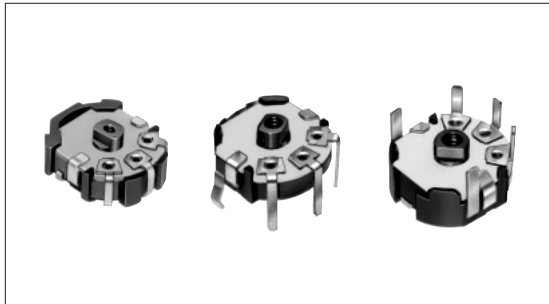


Knob Operating Type Potentiometer Without Knob Type

RK08H Series



Compact type potentiometer suitable for volume and tone controls.



Typical Specifications

Items	Specifications
Total resistance tolerance	±30%
Maximum operating voltage	50V AC 20V DC (Single-unit only)
Total rotational angle	200±10°
Operating life	Without detent 10,000cycles With detent 5,000cycles
Operating temperature range	-10°C to +60°C

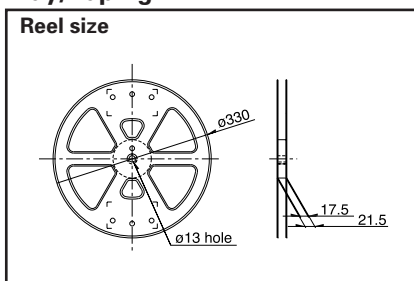
Product Line

Number of resistor elements	Mounting direction	Length of the shaft (mm)	Center detent	Total resistance (kΩ)	Resistance taper	Soldering	Minimum order unit (pcs.)	Products No.	Drawing No.
Single-unit	Vertical type	1	Without	50	1B	Manual	100	RK08H11100U3	1
				10				RK08H11100UD	
			100	RK08H11100XC					
	4.5	With	10	1B	RK08H1110A04			2	
			50	15C	RK08H1120030			3	
		Vertical type	Without	10	1B			RK08H113003Q	4
50	15A			RK08H113003G					
Dual-unit	Back-to-back mounting type	1	—	10	15C	Manual	100	RK08H12100GP	1
				50	15A			RK08H12100F3	
	Vertical type		50	15A	Reflow	1,000	RK08H122005A	3	
							15C	RK08H123002K	4

Packing Specifications

Tray/Taping

Unit:mm



Soldering	Packing specifications	Number of packages (pcs.)		Tape width (mm)	Export package measurements (mm)
		1 case /Japan	1 case /export packing		
Manual	Tray	5,000	10,000	—	368 × 530 × 180
Reflow	Taping	4,000	4,000	16	397 × 401 × 139

Notes

1. Products other than those listed in above products are also available. Please contact us for details.
2. Dip soldering can be applied to the above products. Please specify if required Back-to-back mounting types are excluded.
3. We recommend print boards with a thickness of 0.8mm to 1.2mm. For 1.6mm thickness board applications, please contact us.
4. Please place purchase orders per minimum order unit N (integer).

Refer to **P.409** for product varieties.
Refer to **P.409, 456** for resistance taper.
Refer to **P.410** for soldering conditions.


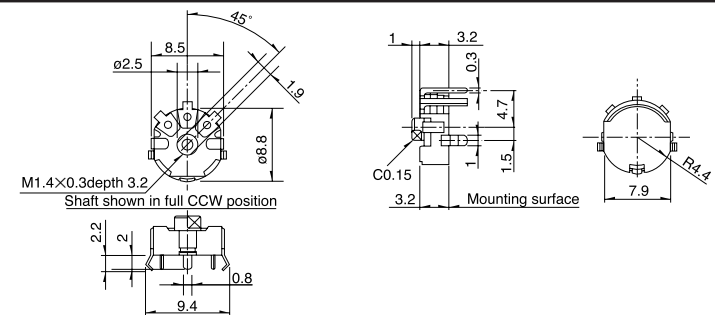

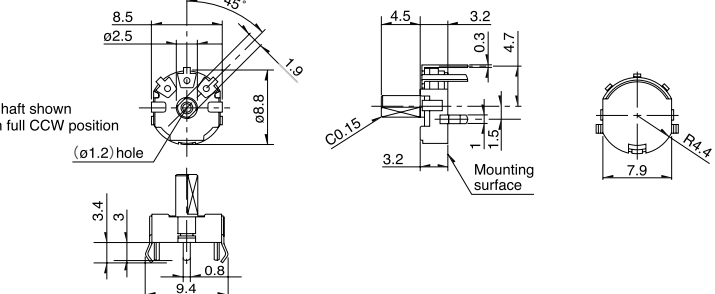
Knob Operating Type Potentiometer Without Knob Type | RK08H Series

