

CFB-1

Standard Bare Cu Wire 高純度Cuボンディングワイヤ



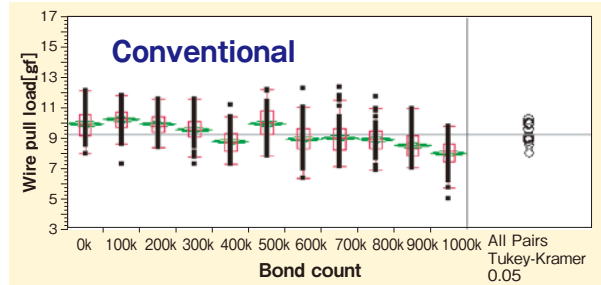
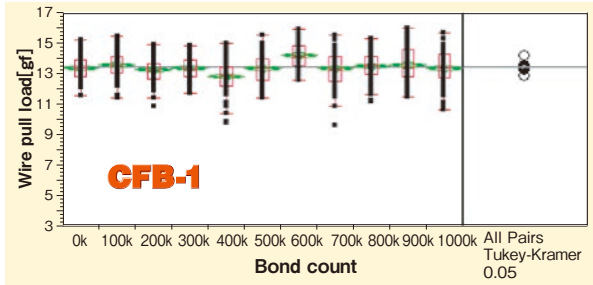
Characteristics

- Excellent stitch bond-ability and wide bonding parameter window
- Stable continuous bond-ability

特 徴

- ステッチ接合性に優れ、パラメータ設定が容易
- 安定した連続ボンディング性

Continuous Bonding 2nd Pull Test



CA-1

High Reliability Cu Alloy Bonding Wire 高信頼性対応Cu合金ボンディングワイヤ



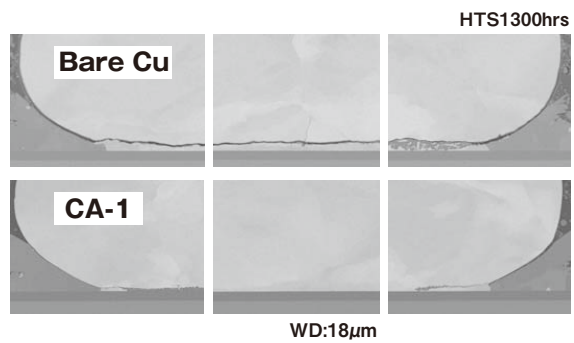
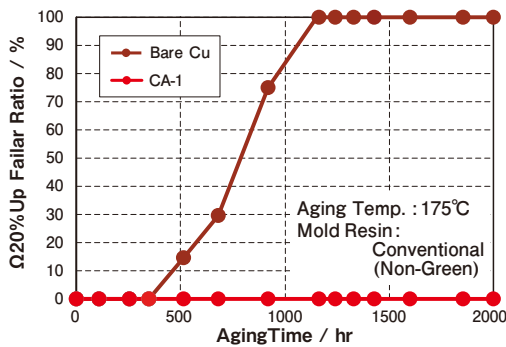
Characteristics

- Higher bond reliability
- Wider bonding window
- Lower resistivity

特 徴

- 高い接合信頼性
- 広いボンディングウインドウ
- 低い電気抵抗

Bond Reliability



2nd Bond Process Window

Bare Cu

		US (mA)													
		0	20	40	60	80	100	120	140	160	180	200			
Force (gf)	20	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	40	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	60	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	80	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	100	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	120	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	140	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	160	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	180	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail
	200	NSOL	NSOL	NSOL	NSOL	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail	Short Tail

K&S iConn WD:18μm

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		US (mA)													
		0	20	40	60	80	100	120	140	160	180	200			
Force (gf)	20	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	40	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	60	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	80	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	100	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	120	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	140	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	160	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	180	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail
	200	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	NSOL	Short Tail

NSOL Short Tail

CFB-1 Data Sheet
General Properties

Wire Diameter (um)	18	20	23	25	28	30	32	35	38
Tolerance (um)	+/- 1.0								
Weight (mg/200mm)	0.405-0.506	0.506-0.618	0.678-0.807	0.807-0.947	1.021-1.178	1.178-1.347	1.347-1.526	1.620-1.816	1.918-2.131
Breaking Load (gf)	3.6 - 7.8	4.4 - 9.6	5.8 - 12.6	6.8 - 14.9	8.5 - 18.6	9.7 - 21.1	11.3 - 24.8	13.5 - 29.5	15.8 - 34.5
Elongation (%)	Room Temp. 7.0 - 17.0		8.0 - 20.0			12.0 - 24.0			

Physical Property

Hardness (HV)	Free Air Ball	55 - 75							
	HAZ	65 - 80							
	Wire	70 - 90							
Density (g/cm ³)	8.92								
Resistivity (uΩ cm) @ 20°C	1.9								
Fusing Current (A, Length=3mm,10sec)	0.6	0.7	0.9	1.1	1.4	1.6	1.9	2.3	2.7
Electrical resistance (Ω, Length 10mm, Room Temp.)	0.67 - 0.84	0.55 - 0.67	0.42 - 0.50	0.36 - 0.42	0.29 - 0.33	0.25 - 0.29	0.22 - 0.25	0.19 - 0.21	0.16 - 0.18
Thermal Conductivity @ 20°C (W/m/K)	385								
Linear Expansion Coefficient (0-100°C) (ppm/K)	17.0								
Elastic Modulus (GPa)	60 - 90								
Melting Point (°C)	1,083								

TDS CFB-1 rev.2 20230524

CA-1 Data Sheet
General Properties

Wire Diameter (um)	18	20	23	25	28	30	32	35	38
Tolerance (um)	+/- 1.0								
Weight (mg/200mm)	0.406-0.508	0.508-0.620	0.680-0.810	0.810-0.950	1.025-1.182	1.182-1.351	1.351-1.531	1.625-1.822	1.925-2.138
Breaking Load (gf)	3.5 - 7.7	4.2 - 9.5	5.5 - 12.4	6.6 - 14.7	8.2 - 18.2	9.3 - 20.8	10.9 - 24.4	13.0 - 29.0	15.2 - 33.9
Elongation (%)	Room Temp. 7.0 - 17.0		8.0 - 20.0			9.0 - 22.0			

Physical Property

Hardness (HV)	Free Air Ball	65 - 85							
	HAZ	75 - 85							
	Wire	75 - 95							
Density (g/cm ³)	8.95								
Resistivity (uΩ cm) @ 20°C	2.2								
Fusing Current (A, Length=3mm,10sec)	0.5	0.6	0.8	1.0	1.2	1.4	1.6	2.0	2.3
Electrical resistance (Ω, Length 10mm, Room Temp.)	0.78 - 0.97	0.64 - 0.78	0.49 - 0.58	0.41 - 0.49	0.33 - 0.38	0.29 - 0.33	0.26 - 0.29	0.22 - 0.24	0.18 - 0.20
Thermal Conductivity @ 20°C (W/m/K)	333								
Linear Expansion Coefficient (0-100°C) (ppm/K)	17.0								
Elastic Modulus (GPa)	55 - 95								
Melting Point (°C)	1,086								

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