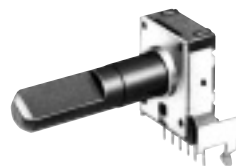


### 12 mm Square Two-in-One Rotary Potentiometers (Dual Type)

Japan  
Malaysia

Type: **EVJC/EVJY**



#### ■ Features

- Rectangular-shaped, automatic mounting type
- High tactile feedback
- Available for automatic dip soldering (Flux-proof structure)
- Highly reliable and dust-proof

#### ■ Recommended Applications

- Audio Equipment
- Video Equipment
- Electronic Musical Instruments

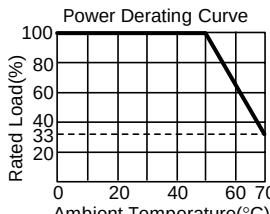
#### ■ Explanation of Part Numbers

|              |   |   |                |   |   |                          |   |   |                    |    |    |
|--------------|---|---|----------------|---|---|--------------------------|---|---|--------------------|----|----|
| 1            | 2 | 3 | 4              | 5 | 6 | 7                        | 8 | 9 | 10                 | 11 | 12 |
| E            | V | J | CY             |   |   |                          |   |   |                    |    |    |
| Product Code |   |   | Specifications |   |   | Shaft Trims & Dimensions |   |   | Taper & Resistance |    |    |

#### ■ Product Chart

| Installation direction | Style           | Height (H=mm) | Applications   | Detent         | Type   |
|------------------------|-----------------|---------------|----------------|----------------|--------|
| Horizontal             | Without bushing | 10.0          | Volume control | Without detent | EVJC00 |
|                        |                 |               | Tone control   | Without detent | EVJC30 |
|                        |                 |               |                | Midpoint       | EVJC31 |
|                        |                 | 12.5          | Volume control | Without detent | EVJC90 |
|                        |                 |               | Tone control   | Without detent | EVJC40 |
|                        |                 |               |                | Midpoint       | EVJC41 |
|                        | With bushing    | 10.0          | Volume control | Without detent | EVJC20 |
|                        |                 |               | Tone control   | Without detent | EVJC50 |
|                        |                 |               |                | Midpoint       | EVJC51 |
|                        |                 | 12.5          | Volume control | Without detent | EVJCB0 |
|                        |                 |               | Tone control   | Without detent | EVJCH0 |
|                        |                 |               |                | Midpoint       | EVJCH1 |
| Vertical               | Without bushing | 10.0          | Volume control | Without detent | EVJC25 |
|                        |                 |               | Tone control   | Without detent | EVJC55 |
|                        |                 |               |                | Midpoint       | EVJC56 |
|                        |                 | 12.5          | Volume control | Without detent | EVJCB5 |
|                        |                 |               | Tone control   | Without detent | EVJCH5 |
|                        |                 |               |                | Midpoint       | EVJCH6 |
|                        | With bushing    | —             | Volume control | Without detent | EVJY00 |
|                        |                 |               | Tone control   | Without detent | EVJY80 |
|                        |                 |               |                | Midpoint       | EVJY81 |
|                        |                 | —             | Volume control | Without detent | EVJY10 |
|                        |                 |               | Tone control   | Without detent | EVJY90 |
|                        |                 |               |                | Midpoint       | EVJY91 |
|                        | With sleeve     | —             | Volume control | Without detent | EVJY15 |
|                        |                 |               | Tone control   | Without detent | EVJY95 |
|                        |                 |               |                | Midpoint       | EVJY96 |

