

MICRON
Backed Gages
Half-Bridge (SSGH)
Full-Bridge (SSGF)

Bending
Torque
Load

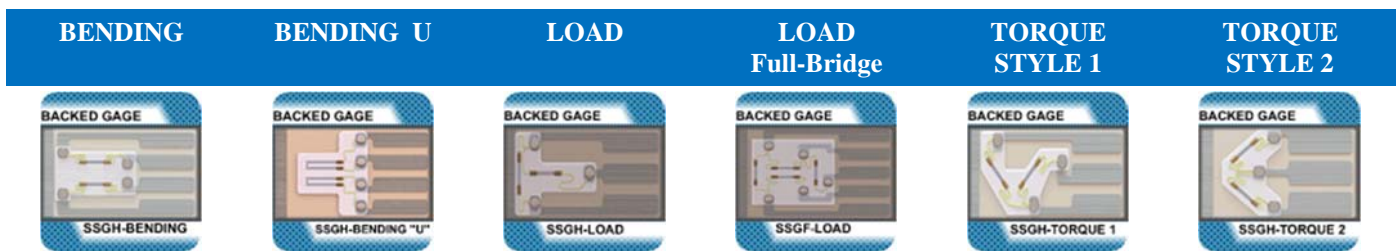
- There are two gages on a backing.
- Backed SSGH's are as easy to install as foil gages.
- Bonding materials and procedures are similar to foil gages.
- SSGH's are suggested for use in prototyping or proof of concept.

BACKED SEMICONDUCTOR STRAIN GAGES HALF-BRIDGE (SSGH) & FULL-BRIDGE (SSGF)

Micron Instruments offers a wide range of semiconductor backed half and full bridge strain gages. Backed bridges are installed on a flexible high temperature insulator that can be bent around a one half inch radius without hurting the gage .

Our Half-Bridge Backed Gages are constructed using two thermally matched gages bonded onto a backing which allows them to track each other. When used as one side of the bridge, they compensate each other thermally even when bonded since they both see the same thermal expansion and temperature. When both gages have a gage factor (GF) of 140 the transverse gage will normally see the Poisson's effect, which for most steels is 0.3. This reduces the transverse gage factor to 42. The average GF for the half bridge would be 91.

Our Full-Bridge Gages are constructed using four thermally matched gages bonded onto a backing.



SPECIFICATIONS

- Bar gages ranges available 120 ohm up to 1000 ohms
- Czochralski pulled boron doped silicon
- Base material FR4 TG-250
- Tinned Copper Solder Pads and Traces

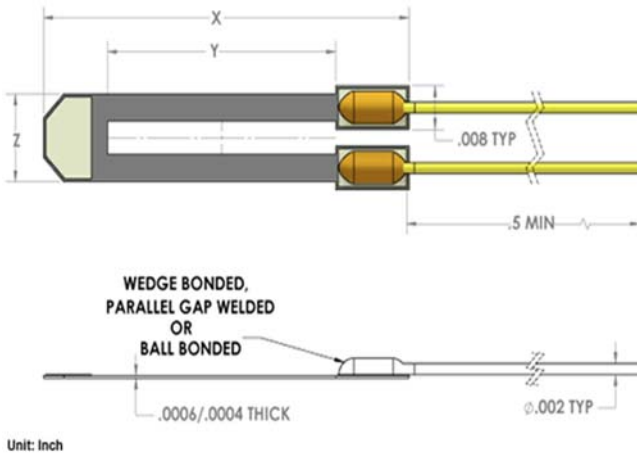
Gages with Low resistance down to 10 ohm up to 10k ohms are also available.

