**本振数据记录表格**

1.当C1＝220pF,C2＝220pF，测量静态工作点。

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VEQ/V | 0.501 | 1.002 | 1.501 | 2.007 | 2.506 | 2.990 | 3.516 | 4.000 | 4.510 | 5.005 | 5.492 |
| VCQ/V | 11.657 | 11.154 | 10.654 | 10.154 | 9.645 | 9.163 | 8.636 | 8.129 | 7.643 | 7.161 | 6.659 |
| VBQ/V | 1.116 | 1.633 | 2.142 | 2.648 | 3.161 | 3.645 | 4.178 | 4.688 | 5.193 | 5.670 | 6.170 |
| IEQ/mA | 0.501 | 1.002 | 1.501 | 2.007 | 2.506 | 2.990 | 3.516 | 4.000 | 4.510 | 5.005 | 5.492 |

**表1** 静态工作测试

2.确定不同反馈系数（由改变C1,C2值所得）下的振荡频率，起振、停振的VEQ，

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| C1/pF | 220 | 220 | 220 | 220 | 220 | 220 |
| C2/pF | 220 | 220 | 220 | 440 | 440 | 440 |
| 反馈系数F | 1 | 1 | 1 | 0.5 | 0.5 | 0.5 |
| VE/V | 5.880 | 5.447 | 0.904 | 5.873 | 5.169 | 1.089 |
| Vo/mV | 230 | 950 | 28 | 265 | 1050 | 30 |
| 振荡频率/MHz | 13.775 | 14.010 | 14.277 | 13.522 | 13.840 | 13.850 |
| 能否起振 | 否 | 是 | 否 | 否 | 是 | 否 |

**表2** 反馈系数对振荡参数的影响

3.当C1=220pF,C2=440pF时，阻性负载变化对振荡参数的影响

C1=220pF C2=440pF F=0.5

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 电阻/ | 1000 | 1000 | 1000 | 500 | 500 | 500 |
|  | 5.873 | 5.169 | 1.089 | 5.872 | 5.119 | 1.438 |
|  | 265 | 1050 | 30 | 210 | 900 | 145 |
| 振荡频率/MHz | 13.522 | 13.840 | 13.850 | 13.613 | 13.852 | 10.694 |
| 能否起振 | 否 | 是 | 否 | 否 | 是 | 否 |

**表3** 阻性负载变化对振荡参数的影响

4. 当C1=220pF,C2=440pF，R=500时，加容性负载对振荡参数的影响

C1=220pF C2=440pF F=0.5 R=500

|  |  |  |  |
| --- | --- | --- | --- |
| 容值/ | 680 | 680 | 680 |
|  | 5.785 | 5.388 | 2.167 |
|  | 335 | 625 | 160 |
| 振荡频率/MHz | 9.744 | 9.800 | 9.765 |
| 能否起振 | 否 | 是 | 否 |

**表4** 加容性负载对振荡参数的影响