**热敏电阻温度数据转换原理：**

**其中温度T，单位K; 电阻值R，单位为kΩ。**

令：

则

则

**化简得到**

**A=(a23^2\*b1 - a12\*a23\*b3 + a13\*a22\*b3 - a13\*a23\*b2 + a12\*a33\*b2 - a22\*a33\*b1)/(a33\*a12^2 - 2\*a12\*a13\*a23 + a22\*a13^2 + a11\*a23^2 - a11\*a22\*a33)**

**B= (a13^2\*b2 - a12\*a13\*b3 + a11\*a23\*b3 - a13\*a23\*b1 - a11\*a33\*b2 + a12\*a33\*b1)/(a33\*a12^2 - 2\*a12\*a13\*a23 + a22\*a13^2 + a11\*a23^2 - a11\*a22\*a33)**

**C=(a12^2\*b3 - a12\*a13\*b2 - a11\*a22\*b3 + a11\*a23\*b2 - a12\*a23\*b1 + a13\*a22\*b1)/(a33\*a12^2 - 2\*a12\*a13\*a23 + a22\*a13^2 + a11\*a23^2 - a11\*a22\*a33)**

**FIELAX热敏电阻温度数据转换原理：**

**其中温度T，单位K; 电阻值R，单位为kΩ。**

令：

则

**A=-(a12\*a23\*a34\*b4 - a12\*a24\*a33\*b4 - a13\*a22\*a34\*b4 + a13\*a24\*a32\*b4 + a14\*a22\*a33\*b4 - a14\*a23\*a32\*b4 - a12\*a23\*a44\*b3 + a12\*a24\*a43\*b3 + a13\*a22\*a44\*b3 - a13\*a24\*a42\*b3 - a14\*a22\*a43\*b3 + a14\*a23\*a42\*b3 + a12\*a33\*a44\*b2 - a12\*a34\*a43\*b2 - a13\*a32\*a44\*b2 + a13\*a34\*a42\*b2 + a14\*a32\*a43\*b2 - a14\*a33\*a42\*b2 - a22\*a33\*a44\*b1 + a22\*a34\*a43\*b1 + a23\*a32\*a44\*b1 - a23\*a34\*a42\*b1 - a24\*a32\*a43\*b1 + a24\*a33\*a42\*b1)/(a11\*a22\*a33\*a44 - a11\*a22\*a34\*a43 - a11\*a23\*a32\*a44 + a11\*a23\*a34\*a42 + a11\*a24\*a32\*a43 - a11\*a24\*a33\*a42 - a12\*a21\*a33\*a44 + a12\*a21\*a34\*a43 + a12\*a23\*a31\*a44 - a12\*a23\*a34\*a41 - a12\*a24\*a31\*a43 + a12\*a24\*a33\*a41 + a13\*a21\*a32\*a44 - a13\*a21\*a34\*a42 - a13\*a22\*a31\*a44 + a13\*a22\*a34\*a41 + a13\*a24\*a31\*a42 - a13\*a24\*a32\*a41 - a14\*a21\*a32\*a43 + a14\*a21\*a33\*a42 + a14\*a22\*a31\*a43 - a14\*a22\*a33\*a41 - a14\*a23\*a31\*a42 + a14\*a23\*a32\*a41)**

