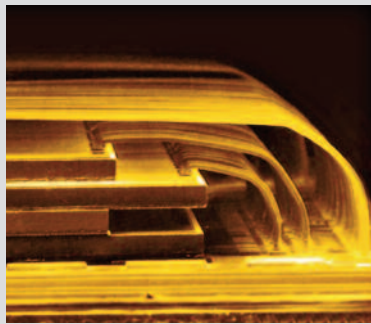
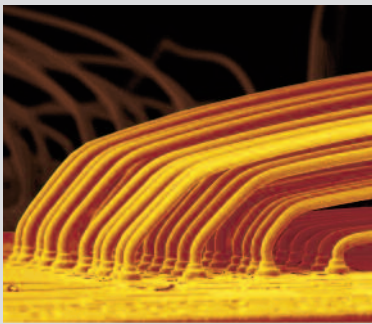


## Formax™

### Gold Wire for Stacked Die and Multi-tier Applications



#### Formax Benefits

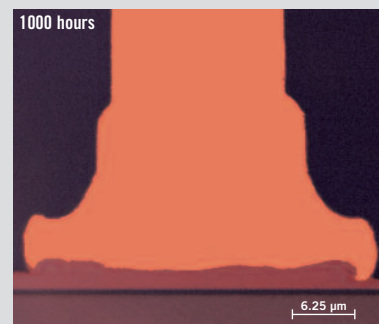
- Engineered and specifically designed for stacked die and multi-tier applications
- Highly accurate and consistent loop profiles support high wire bond yields
- Improved loop linearity and stability achieves higher moulding yields
- Versatile looping capabilities
- Robust 1st and 2nd bondability provides for consistently higher bond test results
- Proven intermetallic stability based on 3N gold composition

#### Formax Mechanical Properties

Diameter	Microns	15	18	20	23	25
	Mils	0.6	0.7	0.8	0.9	1.0
<b>Recommended Specs for Ball Bonding</b>						
Elongation (%)		2 – 5	2 – 6	2 – 6	2 – 7	2 – 7
Breaking Load (g)		2 – 7	4 – 8	6 – 10	7 – 12	9 – 15

\* For other diameters, please contact your local representative.

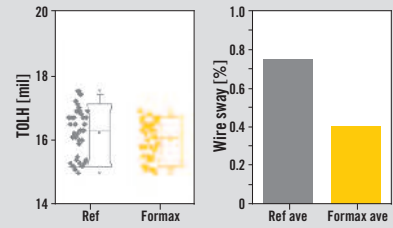
#### High Reliability



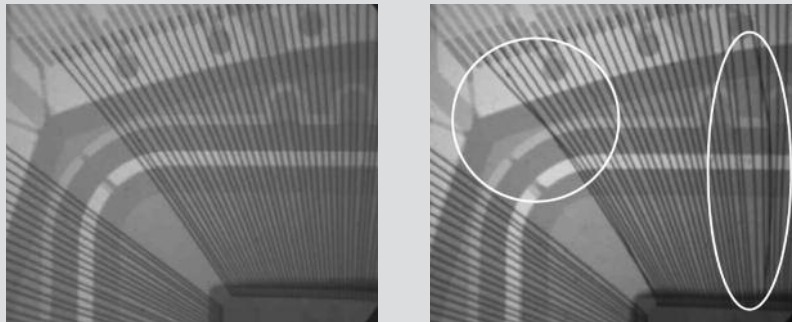
## Characteristics for 1 mil (25 µm) diameter **Formax** wire

Non-Gold Elements	< 0.1%
Breaking Load @ Room Temperature	> 12 g
Breaking Load @ 250°C / 20 sec.	> 11 g
Elastic Modulus	> 85 GPa
Heat Affected Zone (HAZ)	105 – 115 µm (for 50 µm ball diameter)
Neck Strength	> 8.0 g (at 50 µm ball diameter)
Melting Point	1063°C
Density	19.32 g/cm <sup>3</sup>
Heat Conductivity	3.17 W/cm-K
Electrical Resistivity	2.34 µOhm-cm
Coeff. of Linear Expansion (0 – 100°C)	14.2 ppm / K
Fusing Current for 25 µm, dia 10 mm length (in air)	0.5 A
FAB Hardness (HV 0.01/5s)	57 ~ 61

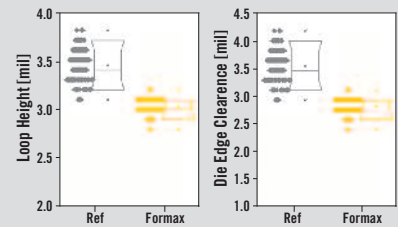
## Loop Height Consistency & Wire Sway



16 mil loop height / 275 mil span  
1 mil (25 µm) wire diameter

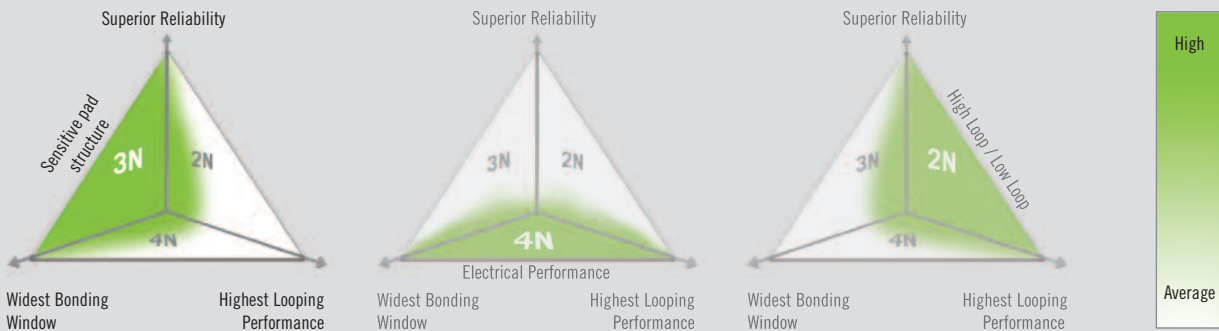


## Loop Height Consistency & Die-edge Clearance



3 mil loop height / 200 mil span  
1 mil (25 µm) wire diameter

## Gold Wire Segmentation by Properties



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