Rotary
Potentiometers
Slide
Potentiometers

Metal
Shaft
Insulated
Shaft
Knob
Operating

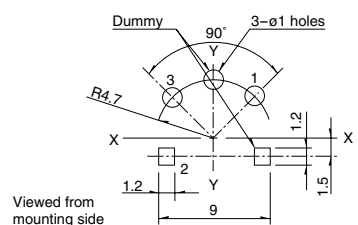
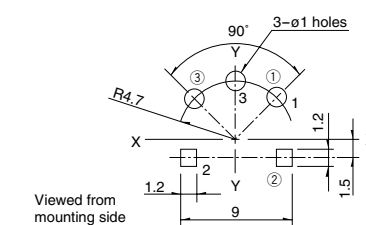
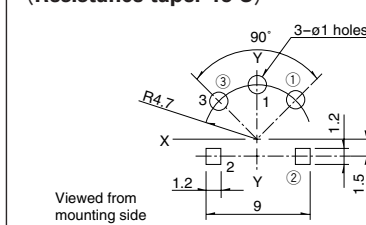
Dimensions (Vertical Type)

Unit:mm

No.	Photo	Style
1	<p>Single-shaft, single-unit RK08H1110 Single-shaft, dual-unit RK08H1210</p> 	
2	<p>Single-shaft, single-unit RK08H1110</p> 	


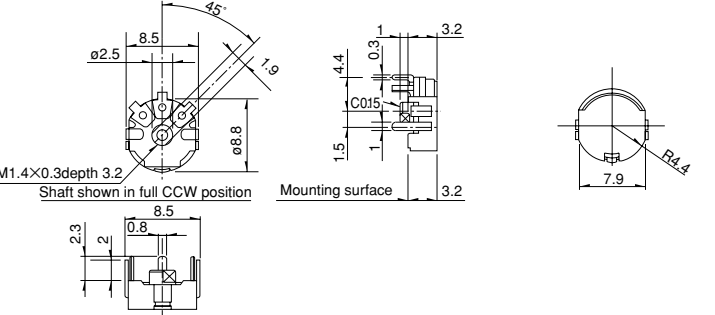
PC Board Mounting Hole Details/ Terminal Layout

Unit:mm

Single-shaft, single-unit	Single-shaft, dual-unit	Single-shaft, dual-unit (Resistance taper 15 C)
		

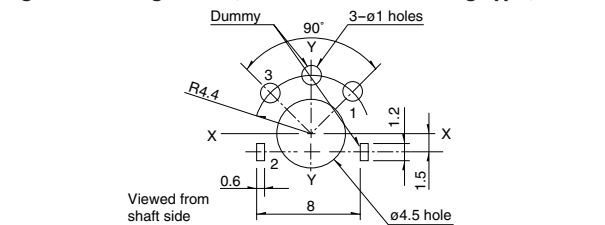
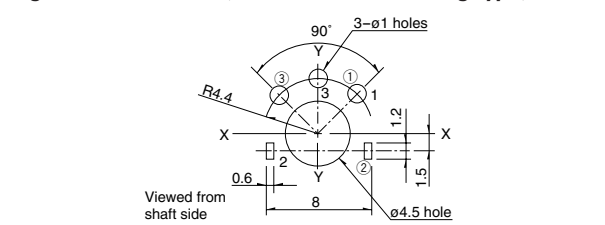
Dimensions (Back-to-back Mounting Type)

Unit:mm

No.	Photo	Style
3	<p>Single-shaft, single-unit RK08H1120 Single-shaft, dual-unit RK08H1220</p> 	

PC Board Mounting Hole Details / Terminal Layout

Unit:mm


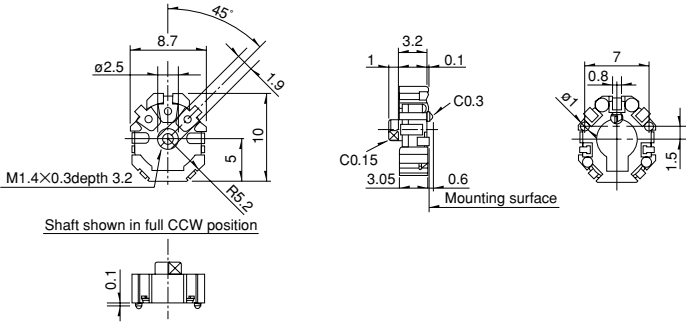
Single-shaft, single-unit (Back-to-back mounting type)	Single-shaft, dual-unit (Back-to-back mounting type)
	

Note

Keep the DUMMY terminal open in the circuit.

