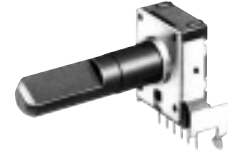


12 mm Square Two-in-One
Rotary Potentiometers (Dual Type)

Japan
Malaysia



Type: **EVJC/EVJY**

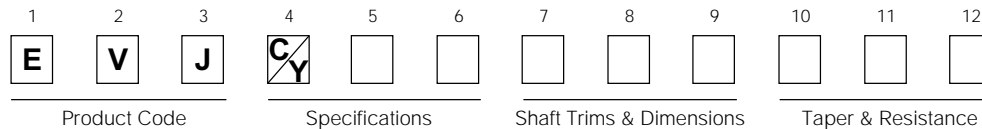
■ Features

- 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



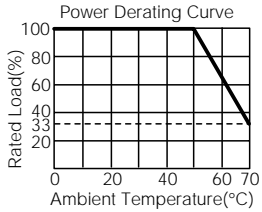
■ Product Chart

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

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Oct. 2005

■ 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	<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 rowspan="2">Type Taper & Terminal</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 < R < 50 kΩ</td> <td colspan="2">25 Ω max.</td> <td>25 Ω max.</td> <td>15 Ω max.</td> <td colspan="2">25 Ω max.</td> <td>20 Ω max.</td> </tr> <tr> <td>50 kΩ < R < 250 kΩ</td> <td colspan="2">25 Ω max.</td> <td>50 Ω max.</td> <td>15 Ω max.</td> <td colspan="2">50 Ω max.</td> <td>20 Ω max.</td> </tr> <tr> <td>250 kΩ < R < 500 kΩ</td> <td colspan="2">100 Ω max.</td> <td>100 Ω max.</td> <td>50 Ω max.</td> <td colspan="2">100 Ω max.</td> <td>50 Ω max.</td> </tr> </tbody> </table>	Type Taper & Terminal	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>Insertion loss</th> </tr> </thead> <tbody> <tr> <td>5 kΩ < R < 10 kΩ</td> <td>-65 dB max.</td> <td rowspan="4">0.1 dB max.</td> </tr> <tr> <td>10 kΩ < R < 50 kΩ</td> <td>-72 dB max.</td> </tr> <tr> <td>50 kΩ < R < 100 kΩ</td> <td>-82 dB max.</td> </tr> <tr> <td>100 kΩ < R</td> <td>-92 dB max.</td> </tr> </tbody> </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.																																							
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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																																																		
	60 pcs. (Tray Pack)	L > 20.0 mm																																																		
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*1 : No direct current should be applied.

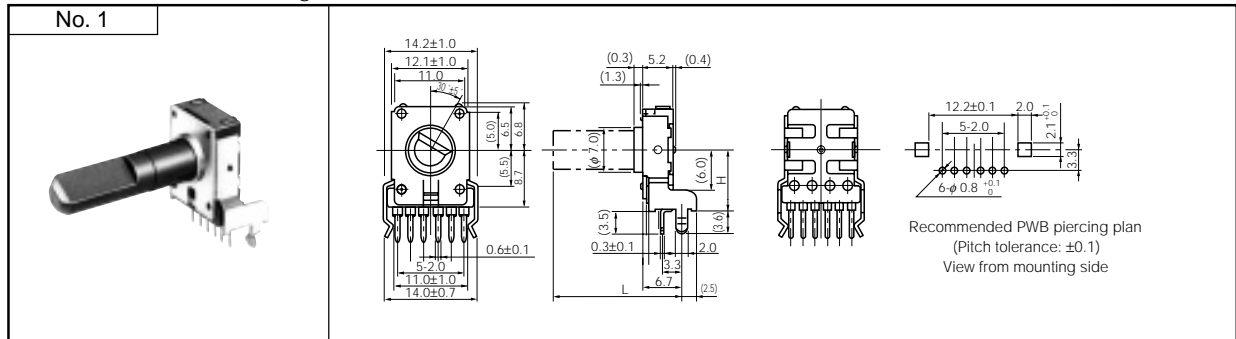
*2 : With bushing : L=L+7.5 mm

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■ Dimensions in mm (not to scale)