## ■ Specifications

| Classification                   | Item                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|----------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------|-------------|--------------------|-------------------|-------------|-------------|--|------------------------------------------------------|----------------------------|----------------|------------------|-------------|--------------------|-------------------|-------------|--------------------|----------------------|-------------------|----------------|-------------|-------------------|-------------------|-------------|-------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------|------------|------------|-----------|------------|-----------|
| Applications                     | 12 mm square Two-in-One                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Mechanical Specifications        | Rotation Angle                                                                                             | 300 °                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Rotation Torque                                                                                            | 2 mN·m to 20 mN·m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Shaft Stopper Strength                                                                                     | 0.5 N·m min.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Shaft Pull/Push Strength                                                                                   | 80 N min.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Shaft Inclination<br>(Measured at the top of the shaft)                                                    | 0.35 mm max.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Bushing-Nut Tightening Torque                                                                              | 1 N·m max.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Electrical Specifications        | Nominal Total Resistance                                                                                   | 5 kΩ to 500 kΩ (Tolerance ±20 %)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Taper                                                                                                      | A, B, C, D, G, BH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Power Rating                                                                                               | <div>0.05 W (0 °C to 50 °C)<br/>For potentiometers operating in ambient temperatures above 50 °C, Rating should be derated in accordance with the figure on the right.</div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Residual Resistance                                                                                        | <table><tr><th rowspan="3">Type<br/>Taper &amp; Terminal<br/>Nominal Total Resistance</th><th colspan="4">For general purpose (tone)</th><th colspan="4">For volume control</th></tr><tr><th>A, B, D, G<br/>1 to 2</th><th>B, C, G<br/>2 to 3</th><th>A, D<br/>2 to 3</th><th>C<br/>1 to 2</th><th>A, B, D<br/>1 to 2</th><th>A, B, D<br/>2 to 3</th><th>C<br/>1 to 2</th><th>C<br/>2 to 3</th></tr><tr><td>5 kΩ &lt; R &lt; 50 kΩ</td><td>25 Ω max.</td><td>25 Ω max.</td><td>25 Ω max.</td><td>15 Ω max.</td><td>25 Ω max.</td><td>20 Ω max.</td></tr><tr><td>50 kΩ &lt; R &lt; 250 kΩ</td><td>25 Ω max.</td><td>50 Ω max.</td><td>50 Ω max.</td><td>15 Ω max.</td><td>50 Ω max.</td><td>20 Ω max.</td></tr><tr><td>250 kΩ &lt; R &lt; 500 kΩ</td><td>100 Ω max.</td><td>100 Ω max.</td><td>50 Ω max.</td><td>100 Ω max.</td><td>50 Ω max.</td></tr></table> |                   |                |             |                    |                   |             |             |  | Type<br>Taper & Terminal<br>Nominal Total Resistance | For general purpose (tone) |                |                  |             | For volume control |                   |             |                    | A, B, D, G<br>1 to 2 | B, C, G<br>2 to 3 | A, D<br>2 to 3 | C<br>1 to 2 | A, B, D<br>1 to 2 | A, B, D<br>2 to 3 | C<br>1 to 2 | C<br>2 to 3 | 5 kΩ < R < 50 kΩ | 25 Ω max. | 25 Ω max. | 25 Ω max. | 15 Ω max. | 25 Ω max. | 20 Ω max. | 50 kΩ < R < 250 kΩ | 25 Ω max. | 50 Ω max. | 50 Ω max. | 15 Ω max. | 50 Ω max. | 20 Ω max. | 250 kΩ < R < 500 kΩ | 100 Ω max. | 100 Ω max. | 50 Ω max. | 100 Ω max. | 50 Ω max. |
|                                  | Type<br>Taper & Terminal<br>Nominal Total Resistance                                                       | For general purpose (tone)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                |             | For volume control |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  |                                                                                                            | A, B, D, G<br>1 to 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | B, C, G<br>2 to 3 | A, D<br>2 to 3 | C<br>1 to 2 | A, B, D<br>1 to 2  | A, B, D<br>2 to 3 | C<br>1 to 2 | C<br>2 to 3 |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  |                                                                                                            | 5 kΩ < R < 50 kΩ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 25 Ω max.         | 25 Ω max.      | 25 Ω max.   | 15 Ω max.          | 25 Ω max.         | 20 Ω max.   |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | 50 kΩ < R < 250 kΩ                                                                                         | 25 Ω max.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 50 Ω max.         | 50 Ω max.      | 15 Ω max.   | 50 Ω max.          | 20 Ω max.         |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | 250 kΩ < R < 500 kΩ                                                                                        | 100 Ω max.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 100 Ω max.        | 50 Ω max.      | 100 Ω max.  | 50 Ω max.          |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  | Maximum Attenuation<br>(for volume control, taper A, B, D)                                                 | <table><tr><th>Nominal total resistance</th><th>Max. Attenuation</th><th>Insertion loss</th></tr><tr><td>5 kΩ &lt; R &lt; 10 kΩ</td><td>−65 dB max.</td><td rowspan="4">0.1 dB max.</td></tr><tr><td>10 kΩ &lt; R &lt; 50 kΩ</td><td>−72 dB max.</td></tr><tr><td>50 kΩ &lt; R &lt; 100 kΩ</td><td>−82 dB max.</td></tr><tr><td>100 kΩ &lt; R</td><td>−92 dB max.</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                |             |                    |                   |             |             |  | Nominal total resistance                             | Max. Attenuation           | Insertion loss | 5 kΩ < R < 10 kΩ | −65 dB max. | 0.1 dB max.        | 10 kΩ < R < 50 kΩ | −72 dB max. | 50 kΩ < R < 100 kΩ | −82 dB max.          | 100 kΩ < R        | −92 dB max.    |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Nominal total resistance         | Max. Attenuation                                                                                           | Insertion loss                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| 5 kΩ < R < 10 kΩ                 | −65 dB max.                                                                                                | 0.1 dB max.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| 10 kΩ < R < 50 kΩ                | −72 dB max.                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| 50 kΩ < R < 100 kΩ               | −82 dB max.                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| 100 kΩ < R                       | −92 dB max.                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Tracking                         | For volume control within<br>±3 dB at −40 to 0 dB<br>For Tone control within<br>±3 dB at midpoint          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Insulation Resistance            | 100 MΩ min. at 250 Vdc                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Dielectric Withstand Voltage     | 300 Vac for 1 minute                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Noise Level                      | 47 mV max.<br>Apply 20 V (When Voltage Rating < 20 V, use the rated voltage.)<br>Rotate shaft at 30 r/min. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Endurance                        | Operating Life *1                                                                                          | 15000 cycles min.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                |             |                    |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Minimum Quantity/Packing Unit *2 |                                                                                                            | 80 pcs. (Tray Pack)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                |             | L≤20.0 mm          |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  |                                                                                                            | 60 pcs. (Tray Pack)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                |             | L>20.0 mm          |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
| Packing Unit *2                  |                                                                                                            | 800 pcs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                |             | L≤20.0 mm          |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |
|                                  |                                                                                                            | 600 pcs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                |             | L>20.0 mm          |                   |             |             |  |                                                      |                            |                |                  |             |                    |                   |             |                    |                      |                   |                |             |                   |                   |             |             |                  |           |           |           |           |           |           |                    |           |           |           |           |           |           |                     |            |            |           |            |           |

