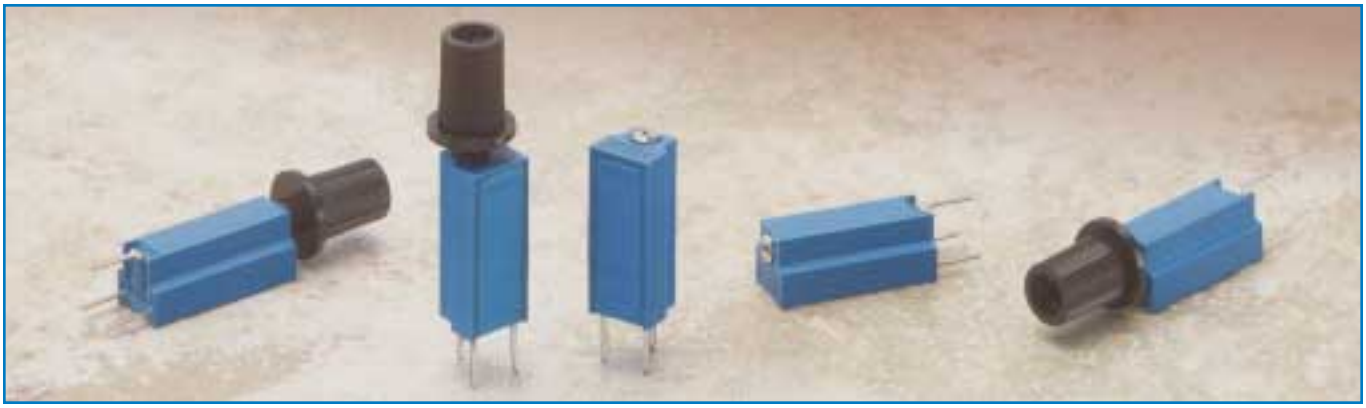
RJC07R Series

TOCOS® POTENTIOMETERS

3/4” Rectilinear, 13-Turn, Through-Hole, Sealed Cermet Trimmers



Features

- 3/4” rectilinear, 13-turn, through-hole, sealed cermet trimmers
- Space-saving vertical mount design
- Single-slot top adjustment
- Knob style available for easier adjustment
- High performance, excellent stability
- Wide operating temperature range of −55°C to +125°C
- PC board solderable pins
- Sealed to withstand wave soldering and immersion cleaning
- Meets UL flammability standards

Specifications

Electrical

Standard Resistance Range . . . . . 10Ω to 1MΩ (standard 1, 2 & 5 sequence)

Resistance Tolerance . . . . . ±10% and ±20%

End Resistance . . . . . 1% or 3Ω, whichever is greater

Resistance Taper . . . . . Linear

Peak Noise (C.R.V.) . . . . . 1% or 1Ω, whichever is greater for ≦10kΩ; 2% max. for ≧20kΩ

Power Rating . . . . . 0.75 watt at +40°C, 0 watt at +125°C

Maximum Input Voltage . . . . . 300VDC or power rating, whichever is smaller

Temperature Coefficient . . . ±100ppm/°C, 200Ω to 500kΩ ±250ppm/°C, other values

Insulation Resistance . . . . . 100MΩ minimum at 500VDC

Dielectric Strength . . . . . 900VAC, 1 minute

Adjustment Travel . . . . . 13±3 turns

Mechanical

Mechanical Travel . . . . . 13±3 turns

Shaft Torque . . . . . 7.2 to 300 gf•cm (0.10 to 4.16 oz•in)

Stop Strength . . . . . Clutch action

Flammability of Plastic Materials . . UL 94V-0 for housing; UL 94HB for knob

Nominal Weight . . . . . 1.4g; 1.8g with knob

Marking . . . . . Resistance code, date code, model type, wiring diagram

Environmental

Temperature Range . . . . . −55°C to +125°C

High Temperature Exposure . . . . . +125°C, 250 hours ΔT/R ≦±3%, S.S. ≦±1%

Load Life . . . . . +40°C, 0.75 watt, 1,000 hours ΔT/R ≦±3%, S.S. ≦±2%

Thermal Shock . . . . . −55°C, +125°C, 30 minutes each, 5 cycles ΔT/R ≦±2%, S.S. ≦±1%

