

Cu Sinter Paste

With advanced demand for power devices, the market wants the bonding materials which have both high thermal conductivity and high heat resistance. Our Cu sinter paste is a solution of the above needs.

1. Cu Sinter Paste for Pressure sintering (Nitrogen)

Process

Screen printing

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Drying

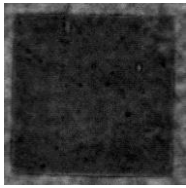
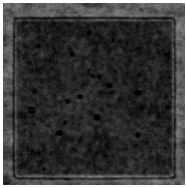
↓

Die mounting

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Pressure sintering

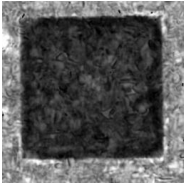
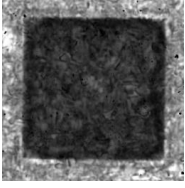
Adaptability

Surface finish	Ag	Au
SAT image*1*2		
Shear strength	> 60 MPa	> 60 MPa

*1 Sintering parameter: 9MPa, 280°C × 5min.

*2 Junction size: 5mm × 5mm

Reliability

	TCT
	-55°C to 150°C, 1000 cycles
SAT image*1*2	
Before	
↓	
After	

*1 Sintering parameter: 20MPa, 300°C × 10min.

*2 Si Die: 7.8mm × 7.8mm, 90μmt, Back metal: Au
AMB substrate: 35.6mm × 28.0mm, 0.92mmt(Bare Cu)

2. Cu Sinter Paste for Pressure-less sintering (Formic Acid)

Process

Dispensing

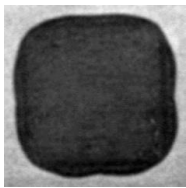
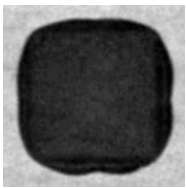
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Die mounting

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Pressureless sintering

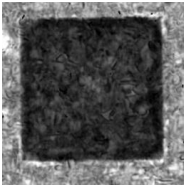
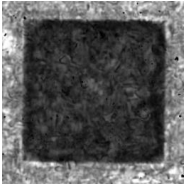
Adaptability

Surface finish	Ag	Au
SAT image*1*2		
Shear strength	> 30 MPa	> 30 MPa

*1 Sintering parameter: 200°C × 60min.

*2 Junction size: 3mm × 3mm

Reliability

	TCT (w/o molding)
	-55°C to 150°C, 1000 cycles
SAT image*1*2	
Before	
↓	
After	

*1 Sintering parameter: 200°C × 60min.

*2 Si Die: 3.0mm × 3.0mm, 200μmt, Back metal: Au
Substrate: TO-247 (Bare Cu)