BACKED SEMICONDUCTOR STRAIN GAGE HALF BRIDGE - TEMPERATURE COMPENSATED

Micron Instruments offers a range of semiconductor backed half bridge strain gages. The gages are installed on a flexible insulated circuit with easy to solder pads which can be bent without hurting the gage and will perform like a foil gage except that the resistive change is 30 to 55 times greater.

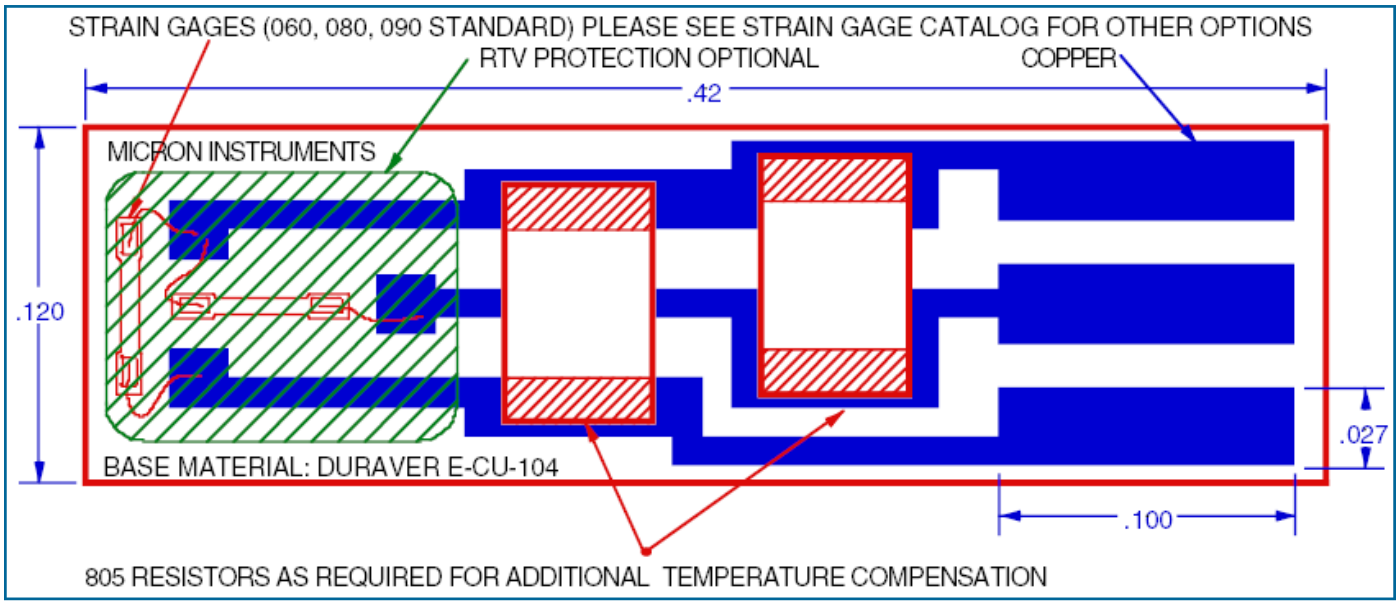
There are two gages on a backing, one longitudinal and one transverse. These gages are thermally matched to track each other before installing onto the backing. When used as one side of the bridge, they compensate each other thermally even when bonded since they both see the same thermal expansion. When 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.

FEATURES

- Backed SSGH's are as easy to install as foil gages
- There are two gages on a backing, one longitudinal and one transverse.
- SSGH's are suggested for use in prototyping or proof of concept

SPECIFICATIONS

- Bar gages ranges available 120 ohm up to 1000 ohms
- Czochralski pulled boron doped silicon
- Base material Duraver E-CU-104
- Dimensions base .42"x.12"
- Copper solder pads



MICRON'S semiconductor strain gages are made from "P" doped bulk silicon. They have no P/N junction.
The silicon is etched to shape, eliminating the potential for molecular dislocation or cracks, thereby optimizing performance.

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STRAIN GAGE HALF BRIDGE

Backed Temperature Compensated Semiconductor Strain Gages Half Bridge (SSGH)

PART NUMBER	Width	Lead Attachment	Thickness	Resistance Ohms@ 78° F	Gage Factor	TCGF	TCR
SS-060-022-500PB-SSGH	.008	WL	.0004	540 ±50	150 ±10	-13%	17%
SS-060-033-500PB-SSGH	.008	WL	.0004	540 ±50	140 ±10	-13%	15%
SS-060-033-1000PB-SSGH	.008	WL	.0004	1050 ±75	155 ±10	-18%	24%
SS-080-050-120PB-SSGH	.008	WL	.0004	120 ±20	120 ±10	-9%	5%
SS-080-050-230PB-SSGH	.008	WL	.0004	230 ±30	120 ±10	-9%	5%
SS-080-050-345PB-SSGH	.008	WL	.0004	345 ±40	140 ±10	-13%	16%
SS-080-050-500PB-SSGH	.008	WL	.0004	540 ±50	140 ±10	-13%	16%
SS-080-050-1000PB-SSGH	.008	WL	.0004	1050±75	155 ±10	-18%	24%
SS-090-060-500PB-SSGH	.009	WL	.0004	540 ±50	140 ±10	-13%	16%
SS-090-060-1150PB-SSGH	.008	WL	.0004	1125 ±75	155 ±10	-18%	24%

Strain Gage Ordering Information

SS-080-050-500 P B SSGH

- Model
- Total Length
- Active Length
- Nominal Resistance at 78°F
- Dopant
- Back Gage
- Half Bridge

Standard Gage Specifications

Material	Czochralski pulled boron doped silicon.
Leads	.002 dia. gold.
Contact Pad	Gold nickel fused, aluminum, or Hi-Temp.
Lead Attachment	Parallel gap welded with epoxy reinforcement or ball bonded.
Operating Strain	±2000 µ inch/inch (3000 µ inch/inch max.)
Linearity	Better than ±0.25% to 600 µ inch/inch Better than ±1.5% to 1500 µ inch/inch
Max. Operating Temp.	+278°F Bonded.

Standard Bridge Matching

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

TERMS & CONDITIONS

Minimum Order:	$50.00
FOB:	Simi Valley, California
Terms:	Net 30 Days
	Credit Cards: Visa, Master Card, American Express
Effective Date:	March 2008

Prices Subject to Change without Notice

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