

Knob Operating Type Potentiometer Self-return Type for Zoom Control

RK10N Series



Compact design that offers superb operability and contributes to the space-saving functions of mobile phones.



Features

- Featuring a variable resistance range that ensures superb operability.
- Positive touch operation.

Applications

- For zoom control of digital camcorders
- For zoom control of various portable devices

Rotary Potentiometers

Slide Potentiometers

Multi Control Devices

Rotary Sensors
Linear Sensors

Metal Shaft

Insulated Shaft

Knob Operating

Typical Specifications

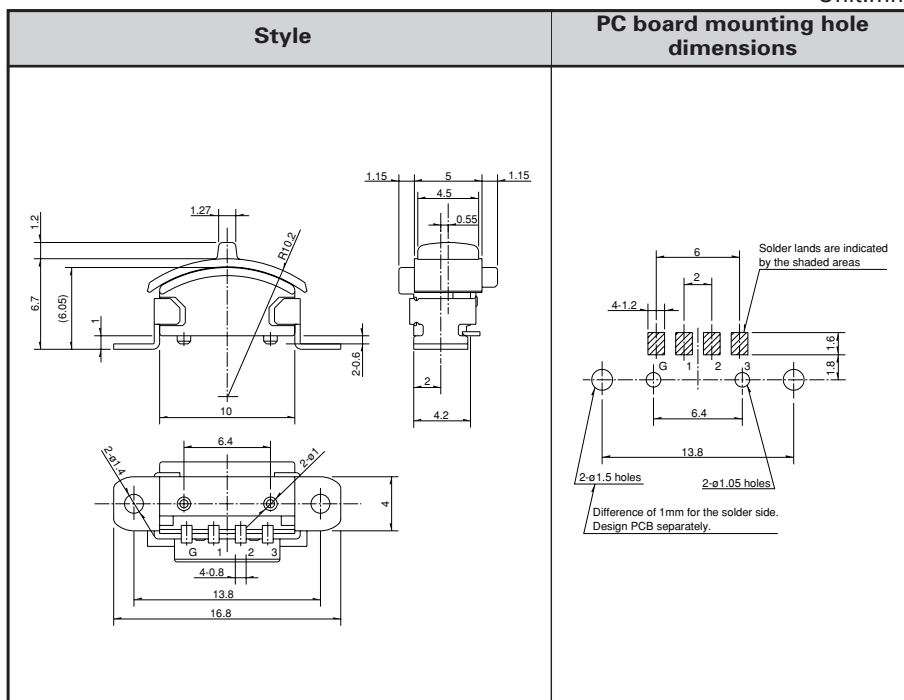
Items	Specifications
Total resistance tolerance	±30%
Maximum operating voltage	50V AC
Total rotational angle	26±2°
Operating force	At starting force : 0.36 ± 0.1N, Near an end : 1.5N or less
Operating life	25,000 cycles
Operating temperature	-10°C to +60°C

Recommended Products List

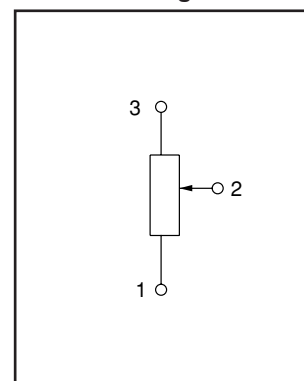
Number of resistor elements	Products No.	Total resistance	Resistance taper	Soldering	Rated power	Minimum packing unit (pcs.)
Single-unit	RK10N111000B	50kΩ	B	Manual	0.0125W	500

Dimensions

Unit:mm



Circuit Diagram



For products specifications, see P.86
For resistance taper, see P.199

Products Specifications

Items	Type	Without knob		With knob				Self return	
	Model	RK08H1□1 RK08H1□2	RK08H1□3	RK10J1□E	RK10J1□R	RK14J1□A	RK14J1□R	RK10N	
		Vertical back-to-back mounting	Reflow type	Insertion type	Reflow type	Insertion type	Reflow type	Manual soldering type	
Operating temperature range		-10°C to +70°C						-10°C to +60°C	
Electrical performance	Total resistance tolerance	±30%							
	Rated power	0.03W						0.0125W	
	Maximum operating voltage	50V AC (Single-unit available with 20V DC)						50V AC	
	Insulation resistance	100MΩ min. 100V DC							
	Voltage proof	1 minute 100V AC							
Mechanical performance	Total rotational angle	200±10°		270±10°		270±5°		26±2°	
	Rotational torque	1 to 10mN·m		0.5 to 10mN·m				At starting force: 0.36±0.1N Near an end: 1.5N or less	
	Strength of the operating section	Stopper strength	0.1N·m		70mN·m				40N max.
		Push-pull strength (In the direction perpendicular to the P.W.Board surface)	10N max.		5N max.				70N max. (Push strength)
	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.	—	350°C max. 3s max.	—	350°C max. 3s max.	—	350°C max. 3s max.
		Dip soldering	—				260±5°C 4±1s		—
Reflow soldering		—	Please see P.94	—	Please see P.94	—	Please see P.94	—	
Endurance	Operating life	Without detent With detent	10,000 cycles 5,000 cycles	10,000 cycles				25,000 cycles	
Environmental test	Cold	-10°C for 96h						-30°C for 48h	
	Long-term heat resistance	70°C for 96h						70°C for 48h	
	Moisture resistance	40±2°C, 90 to 95%RH for 96h							

Maximum Attenuation or Residue Resistance (Except RK10N) ※Application of remaining standard products

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.		