

A Commitment to Your Success...

MKE VISION

MKE's vision is to win for customers, stockholders, the company and employees by providing RealValue™ to the customers by building technology, quality and cost competitiveness on the base of the Beyond the Perfection™



Specialized in Connection Materials

Since 1982, MKE has been developing and manufacturing key connection materials for semiconductor, such as bonding wire, solder ball, sputtering target and evaporate materials. As the only major supplier specializing in connection materials, MKE commits to serve the market continuously with dedication.

Most Reliable Solution

With specialized experience and know-how as a leading supplier in Korea, MKE is extending its value added service to global market. Wherever you are in lifecycle of your technology, MKE provides the most reliable solution with expertise and royalty.

Leader of Technology Innovation

Through co-development with industry leaders and national institutes, MKE has been introducing new products to the market. MKE aims to become a steppingstone to the next generation of microelectronic world by maximizing R&D resources and capabilities.



Delivering RealValue™ for Customer Success

Innovation in Action

MKE's R&D focuses on the fundamental study of study of dopant effects and failure analyses to add RealValue™ to our products with quality Beyond the Perfection™. We believe MKE's value-added products and services will help our customer challenge current difficulty and shape the future of their products.



MKE's unique alloy design and customized process build the most reliable products which ensures quality uniformity.

Product Reliability

Professional Customer Support

Dedicated customer service team and comprehensive technical support system offer our expertise to support customized packaging solution for customer's products.

RealValue™

Six-Sigma Innovation

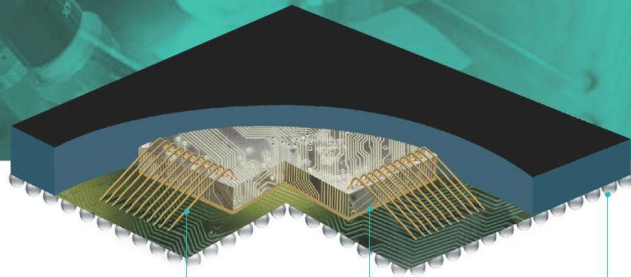
Global R&D Resource

Focus on customer oriented product development with extensive global R&D network with customers, assembly tool suppliers and related research institutes of package advancement.

Continuously realizing the quality innovation technology and cost competitiveness using Six-Sigma.



Products



Bonding Wire



• Gold Bonding Wire

High Reliability, Low Loop Height and Good Loop Shape

Take advantages of our differentiated gold wire selections from 4N(99.99% purity) to 2N(99% purity) packages for various requirements.

- 4N High strength wire - UB, XC, UN type
- 4N Normal loop wire - M, L, T type
- 3N High Reliability wire - UR type
- 2N High reliability wire - R, LK type
- Bumping wire - BR type
- Au-Ag alloy wire - MR type



• Copper Bonding Wire

Anti-Oxidation, Low Hardness and Excellent Bondability

Broaden your package design solutions with MKE's innovative Cu technology. To maximize package performance and minimize cost, MKE takes an extra mile for the most suitable customization.

- 4N Copper Bonding Wire - CD, CS, LV type

Bonding Wire

Gold Bonding Wire
Copper Bonding Wire

Solder Ball

EVM & Target

Gold Evaporate Materials
Sputtering Targets

Solder Ball



• Solder Ball

New Lead-Free Composition for Reliability Enhancement

MKE offer various Lead-free compositions with own patent alloy and other licensed alloys. MKE's unique alloy design for preventing oxidation and enhancing shear strength ensures higher reliability performance.

EVM & Target

• Gold Evaporate Materials

MKE offer various Lead-free compositions with own patent alloy and other licensed alloys. MKE's unique alloy design for preventing oxidation and enhancing shear strength ensures higher reliability performance.



