# 1.06低电压检测电压（LVD）(2.20 3.07)

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1. 测试仪器：直流稳压电源（IT6932A）；高低温交变湿热试验箱（501565）；
2. 测试工具：CS2110 下载器，CS2110 MPA DEMO VER1.2
3. 上位机下载软件及烧写程序：CS2110 3.0.0



1. 测试方法：烧录低电压检测程序，降低电源电压直至灯亮此时电压为低压监测点，然后抬高电源电压直至灯灭此时电压为退出低压监测点；（PC3口的LED灯亮）
2. 要求：1.06 低电压检测范围在±5%VLVD之内；

2.20 低电压检测寄存器读写及对应功能测试正常；

3.07 低电压检测精度、稳定性无波动。

1. 测试数据：

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 低压监测点 | 1# | | 2# | | 3# | | 单位:V |
|  | 进入 | 退出 | 进入 | 退出 | 进入 | 退出 |  |
| 2.0 | 1.969 | 1.978 | 1.958 | 1.967 | 1.961 | 1.968 |  |
| 2.1 | 2.066 | 2.077 | 2.055 | 2.064 | 2.059 | 2.067 |  |
| 2.2 | 2.165 | 2.176 | 2.153 | 2.163 | 2.157 | 2.166 |  |
| 2.3 | 2.264 | 2.274 | 2.249 | 2.260 | 2.255 | 2.264 |  |
| 2.4 | 2.361 | 2.372 | 2.348 | 2.359 | 2.353 | 2.363 |  |
| 2.5 | 2.460 | 2.472 | 2.445 | 2.458 | 2.451 | 2.460 |  |
| 2.6 | 2.558 | 2.571 | 2.544 | 2.554 | 2.549 | 2.558 |  |
| 2.7 | 2.657 | 2.670 | 2.641 | 2.654 | 2.648 | 2.657 |  |
| 3.0 | 2.952 | 2.967 | 2.933 | 2.946 | 2.941 | 2.951 |  |
| 3.3 | 3.248 | 3.266 | 3.228 | 3.242 | 3.234 | 3.246 |  |
| 3.6 | 3.540 | 3.560 | 3.522 | 3.537 | 3.528 | 3.540 |  |
| 4.4 | 4.328 | 4.347 | 4.303 | 4.323 | 4.311 | 4.324 |  |

温漂测试

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| LVD=2V | | 1# | | | 2# | | | 3# | | LVD=2.5V | | 1# | | | 2# | | | 3# | |
| -40 |  | |  |  | |  |  | |  | -40 | 2.475 | | 2.483 | 2.491 | | 2.499 | 2.558 | | 2.564 |
| -30 |  | |  |  | |  |  | |  | -30 | 2.483 | | 2.486 | 2.49 | | 2.5 | 2.555 | | 2.56 |
| -20 |  | |  |  | |  |  | |  | -20 | 2.485 | | 2.488 | 2.492 | | 2.504 | 2.545 | | 2.552 |
| -10 |  | |  |  | |  |  | |  | -10 | 2.487 | | 2.492 | 2.495 | | 2.506 | 2.539 | | 2.544 |
| 0 |  | |  |  | |  |  | |  | 0 | 2.489 | | 2.496 | 2.494 | | 2.508 | 2.533 | | 2.537 |
| 10 |  | |  |  | |  |  | |  | 10 | 2.492 | | 2.498 | 2.496 | | 2.511 | 2.525 | | 2.532 |
| 20 | 2.022 | | 2.027 |  | |  | 2.003 | | 2.013 | 20 | 2.498 | | 2.5 | 2.495 | | 2.51 | 2.52 | | 2.523 |
| 30 | 2.022 | | 2.028 | 1.986 | | 1.992 | 1.995 | | 2.006 | 30 | 2.497 | | 2.499 | 2.497 | | 2.514 | 2.497 | | 2.517 |
| 40 | 2.025 | | 2.033 | 1.984 | | 1.991 | 1.991 | | 2 | 40 | 2.498 | | 2.502 | 2.497 | | 2.511 | 2.506 | | 2.51 |
| 50 | 2.027 | | 2.037 | 1.982 | | 1.995 | 1.985 | | 1.996 | 50 | 2.501 | | 2.503 | 2.495 | | 2.512 | 2.501 | | 2.503 |
| 60 | 2.033 | | 2.039 | 1.979 | | 1.99 | 1.979 | | 1.99 | 60 | 2.502 | | 2.505 | 2.496 | | 2.514 | 2.495 | | 2.499 |
| 70 | 2.034 | | 2.044 | 1.978 | | 1.987 | 1.972 | | 1.985 | 70 | 2.502 | | 2.505 | 2.497 | | 2.515 | 2.487 | | 2.494 |
| 80 | 2.036 | | 2.046 | 1.975 | | 1.986 | 1.965 | | 1.98 | 80 | 2.5 | | 2.503 | 2.497 | | 2.518 | 2.48 | | 2.487 |

1. 测试结果：根据测试结果表明，低电压检测范围在±5%VLVD之内，低电压检测寄存器及对应功能正常，低温时，该功能失效。
2. CS2110 MPA DEMO VER1.2原理图：