\*1 : No direct current should be applied.

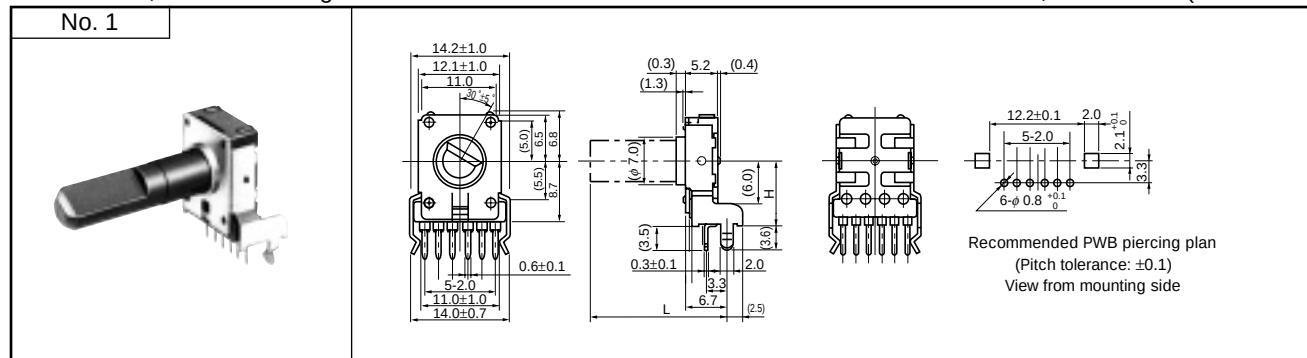
\*2 : With bushing : L=L+7.5 mm

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.  
Should a safety concern arise regarding this product, please be sure to contact us immediately.

