neyco
VACUUM & MATERIALS

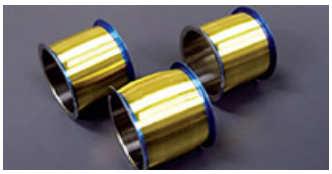
TDS

Tanaka Bonding Wires

TANAKA Bonding wires are used for a wide range of products, such as integrated circuits (ICs and LSIs) and transistors. It allow to connects semi-conductor IC chip to electrode.

All of our bonding wires are delivered with a specific certificate of analysis.

Gold bonding wire



Au wire - purity of 99.99%

- Available with various types of package design
- Available with the latest type of package such as stacked package and super thin package
- Use of higher tensile strength wires enables cost reductions with finer diameters
- Use of higher tensile strength wires enables use with fine pitch package

Size

- ø from 15 ±1 µm to 38 ±1 µm

Product specifications			
Type	**Breaking load (mN)**	**Elongation (%)**	**Features**
Y	34-65	2.0-5.0	Excellent performance in thermal stress environment
GSA	43-92	1.0-7.0	Stable 2nd-bonding /Fine pitch bonding
GSB	51-99	1.0-7.0	Stable 2nd-bonding /Fine pitch bonding
FA	64-113	2.0-6.0	Excellent bonding
GMG	62-111	1.0-7.0	Good for fine pitch small pads / Good for long & short loops
GFC	49-97	1.0-7.0	Stable 1st-bonding
GFD	58-106	1.0-7.0	Good for fine pitch small pads
GMH-2	66-114	1.0-7.0	High strength with less wire sweep / Good for fine pitch pads
GLF	55-103	2.0-7.0	Less neck damage, good for fine pitch pads / Good for super low loops

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Gold alloy bonding wire

Au alloy wire - purity of 99%

- Smaller squashed ball area
- Superior bonding reliability
- Can be used on conventional ball bonders
- No wire bonder stop and no drop of pull strength during continuous bonding
- High bonding reliability when combined with halogen resin
- Stable bonded ball shape. Good ball roundness (GPG-2)

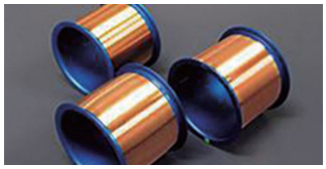
Size

- ø from 15 µm to 30 µm

Product specifications			
Type	**Breaking load (mN)**	**Elongation (%)**	**Features**
GPG	66-99	1.0-7.0	High reliability with 99.99% Au wires, good for fine pitch pads / Applicable to halogen resin
GPG-2	61-109	1.0-7.0	

Copper bonding wire

Cu wire - purity of 99.99% and Cu alloy



- Enables a reduction in costs with a lower cost than gold bonding wires

Size

- ø from 15 ±1 µm to 500 ±10 µm

Comparison of Properties of Gold and Copper		
Physical Properties	**Au**	**Cu**
Resistivity [µOhm.cm]	43-92	1.0-7.0
Thermal conductivity: [W/m.K]	51-99	1.0-7.0
Young's modulus: [GPa]	64-113	1.0-7.0

Product specifications			
Type	**Breaking load (mN)**	**Elongation (%)**	**Features**
Cu Alloy (CA-1)	41-93	7.0-17.0	High reliability, good for high 2nd-bonding
Cu (CFB-1)	43-94	7.0-17.0	High 2nd-bonding / Stable continuous bondability
Cu (TCA-1)	42-90	5.0-15.0	Good for fine pitch pads / Stable ball formation
Cu (TCB-1)	27-76	5.0-15.0	Soft and stable ball formation

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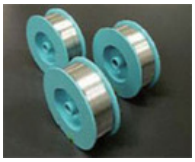
Aluminum bonding wire for power devices

Al wire - TANW Types



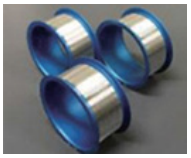
- Excellent corrosion resistance
- Excellent bondability
- Hard, Soft-1, and Soft-2 are available according to applications

Size

- ø from 100 ±5 µm to 500 ±10 µm

Aluminum-Silcon bonding wire

Al 1%/Si wire - TABN Types



- Uniform Si distribution
- Stable mechanical properties
- Stable quality wire without any curl, dirt and suface flaws
- Excellent bondability
- Excellent corrosion resistance

Size

- ø from 18 ±1 µm to 80 ±3 µm

Silver alloy bonding wire

Ag wire - SEA, SEB, SEC Types

- Lower material costs than gold wire and higher bondability than copper wire
- High reflectivity in low wavelength region

Size

- ø from 15 µm to 30 µm

afaq ISO 9001 Qualité AFNOR CERTIFICATION

afaq ISO 14001 Environnement AFNOR CERTIFICATION

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