

### 12 mm Square Two-in-One Potentiometers

Type: **EVJC/EVJY**



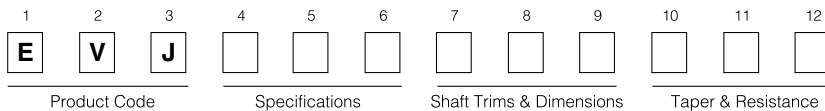
#### ■ Features

- Rectangular-shaped, automatic mounting type
- High tactile feedback (various types with bushing available)
- Available for automatic dip soldering (Flux-proof structure ensured by using the insert soldering method)
- Highly reliable, dust-proof type

#### ■ Recommended Applications

- Audio Equipment
- Video Equipment
- Electronic Musical Instruments

#### ■ Explanation of Part Numbers



#### ■ Circuit Diagram and PWB Piercing Plan

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

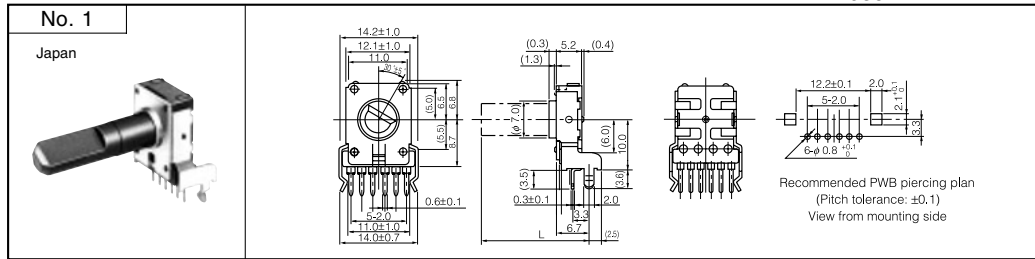
Notes:

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.

■ Dimensions in mm (not to scale)

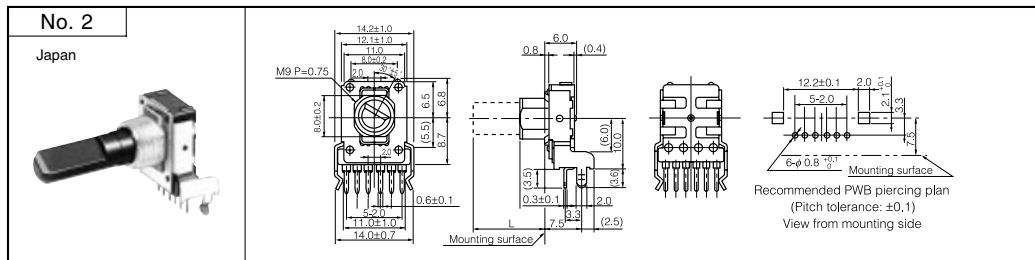
for Volume : EVJC00 (without detent)  
 for Tone : EVJC30 (with detent)  
 EVJC31

● Horizontal, without Bushing .....



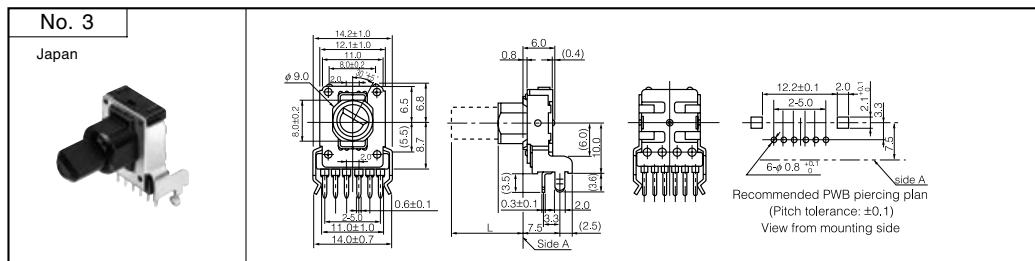
for Volume: EVJC20  
 for Tone : EVJC50 (without detent)  
 EVJC51 (with detent)

● Horizontal, with Bushing .....