■ Dimensions in mm (not to scale)

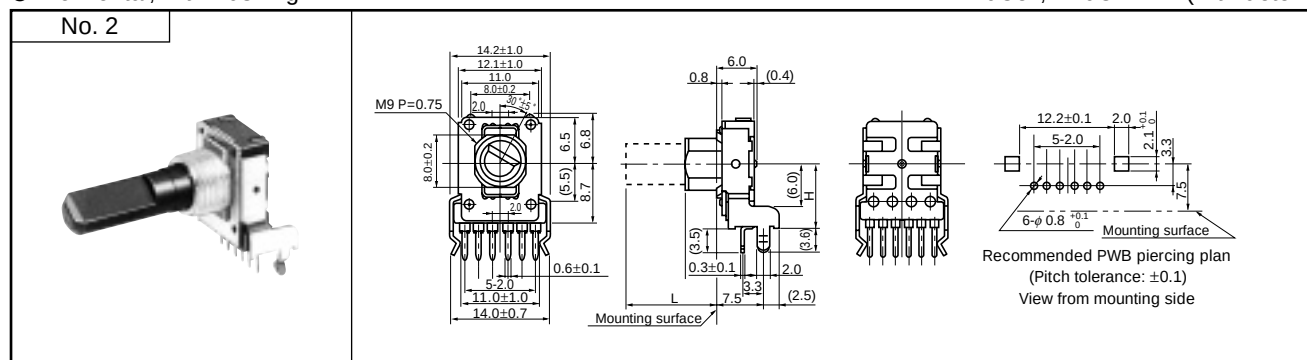
for Volume : EVJC00, EVJC90  
for Tone : EVJC30, EVJC40 (without detent)  
EVJC31, EVJC41 (with detent)

● Horizontal, without Bushing



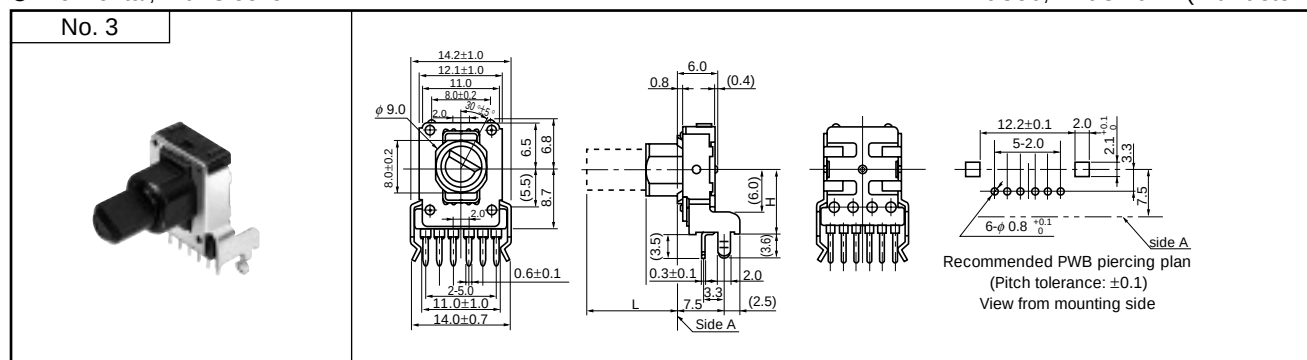
for Volume : EVJC20, EVJCB0  
for Tone : EVJC50, EVJCH0 (without detent)  
EVJC51, EVJCH1 (with detent)

