


规格书
SPECIFICATION

| | |
|----------------------|--------------------|
| 客户 CUSTOMER | 立创 |
| 客户料号 CUSTOMER P/N | |
| 规格描述 DESCRIPTION | |
| 产品编码 PART NUMBER | NTWB1002FB39500147 |
| 日期 DATE | 2023-01-31 |

| 德尔创承认栏 APPROVED BY DERSONIC | | | 客户承认栏 APPROVED BY CUSTOMER | |
|--------------------------------|---|-----------------------|-------------------------------|----------------|
| 批准 APPROVED BY | 审核 CHECK BY | 制订 FORMULATE BY | 批准 APPROVED BY | 审核 CHECK BY |
| |  | | | |

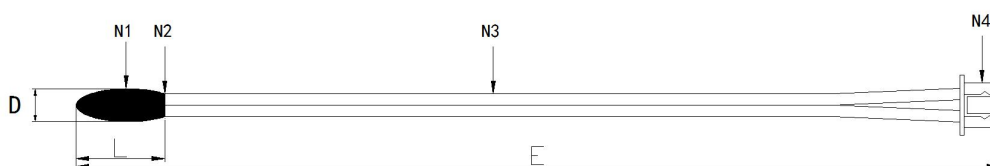
东莞市德尔创电子有限公司

DONGGUAN DERSONIC ELECTRONIC CO., LTD.

中国广东省东莞市寮步镇松湖智谷科技产业园2栋15楼
15/F, Building 2, Songhu Zhigu Science and Technology Industrial Park,
Liaobu Town, Dongguan City, Guangdong Province, China
TEL: +86-769-8533 5208 FAX: +86-769-8155 5989
Website: <http://www.dersonic.com>

1. 外形尺寸

单位 (Unit) : mm



| | | | | |
|-------------|-------------|-----------|-------------------|-------------|
| $D \pm 0.2$ | $L \pm 0.5$ | $E \pm 2$ | $\Phi d \pm 0.05$ | $F \pm 0.5$ |
| 2.2mm | 8mm | 947mm | / | / |

2. 参数规格

| 序号 | 材料名称 | 规格/型号 | 数量 |
|----|------|---|------|
| N1 | 芯片 | 103F3950 (25°C=10K±1% B=25/50 3950±1%) | 1pcs |
| N2 | 封装 | NB-1: NBH-1: NBX-1 环氧包封料 | 0.3g |
| N3 | 引线 | PVC UL2651 28 (0.9-1.9) awg /105°C 300V | 2pcs |
| N4 | 线尾 | ZH1.5-2P 黑色 | 1pcs |

3. 电气性能

| 序号 | 项目 | 符号 | 测试条件 | 最小值 | 正常值 | 最大值 | 单位 |
|------|---------|--------|--|--------|--------|--------|------|
| 3-1 | 25℃的电阻值 | R25 | Ta=25±0.05℃Pt≤0.1mw | 9.9 | 10 | 10.1 | kΩ |
| 3-2 | 50℃的电阻值 | R50 | Ta=50±0.05℃Pt≤0.1mw | 3.5161 | 3.5882 | 3.6614 | kΩ |
| 3-3 | B 值 | R25/50 | $B = LN \frac{R_{T1}}{R_{T2}} / (\frac{1}{T1} - \frac{1}{T2})$ | 3910.5 | 3950 | 3989.5 | k |
| 3-4 | 耗散系数 | σ | Ta=25±0.5℃（静止空气中） | 5 | / | / | mw/℃ |
| 3-5 | 时间常数 | τ | Ta=25±0.5℃（静止空气中） | / | / | 15 | sec |
| 3-6 | 绝缘电阻 | / | 500V/DC1min | 100 | / | / | |
| 3-7 | 耐压测试 | / | 700V AC, I=0.5mA | 60 | / | / | s |
| 3-8 | 工作温度范围 | / | / | -40 | / | +105 | ℃ |
| 3-9 | 反应灵敏 | / | / | 4.5 | 5 | 5.5 | S |
| 3-10 | 温度特性 | / | / | / | 见附表 | / | ℃ |
| 3-11 | 阻值误差 | / | / | / | 见附表 | / | KΩ |

4、可靠性能试验

- 4.1 耐焊性：将引线浸入 235±5℃的锡液中，锡面距本体下端 6mm 处，时间 2-3 秒。要求焊料在引线入浸部分表面涂布均匀、光滑，面积在 95%以上。
- 4.2 耐焊接热：将引线浸入 265℃±5 的锡液中，液面距电阻体 6mm 处，时间 5±1 秒。要求无可见性损伤，R25△R/R≤±2%。
- 4.3 引出端强度速变化强度：拉力:5N，时间:10 秒。要求无可见性损伤，R25△R/R≤±2%。
- 4.4 温度快速变化:55℃30min→25℃min→125℃30min→25℃min，反复 5 次，恢复 4 小时。