**B=(a11\*a23\*a34\*b4 - a11\*a24\*a33\*b4 - a13\*a21\*a34\*b4 + a13\*a24\*a31\*b4 + a14\*a21\*a33\*b4 - a14\*a23\*a31\*b4 - a11\*a23\*a44\*b3 + a11\*a24\*a43\*b3 + a13\*a21\*a44\*b3 - a13\*a24\*a41\*b3 - a14\*a21\*a43\*b3 + a14\*a23\*a41\*b3 + a11\*a33\*a44\*b2 - a11\*a34\*a43\*b2 - a13\*a31\*a44\*b2 + a13\*a34\*a41\*b2 + a14\*a31\*a43\*b2 - a14\*a33\*a41\*b2 - a21\*a33\*a44\*b1 + a21\*a34\*a43\*b1 + a23\*a31\*a44\*b1 - a23\*a34\*a41\*b1 - a24\*a31\*a43\*b1 + a24\*a33\*a41\*b1)/(a11\*a22\*a33\*a44 - a11\*a22\*a34\*a43 - a11\*a23\*a32\*a44 + a11\*a23\*a34\*a42 + a11\*a24\*a32\*a43 - a11\*a24\*a33\*a42 - a12\*a21\*a33\*a44 + a12\*a21\*a34\*a43 + a12\*a23\*a31\*a44 - a12\*a23\*a34\*a41 - a12\*a24\*a31\*a43 + a12\*a24\*a33\*a41 + a13\*a21\*a32\*a44 - a13\*a21\*a34\*a42 - a13\*a22\*a31\*a44 + a13\*a22\*a34\*a41 + a13\*a24\*a31\*a42 - a13\*a24\*a32\*a41 - a14\*a21\*a32\*a43 + a14\*a21\*a33\*a42 + a14\*a22\*a31\*a43 - a14\*a22\*a33\*a41 - a14\*a23\*a31\*a42 + a14\*a23\*a32\*a41)**

**C=-(a11\*a22\*a34\*b4 - a11\*a24\*a32\*b4 - a12\*a21\*a34\*b4 + a12\*a24\*a31\*b4 + a14\*a21\*a32\*b4 - a14\*a22\*a31\*b4 - a11\*a22\*a44\*b3 + a11\*a24\*a42\*b3 + a12\*a21\*a44\*b3 - a12\*a24\*a41\*b3 - a14\*a21\*a42\*b3 + a14\*a22\*a41\*b3 + a11\*a32\*a44\*b2 - a11\*a34\*a42\*b2 - a12\*a31\*a44\*b2 + a12\*a34\*a41\*b2 + a14\*a31\*a42\*b2 - a14\*a32\*a41\*b2 - a21\*a32\*a44\*b1 + a21\*a34\*a42\*b1 + a22\*a31\*a44\*b1 - a22\*a34\*a41\*b1 - a24\*a31\*a42\*b1 + a24\*a32\*a41\*b1)/(a11\*a22\*a33\*a44 - a11\*a22\*a34\*a43 - a11\*a23\*a32\*a44 + a11\*a23\*a34\*a42 + a11\*a24\*a32\*a43 - a11\*a24\*a33\*a42 - a12\*a21\*a33\*a44 + a12\*a21\*a34\*a43 + a12\*a23\*a31\*a44 - a12\*a23\*a34\*a41 - a12\*a24\*a31\*a43 + a12\*a24\*a33\*a41 + a13\*a21\*a32\*a44 - a13\*a21\*a34\*a42 - a13\*a22\*a31\*a44 + a13\*a22\*a34\*a41 + a13\*a24\*a31\*a42 - a13\*a24\*a32\*a41 - a14\*a21\*a32\*a43 + a14\*a21\*a33\*a42 + a14\*a22\*a31\*a43 - a14\*a22\*a33\*a41 - a14\*a23\*a31\*a42 + a14\*a23\*a32\*a41)**

