

For Nichrome 60 wire

$$L := 3 \cdot \text{in} \quad R_{26} := 2.670 \cdot \frac{\text{ohm}}{\text{ft}} \quad RTempFactor200 := 1.044$$

$$Rat20 := R_{26} \cdot L = 0.668 \, \Omega \quad Rat200 := Rat20 \cdot RTempFactor200 = 0.697 \, \Omega$$

$$current := 2 \cdot \text{amp}$$

$$Vat20 := current \cdot Rat20 = 1.335 \, \text{V} \quad Vat200 := current \cdot Rat200 = 1.394 \, \text{V}$$

$$voltage := 3.4 \cdot \text{V}$$

$$Iat20 := \frac{voltage}{Rat20} = 5.094 \, \text{A} \quad Iat200 := \frac{voltage}{Rat200} = 4.879 \, \text{A}$$

$$R_{30} := 6.750 \cdot \frac{\text{ohm}}{\text{ft}}$$

$$Rat20 := R_{30} \cdot L = 1.688 \, \Omega \quad Rat200 := Rat20 \cdot RTempFactor200 = 1.762 \, \Omega$$

$$current := 2 \cdot \text{amp}$$

$$Vat20 := current \cdot Rat20 = 3.375 \, \text{V} \quad Vat200 := current \cdot Rat200 = 3.524 \, \text{V}$$

$$voltage := 3.4 \cdot \text{V}$$

$$Iat20 := \frac{voltage}{Rat20} = 2.015 \, \text{A} \quad Iat200 := \frac{voltage}{Rat200} = 1.93 \, \text{A}$$

$$R_{28} := 4.094 \cdot \frac{\text{ohm}}{\text{ft}}$$

$$Rat20 := R_{28} \cdot L = 1.024 \, \Omega$$

$$Rat200 := Rat20 \cdot 1.037 = 1.061 \, \Omega$$

$$current := 2 \cdot \text{amp}$$

$$Vat20 := current \cdot Rat20 = 2.047 \, V$$

$$Vat200 := current \cdot Rat200 = 2.123 \, V$$

$$voltage := 3.4 \cdot V$$

$$Iat20 := \frac{voltage}{Rat20} = 3.322 \, A$$

$$Iat200 := \frac{voltage}{Rat200} = 3.203 \, A$$

For Kanthal A1

$$R_{28} := 5.27 \cdot \frac{\text{ohm}}{\text{ft}}$$

$$Rat20 := R_{28} \cdot L = 1.318 \, \Omega$$

$$Rat200 := Rat20 \cdot RTempFactor200 = 1.375 \, \Omega$$

$$current := 2 \cdot \text{amp}$$

$$Vat20 := current \cdot Rat20 = 2.635 \, V$$

$$Vat200 := current \cdot Rat200 = 2.751 \, V$$

$$voltage := 3.4 \cdot V$$

$$Iat20 := \frac{voltage}{Rat20} = 2.581 \, A$$

$$Iat200 := \frac{voltage}{Rat200} = 2.472 \, A$$