |
|------------------------------|----------|--------------------|--------------------|
|                              |          |                    |                    |
|                              |          |                    |                    |
|                              |          |                    |                    |
|                              |          |                    |                    |
| 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         |
|                              |          | 何<br>90.8.21<br>建志 | 王<br>90.8.21<br>茂松 |
|                              |          | APPROVED BY        | DRAWING NO.        |
|                              |          | 王<br>90.8.21<br>茂松 |                    |