

C1814

Cu-Cr-Zr ALLOY

1、Characteristic：

- Having high strength、electrical conductivity、good heat resistance、stress corrosion resistance and stress relaxation characteristics
- Non-magnetic material

2、Application：

- Applicable to all kinds of terminals、electric appliance and electronic materials
- Can substitute for Stol 95, applicable to Thermal module for mobile phone
- Can substitute for K75, applicable to LED、IC materials

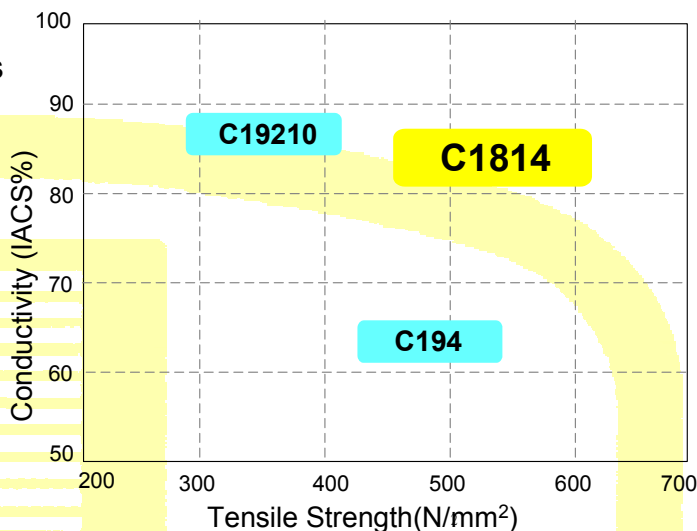
3、Chemical Composition：

Chemical Composition %			
Cu	Cr	Zr	Si
Bal.	0.15~0.45	0.05~0.25	0.005~0.05

4、Physical Properties：

Alloy	C1814
Density (gm/cm ³) (20°C)	8.9
Coefficient of Thermal Expansion (10 ⁻⁶ /°C 20°C~100°C)	17.1
Thermal Conductivity (cal/cm ² /cm/sec/°C 20°C)	0.76
Electrical Conductivity (IACS%)(Annealing)	80
Modulus of Elasticity (KN/mm ²)	137

6、Characteristic location：

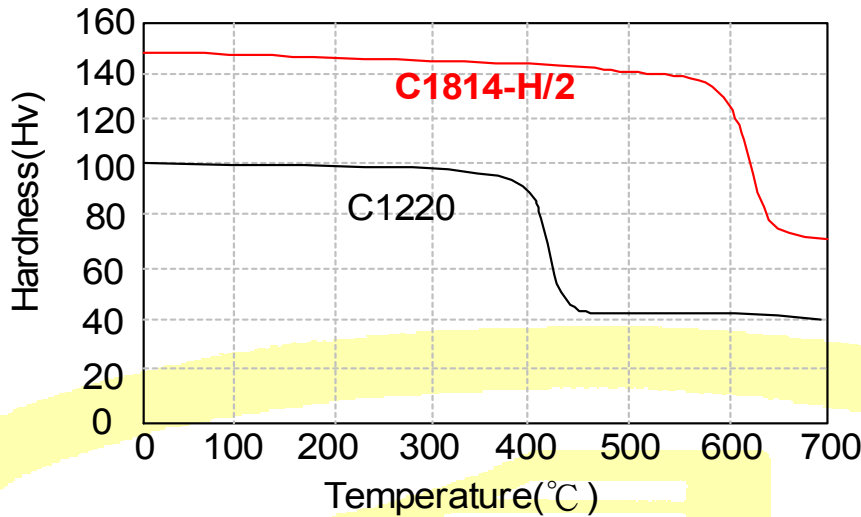


5、Mechanical Properties：

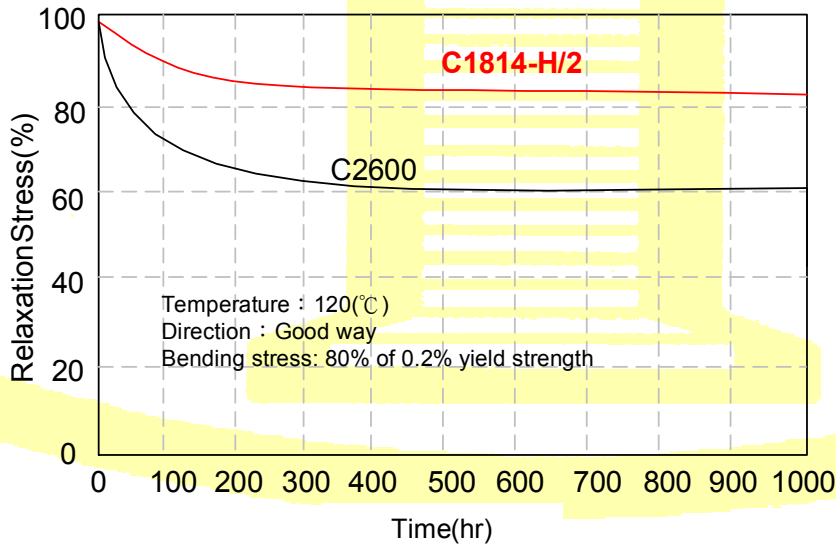
* Stress relief

Temper	Mechanical Properties			
	Vicker's Hardness Hv(500g)	Tensile Strength TS(N/mm ²)	Elongation EL (%)	Yield Strength Ys (N/mm ²)
1/2 H	135~160	470~550	Min. 6	350~510
H	145~170	510~590	Min. 3	410~570
CU 165以上		Min. 540	* Min. 4	Min. 520

7、Heat resistance：



8、Stress relaxation characteristics：



9、Bending properties：(t ≤ 0.5mm)

Sample : 0.40 mm(T) × 30 mm(W) × 60 mm(L) (90°-W Bending test)

Test method : JIS Z 2248

Alloy	Temper	Direction	R/t (Bending radius mm / thickness mm)							M-R/t (min)
			0	0.5	1.0	1.5	2.0	2.5	3.0	
C1814	H/2	Good way	▲	△	○	◎	◎	◎	◎	0.5
		Bad way	▲	△	○	○	◎	◎	◎	0.5
	H	Good way	▲	△	○	○	◎	◎	◎	0.5
		Bad way	▲	△	△	○	○	◎	◎	0.5

Determination : ▲ : Crack(Failed) 、 △ : Big wrinkles(Qualified) 、 ○ : Small wrinkles(Qualified) 、 ◎ : Good (Qualified)