C70250 Strip

1 Features

◆ C70250 (CuNi3Si) is a solid solution alloy with high strength and high thermal conductivity. It is suitable for lead frame alloys and is especially suitable for packaging high-density integrated circuits.
◆ Compared with Cu-Fe-P alloy, Cu-Ni-Si alloy has good elasticity, high strength, hardness, high temperature resistance and stress relaxation resistance.

2 Typical Applications

Lead frame、Connectors、Relay springs

Components for the electrical industry	Stamped parts	Connectors	Relay springs	Semiconductor components
√ √	√ √	√ √	√ √	√ √

3 Size

Alloy	Thickness	Width
C70250	≥0.08mm	18～610mm

4 Chemical Composition

Alloy	Chemical Composition %			
	Cu	Ni	Mg	Si
C70250	Rem	2.2～4.2	0.05～0.30	0.25～1.2

5 Physical Properties

Electricalconductivity, %IACS (20℃)	≥40
Resistivity, Ωmm2/m (20℃)	0.043103
Thermal Conductivity, W/m•K(20℃)	147-190
Coefficient of thermal expansion, 10^{-6}•K (20～300℃)	17.6
Density, g/cm3 (20℃)	8.82
Modulus of elasticity, GPa	131

6 Mechanical Properties

Temper	Tensile Strength Rm, MPa	Yield strength Rp0.2, MPa	Elongtion,%	Hardness HV
TM00	621～760	450～620	≥10	180～240
TM02	656～825	580～760	≥7	190～250
TM03	690～860	640～830	≥5	200～260

7 Bendability

Temper	R/T	
	GW	BD
TM00	1.0	1.5
TM02	1.5	2.0
TM03	2.0	2.5

7、Electrical conductivity