

Gages for Ultra-small Strain Measurement (KSPB & KSNB)



Strain Gages

Outline

Lead-wire cable

General

Waterproof

Concrete

Composite material
PCB
Plastics

Ultra-small strain
High temp.
Low temp.

High elongation

Non-magneto
resistive

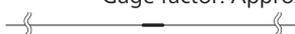
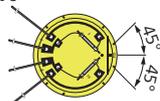
Hydrogen gas
Bending

With protector
Embedded

Crack

Adhesive
Coating agent

Custom-
designed

Patterns, Gage Resistance, Gage Factor	Models	Dimensions (mm)				Remarks								
		Gage (Grid)		Base										
		Length	Width	Length	Width									
<p>●KSPB Series Semiconductor Strain Gages</p> <p style="text-align: center;">RoHS</p> <p>The KSPB series gages are stable-performance semiconductor strain gages usable for general stress measurement and transducers. The F2 type has a half-bridge formed with a 2-element structure (Positive and Negative), for self-temperature compensation and is suitable for strain measurement of steel products.</p> <p style="text-align: right;">Applicable Adhesives</p> <table border="1" style="float: right;"> <thead> <tr> <th></th> <th>Operating Temp. after Curing the Adhesive</th> </tr> </thead> <tbody> <tr> <td>CC-33A</td> <td>-50 to 120°C</td> </tr> <tr> <td>EP-340</td> <td>-50 to 150°C</td> </tr> </tbody> </table>								Operating Temp. after Curing the Adhesive	CC-33A	-50 to 120°C	EP-340	-50 to 150°C		
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<p>Uniaxial</p>  <p>Resistance: 120 Ω Gage factor: Approx. 125</p>	KSPB-2-120-E3	2	0.25	5	3	4 gages/ pkg								
<p>Uniaxial</p>  <p>Resistance: 120 Ω Gage factor: Approx. 125</p>	KSPB-2-120-E4	2	0.26	7.7	4	4 gages/ pkg								
<p>Uniaxial 350Ω gage</p>  <p>Resistance: 350 Ω Gage factor: Approx. 125</p>	KSPB-6-350-E4	6	0.27	13	5	4 gages/ pkg								
<p>Uniaxial 350Ω gage</p>  <p>Resistance: 350 Ω Gage factor: Approx. 160</p>	KSPB-1-350-E4	1	0.25	6.6	4	4 gages/ pkg								
<p>Uniaxial 1000Ω gage</p>  <p>Resistance: 1000 Ω Gage factor: Approx. 170</p>	KSPB-2-1K-E4	2	0.2	7.7	4	4 gages/ pkg								
<p>Uniaxial, 2-element</p>  <p>Resistance: 120 Ω Gage factor: Approx. 235</p>	KSPB-3-120-F2-11	3	N0.83 P0.47	10	4	2 gages/ pkg								
Patterns, Gage Resistance, Gage Factor	Models	Dimensions (mm)				Remarks								
		Gage (Grid)		Base										
		Length	Width	Length	Width									
<p>●KSNB Series Self-temperature-compensation Semiconductor Strain Gages</p> <p style="text-align: center;">NEW RoHS</p> <p>The KSNB series gages use an N-type silicon as the resistive element to control the resistance temperature coefficient of the material according to the linear expansion coefficient of the measuring object. Thus, the change of thermally-induced resistance is minimized. (Excluding E5)</p> <p style="text-align: right;">Applicable Adhesives</p> <table border="1" style="float: right;"> <thead> <tr> <th></th> <th>Operating Temp. after Curing the Adhesive</th> </tr> </thead> <tbody> <tr> <td>EP-340</td> <td>-50 to 150°C</td> </tr> <tr> <td>CC-33A</td> <td>-50 to 120°C</td> </tr> <tr> <td>CC-36</td> <td>-30 to 100°C</td> </tr> </tbody> </table>								Operating Temp. after Curing the Adhesive	EP-340	-50 to 150°C	CC-33A	-50 to 120°C	CC-36	-30 to 100°C
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<p>Uniaxial</p>  <p>Resistance: 120 Ω Gage factor: Approx. -100</p> <p>*The above picture is KSNB-2-120-E3-11.</p>	KSNB-2-120-E3-11 KSNB-2-120-E3-16	2	0.3	5	3	4 gages/ pkg								
<p>Uniaxial</p>  <p>Resistance: 120 Ω Gage factor: Approx. -100</p> <p>*The above picture is KSNB-2-120-E4-11.</p>	KSNB-2-120-E4-11 KSNB-2-120-E4-16	2	0.3	7.7	4	4 gages/ pkg								
<p>Uniaxial</p>  <p>Resistance: 120 Ω Gage factor: Approx. -110</p> <p>*The above picture is KSNB-2-120-E5-11.</p>	KSNB-2-120-E5-11 KSNB-2-120-E5-16	2	0.3	-	-	4 gages/ pkg Oxygen-free tin-plated copper wires 40 mm long								
<p>Biaxial, 0°/90° plane arrangement</p>  <p>Resistance: 120 Ω Gage factor: Approx. -100</p> <p>*The above picture is KSNB-2-120-F3-11.</p>	KSNB-2-120-F3-11 KSNB-2-120-F3-16	2	0.3	φ11	-	2 gages/ pkg								
<p>Uniaxial 350Ω gages</p>  <p>Resistance: 350 Ω Gage factor: Approx. -100</p> <p>*The above picture is KSNB-6-350-E4-11.</p>	KSNB-6-350-E4-11 KSNB-6-350-E4-16	6	0.31	13	5	4 gages/ pkg								