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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# RJ-13

## CERMET TRIMMERS

### LIST OF PART NUMBERS

Adjustment position	Shape of terminal (Top view)	Form of packaging	Pieces in package
		Plastic bag	
Top adjustment		RJ-13P	50 pcs./pack
		RJ-13B	
		RJ-13PR	
Side adjustment (↑ Adjustment direction)		RJ-13S	
		RJ-13SR	

### ELECTRICAL CHARACTERISTICS

Nominal resistance range	10 Ω ~ 5 MΩ
Resistance tolerance	± 10 %
Power ratings	0.75 W (70 °C) 0 W (120 °C)
Resistance law	(B) Linear law
Maximum input voltage	DC300 V or power rating, whichever is smaller
Maximum wiper current	100 mA or power rating, whichever is smaller
Effective electrical angle	230 ° (1 turn)
End resistance	1 % or 2 Ω, whichever is greater
C.R.V.	1 % or 3 Ω, whichever is greater
Operating temp. range	-55 ~ 120 °C
Temp. coefficient	10 Ω, 20 Ω, 5 MΩ : ± 250 10 <sup>-6</sup> /°C maximum 50 Ω ~ 2 MΩ : ± 100 10 <sup>-6</sup> /°C maximum
Insulation resistance	1000 MΩ minimum (DC500 V)
Dielectric strength	AC900 V, 60 s
Net weight	Approx. 1.90 g (RJ-13P) Approx. 4.50 g (RJ-13B) Approx. 2.15 g (RJ-13PR) Approx. 2.50 g (RJ-13S) Approx. 2.78 g (RJ-13SR)

### <Nominal resistance values>

↻ 10 Ω	↻ 20 Ω	50 Ω	100 Ω	200 Ω	500 Ω	1 kΩ	2 kΩ	5 kΩ	10 kΩ
20 kΩ	↻ 25 kΩ	50 kΩ	100 kΩ	200 kΩ	↻ 250 kΩ	500 kΩ	1 MΩ	2 MΩ	↻ 5 MΩ

Fig. 1

※ The above part numbers are all available with the respective combination of <Nominal resistance values> (Fig. 1).  
 ※ Verify the above part numbers when placing orders.

**The products indicated by ↻ mark are manufactured upon receipt of order basis.**

### MECHANICAL CHARACTERISTICS

Mechanical angle	270 ° (1 turn)
Operating torque	3 ~ 35 mN·m {30.6~357 gf·cm}
Stop strength	100 mN·m {1.02 kgf·cm}
Rotational life	200 cycles 10 Ω ~ 200 Ω [ Δ R/R ≤ ± (0.5 Ω + 3 %) ] 500 Ω ~ 5 MΩ [ Δ R/R ≤ ± (0.5 Ω + 2 %) ]
Terminal to strength	20 N {2.04 kgf} minimum (Tensile strength)
Thrust to rotor	10 N {1.02 kgf} minimum
Solderability	245 ± 3 °C, 2 ~ 3 s

{ } : eference only

### ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions	Specifications
Thermal shock	-65 ~ 125 °C (0.5 h), 5 cycles	[ Δ R/R ≤ 1 % ] [ S.S. ≤ 1 % ]
Humidity	-10 ~ 65 °C (80 ~ 98 %), 10 cycles, 240 h	[ Δ R/R ≤ 1 % ]
Shock	981 m/s <sup>2</sup> , 6 ms 6 directions for 3 times each	[ Δ R/R ≤ 1 % ] [ S.S. ≤ 1 % ]
Vibration	(Amplitude) 1.52 mm or (Acceleration) 196 m/s <sup>2</sup> , 10 ~ 2000 Hz, 3 directions, 12 times each	
Load life	70 °C, 0.75 W, 1000 h	[ Δ R/R ≤ 2 % ] [ S.S. ≤ 1 % ]
Low temp. operation	-55 °C, 2 h	[ Δ R/R ≤ 1 % ] [ S.S. ≤ 2 % ]
High temp. exposure	120 °C, 250 h	[ Δ R/R ≤ 2 % ] [ S.S. ≤ 2 % ]
Immersion seal	85 °C, 60 s	No leaks (No continuous bubbles)
Soldering heat	Flow 260 ± 3 °C, 5 ~ 6 s, two times maximum	[ Δ R/R ≤ 1 % ]
	Manual soldering 380 ± 10 °C, 3 ~ 4 s	

