**亚低温体温测温电路调试要求**

提交：吕刚立

时间：20170605

1. **总体要求：**

产品要求如下：

|  |  |
| --- | --- |
| 温度点 | 温度允差 |
| 28.0℃ | ±0.2℃ |
| 43.0℃ | ±0.2℃ |
| 38.0℃ | ±0.1℃ |

则有测温运放电路+MCU-AD转换总体误差如下：

|  |  |  |
| --- | --- | --- |
| 输入电压mv | AD输出值 | 允差 |
| 620.99 | 186 | ±12 |
| 592.00 | 3909 | ±12 |
| 601.75 | 2659 | ±12 |

输入电压与AD值的关系式为：y = -128.42x + 79936（其中y为AD值，X为输入电压值）

1. **调试运放电路：**

|  |  |  |
| --- | --- | --- |
| 输入电压mv | 运放输出电压mv | 允差mv |
| 620.99 | 150 | ±10 |
| 592.00 | 3150 | ±10 |

1. **总体测试：**

测试条件：恒压源1.2060V，6位半数字电压表，5.1K 10PPM 0.05% 串联电阻，标准信号源。

提交测试文件：

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 板号 | 通道号 | 输入电压mv | 输出电压最小值mv | 输出电压最大值mv | 单片机AD输入最小值mv | 单片机AD输入最大值mv | 输出AD最大值 | 输出AD最小值 |
| NO.1 | CH1 | 620.99 | 147.11 | 152.78 | 152.94 | 151.21 | 195 | 188 |
| 592.00 | 3147.2 | 3152.8 | 3149.2 | 3151.7 | 3911 | 3904 |
| 601.75 | 2141.3 | 2143.6 | 2145.1 | 2146.9 | 2671 | 2663 |
| CH2 | 620.99 | 149.86 | 154.61 | 150.06 | 154.71 | 198 | 191 |
| 592.00 | 3147.8 | 3150.8 | 3146.7 | 3147.8 | 3908 | 3901 |
| 601.75 | 2139.4 | 2143.3 | 2140.4 | 2144.3 | 2665 | 2659 |
| NO.2 | CH1 | 620.99 | 148.3 | 154.9 | 148.5 | 154.25 | 196 | 189 |
| 592.00 | 3147.4 | 3152.9 | 3143.8 | 3145.7 | 3905 | 3897 |
| 601.75 | 2145.8 | 2146.6 | 2143.3 | 2145.6 | 2668 | 2661 |
| CH2 | 620.99 | 148.1 | 151.83 | 148.4 | 151.2 | 195 | 187 |
| 592.00 | 3149.7 | 3151.3 | 3147.3 | 3149.5 | 3912 | 3902 |
| 601.75 | 2142.1 | 2143.2 | 2140.8 | 2141.5 | 2664 | 2656 |