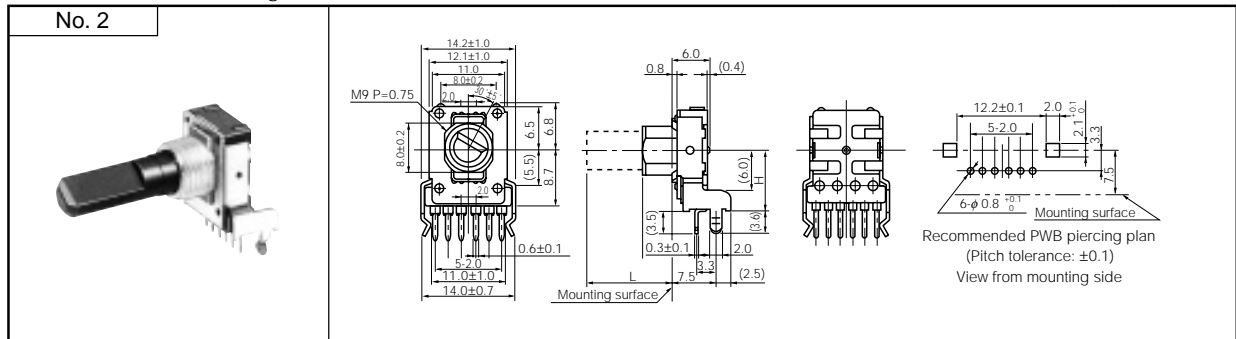
for Volume : EVJC00, EVJC90
 for Tone : EVJC30, EVJC40 (without detent)
 EVJC31, EVJC41 (with detent)

● Horizontal, without Bushing



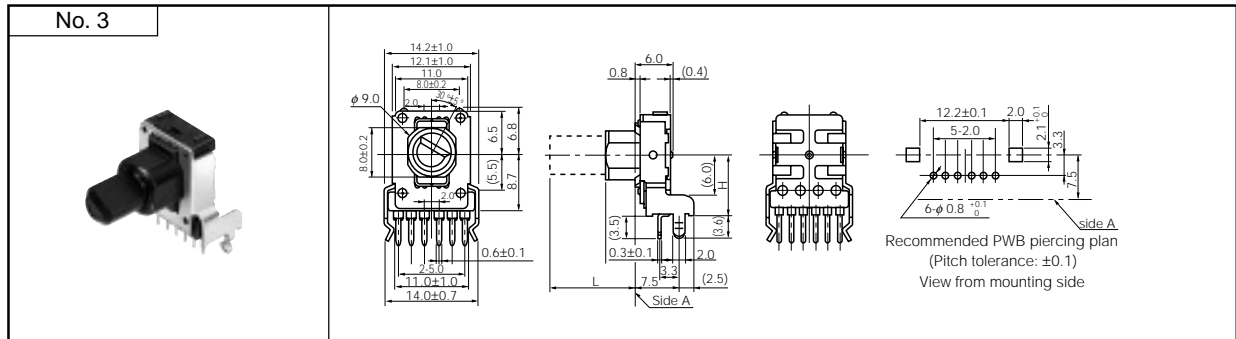
for Volume : EVJC20, EVJCB0
 for Tone : EVJC50, EVJCH0 (without detent)
 EVJC51, EVJCH1 (with detent)

