

### 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



#### ■ 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
With sleeve	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	
Vertical	Without bushing	—	Volume control	Without detent	EVJY00
			Tone control	Without detent	EVJY80
				Midpoint	EVJY81
	With bushing	—	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 (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	0.05 W (0 °C to 50 °C) For potentiometers operating in ambient temperatures above 50 °C, Rating should be derated in accordance with the figure on the right. <div style="text-align: right;"> <p>Power Derating Curve</p> <table border="1"> <caption>Power Derating Curve Data</caption> <thead> <tr> <th>Ambient Temperature (°C)</th> <th>Rated Load (%)</th> </tr> </thead> <tbody> <tr><td>0</td><td>100</td></tr> <tr><td>20</td><td>100</td></tr> <tr><td>40</td><td>100</td></tr> <tr><td>50</td><td>100</td></tr> <tr><td>60</td><td>66.7</td></tr> <tr><td>70</td><td>33.3</td></tr> </tbody> </table> </div>	Ambient Temperature (°C)	Rated Load (%)	0	100	20	100	40	100	50	100	60	66.7	70	33.3																													
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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 &lt; R &lt; 10 kΩ</td> <td>-65 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> <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 Withstand Voltage	300 Vac for 1 minute																																												
Noise Level	47 mV max. Apply 20 V (When Voltage Rating < 20 V, use the rated voltage.) 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																																											
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\*1 : No direct current should be applied.

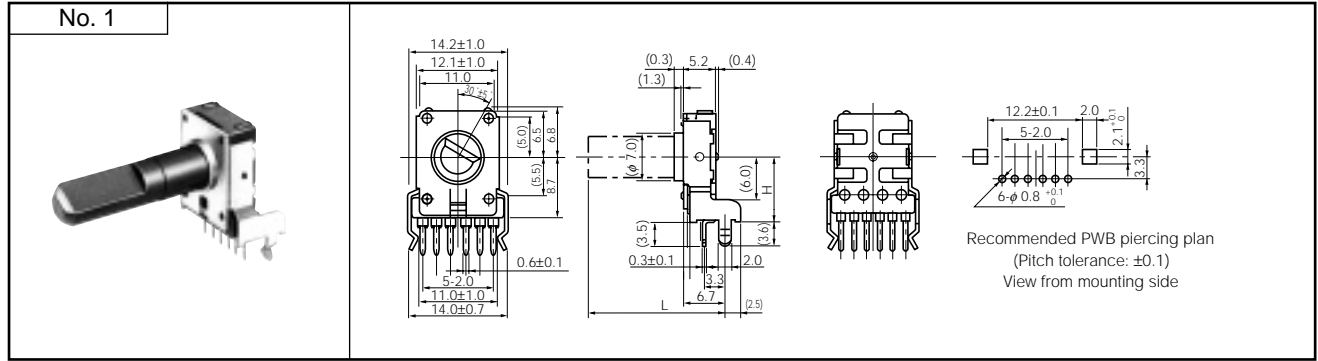
\*2 : With bushing : L=L+7.5 mm

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)

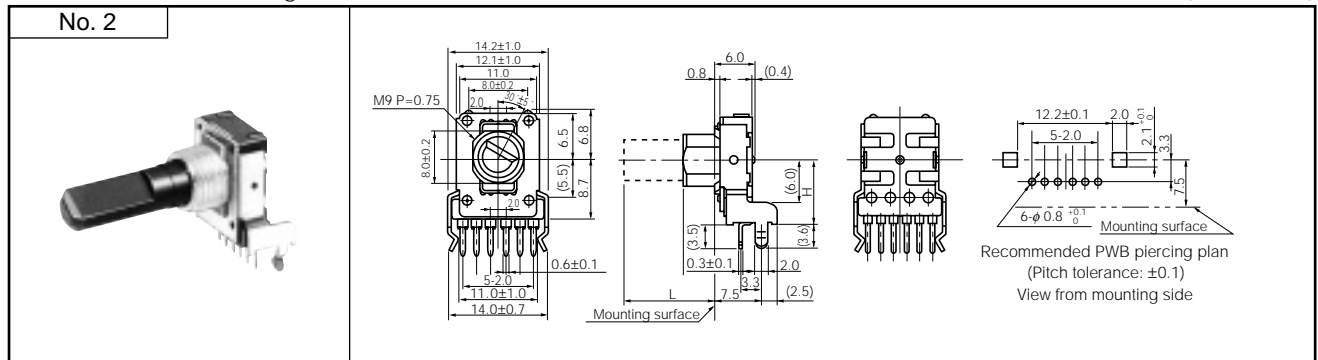
for Volume : EVJC00, EVJC90  
 for Tone : EVJC30, EVJC40 (without detent)  
 EVJC31, EVJC41 (with detent)