**D=(a11\*a22\*a33\*b4 - a11\*a23\*a32\*b4 - a12\*a21\*a33\*b4 + a12\*a23\*a31\*b4 + a13\*a21\*a32\*b4 - a13\*a22\*a31\*b4 - a11\*a22\*a43\*b3 + a11\*a23\*a42\*b3 + a12\*a21\*a43\*b3 - a12\*a23\*a41\*b3 - a13\*a21\*a42\*b3 + a13\*a22\*a41\*b3 + a11\*a32\*a43\*b2 - a11\*a33\*a42\*b2 - a12\*a31\*a43\*b2 + a12\*a33\*a41\*b2 + a13\*a31\*a42\*b2 - a13\*a32\*a41\*b2 - a21\*a32\*a43\*b1 + a21\*a33\*a42\*b1 + a22\*a31\*a43\*b1 - a22\*a33\*a41\*b1 - a23\*a31\*a42\*b1 + a23\*a32\*a41\*b1)/(a11\*a22\*a33\*a44 - a11\*a22\*a34\*a43 - a11\*a23\*a32\*a44 + a11\*a23\*a34\*a42 + a11\*a24\*a32\*a43 - a11\*a24\*a33\*a42 - a12\*a21\*a33\*a44 + a12\*a21\*a34\*a43 + a12\*a23\*a31\*a44 - a12\*a23\*a34\*a41 - a12\*a24\*a31\*a43 + a12\*a24\*a33\*a41 + a13\*a21\*a32\*a44 - a13\*a21\*a34\*a42 - a13\*a22\*a31\*a44 + a13\*a22\*a34\*a41 + a13\*a24\*a31\*a42 - a13\*a24\*a32\*a41 - a14\*a21\*a32\*a43 + a14\*a21\*a33\*a42 + a14\*a22\*a31\*a43 - a14\*a22\*a33\*a41 - a14\*a23\*a31\*a42 + a14\*a23\*a32\*a41)**

**化简得到**

**A= (a22\*a34^2\*b1 - a14\*a23^2\*b4 - a12\*a34^2\*b2 - a13\*a24^2\*b3 + a24^2\*a33\*b1 + a23^2\*a44\*b1 + a13\*a23\*a24\*b4 + a14\*a23\*a24\*b3 + a12\*a23\*a34\*b4 - a12\*a24\*a33\*b4 + a12\*a24\*a34\*b3 - a13\*a22\*a34\*b4 + a13\*a24\*a34\*b2 + a14\*a22\*a33\*b4 - a14\*a22\*a34\*b3 + a14\*a23\*a34\*b2 - a14\*a24\*a33\*b2 - a12\*a23\*a44\*b3 + a13\*a22\*a44\*b3 - a13\*a23\*a44\*b2 - 2\*a23\*a24\*a34\*b1 + a12\*a33\*a44\*b2 - a22\*a33\*a44\*b1)/(- a12^2\*a34^2 + a33\*a44\*a12^2 - 2\*a44\*a12\*a13\*a23 + 2\*a12\*a13\*a24\*a34 + 2\*a12\*a14\*a23\*a34 - 2\*a33\*a12\*a14\*a24 - a13^2\*a24^2 + a22\*a44\*a13^2 + 2\*a13\*a14\*a23\*a24 - 2\*a22\*a13\*a14\*a34 - a14^2\*a23^2 + a22\*a33\*a14^2 + a11\*a44\*a23^2 - 2\*a11\*a23\*a24\*a34 + a11\*a33\*a24^2 + a11\*a22\*a34^2 - a11\*a22\*a33\*a44)**

**B= (a11\*a34^2\*b2 - a13^2\*a24\*b4 - a14^2\*a23\*b3 - a12\*a34^2\*b1 + a14^2\*a33\*b2 + a13^2\*a44\*b2 + a13\*a14\*a23\*b4 + a13\*a14\*a24\*b3 + a12\*a13\*a34\*b4 - a12\*a14\*a33\*b4 + a12\*a14\*a34\*b3 - 2\*a13\*a14\*a34\*b2 - a11\*a23\*a34\*b4 + a11\*a24\*a33\*b4 - a11\*a24\*a34\*b3 - a12\*a13\*a44\*b3 + a13\*a24\*a34\*b1 + a14\*a23\*a34\*b1 - a14\*a24\*a33\*b1 + a11\*a23\*a44\*b3 - a13\*a23\*a44\*b1 - a11\*a33\*a44\*b2 + a12\*a33\*a44\*b1)/(- a12^2\*a34^2 + a33\*a44\*a12^2 - 2\*a44\*a12\*a13\*a23 + 2\*a12\*a13\*a24\*a34 + 2\*a12\*a14\*a23\*a34 - 2\*a33\*a12\*a14\*a24 - a13^2\*a24^2 + a22\*a44\*a13^2 + 2\*a13\*a14\*a23\*a24 - 2\*a22\*a13\*a14\*a34 - a14^2\*a23^2 + a22\*a33\*a14^2 + a11\*a44\*a23^2 - 2\*a11\*a23\*a24\*a34 + a11\*a33\*a24^2 + a11\*a22\*a34^2 - a11\*a22\*a33\*a44)**