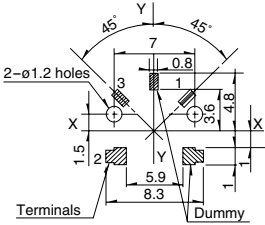
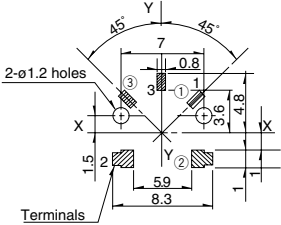
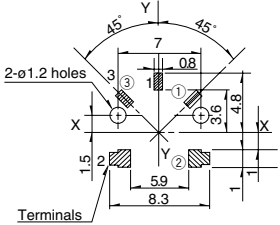
Dimensions (Reflow Type)

Unit:mm

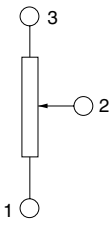
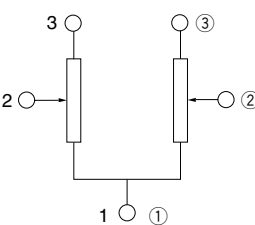
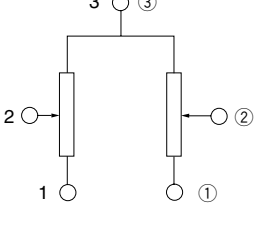
No.	Photo	Style
4	<p>Single-shaft, single-unit RK08H1130 Single-shaft, dual-unit RK08H1230</p> 	 <p>Shaft shown in full CCW position</p>

PC Board Mounting Hole Details / Terminal Layout

Unit:mm

Single-shaft, single-unit	Single-shaft, dual-unit	Single-shaft, dual-unit (Resistance taper 15 C)
		

Standard Specification Circuit Diagram

Single-shaft, single-unit	Single-shaft, dual-unit	Single-shaft, dual-unit (Resistance taper 15 C)
		

Note

Keep the DUMMY terminal open in the circuit.

Product Varieties

When ordering product varieties that are not listed in the Product Line, please specify by referring to the below example.

Total Resistance Variety

Total resistance (kΩ)	5	10	20	50	100
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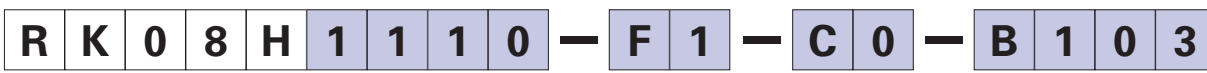
Resistance Taper

Resistance taper	15A	1B	3B	15C
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Orders Other Than Recommended Products

When ordering product varieties that are not listed in the Product Line, please specify by referring to the below example.

Sample Part Number



Model type

Code	Model type
111	Single-unit Vertical type
112	Single-unit Back-to-back mounting type
113	Single-unit Reflow type
121	Dual-unit Vertical type
122	Dual-unit Back-to-back mounting type
123	Dual-unit Reflow type

Length of the shaft (mm)

Code	Length of the shaft
F1	1
F4	4.5

* Only 1mm types are provided with the M1.4 tap screws.
* Reflow soldering cannot be applied in the 4.5 mm type.

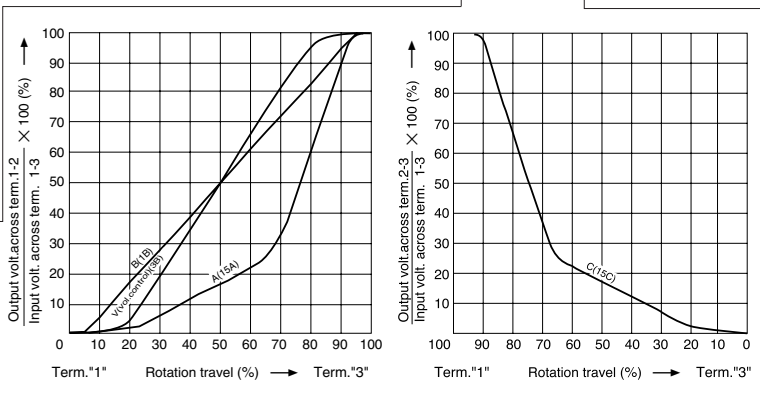
Detent

Code	Center detent
C0	Without
C1	With

* Detent can only be specified for non-reflow single-unit types.

Resistance taper

Code	Resistance taper	Code	Resistance taper
A	15A	C	15C
B	1B	V	3B





Total resistance

Code	Total resistance (kΩ)	Code	Total resistance (kΩ)
502	5	503	50
103	10	104	100
203	20		

Note

marked are specifications recommended by ALPS.

