

Standard Semiconductor Strain Gages

Standard 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.



"BAR" gage has electrical leads exiting the part from both ends. It is the gage of preference when cost needs to be minimum.

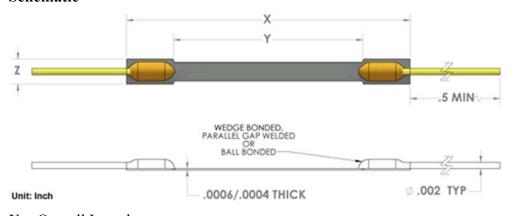
"U" gages are two parallel bar gages in series. This gage is physically and electrically connected on one end with the electrical leads exiting the other end in the same direction. They are about 25 % more expensive than the bar gage.

"M" gages are four parallel bar gages or two parallel "U" gages with the electrical leads exiting in the same direction. Cost is twice that of the bar gage.

"Bar" Shaped Semiconductor Strain Gage

High Stability, high accuracy, low cost semiconductor strain gages for all applications. The gages, made from P-doped silicon, are the heart of the Micron Instruments pressure and force transducers.

Schematic



X = Overall Length

Y = Active Area

Z = Width





Part Number X Y	Dimension Z	Lead Type	Thickness	Resistance @ 78 deg F	Gage Factor	TCGF*	TCR*
SS-027-013-500P	0.009"	Ball Bond	0.0004"	$540 \pm 50 \text{ Ohms}$	155 ± 10	-18%	24%
SS-037-022-500P	0.009"	Ball Bond	0.0004"	$540 \pm 50 \text{ Ohms}$	150 ± 10	-13%	17%
SS-060-033-500P	0.008"	Welded	0.0004"	$540 \pm 50 \text{ Ohms}$	140 ± 10	-13%	15%
SS-060-033-1000P	0.008"	Welded	0.0004"	$1050 \pm 75 \text{ Ohms}$	155 ± 10	-18%	24%
SS-080-050-120P	0.008"	Welded	0.0004"	$120 \pm 20 \text{ Ohms}$	120 ± 10	-9%	5%
SS-080-050-230P	0.008"	Welded	0.0004"	230 ± 30 Ohms	120 ± 10	-9%	5%
SS-080-050-345P	0.008"	Welded	0.0004"	$345 \pm 40 \text{ Ohms}$	140 ± 10	-13%	16%
SS-080-050-500P	0.008"	Welded	0.0004"	540 ± 50 Ohms	140 ± 10	-13%	16%
SS-080-050-500PB	0.008"	Ball Bond	0.0004"	540 ± 50 Ohms	140 ± 10	-13%	16%
SS-080-050-1000P	0.008"	Welded	0.0004"	$1050 \pm 75 \text{ Ohms}$	155 ± 10	-18%	24%
SS-090-060-500P	0.008"	Welded	0.0004"	$540 \pm 50 \text{ Ohms}$	140 ± 10	-13%	16%
SS-090-060-1150P	0.008"	Welded	0.0004"	$1125 \pm 75 \text{ Ohms}$	155 ± 10	-18%	24%
SS-150-125-15P	0.009"	Welded	0.0010"	15 ± 2 Ohms	100 ± 10	-10%	6%
SS-150-125-25P	0.009"	Welded	0.0008"	25 ± 3 Ohms	100 ± 10	-10%	6%
SS-250-225-120P	0.009"	Welded	0.0004"	$120 \pm 20 \text{ Ohms}$	100 ± 10	-10%	6%

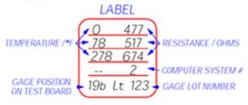
Standard Bridge Matching

Temperature °F 0° 78° 278°

Standard Matching $\pm 0.6\%$ $\pm 0.4\%$ Percent of Base Resistance

MATCHED GAGE SETS

SO gages do not include the reference data shown on this label.



If you need a gage with reference data, order an S1, S2,

or S4

S1 is a single gage, tested and with data.

S2 is a thermally matched set of two gages, tested with data.

S4 is a thermally matched set of four gages, tested with data.

Sx for sets greater than S4 ask for pricing and delivery.

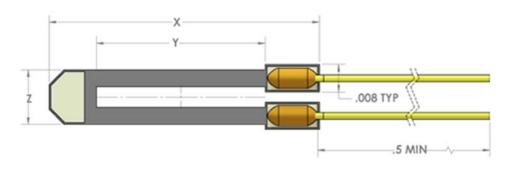
"U" Shaped Semiconductor Strain Gage

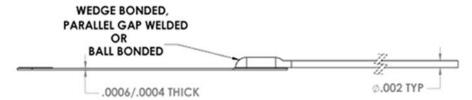
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Schematic





Unit: Inch

X = Overall Length

Y = Active Area

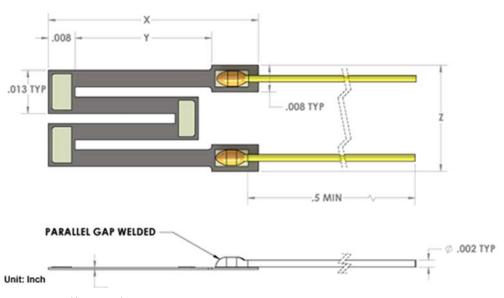
Z = Width

Part Number X Y	Dim Z	Lead Type	Thickness	Resistance @ 78 deg F	Gage Factor	TCGF*	TCR*
SS-018-011- 3000PU	0.012"	Ball Bond	0.0004"	3000 ± 150 Ohms	150 ± 10	-23%	42%
SS-037-022- 500PU	0.016"	Welded	0.0004"	540 ± 50 Ohms	150 ± 10	-13%	17%
SS-047-025- 350PU	0.016"	Welded	0.0004"	$325 \pm 40 \text{ Ohms}$	100 ± 10	-10%	6%
SS-047-025- 500PU	0.016"	Welded	0.0004"	540 ± 50 Ohms	140 ± 10	-13%	16%
SS-047-025- 1000PU	0.016"	Welded	0.0004"	1000 ± 100 Ohms	160 ± 10	-20%	28%
SS-060-033- 300PU	0.016"	Welded	0.0004"	$325 \pm 40 \text{ Ohms}$	100 ± 10	-10%	6%
SS-060-033- 500PU	0.016"	Welded	0.0004"	540 ± 50 Ohms	140 ± 10	-12%	14%
SS-060-033- 2000PU	0.016"	Welded	0.0004"	2000 ± 100 Ohms	155 ± 10	-18%	24%
SS-080-050- 10000PU	0.013"	Welded	0.0004"	10000 ± 1000 Ohms	175 ± 10	-23%	42%
SS-095-060- 350PU	0.016"	Welded	0.0004"	$350 \pm 50 \text{ Ohms}$	120 ± 10	-9%	5%

"M" Shaped Semiconductor Strain Gage

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Z = Width

Part Number X Y	Dim Z	Lead Type	Thickness	Resistance @ 78 deg F	Gage Factor	TCGF*	TCR *
SS-060-040-2500- PM	0.032"	Welded	0.0004"	2500 ± 150 Ohms	140 ± 10	-13%	17%

Standard Bridge Matching

Temperature °F 0° 78° 278°

Standard Matching $\pm 0.6\%$ $\pm 0.4\%$ Percent of Base Resistance