Δ R/R : Change in total resistance  
S.S. : Setting stability



# RJ-13

## CERMET TRIMMERS

### MAXIMUM INPUT RATINGS

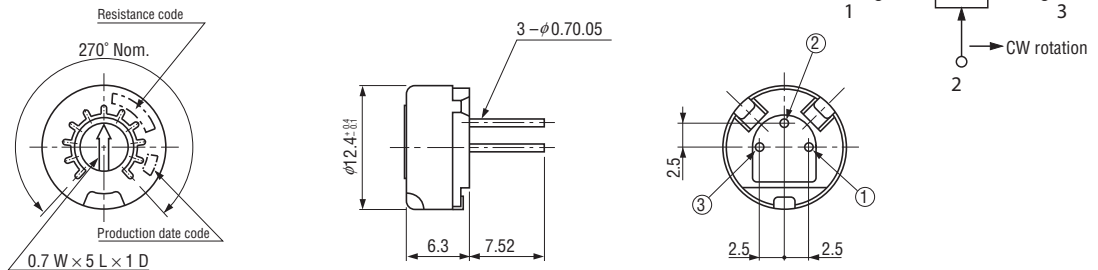
Nominal resistance value (Ω)	Resistance code	Maximum input voltage (V)	Maximum wiper current (mA)
<ul style="list-style-type: none"> <li>➔ 10</li> <li>➔ 20</li> <li>50</li> <li>100</li> <li>200</li> <li>500</li> </ul>	<ul style="list-style-type: none"> <li>100</li> <li>200</li> <li>500</li> <li>101</li> <li>201</li> <li>501</li> </ul>	<ul style="list-style-type: none"> <li>1.00</li> <li>2.00</li> <li>5.00</li> <li>8.66</li> <li>12.2</li> <li>19.4</li> </ul>	<ul style="list-style-type: none"> <li>100</li> <li>100</li> <li>100</li> <li>86.6</li> <li>61.0</li> <li>38.8</li> </ul>
<ul style="list-style-type: none"> <li>1 k</li> <li>2 k</li> <li>5 k</li> <li>10 k</li> <li>20 k</li> <li>➔ 25 k</li> <li>50 k</li> </ul>	<ul style="list-style-type: none"> <li>102</li> <li>202</li> <li>502</li> <li>103</li> <li>203</li> <li>253</li> <li>503</li> </ul>	<ul style="list-style-type: none"> <li>27.4</li> <li>38.7</li> <li>61.2</li> <li>86.6</li> <li>122</li> <li>137</li> <li>194</li> </ul>	<ul style="list-style-type: none"> <li>27.4</li> <li>19.3</li> <li>12.2</li> <li>8.66</li> <li>6.10</li> <li>5.48</li> <li>3.88</li> </ul>
<ul style="list-style-type: none"> <li>➔ 100 k</li> <li>➔ 200 k</li> <li>➔ 250 k</li> <li>500 k</li> <li>➔ 1 M</li> <li>➔ 2 M</li> <li>➔ 5 M</li> </ul>	<ul style="list-style-type: none"> <li>104</li> <li>204</li> <li>254</li> <li>504</li> <li>105</li> <li>205</li> <li>505</li> </ul>	<ul style="list-style-type: none"> <li>274</li> <li>300</li> <li>300</li> <li>300</li> <li>300</li> <li>300</li> <li>300</li> </ul>	<ul style="list-style-type: none"> <li>2.74</li> <li>1.50</li> <li>1.20</li> <li>0.60</li> <li>0.30</li> <li>0.15</li> <li>0.06</li> </ul>

The products indicated by ➔ mark are manufactured upon receipt of order basis.