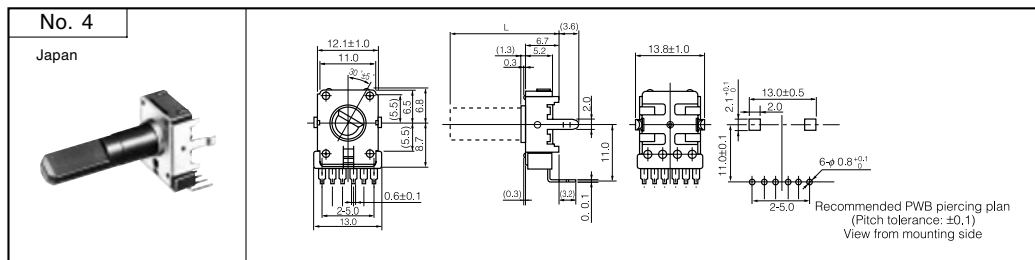
for Volume: EVJC25  
 for Tone : EVJC55 (without detent)  
 EVJC56 (with detent)

● Horizontal, with Sleeve .....



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

● Vertical, without Bushing .....



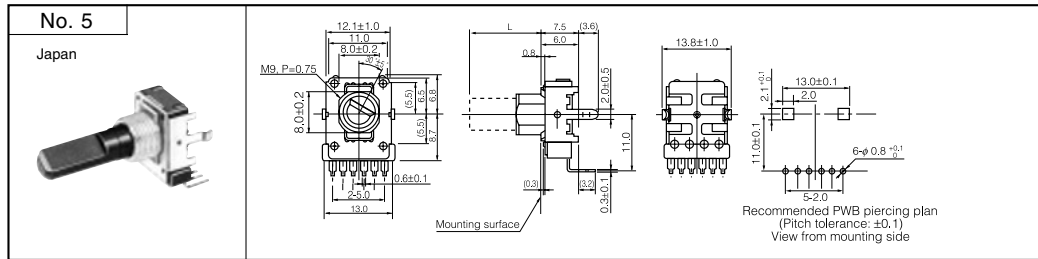
■ Dimensions in mm (not to scale)

● Vertical, with Bushing

for Volume: EVJY10

for Tone : EVJY90 (without detent)

EVJY91 (with detent)

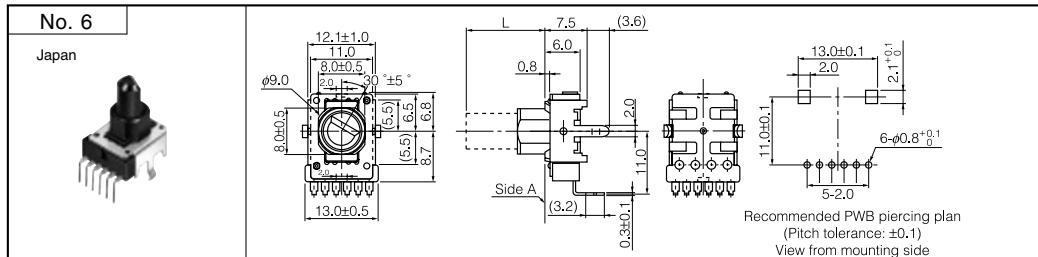


● Vertical, with Sleeve

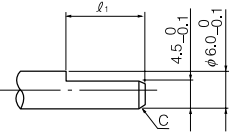
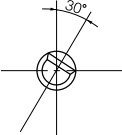
for Volume: EVJY15

for Tone : EVJY95 (without detent)

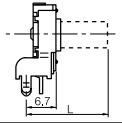
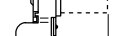

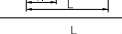
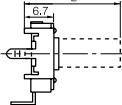
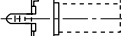
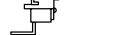
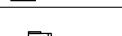
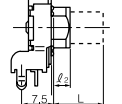

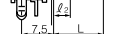
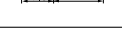


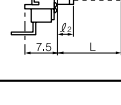
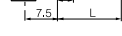
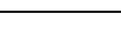



EVJY96 (with detent)



### ■ Shaft Trims and Dimensions in mm

Dimensions	Trim Position
	 <p style="text-align: right;">Terminal side</p>

Note: The drawing is at full CCW position

Style			Dimensions in mm			
			Shaft			Bushing
			L	$l_1$	Comercut	$l_2$
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	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
			25.0	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
			25.0	12.0	C1.0	5.0, 7.0

### Major Specifications

#### 1. Mechanical Specifications

Applications	12 mm square Two-in-One
Rotation Angle	300 ° ±5 °
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 (Measured at the top of the shaft)	0.35 mm max.
Bushing-Nut Tightening Torque	1 N·m max.