List of Varieties

Items		Type	Without knob	
		Model	RK08H1□1 RK08H1□2	RK08H1□3
			Vertical back-to-back mounting	Reflow type
Photo				
Electrical performance	Rated power	0.03W		
	Insulation resistance	100MΩ min. 100V DC		
	Voltage proof	100V AC for 1minute		
Mechanical performance	Strength of the operating section	Stopper strength	0.1N·m	
		Push-pull strength (In vertical direction against the P.W.B. surface)	10N max.	
	Vibration		10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z and for 2 hours respectively	
	Solder heat resistance	Manual soldering	350°C max. 3s max.	
		Dip soldering	_____	
Reflow soldering		_____	Please see P.410	
Environmental performance	Cold	-10±2°C for 96h		
	Dry heat	70±2°C for 96h		
	Damp heat	40±2°C, 90 to 95%RH for 96h		
Page		406		

Rotary Potentiometers
Slide Potentiometers

Metal Shaft
Insulated Shaft
Knob Operating

Maximum Attenuation and Residual Resistance

※Application of non-standard

Nominal total resistance	Maximum attenuation	Nominal total resistance	※ Residual resistance
$R \geq 100k\Omega$	90dB min.	$100k\Omega \geq R \geq 50k\Omega$	0.1% or less of nominal total resistance
$100k\Omega > R \geq 50k\Omega$	80dB min.	$50k\Omega > R > 10k\Omega$	30Ω or less
$50k\Omega > R \geq 10k\Omega$	70dB min.	$10k\Omega \geq R$	20Ω or less
$10k\Omega > R$	60dB min.		

- Knob Operating Type Potentiometers Cautions411
- Knob Operating Type Potentiometers Soldering Conditions410

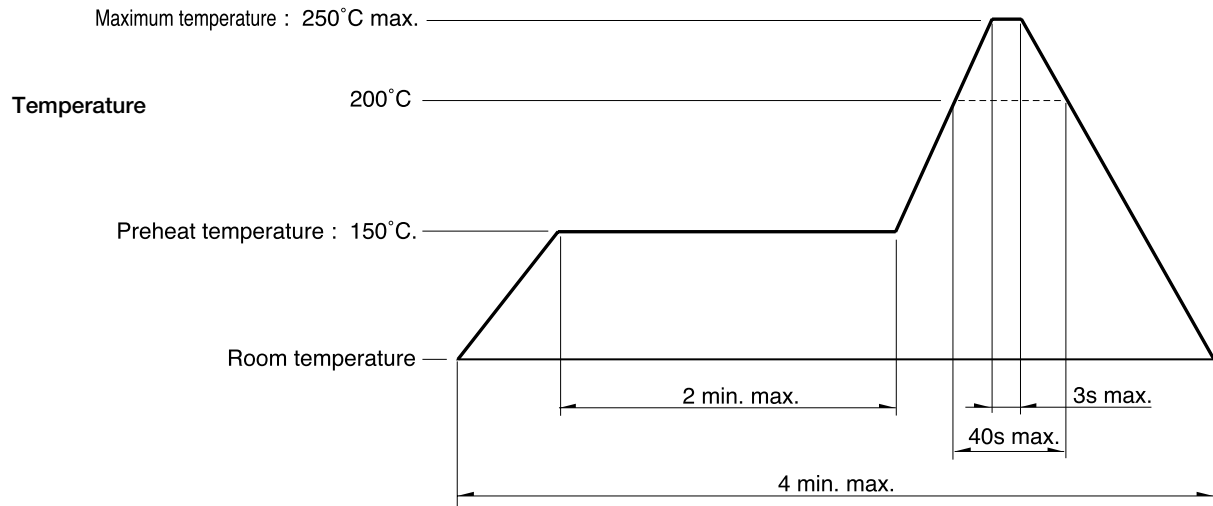
Note

For reflow type taping, please contact us.

Soldering Conditions

Soldering Conditions

1. Recommended reflow conditions



- | | |
|------------------------------|--|
| 2. Cleaning | Cleaning should not be attempted. |
| 3. Type of solder to be used | Use cream solder that contains 10 - 15 %wt flux. |
| 4. Soldering | Mounting plate should also be soldered. |

Notes

- When using an infrared reflow oven, solder may sometimes not be applied. Be sure to use a hot air reflow oven or a type that uses infrared rays in combination with hot air.
- The temperatures given above are the maximum temperatures at the terminals of the potentiometer when employing a hot air reflow method. The temperature of the PC board and the surface temperature of the potentiometer may vary greatly depending on the PC board material, its size and thickness. Ensure that the surface temperature of the potentiometer does not rise to 250°C or greater.
- Conditions vary to some extent depending on the type of reflow bath used. Be sure to give due consideration to this prior to use.

Rotary
Potentiometers
Slide
Potentiometers

Metal
Shaft

Insulated
Shaft

Knob
Operating