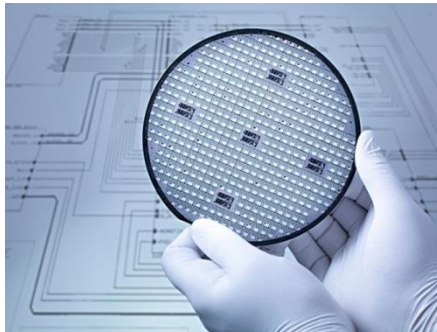


102mil TVS 芯片选型



TVS Diode series

102TVS

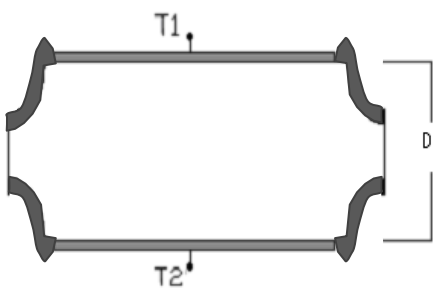
描述

TVS 系列产品是一种专门用来保护敏感电子设备免受雷电或者瞬态电压冲击的器件。

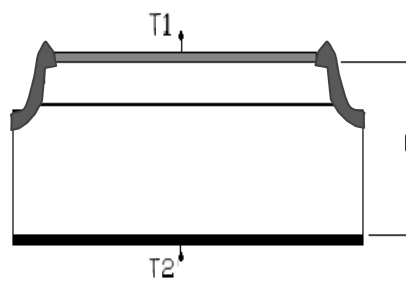
- 低漏电流
- 快速相应速度 (从 0->VBR 响应时间小于 1ps)
- 玻璃钝化结
- 良好的钳位能力
- 匹配大凸台框架的情况下, 可承受 1500W 峰值脉冲 (10/1000 μ s)

芯片结构图

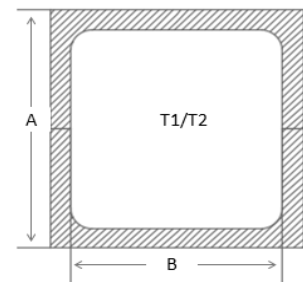
| | | |
|---------------------|-----------------------------------|---------------|
| 芯片工艺 Wafer tech | 台面玻璃钝化工艺 | |
| 圆片尺寸 Wafer Size | Φ 5inch | |
| 芯片厚度 Chip Thickness | D=265 \pm 15 μ m(可根据客户要求定制) | |
| 金属 (T1/T2) Metal | 正面 Front | TiNiAg |
| | 背面 Back | TiNiAg |
| 芯片尺寸 Chip Size | 芯片尺寸(A: μ m) Chip | 2591 \pm 50 |
| | 电极尺寸(B: μ m) Pad | 2296 \pm 25 |



(图 1: 双向 TVS 外沟槽结构示意图)



(图 2: 单向 TVS 外沟槽结构示意图)



(图 3: 芯片尺寸示意图)



芯片电参数-TVS (VR)

