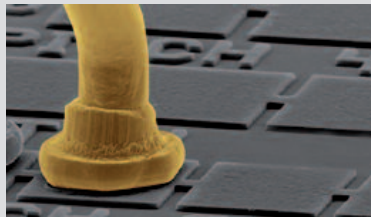
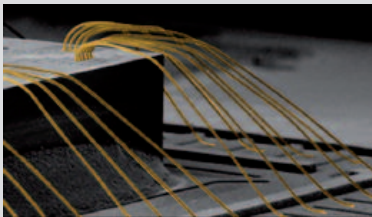


Au HA6 Universal Wire for Fine Pitch and Low Loop



In contrast to doped Au wires, alloyed wire types contain a low percentage of alloying elements. This results in markedly higher wire strength, shorter heat affected zones and better thermal stability without a significant increase in electrical resistance. The increased wire strength, while maintaining all other mechanical properties, permits a reduction of

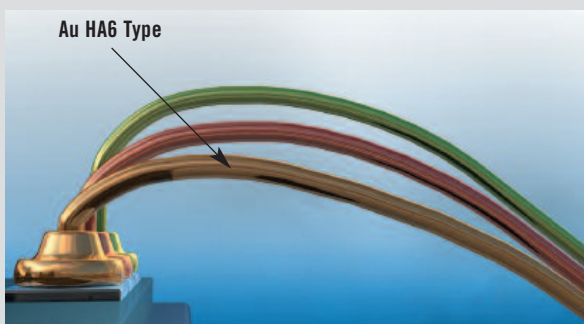
wire diameter together with a marked saving in precious metal costs.

Areas of application

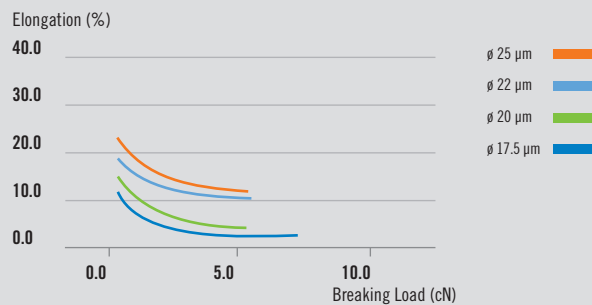
- High frequency bonding
- Low temperature bonding
- Low- and long-loop bonding
- High speed bonding
- Ultra fine pitch bonding
- Ball bumping

Au HA6 Benefits

- High strength and fine pitch wire type
- Increased strength, high loop stiffness
- Very good pull strengths and shear
- Long & low loop geometries
- Optimum stabilized phase formation
- High thermal stability
- Improved reliability



Breaking Load vs. Elongation



Recommended Technical Data of Au HA6

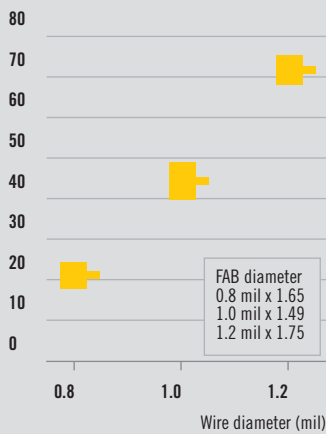
Diameter	Microns (μm)	17.5	20	23	25	30	32	38	50
	Mils	0.7	0.8	0.9	1.0	1.2	1.25	1.5	2.0
Elongation	%	2 – 5	2 – 5	2 – 8	2 – 8	2 – 8	2 – 8	3 – 8	3 – 10
Breaking Load	cN	> 5	> 6	> 8	> 10	> 15	> 16	> 22	> 36

Characteristics of Au HAG

Non-Gold Elements	< 100 ppm	Melting Point	1063°C
Breaking Load @ Room Temperature at 4% EL	> 11 g	Density	19.32 g / cm ³
Breaking Load @ 250°C / 20 sec	> 9 g	Heat Conductivity	3.12 W / cmK
Elastic Modulus	> 90 GPa	Electrical Resistivity	2.3 μOhm-cm
Heat Affected Zone (HAZ) on 50 μm ball diameter	45 μm	Coeff. of Linear Expansion (0 – 100°C)	14.2 ppm / K
Neck Strength at 37 μm ball diameter	10 g	Fusing Current for 25 μm, dia 10 mm length (in air)	0.5 A

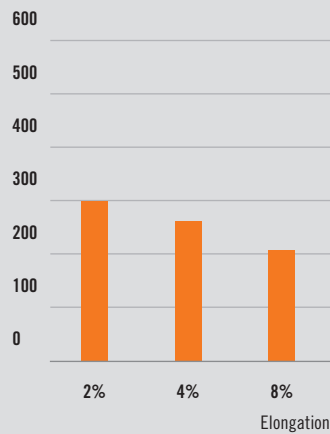
Heat Affected Zone (HAZ)

Length of HAZ (μm)



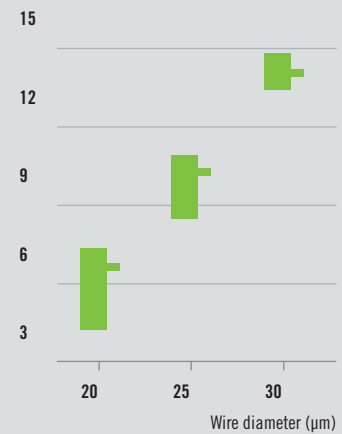
Breaking Load vs. Elongation

Tensile strength (N / mm²)

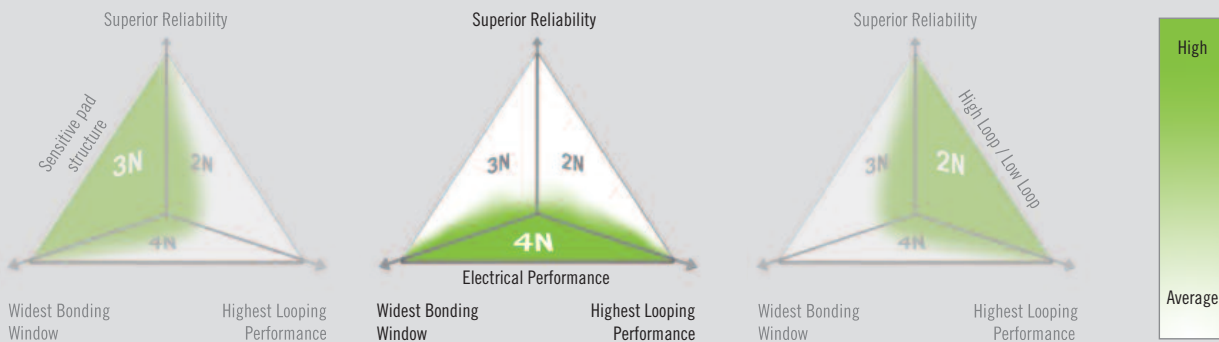


Neck Strength

Neck breaking force in cN



Gold Wire Segmentation by Properties



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