• Sputtering Target

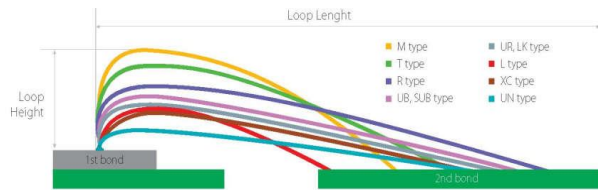
MKE Au base sputtering targets are widely used for conductive film deposition of semiconductor wafer and decorative coating, etc. All geometries including circular, planar, rectangular and conical are available and rare used composition can be manufactured as well by our alloy design know-how. MKE also offers reproduction service of gold scrap.



Bonding Wire



Gold Bonding Wire



Datasheet

Classification	Normal Wire		High Tensile Strength 4N Wire		High Reliability			
	L	T	UB	UN	4N SUB	3N UR2	2N R	LK
Wire Type	L	T	UB	UN	4N SUB	3N UR2	2N R	LK
B/L (gr)	≥ 9	≥ 9	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
E/L (%)	3~8	3~8	2~7	2~7	2~7	2~7	2~8	2~7
HAZ length (um)	130~160	160~190	120~150	90~110	120~140	90~110	140~170	90~110
Loop height (um)	Min. 115	Min. 130	Min. 110	Min. 70	Min. 110	Min. 75	Min. 120	Min. 75
Loop length (mil)	Max. 150	Max. 200	Max. 230	Max. 220	Max. 220	Max. 230	Max. 230	Max. 230
Application	TSOP TQFP	QFP BGA SBGA	QFP BGA FPP PKG CSP	CSP BGA MCM MCP	FPP PKG Low-K PKG	CSP BGA QFP FPP PKG	BGA CSP QFP PKG	FPP PKG Low-K PKG

< Wire size : 1.0 MIL >

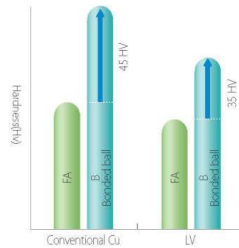
Copper Bonding Wire

Features

Type	Purity	Description
CD	4N	Normal type for general application
CS	4N	Customized type
LV	4N	Low hardness wire for fine size



Wire : CS type 2.0mil / Aging Temp. : 45°C / Aging Time : 3 days / Humidity : 50%RH / Environment : Air



- Wire size : 1.0 MIL
- FISCHERS COPE HM2000
- Load : 50mN
- Indenting Speed : 10 sec
- Creep : 5 sec

Pb-Free Solder Ball

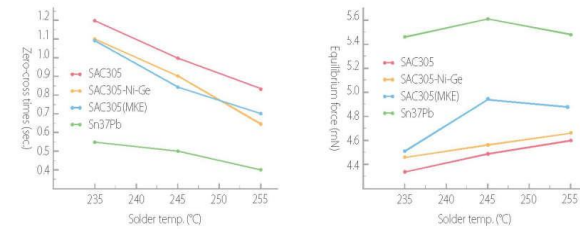


Features

Composition	Melting Temp. (°C)
Sn - 1Ag - 0.5Cu	217 ~ 225
Sn - 1.2Ag - 0.5Cu - 0.05Ni	217 ~ 225
Sn - 3Ag - 0.5Cu + (X Doping)	217 ~ 219
Sn - 3.5Ag	221
Sn - 4Ag - 0.5Cu + (X Doping)	217 ~ 219
Sn - 3Ag - 0.5Cu / Sn - 4Ag - 0.5Cu	217 ~ 219

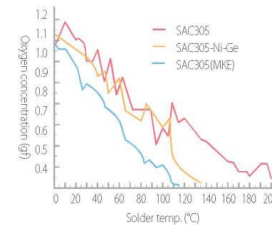
Superior Wettability

Superior Wettability ensures lower ball come-off failure in Green Package



Oxidation-free

MKE's Pb-free ball shows better oxidation-resistant property



Visual comparison after 5x multiple reflow : Degree of discoloration