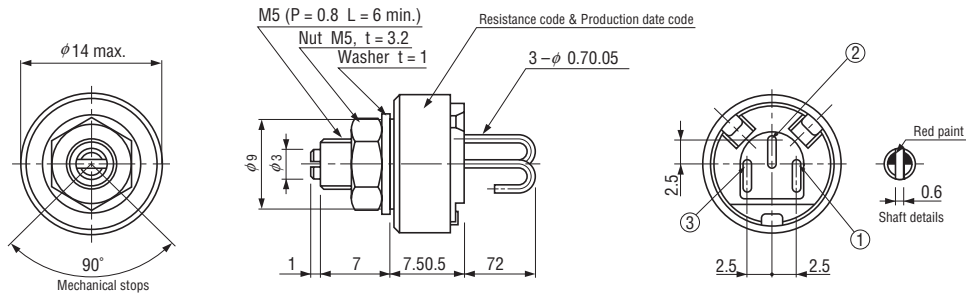
### OUTLINE DIMENSIONS

Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)

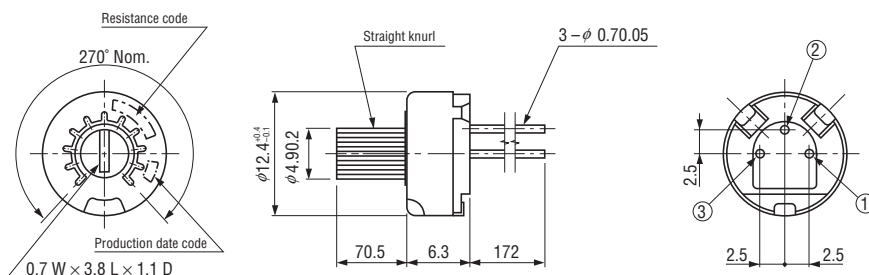
#### RJ-13P Top adjustment



#### RJ-13B Panel mount



#### RJ-13PR Top adjustment with knob

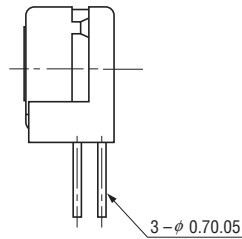
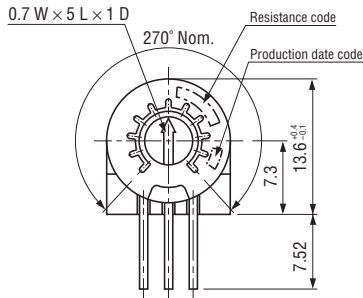


# RJ-13

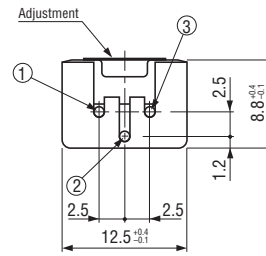
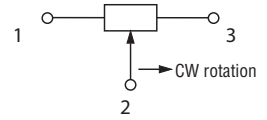
## CERMET TRIMMERS

### OUTLINE DIMENSIONS

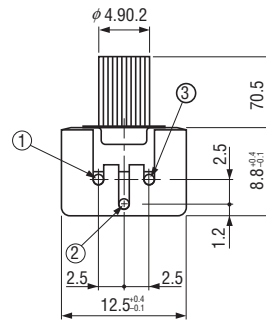
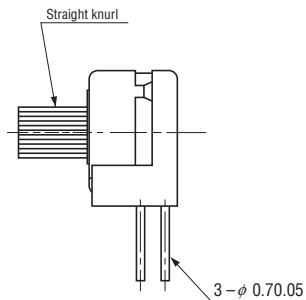
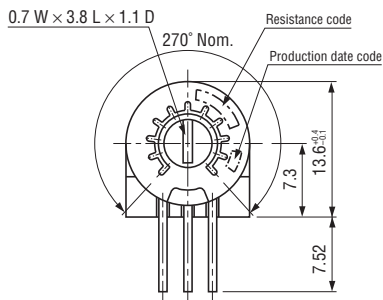
#### RJ-13S Side adjustment



Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)



#### RJ-13SR Side adjustment with knob



### PACKAGING SPECIFICATIONS

#### <Bulk pack specifications>

- Unit of bulk pack in a plastic bag is 25 pcs. per pack, only that RJ-13P is 50 pcs. per pack.
- Boxing of bulk in a plastic bag is performed with 50 pcs. per box, only that RJ-13P is 100 pcs. per box.