● Horizontal, with Bushing



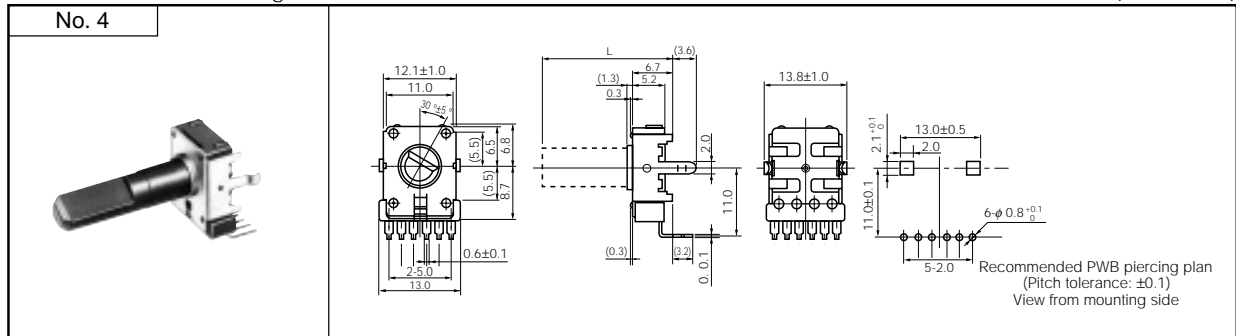
for Volume : EVJC25, EVJCB5
 for Tone : EVJC55, EVJCH5 (without detent)
 EVJC56, EVJCH6 (with detent)

● Horizontal, with Sleeve



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

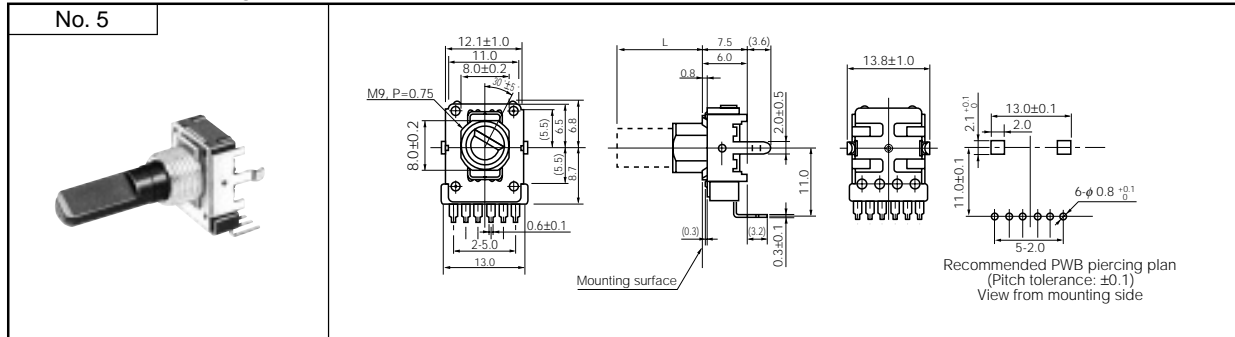
● Vertical, without Bushing



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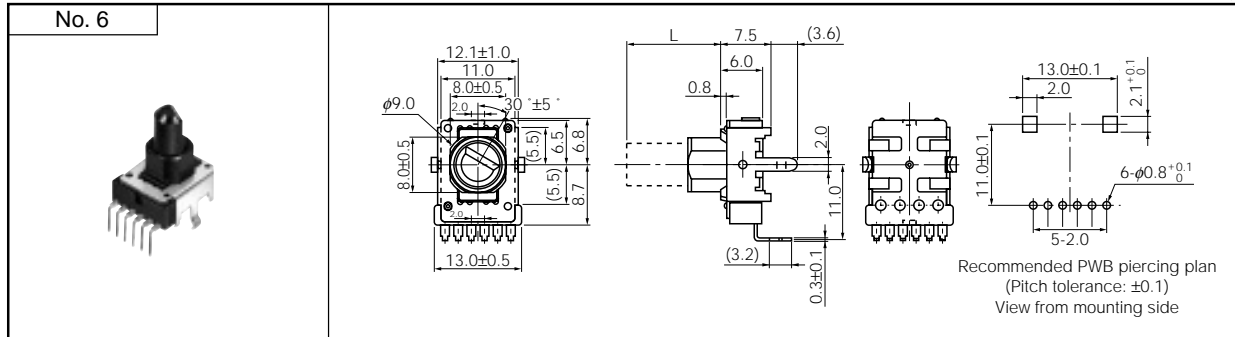
for Volume : EVJY10
 for Tone : EVJY90 (without detent)
 EVJY91 (with detent)

● 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 ₁	Corner cut	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	—	
without Bushing	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	
	with Bushing or with Sleeve	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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Mar. 2005