● Horizontal, without Bushing



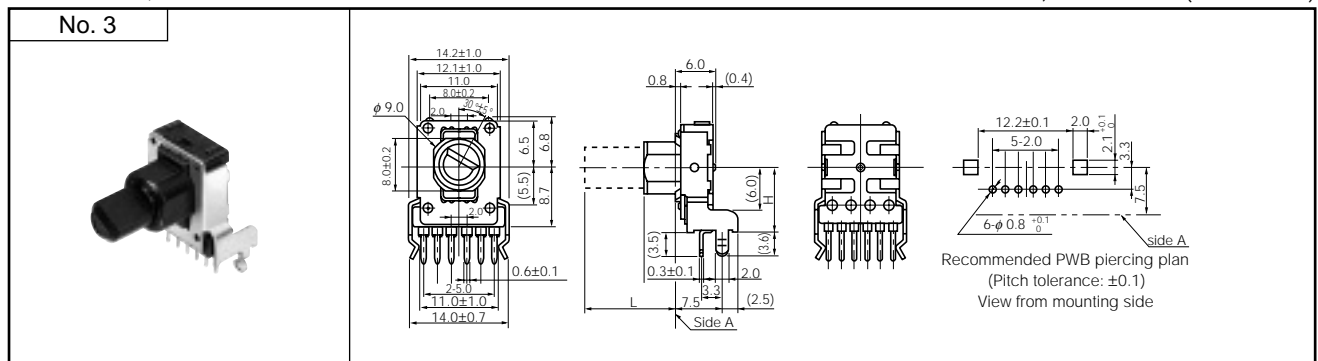
for Volume : EVJC20, EVJCB0  
 for Tone : EVJC50, EVJCH0 (without detent)  
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● Horizontal, with Bushing



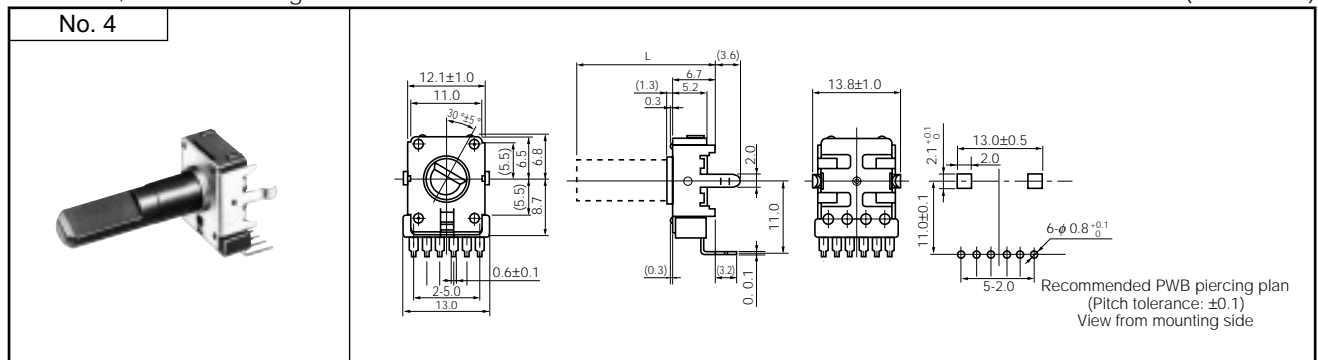
for Volume : EVJC25, EVJCB5  
 for Tone : EVJC55, EVJCH5 (without detent)  
 EVJC56, EVJCH6 (with detent)

● 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

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