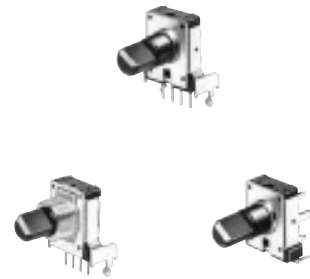


### 12 mm Square Rotary Potentiometers with Insulated Shaft

Japan  
Malaysia

Type: **EVJ01/EVJ02**



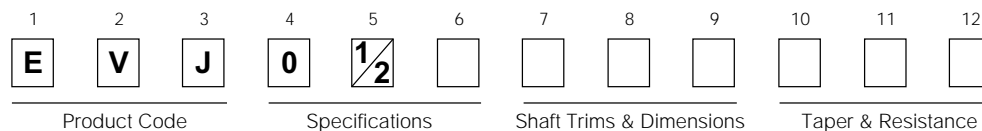
#### ■ Features

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

#### ■ Recommended Applications

- Audio Equipment
- Video Equipment
- Electronic Musical Instruments

#### ■ Explanation of Part Numbers



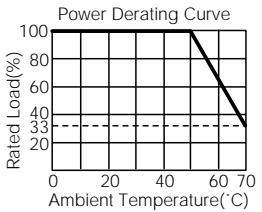
#### ■ Product Chart

Installation direction	Style	Height (H=mm)	Detent	Type
Horizontal	Without bushing	10.0	Without detent	EVJ01A
			Midpoint	EVJ01K
		12.5	Without detent	EVJ01J
			Midpoint	EVJ01F
	With bushing	10.0	Without detent	EVJ01B
			Midpoint	EVJ01D
12.5		Without detent	EVJ01H	
		Midpoint	EVJ01L	
Vertical	Without bushing	—	Without detent	EVJ02A
			Midpoint	EVJ02H
	With bushing	—	Without detent	EVJ02B
			Midpoint	EVJ02K

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.

Oct. 2005

### ■ Specifications

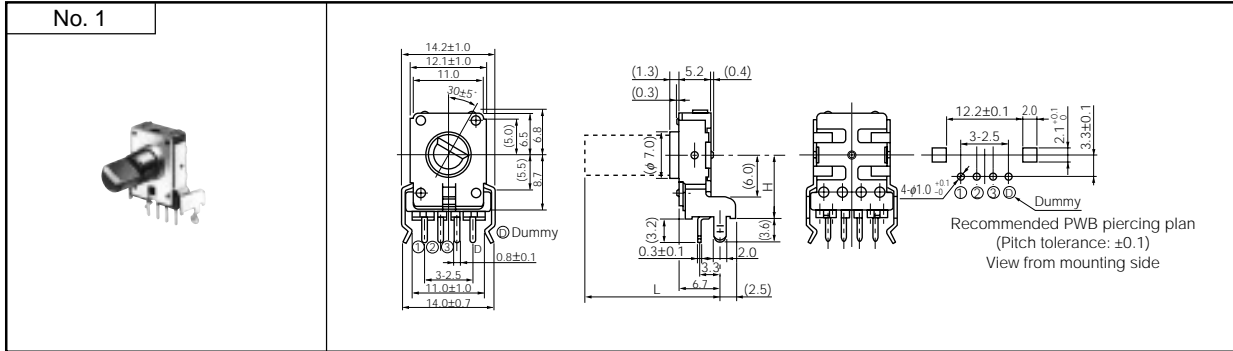
Classification	Item																										
Applications	12 mm Square Insulated Shaft																										
Mechanical Specifications	Rotation Angle	300 °																									
	Rotation Torque	2 mN·m to 20 mN·m																									
	Shaft Stopper Strength	0.5 N·m min.																									
	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																									
	Power Rating	<p>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.</p> 																									
	Residual Resistance	<table border="1"> <thead> <tr> <th colspan="2">Taper &amp; Terminal</th> <th>A, B, D, G 1 to 2</th> <th>B, C, G 2 to 3</th> <th>A, D 2 to 3</th> <th>C 1 to 2</th> </tr> </thead> <tbody> <tr> <td>Nominal</td> <td>5 kΩ &lt; R &lt; 50 kΩ</td> <td>25 Ω max.</td> <td></td> <td>25 Ω max.</td> <td></td> </tr> <tr> <td>Total</td> <td>50 kΩ &lt; R &lt; 250 kΩ</td> <td>25 Ω max.</td> <td></td> <td>50 Ω max.</td> <td></td> </tr> <tr> <td>Resistance</td> <td>250 kΩ &lt; R &lt; 500 kΩ</td> <td></td> <td>100 Ω max.</td> <td></td> <td>100 Ω max.</td> </tr> </tbody> </table>		Taper & Terminal		A, B, D, G 1 to 2	B, C, G 2 to 3	A, D 2 to 3	C 1 to 2	Nominal	5 kΩ < R < 50 kΩ	25 Ω max.		25 Ω max.		Total	50 kΩ < R < 250 kΩ	25 Ω max.		50 Ω max.		Resistance	250 kΩ < R < 500 kΩ		100 Ω max.		100 Ω max.
		Taper & Terminal		A, B, D, G 1 to 2	B, C, G 2 to 3	A, D 2 to 3	C 1 to 2																				
		Nominal	5 kΩ < R < 50 kΩ	25 Ω max.		25 Ω max.																					
		Total	50 kΩ < R < 250 kΩ	25 Ω max.		50 Ω max.																					
Resistance	250 kΩ < R < 500 kΩ		100 Ω max.		100 Ω max.																						
Insulation Resistance	100 MΩ min. at 250 Vdc																										
Dielectric Withstand Voltage	300 Vac for 1 minute																										
Noise Level	<p>47 mV max. Apply 20 V (When Voltage Rating &lt; 20 V, use the rated voltage.) Rotate shaft at 30 r/min.</p>																										
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