Shock . . . . . 50G, 6ms, 6 directions, 3 times each ΔT/R ≦±1%, S.S. ≦±1%

Vibration . . . . . 10-2,000Hz, 1.5mm amplitude, 20G, 12 hours ΔT/R ≦±1%, S.S. ≦±1%

Humidity . . . . . +40°C, 90-95%RH, 0.75 watt, 1,000 hours ΔT/R ≦±3%, S.S. ≦±1%

Moisture Resistance . . . . . −10°C to +65°C, 80-98%RH, 0.75 watt, 10 cycles, 240 hours ΔT/R ≦±3%

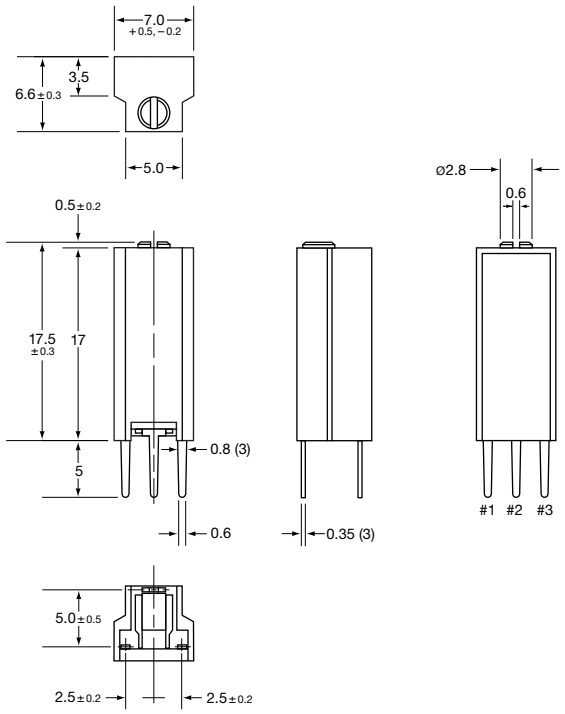
Soldering Heat Resistance . . . . . 350°C, 3 seconds ΔT/R ≦±1%

Seal Test . . . . . +85°C, hot water for 1 minute

Rotational Life . . . . . 200 cycles without discontinuity ΔT/R ≦±5%

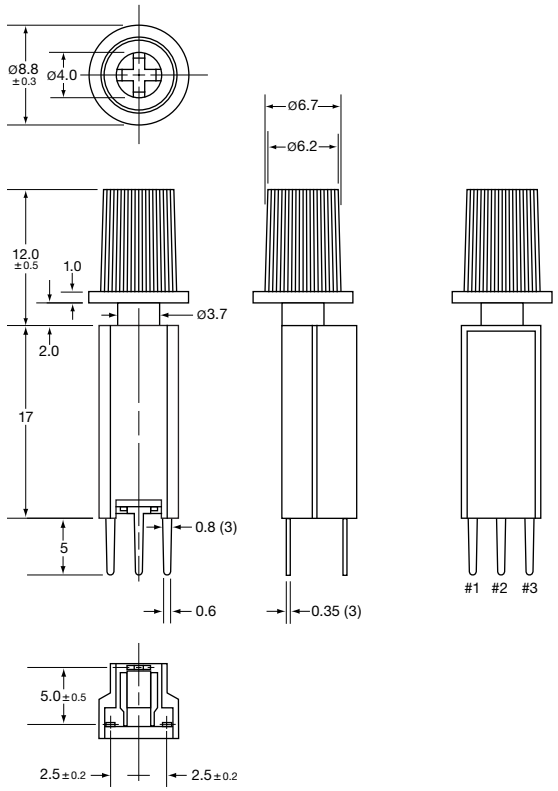
ΔT/R = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

RJC07R
Single-Slot, Short Shaft, Top Adjust



RJC07RK2
Extended Shaft, Permanent Knob, Top Adjust

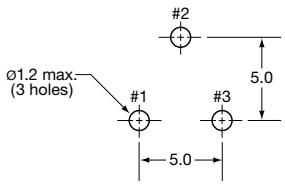
Unit: mm



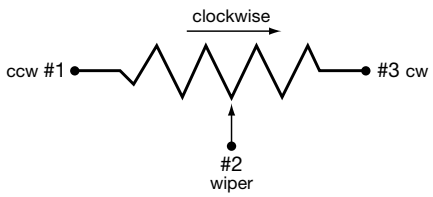
Recommended PCB Layout

RJC07R & RJC07RK2 Pin-Out

Unit: mm



Electrical Schematic



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RJC07R Series Part Numbering System