| 单向 | 双向 | V _{RWM} | V _{BR} @ I _T | | I _T | V _c @ I _{pp} | I _{pp} | I _R @ V _{RWM} |
|---------------|---------------|------------------|----------------------------------|--------|----------------|----------------------------------|-----------------|-----------------------------------|
| | | (V) | (V)min | (V)max | (mA) | (V) max | (A) min | (μA) max |
| TP0102-N5V0A2 | TP0102-N5V0C1 | 5 | 6.4 | 7 | 10 | 9.2 | 163.0 | 500 |
| TP0102-N6V0A2 | TP0102-N6V0C1 | 6 | 6.67 | 7.37 | 10 | 10.3 | 145.6 | 500 |
| TP0102-N6V5A2 | TP0102-N6V5C1 | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 134 | 100 |
| TP0102-N7V0A2 | TP0102-N7V0C1 | 7 | 7.8 | 8.6 | 10 | 12 | 125.0 | 50 |
| TP0102-N7V5A2 | TP0102-N7V5C1 | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 116.3 | 50 |
| TP0102-N8V0A2 | TP0102-N8V0C1 | 8 | 8.89 | 9.83 | 1 | 13.6 | 110.3 | 50 |
| TP0102-N8V5A2 | TP0102-N8V5C1 | 8.5 | 9.44 | 10.4 | 1 | 14.4 | 104.2 | 20 |
| TP0102-N9V0A1 | TP0102-N9V0C1 | 9 | 10 | 11.1 | 1 | 15.4 | 97.4 | 10 |
| TP0102-N010A1 | TP0102-N010C1 | 10 | 11.1 | 12.3 | 1 | 17 | 88.2 | 5 |
| TP0102-N011A1 | TP0102-N011C1 | 11 | 12.2 | 13.5 | 1 | 18.2 | 82.4 | 1 |
| TP0102-N012A1 | TP0102-N012C1 | 12 | 13.3 | 14.7 | 1 | 19.9 | 75.4 | 1 |
| TP0102-N013A1 | TP0102-N013C1 | 13 | 14.4 | 15.9 | 1 | 21.5 | 69.8 | 1 |
| TP0102-N014A1 | TP0102-N014C1 | 14 | 15.6 | 17.2 | 1 | 23.2 | 64.7 | 1 |
| TP0102-N015A1 | TP0102-N015C1 | 15 | 16.7 | 18.5 | 1 | 24.4 | 61.5 | 1 |
| TP0102-N016A1 | TP0102-N016C1 | 16 | 17.8 | 19.7 | 1 | 26 | 57.7 | 1 |
| TP0102-N017A1 | TP0102-N017C1 | 17 | 18.9 | 20.9 | 1 | 27.6 | 54.4 | 1 |
| TP0102-N018A1 | TP0102-N018C1 | 18 | 20 | 22.1 | 1 | 29.2 | 51.4 | 1 |
| TP0102-N020A1 | TN0102-N020C3 | 20 | 22.2 | 24.5 | 1 | 32.4 | 46.3 | 1 |
| TP0102-N022A1 | TN0102-N022C3 | 22 | 24.4 | 26.9 | 1 | 35.5 | 42.3 | 1 |
| TP0102-N024A1 | TN0102-N024C3 | 24 | 26.7 | 29.5 | 1 | 38.9 | 38.6 | 1 |
| TP0102-N026A1 | TN0102-N026C3 | 26 | 28.9 | 31.9 | 1 | 42.1 | 35.6 | 1 |
| TP0102-N028A1 | TN0102-N028C3 | 28 | 31.1 | 34.4 | 1 | 45.4 | 33.1 | 1 |
| TP0102-N030A1 | TN0102-N030C3 | 30 | 33.3 | 36.8 | 1 | 48.4 | 31.0 | 1 |
| TP0102-N033A1 | TN0102-N033C3 | 33 | 36.7 | 40.6 | 1 | 53.3 | 28.2 | 1 |
| TP0102-N036A1 | TN0102-N036C3 | 36 | 40 | 44.2 | 1 | 58.1 | 25.8 | 1 |
| TP0102-N040A1 | TN0102-N040C3 | 40 | 44.4 | 49.1 | 1 | 64.5 | 23.3 | 1 |
| TP0102-N043A1 | TN0102-N043C3 | 43 | 47.8 | 52.8 | 1 | 69.4 | 21.6 | 1 |
| TP0102-N045A1 | TN0102-N045C3 | 45 | 50 | 55.3 | 1 | 72.7 | 20.6 | 1 |
| TP0102-N048A1 | TN0102-N048C3 | 48 | 53.3 | 58.9 | 1 | 77.4 | 19.4 | 1 |
| TP0102-N051A1 | TN0102-N051C3 | 51 | 56.7 | 62.7 | 1 | 82.4 | 18.2 | 1 |
| TP0102-N054A1 | TN0102-N054C3 | 54 | 60 | 66.3 | 1 | 87.1 | 17.2 | 1 |
| TP0102-N058A1 | TN0102-N058C3 | 58 | 64.4 | 71.2 | 1 | 93.6 | 16.1 | 1 |
| TP0102-N060A1 | TN0102-N060C3 | 60 | 66.7 | 73.7 | 1 | 96.8 | 15.5 | 1 |
| TP0102-N064A1 | TN0102-N064C3 | 64 | 71.1 | 80.6 | 1 | 103 | 14.6 | 1 |
| TN0102-N070A1 | TN0102-N070C3 | 70 | 77.8 | 86 | 1 | 113 | 13.3 | 1 |
| TN0102-N075A1 | TN0102-N075C3 | 75 | 83.3 | 92.1 | 1 | 121 | 12.4 | 1 |
| TN0102-N080A1 | TN0102-N080C3 | 80 | 86.7 | 95.8 | 1 | 126 | 11.9 | 1 |
| TN0102-N085A1 | TN0102-N085C3 | 85 | 94.4 | 104 | 1 | 137 | 11.0 | 1 |
| TN0102-N090A1 | TN0102-N090C3 | 90 | 100 | 111 | 1 | 146 | 10.3 | 1 |