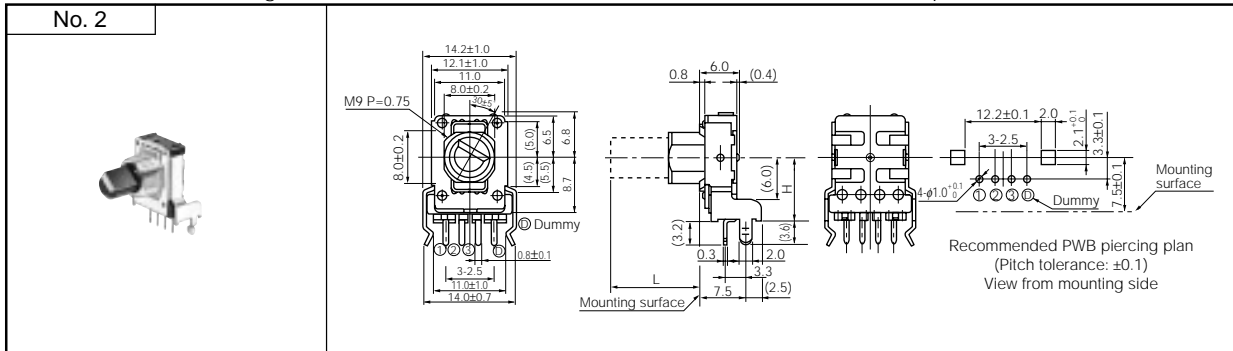
■ Dimensions in mm (not to scale)

● Horizontal, without Bushing ..... without midpoint detent: EVJ01A, EVJ01J  
 with midpoint detent: EVJ01K, EVJ01F

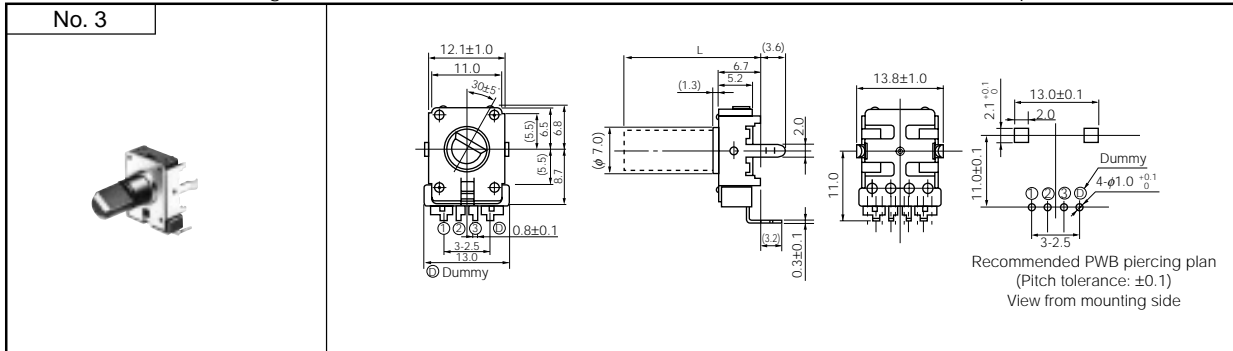


Note: Midpoint detent and midpoint tap available

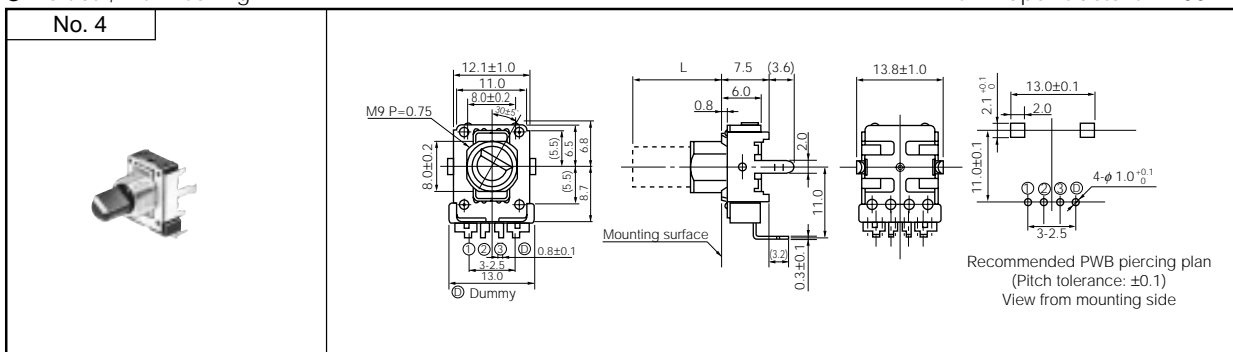
● Horizontal, with Bushing ..... without midpoint detent: EVJ01B, EVJ01H  
 with midpoint detent: EVJ01D, EVJ01L



● Vertical, without Bushing ..... without midpoint detent: EVJ02A  
 with midpoint detent: EVJ02H



● Vertical, with Bushing ..... without midpoint detent: EVJ02B  
 with midpoint detent: EVJ02K



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### ■ Circuit Diagram and PWB Piercing Plan

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

Notes:

1. Relation of mounting holes and terminals. Refer to each piercing plan for dimensions.
2. View from mounted part side.
3. D is for dummy terminal.

### ■ Shaft Trims and Dimensions in mm

Dimensions	Trim Position

Note: The drawing at full CCW position

Style			Dimensions in mm			
			Shaft			Bushing
			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	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

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Nov. 2005