

[Abstract]

[Title of the Invention] High Purity Copper Wire for Connecting Semiconductor Apparatuses

[Object] By rendering a high purity copper wire such that its sectional structure becomes a dual structure, the wire's mechanical strength is increased, and thus the high purity copper wire with a sub-millimeter diameter is provided which is most suitable for a use with high temperature power semiconductor, which is subjected to numerous repetitions of ON/OFF operation in a short time.

[Means to solve problems] The present invention relates to a high purity copper wire having an oxide film and made of a copper of a purity of 99.999 to 99.99994 mass %; the wire has a sectional structure in which top 10 grains have collectively a crystal grain area which accounts for 5 - 25 % of the total area of the sectional structure, and 80 % or more of this crystal grain area is interior to the surface layer defined as having a thickness of 1/20 or smaller of the wire diameter; the high purity copper wire is made by being continuously drawn and useful for connecting to a semiconductor apparatus.

[Selected Drawing] Fig. 2