● Horizontal, with Bushing



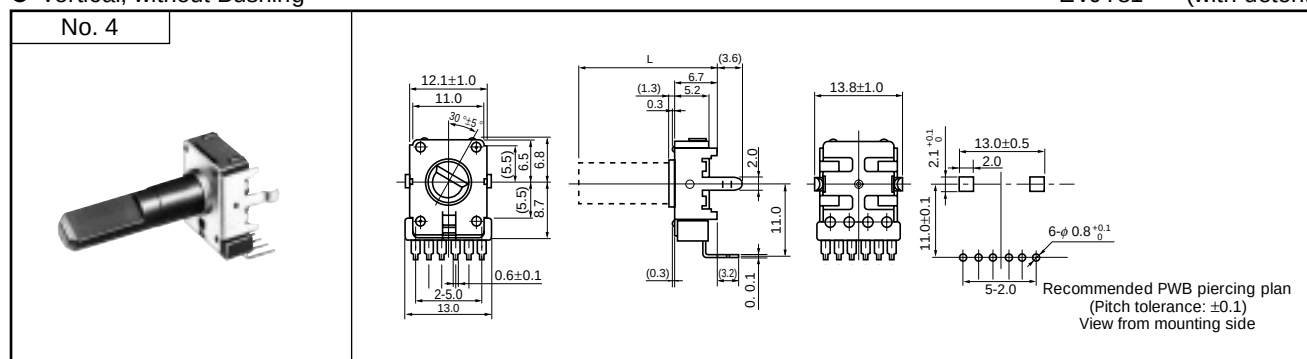
for Volume : EVJC25, EVJCB5  
for Tone : EVJC55, EVJCH5 (without detent)  
EVJC56, EVJCH6 (with detent)

● Horizontal, with Sleeve



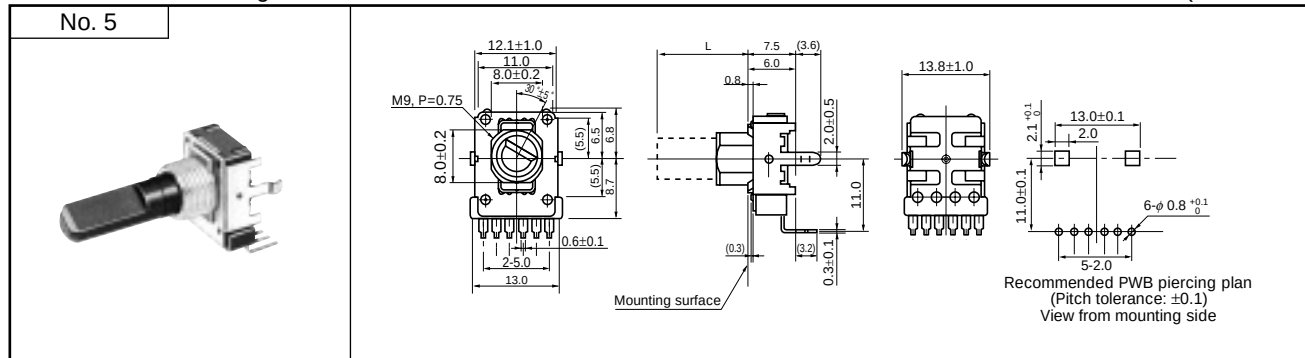
for Volume : EVJY00  
for Tone : EVJY80 (without detent)  
EVJY81 (with detent)

