

ABSTRACT

COPPER ALLOY FOR ELECTRONIC DEVICE, METHOD FOR PRODUCING
COPPER ALLOY FOR ELECTRONIC DEVICE, AND COPPER ALLOY ROLLED
MATERIAL FOR ELECTRONIC DEVICE

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One aspect of this copper alloy for an electronic device is composed of a binary alloy of Cu and Mg which includes Mg at a content of 3.3 to 6.9 atomic%, with a remainder being Cu and inevitable impurities, and a conductivity σ (%IACS) is within the following range when the content of Mg is given as A atomic%,

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$$\sigma \leq \{1.7241/(-0.0347 \times A^2 + 0.6569 \times A + 1.7)\} \times 100.$$

Another aspect of this copper alloy for an electronic device is composed of a ternary alloy of Cu, Mg, and Zn which includes Mg at a content of 3.3 to 6.9 atomic% and Zn at a content of 0.1 to 10 atomic%, with a remainder being Cu and inevitable impurities, and a conductivity σ (%IACS) is within the following range when the content of Mg is

15 given as A atomic% and the content of Zn is given as B atomic%,

$$\sigma \leq \{1.7241/(X+Y+1.7)\} \times 100$$

$$X = -0.0347 \times A^2 + 0.6569 \times A$$

$$Y = -0.0041 \times B^2 + 0.2503 \times B.$$

20 No suitable figure