芯片电参数- TVS (VBR)

| 单向 | 双向 | V _{RWM} | V _{BR} @ I _T | | I _T | V _c @ I _{pp} | I _{pp} | I _R @ V _{RWM} |
|---------------|---------------|------------------|----------------------------------|--------|----------------|----------------------------------|-----------------|-----------------------------------|
| | | (V) | (V)min | (V)max | (mA) | (V) max | (A) min | (μA) max |
| TP0102-P6V8A2 | TP0102-P6V8C1 | 5.8 | 6.45 | 7.14 | 10 | 10.5 | 144.8 | 500 |
| TP0102-P7V5A2 | TP0102-P7V5C1 | 6.4 | 7.13 | 7.88 | 10 | 11.3 | 132.8 | 100 |
| TP0102-P8V2A2 | TP0102-P8V2C1 | 7.02 | 7.79 | 8.61 | 10 | 12.1 | 124 | 100 |
| TP0102-P9V1A2 | TP0102-P9V1C1 | 7.8 | 8.65 | 9.55 | 1 | 13.4 | 112 | 20 |
| TP0102-P010A2 | TP0102-P010C1 | 8.55 | 9.5 | 10.5 | 1 | 14.5 | 103.5 | 10 |
| TP0102-P011A2 | TP0102-P011C1 | 9.4 | 10.5 | 11.6 | 1 | 15.6 | 96.2 | 5 |
| TP0102-P012A1 | TP0102-P012C1 | 10.2 | 11.4 | 12.6 | 1 | 16.7 | 89.8 | 1 |
| TP0102-P013A1 | TP0102-P013C1 | 11.1 | 12.4 | 13.7 | 1 | 18.2 | 82.5 | 1 |
| TP0102-P015A1 | TP0102-P015C1 | 12.8 | 14.3 | 15.8 | 1 | 21.2 | 70.8 | 1 |
| TP0102-P016A1 | TP0102-P016C1 | 13.6 | 15.2 | 16.8 | 1 | 22.5 | 66.7 | 1 |
| TP0102-P018A1 | TP0102-P018C1 | 15.3 | 17.1 | 18.9 | 1 | 25.2 | 59.6 | 1 |
| TP0102-P020A1 | TP0102-P020C1 | 17.1 | 19 | 21 | 1 | 27.7 | 54.2 | 1 |
| TP0102-P022A1 | TP0102-P022C3 | 18.8 | 20.9 | 23.1 | 1 | 30.6 | 49.1 | 1 |
| TP0102-P024A1 | TN0102-P024C3 | 20.5 | 22.8 | 25.2 | 1 | 33.2 | 45.2 | 1 |
| TP0102-P027A1 | TN0102-P027C3 | 23.1 | 25.7 | 28.4 | 1 | 37.5 | 40 | 1 |
| TP0102-P030A1 | TN0102-P030C3 | 25.6 | 28.5 | 31.5 | 1 | 41.4 | 36.3 | 1 |
| TP0102-P033A1 | TN0102-P033C3 | 28.2 | 31.4 | 34.7 | 1 | 45.7 | 32.9 | 1 |
| TP0102-P036A1 | TN0102-P036C3 | 30.8 | 34.2 | 37.8 | 1 | 49.9 | 30.1 | 1 |
| TP0102-P039A1 | TN0102-P039C3 | 33.3 | 37.1 | 41 | 1 | 53.9 | 27.9 | 1 |
| TP0102-P043A1 | TN0102-P043C3 | 36.8 | 40.9 | 45.2 | 1 | 59.3 | 25.3 | 1 |
| TP0102-P047A1 | TN0102-P047C3 | 40.2 | 44.7 | 49.4 | 1 | 64.8 | 23.2 | 1 |
| TP0102-P051A1 | TN0102-P051C3 | 43.6 | 48.5 | 53.6 | 1 | 70.1 | 21.4 | 1 |
| TP0102-P056A1 | TN0102-P056C3 | 47.8 | 53.2 | 58.8 | 1 | 77 | 19.5 | 1 |
| TP0102-P062A1 | TN0102-P062C3 | 53 | 58.9 | 65.1 | 1 | 85 | 17.7 | 1 |
| TP0102-P068A1 | TN0102-P068C3 | 58.1 | 64.6 | 71.4 | 1 | 92 | 16.4 | 1 |
| TP0102-P075A1 | TN0102-P075C3 | 64.1 | 71.3 | 80.8 | 1 | 103 | 14.6 | 1 |
| TN0102-P082A1 | TN0102-P082C3 | 70.1 | 77.9 | 86.1 | 1 | 113 | 13.3 | 1 |
| TN0102-P091A1 | TN0102-P091C3 | 77.8 | 86.5 | 95.5 | 1 | 125 | 12 | 1 |
| TN0102-P100A1 | TN0102-P100C3 | 85.5 | 95 | 105 | 1 | 137 | 11 | 1 |