

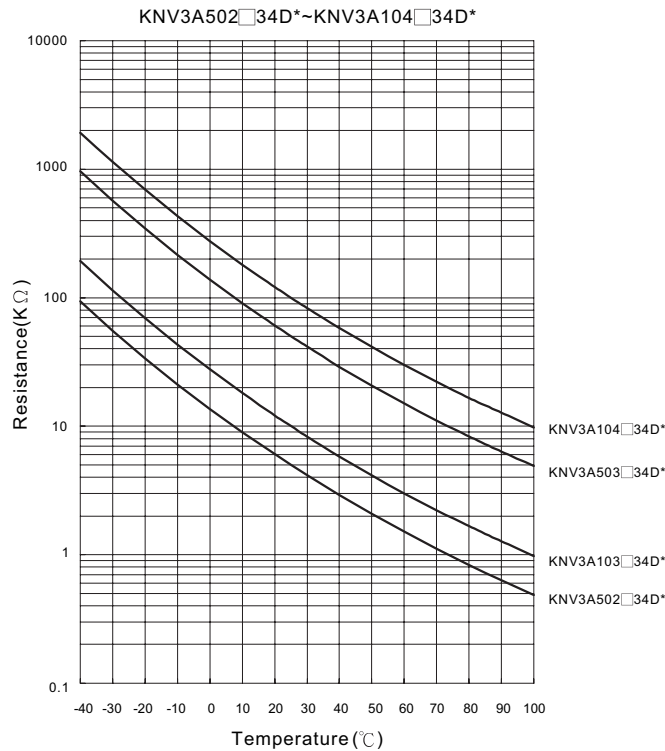
● Characteristics

Part no.	Zero power resistance at 25°C (KΩ)	Tolerance of resistance (±%)	B value (K)		Tolerance of B value (±%)	Max. power rating at 25°C (mW)	Thermal dissipation constant (mW/°C)	Thermal time constant (Sec.)	Operating temperature range (°C)
KNV3A502□34D*	5	1 · 2 · 3 · 5 · 10	25/85	3435	1 · 2 · 3	31.5	0.7	5	-40 ~ +100
KNV3A103□34D*	10								
KNV3A503 □34D*	50								
KNV3A104 □34D*	100								

Note 1: □ = Tolerance of resistance

Note 2: * = Tolerance of B value

● R-T characteristic curve (representative)



- Reliability test

Item	Test Conditions/Methods	Specifications															
Tensile Strength of Terminations	<p>Gradually applying the force specified below to each terminal and keeping the unit fixed for 10 ± 1 sec.</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Terminal diameter (mm)</td> <td style="text-align: center;">Force (Kg)</td> </tr> <tr> <td style="text-align: center;">$d \leq 0.25$</td> <td style="text-align: center;">0.1</td> </tr> </table>	Terminal diameter (mm)	Force (Kg)	$d \leq 0.25$	0.1	No visible damage											
Terminal diameter (mm)	Force (Kg)																
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Bending Strength of Terminations	<p>Hanging the force specified below to each terminal and gradually bending each terminal by 90° in one direction, then 90° in the opposite direction, and again back to the origin.</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Terminal cross-sectional area (mm)</td> <td style="text-align: center;">Terminal diameter (mm)</td> <td style="text-align: center;">Force (Kg)</td> </tr> <tr> <td style="text-align: center;">$S \leq 0.05$</td> <td style="text-align: center;">$d \leq 0.25$</td> <td style="text-align: center;">0.05</td> </tr> </table>	Terminal cross-sectional area (mm)	Terminal diameter (mm)	Force (Kg)	$S \leq 0.05$	$d \leq 0.25$	0.05	No visible damage									
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$S \leq 0.05$	$d \leq 0.25$	0.05															
Solderability	$235 \pm 5^\circ\text{C}$, 2 ± 0.5 sec	At least 95% of terminal electrode is covered by new solder															
Resistance to Soldering Heat	$260 \pm 5^\circ\text{C}$, 10 ± 1 sec	No visible damage $ \Delta R/R \leq 3\%$															
High Temperature Storage	$100 \pm 5^\circ\text{C} \times 1000$ HRS	No visible damage $ \Delta R/R \leq 5\%$															
Damp Heat	$40 \pm 2^\circ\text{C}$, 90~95%RH, 1000 ± 24 HRS	No visible damage $ \Delta R/R \leq 3\%$															
Thermal Shock	<p>The thermal shock conditions shown below shall be repeated 5 cycles</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Step</th> <th>Temperature ($^\circ\text{C}$)</th> <th>Period (minutes)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40 ± 5</td> <td>30 ± 3</td> </tr> <tr> <td>2</td> <td>Room temperature</td> <td>5 ± 3</td> </tr> <tr> <td>3</td> <td>100 ± 5</td> <td>30 ± 3</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>5 ± 3</td> </tr> </tbody> </table>	Step	Temperature ($^\circ\text{C}$)	Period (minutes)	1	-40 ± 5	30 ± 3	2	Room temperature	5 ± 3	3	100 ± 5	30 ± 3	4	Room temperature	5 ± 3	No visible damage $ \Delta R/R \leq 3\%$
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2	Room temperature	5 ± 3															
3	100 ± 5	30 ± 3															
4	Room temperature	5 ± 3															
Life Test	$25 \pm 5^\circ\text{C}$, Pmax X 1000 HRS	No visible damage $ \Delta R/R \leq 5\%$															