Backed Temperature Compensated Semiconductor Strain Gages Half Bridge (SSGH)							
PART NUMBER X Y	Width Z	Lead Attachment	Thickness	Resistance Ohms@ 78° F	Gage Factor	TCGF	TCR
SSGH-080-050-120PB-	.008	WL	.0004	120 ± 20	120 ± 10	-9%	5%
SSGH-080-050-345PB-	.008	WL	.0004	345 ± 40	140 ± 10	-13%	16%
SSGH-060-033-500PB-	.008	WL	.0004	540 ± 50	140 ± 10	-13%	15%
SSGH-060-033-1000PB-	.008	WL	.0004	1050 ± 75	155 ± 10	-18%	24%
SSGH-060-033-5000PB-	.008	WL	.0004	5000 ± 500	175 ± 10	-23%	47%
SSGH-060-033-2,000PUB-	.016	WL	.0004	2000 ± 100	155 ± 10	-18%	25%
SSGH-080-050-10,000PUB-	.016	WL	.0004	10000 ± 1000	175 ± 10	-23%	42%

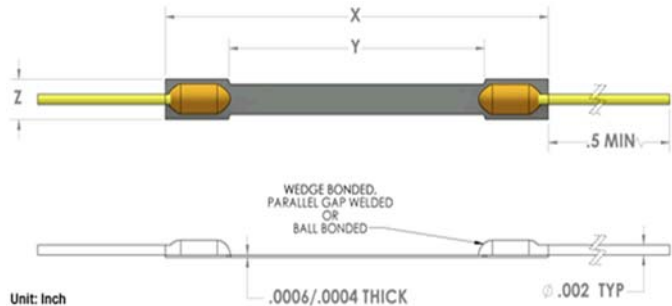
Standard Bridge Matching				
Temperature °F	0°	78°	278°	
Standard Matching	±0.6%	±0.4%	±0.4%	Percent of Base Resistance

Backed Temperature Compensated Semiconductor Strain Gages Half Bridge (SSGH)

PART NUMBER X Y	Width Z	Lead Attachment	Thickness	Resistance Ohms@ 78° F	Gage Factor	TCGF	TCR
SSGH-080-050-120PB-	.008	WL	.0004	120 ± 20	120 ± 10	-9%	5%
SSGH-080-050-345PB-	.008	WL	.0004	345 ± 40	140 ± 10	-13%	16%
SSGH-060-033-500PB-	.008	WL	.0004	540 ± 50	140 ± 10	-13%	15%
SSGH-060-033-1000PB-	.008	WL	.0004	1050 ± 75	155 ± 10	-18%	24%
SSGH-060-033-5000PB-	.008	WL	.0004	5000 ± 500	175 ± 10	-23%	47%
SSGH-060-033-2,000PUB-	.016	WL	.0004	2000 ± 100	155 ± 10	-18%	25%
SSGH-080-050-10,000PUB-	.016	WL	.0004	10000 ± 1000	175 ± 10	-23%	42%



X= Gage Length
Y= Gage Active Length
Z= Gage Width



Ordering Guidelines	Example
A. Model (SSGH)	<p>SSGH-080-050-120PB-B-M2 is a Backed Semiconductor Strain gage with a Total Length of 080 and an Active Length of 050. The gage has a nominal resistance of 120 at 78 degrees F. The gage is further defined as P Dopant and is configured for Bending applications. M2 denotes two backings.</p> <p>Micron offers several matching options.</p> <p>M1 is a single backing with two semiconductor gages that have been resistance matched to each other from 0 to 272 degrees F.</p> <p>M2 is two backings with two semiconductor gages on each backing, all gages are resistance matched to each other from 0 to 272 degrees F.</p> <p>M3 is three backings with two semiconductor gages on each backing, all gages are resistance matched to each other from 0 to 272 degrees F.</p> <p>M4 is four backings with two semiconductor gages on each backing, all gages are resistance matched to each other from 0 to 272 degrees F.</p> <p>Note: For sets greater than M4 ask for pricing and delivery.</p> <p>Note: Backings are packaged with resistance vs. temperature test data.</p>
B. Total Length	
C. Active Length	
D. Nominal Resistance at 78°F	
E. Dopant	
F. Style (L) load (B) Bending (T) Torque T1 or T2	
G. Matched Set (M1) (M2) etc.	