

Au HD5

Gold Bonding Wire for High Electrical Performance and Low Loop



These highly doped wires of different chemical compositions are very suitable for low and long loop applications. Both wire types are comparable in their characteristics and offer outstanding material and processing properties as well as good high temperature strength.

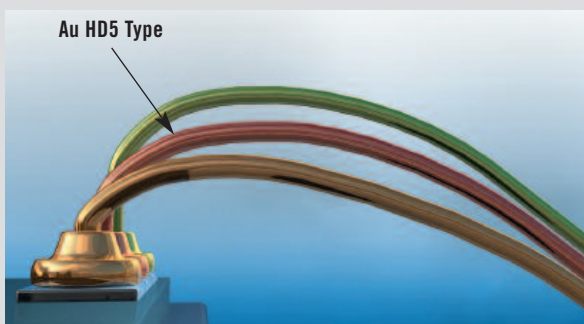
They represent an excellent bridge between doped and alloyed wires.

Areas of application

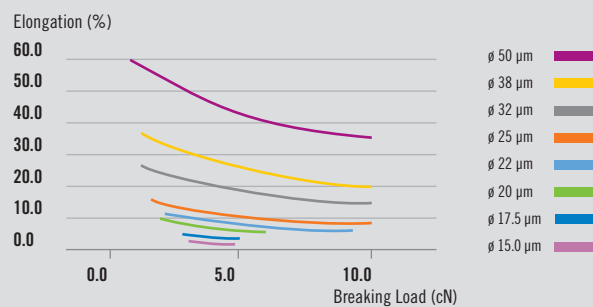
- Flat integrated circuits (BGA, MQFP, CQP, TSOP, TQFP, VSSOP, IC-cards,...)
- COB, foil frames

Au HD5 Benefits

- Low and long loop wire type
- Suitable for all high performance bonding machines
- Mid strength type
- Exact loop guiding
- Well proven loop stiffness and thermal stability
- Good high temperature strength.



Breaking Load vs. Elongation



Recommended Technical Data of Au HD5

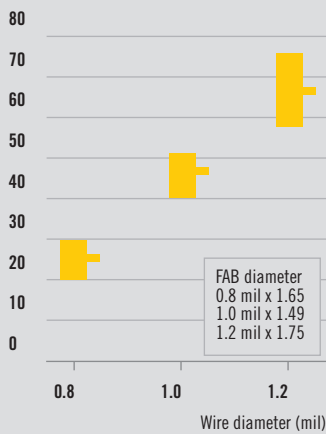
Diameter	Microns (µm)	17.5	20	23	25	30	32	38	50
	Mils	0.7	0.8	0.9	1.0	1.2	1.25	1.5	2.0
Elongation	%	2 – 5	2 – 5	2 – 8	2 – 8	2 – 8	2 – 8	3 – 8	3 – 10
Breaking Load	cN	> 4	> 5	> 7	> 9	> 13	> 14	> 19	> 34

Characteristics of Au HD5

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	> 10 g	Heat Conductivity	3.12 W / cmK
Elastic Modulus	> 80 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	9 g	Fusing Current for 25 μm, dia 10 mm length (in air)	0.5 A

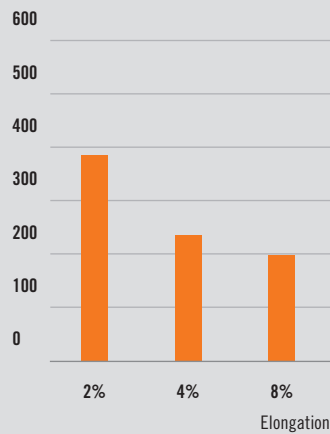
Heat Affected Zone (HAZ)

Length of HAZ (μm)



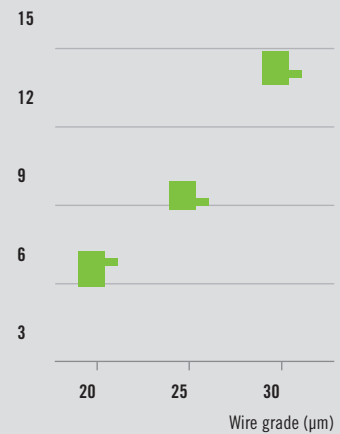
Breaking Load vs. Elongation

Tensile strength (N / mm²)

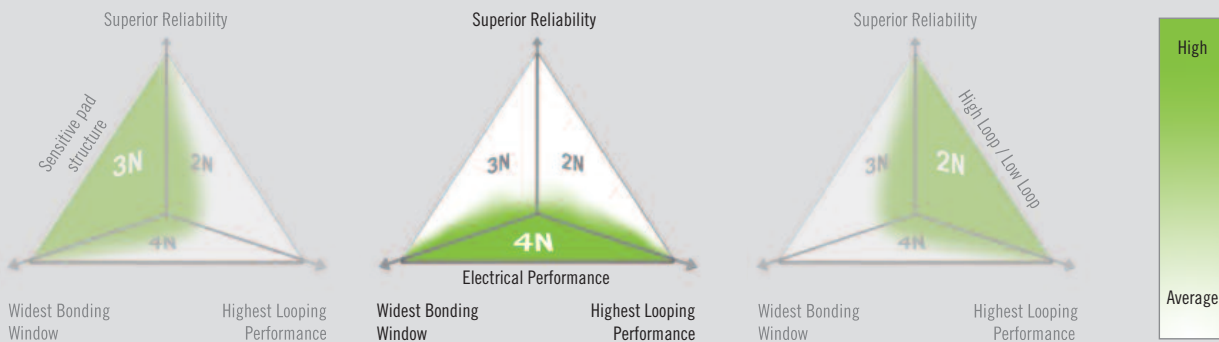


Neck Strength

Neck breaking force in cN



Gold Wire Segmentation by Properties



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