

Developed highly reliable and low cost low silver alloy solder paste with excellent thermal fatigue and drop impact resistance properties

Characteristics

- Realize higher joint strength and drop impact resistance with low silver alloys than SAC305
- Applicable to various reflow profiles of SAC305

Alloy composition

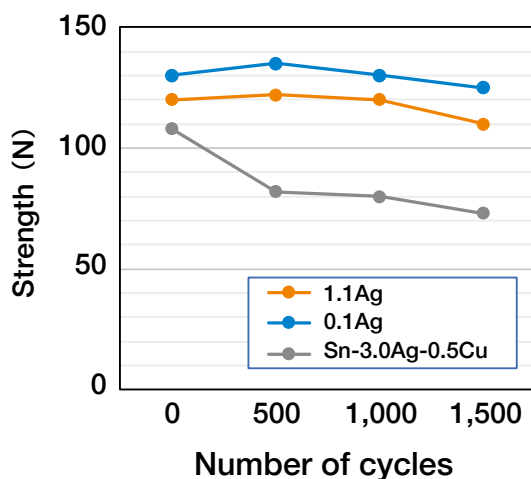
<Patented>

	Low 1.1% silver type	Low 0.1% silver type	SAC305
Composition	Sn-1.1Ag-0.7Cu-1.7Bi + α	Sn-0.1Ag-0.7Cu-2.0Bi + β	Sn-3.0Ag-0.5Cu
Melting point	223°C	225°C	219°C
Strength	64MPa	71MPa	42MPa
Elongation	35.2%	26.2%	33.7%

Joint reliability

- Excellent joint strength and drop impact resistance

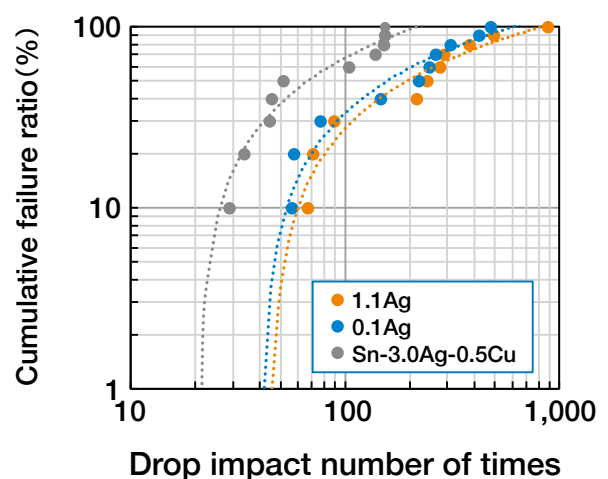
Joint strength (Thermal cycle test)



Test condition

- Substrate : FR4/Cu pad
- Mask thickness : 150 μ m
- Component : 3216R
- Cycle condition : -40 \leftrightarrow 125°C (30min. each)

Drop impact resistance



Test condition

- Substrate : FR4/Cu pad
- Mask thickness : 120 μ m
- Component : 0.5mm pitch LGA
- Drop impact condition : JEDEC 1,500G