**C= (a11\*a24^2\*b3 - a13\*a24^2\*b1 + a14^2\*a22\*b3 - a14^2\*a23\*b2 - a12^2\*a34\*b4 + a12^2\*a44\*b3 + a12\*a13\*a24\*b4 + a12\*a14\*a23\*b4 - 2\*a12\*a14\*a24\*b3 - a13\*a14\*a22\*b4 + a13\*a14\*a24\*b2 - a11\*a23\*a24\*b4 + a12\*a14\*a34\*b2 + a14\*a23\*a24\*b1 + a11\*a22\*a34\*b4 - a11\*a24\*a34\*b2 - a12\*a13\*a44\*b2 + a12\*a24\*a34\*b1 - a14\*a22\*a34\*b1 - a11\*a22\*a44\*b3 + a11\*a23\*a44\*b2 - a12\*a23\*a44\*b1 + a13\*a22\*a44\*b1)/(- a12^2\*a34^2 + a33\*a44\*a12^2 - 2\*a44\*a12\*a13\*a23 + 2\*a12\*a13\*a24\*a34 + 2\*a12\*a14\*a23\*a34 - 2\*a33\*a12\*a14\*a24 - a13^2\*a24^2 + a22\*a44\*a13^2 + 2\*a13\*a14\*a23\*a24 - 2\*a22\*a13\*a14\*a34 - a14^2\*a23^2 + a22\*a33\*a14^2 + a11\*a44\*a23^2 - 2\*a11\*a23\*a24\*a34 + a11\*a33\*a24^2 + a11\*a22\*a34^2 - a11\*a22\*a33\*a44)**

**D= (a11\*a23^2\*b4 - a14\*a23^2\*b1 + a13^2\*a22\*b4 - a13^2\*a24\*b2 + a12^2\*a33\*b4 - a12^2\*a34\*b3 - 2\*a12\*a13\*a23\*b4 + a12\*a13\*a24\*b3 + a12\*a14\*a23\*b3 - a13\*a14\*a22\*b3 + a13\*a14\*a23\*b2 - a11\*a23\*a24\*b3 + a12\*a13\*a34\*b2 - a12\*a14\*a33\*b2 + a13\*a23\*a24\*b1 - a11\*a22\*a33\*b4 + a11\*a22\*a34\*b3 - a11\*a23\*a34\*b2 + a11\*a24\*a33\*b2 + a12\*a23\*a34\*b1 - a12\*a24\*a33\*b1 - a13\*a22\*a34\*b1 + a14\*a22\*a33\*b1)/(- a12^2\*a34^2 + a33\*a44\*a12^2 - 2\*a44\*a12\*a13\*a23 + 2\*a12\*a13\*a24\*a34 + 2\*a12\*a14\*a23\*a34 - 2\*a33\*a12\*a14\*a24 - a13^2\*a24^2 + a22\*a44\*a13^2 + 2\*a13\*a14\*a23\*a24 - 2\*a22\*a13\*a14\*a34 - a14^2\*a23^2 + a22\*a33\*a14^2 + a11\*a44\*a23^2 - 2\*a11\*a23\*a24\*a34 + a11\*a33\*a24^2 + a11\*a22\*a34^2 - a11\*a22\*a33\*a44)**