● Vertical, without Bushing



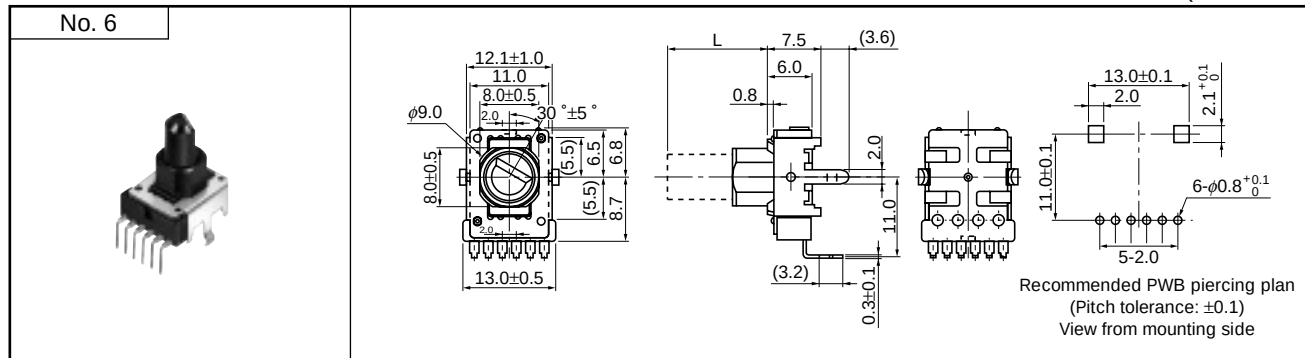
for Volume : EVJY10  
 for Tone : EVJY90 (without detent)  
 EVJY91 (with detent)

● Vertical, with Bushing .....



for Volume : EVJY15  
 for Tone : EVJY95 (without detent)  
 EVJY96 (with detent)

● Vertical, with Sleeve .....



### ■ Circuit Diagram and PWB Piercing Plan

|                                          | Volume control without tap | With tap | Tone control |
|------------------------------------------|----------------------------|----------|--------------|
| Relation of mounting holes and terminals |                            |          |              |

Notes:

1. I=Resistor 1, II=Resistor 2
2. Relation of mounting holes and terminals. Refer to each piercing plan for dimensions.
3. View from mounted part side.

### ■ Shaft Trims and Dimensions in mm

| Dimensions | Trim Position |
|------------|---------------|
|            |               |

Note: The drawing at full CCW position

| Style                       |            |  | Dimensions in mm |                |            |                 |
|-----------------------------|------------|--|------------------|----------------|------------|-----------------|
|                             |            |  | Shaft            |                |            | Bushing, Sleeve |
|                             |            |  | L                | l <sub>1</sub> | Corner cut | l <sub>2</sub>  |
| without Bushing             | Horizontal |  | 15.0             | 4.5            | C0.5       | —               |
|                             |            |  | 20.0             | 7.0            | C1.0       | —               |
|                             |            |  | 25.0             | 12.0           | C1.0       | —               |
|                             |            |  | 30.0             | 12.0           | C1.0       | —               |
|                             | Vertical   |  | 15.0             | 4.5            | C0.5       | —               |
|                             |            |  | 20.0             | 7.0            | C1.0       | —               |
|                             |            |  | 25.0             | 12.0           | C1.0       | —               |
|                             |            |  | 30.0             | 12.0           | C1.0       | —               |
| with Bushing or with Sleeve | Horizontal |  | 12.5             | 7.0            | C1.0       | 5.0             |
|                             |            |  | 15.0             | 7.0            | C1.0       | 5.0             |
|                             |            |  | 17.5             | 12.0           | C1.0       | 5.0             |
|                             |            |  | 20.0             | 12.0           | C1.0       | 5.0, 7.0        |
|                             |            |  | 22.5             | 12.0           | C1.0       | 5.0, 7.0        |
|                             | Vertical   |  | 12.5             | 7.0            | C1.0       | 5.0             |
|                             |            |  | 15.0             | 7.0            | C1.0       | 5.0             |
|                             |            |  | 17.5             | 12.0           | C1.0       | 5.0             |
|                             |            |  | 20.0             | 12.0           | C1.0       | 5.0, 7.0        |
|                             |            |  | 22.5             | 12.0           | C1.0       | 5.0, 7.0        |
|                             |            |  | 22.5             | 12.0           | C1.0       | 5.0, 7.0        |
|                             |            |  | 22.5             | 12.0           | C1.0       | 5.0, 7.0        |

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.  
Should a safety concern arise regarding this product, please be sure to contact us immediately.