RJC07R K2 B 102 K

- K: Resistance Tolerance: K = ±10%; M = ±20%
- 102: Resistance Code: Expressed in ohms. A three digit code where the first two digits are significant figures, and the third digit indicates the number of zeros that follow these figures (i.e., 100 = 10Ω; 101 = 100Ω; 102 = 1,000Ω; 105 = 1,000,000Ω).
- B: Resistance Taper: B = Linear.
- K2: Adjustment Knob: K2 = Permanent Large Knob, Extended Shaft. Blank = No Knob, Single-Slot, Short Shaft.
- RJC07R: TOCOS Series Name.

Part Numbers

Nominal Resistance		Catalog No. Bulk		Potentiometer Styles
Value (Ω)	Code	Resistance Tolerance ±10%	Resistance Tolerance ±20%	

RJC07R Through-Hole, Single-Slot, Short Shaft, Top Adjust

10	100	RJC07R B 100 K	RJC07R B 100 M	 RJC07R
20	200	RJC07R B 200 K	RJC07R B 200 M	
50	500	RJC07R B 500 K	RJC07R B 500 M	
100	101	RJC07R B 101 K	RJC07R B 101 M	
200	201	RJC07R B 201 K	RJC07R B 201 M	
500	501	RJC07R B 501 K	RJC07R B 501 M	
1,000	102	RJC07R B 102 K	RJC07R B 102 M	
2,000	202	RJC07R B 202 K	RJC07R B 202 M	
5,000	502	RJC07R B 502 K	RJC07R B 502 M	
10,000	103	RJC07R B 103 K	RJC07R B 103 M	
20,000	203	RJC07R B 203 K	RJC07R B 203 M	
50,000	503	RJC07R B 503 K	RJC07R B 503 M	
100,000	104	RJC07R B 104 K	RJC07R B 104 M	
200,000	204	RJC07R B 204 K	RJC07R B 204 M	
500,000	504	RJC07R B 504 K	RJC07R B 504 M	
1,000,000	105	RJC07R B 105 K	RJC07R B 105 M	

RJC07RK2 Through-Hole, Extended Shaft, Permanent Knob, Top Adjust

10	100	RJC07RK2 B 100 K	RJC07RK2 B 100 M	 RJC07RK2
20	200	RJC07RK2 B 200 K	RJC07RK2 B 200 M	
50	500	RJC07RK2 B 500 K	RJC07RK2 B 500 M	
100	101	RJC07RK2 B 101 K	RJC07RK2 B 101 M	
200	201	RJC07RK2 B 201 K	RJC07RK2 B 201 M	
500	501	RJC07RK2 B 501 K	RJC07RK2 B 501 M	
1,000	102	RJC07RK2 B 102 K	RJC07RK2 B 102 M	
2,000	202	RJC07RK2 B 202 K	RJC07RK2 B 202 M	
5,000	502	RJC07RK2 B 502 K	RJC07RK2 B 502 M	
10,000	103	RJC07RK2 B 103 K	RJC07RK2 B 103 M	
20,000	203	RJC07RK2 B 203 K	RJC07RK2 B 203 M	
50,000	503	RJC07RK2 B 503 K	RJC07RK2 B 503 M	
100,000	104	RJC07RK2 B 104 K	RJC07RK2 B 104 M	
200,000	204	RJC07RK2 B 204 K	RJC07RK2 B 204 M	
500,000	504	RJC07RK2 B 504 K	RJC07RK2 B 504 M	
1,000,000	105	RJC07RK2 B 105 K	RJC07RK2 B 105 M	

Packaging

Standard: **Bulk Packaging**

Quantity
RJC07R: 20 pieces per vinyl bag; 200 pieces per box.
RJC07RK2: 50 pieces per vinyl bag; 200 pieces per box.

Soldering and Cleaning Guidelines

For soldering, cleaning and other information, refer to Guidelines and Precautions for Using Potentiometers.