#### 2. Electrical Specifications

Nominal Total Resistance	5 kΩ to 500 kΩ (Tolerance ±20 %)																																																							
Taper	A, B, C, D, G, BH																																																							
Power Rating	0.05 W (0 °C to 50 °C)	<p>Power Derating Curve</p> <p>Rated Load(%)</p> <p>Ambient Temperature(°C)</p>																																																						
Voltage Rating	$E = \sqrt{P \cdot R}$ but $E \leq 50$ Vac $E$ =Voltage Rating (V) $P$ =Power Rating (W) $R$ =Nominal Total Resistance (Ω)																																																							
Residual Resistance	<table border="1"> <thead> <tr> <th rowspan="2">Type</th> <th colspan="4">For general purpose (tone)</th> <th colspan="4">For volume control</th> </tr> <tr> <th>A, B, D, G</th> <th>B, C, G</th> <th>A, D</th> <th>C</th> <th>A, B, D</th> <th>A, B, D</th> <th>C</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>Nominal Total Resistance</td> <td>1 to 2</td> <td>2 to 3</td> <td>2 to 3</td> <td>1 to 2</td> <td>1 to 2</td> <td>2 to 3</td> <td>1 to 2</td> <td>2 to 3</td> </tr> <tr> <td>5 kΩ &lt; R ≤ 50 kΩ</td> <td colspan="2">25 Ω max.</td> <td>25 Ω max.</td> <td>15 Ω max.</td> <td>25 Ω max.</td> <td>20 Ω max.</td> <td colspan="2"></td> </tr> <tr> <td>50 kΩ &lt; R ≤ 250 kΩ</td> <td colspan="2">25 Ω max.</td> <td>50 Ω max.</td> <td>15 Ω max.</td> <td>50 Ω max.</td> <td>20 Ω max.</td> <td colspan="2"></td> </tr> <tr> <td>250 kΩ &lt; R ≤ 500 kΩ</td> <td colspan="2">100 Ω max.</td> <td>100 Ω max.</td> <td>50 Ω max.</td> <td>100 Ω max.</td> <td>50 Ω max.</td> <td colspan="2"></td> </tr> </tbody> </table>			Type	For general purpose (tone)				For volume control				A, B, D, G	B, C, G	A, D	C	A, B, D	A, B, D	C	C	Nominal Total Resistance	1 to 2	2 to 3	2 to 3	1 to 2	1 to 2	2 to 3	1 to 2	2 to 3	5 kΩ < R ≤ 50 kΩ	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.	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.		
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Maximum Attenuation (for volume control, taper A, B, D)	<table border="1"> <thead> <tr> <th>Nominal total resistance</th> <th>Max. Attenuation</th> <th rowspan="4">Insertion loss</th> </tr> </thead> <tbody> <tr> <td>5 kΩ ≤ R &lt; 10 kΩ</td> <td>-65 dB max.</td> </tr> <tr> <td>10 kΩ ≤ R &lt; 50 kΩ</td> <td>-72 dB max.</td> </tr> <tr> <td>50 kΩ ≤ R &lt; 100 kΩ</td> <td>-82 dB max.</td> </tr> <tr> <td>100 kΩ ≤ R</td> <td>-92 dB max.</td> <td>0.1 dB max.</td> </tr> </tbody> </table>	Nominal total resistance	Max. Attenuation	Insertion loss	5 kΩ ≤ R < 10 kΩ	-65 dB max.	10 kΩ ≤ R < 50 kΩ	-72 dB max.	50 kΩ ≤ R < 100 kΩ	-82 dB max.	100 kΩ ≤ R	-92 dB max.	0.1 dB max.																																											
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Tracking	For volume control within 3 dB at -40 to 0 dB For Tone control within 3 dB at midpoint																																																							
Insulation Resistance	100 MΩ min. at 250 Vdc																																																							
Dielectric Withstanding Voltage	300 Vac for 1 minute																																																							
Noise Level	47 mV max. Apply 20 Vdc (When Voltage Rating < 20 V, use the rated voltage.) Rotate shaft at 30 r/min.																																																							

#### 3. Endurance

Rotation Life	15000 cycles min.
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Note: No direct current should be applied.

#### 4. Minimum Quantity/Packing Unit

Minimum Quantity/ Packing Unit	EVJC/EVJY	80 pcs. (Tray Pack)	L ≥ 20.0 mm
		60 pcs. (Tray Pack)	L < 20.0 mm
Quantity/ Carton	EVJC/EVJY	800 pcs.	L ≥ 20.0 mm
		600 pcs.	L < 20.0 mm