要求无

可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。

- 4.5 高温: 温度: 125°C , 时间: 16 小时。要求无可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。
- 4.6 寒冷: 温度: -55°C , 时间: 2 小时。要求无可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。
- 4.7 低气压: 气压: $40 \pm 0.1 \text{K}_{pa}$, 时间 4 小时。要求无可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。
- 4.8 稳态湿热: 温度: 40°C , 湿度: 93%, 时间: 500 ± 12 小时。要求无可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。耐电压 $\geq 700\text{V}/\text{AC}1\text{min}$ 绝缘电阻 $\geq 100 \text{K}\Omega$ 。
- 4.9 交变湿热: 温度: $25 \sim 40^{\circ}\text{C}$, 湿度: 90%, 时间: 500 ± 12 小时。 $R25\Delta R/R \leq \pm 2\%$ 。耐电压 $\geq 700\text{V}/\text{AC}1\text{min}$ 绝缘电阻 $\geq 100 \text{K}\Omega$ 。
- 4.10 上限类别温度、下零功耗的耐久性: 时间: 1000 ± 24 小时。要求无可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。
- 4.11 振动: 频率范围: $10 \sim 500\text{HZ}$, 振幅: 0.75mm 或 $98\text{m}/\text{S}^2$ 时间 2 小时, 要求无可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。
- 4.12 碰撞: 加速度: $250\text{m}/\text{S}^2$, 脉冲持续时间: 6Ms , 碰撞次数 4000 次。要求无可见性损伤, $R25\Delta R/R \leq \pm 2\%$ 。

5、贮存条件

- 5.1 贮存和运输过程中每堆叠放高度不超过 4 箱产品。
- 5.2 允许用任何方法运输, 但要避免雨、雪的直接或间接的淋袭和机械损伤
- 5.3 产品应贮存环境在温度为 $10^{\circ}\text{C}/+40^{\circ}\text{C}$, 相对湿度不大于 80%, 周围环境不应有酸性、碱性物质及腐蚀气体或辐射源。

TEMPERATURE VS RESISTANCE TABLE**Resistance 10k Ohms at 25deg. C****Resistance Tolerance + / -1%****B Value 3950K at 25/50 deg. C****B Value Tolerance + / - 1%**

| Temp. (deg. C) | Rmax (k Ohms) | Rnor (k Ohms) | Rmin (k Ohms) |
|-------------------|------------------|------------------|------------------|
| -40 | 359.5644 | 343.6326 | 328.3739 |
| -39 | 335.9504 | 321.2809 | 307.2213 |
| -38 | 314.0464 | 300.5339 | 287.5741 |
| -37 | 293.7175 | 281.2660 | 269.3154 |
| -36 | 274.8405 | 263.3624 | 252.3384 |
| -35 | 257.3023 | 246.7177 | 236.5449 |
| -34 | 240.9996 | 231.2355 | 221.8447 |
| -33 | 225.8377 | 216.8273 | 208.1555 |
| -32 | 211.7294 | 203.4118 | 195.4013 |
| -31 | 198.5951 | 190.9144 | 183.5124 |
| -30 | 186.3613 | 179.2666 | 172.4247 |
| -29 | 174.9608 | 168.4053 | 162.0793 |
| -28 | 164.3317 | 158.2726 | 152.4218 |
| -27 | 154.4170 | 148.8151 | 143.4022 |
| -26 | 145.1643 | 139.9837 | 134.9746 |
| -25 | 136.5254 | 131.7332 | 127.0964 |
| -24 | 128.4558 | 124.0216 | 119.7285 |
| -23 | 120.9146 | 116.8107 | 112.8348 |
| -22 | 113.8640 | 110.0648 | 106.3818 |
| -21 | 107.2691 | 103.7512 | 100.3387 |
| -20 | 101.0977 | 97.8396 | 94.6771 |
| -19 | 95.3201 | 92.3020 | 89.3705 |
| -18 | 89.9088 | 87.1124 | 84.3946 |
| -17 | 84.8385 | 82.2471 | 79.7268 |
| -16 | 80.0856 | 77.6837 | 75.3463 |
| -15 | 75.6284 | 73.4018 | 71.2336 |
| -14 | 71.4468 | 69.3823 | 67.3708 |
| -13 | 67.5220 | 65.6077 | 63.7412 |
| -12 | 63.8370 | 62.0616 | 60.3295 |
| -11 | 60.3755 | 58.7288 | 57.1212 |
| -10 | 57.1228 | 55.5953 | 54.1032 |
| -9 | 54.0651 | 52.6480 | 51.2629 |
| -8 | 51.1895 | 49.8747 | 48.5889 |
| -7 | 48.4842 | 47.2643 | 46.0705 |
| -6 | 45.9381 | 44.8062 | 43.6978 |

| | | | |
|----|---------|---------|---------|
| -5 | 43.5409 | 42.4906 | 41.4615 |
| -4 | 41.2831 | 40.3086 | 39.3531 |
| -3 | 39.1559 | 38.2516 | 37.3644 |
| -2 | 37.1508 | 36.3117 | 35.4880 |
| -1 | 35.2603 | 34.4817 | 33.7169 |
| 0 | 33.4771 | 32.7547 | 32.0447 |
| 1 | 31.7945 | 31.1243 | 30.4652 |
| 2 | 30.2064 | 29.5847 | 28.9728 |
| 3 | 28.7068 | 28.1301 | 27.5623 |
| 4 | 27.2904 | 26.7556 | 26.2286 |
| 5 | 25.9521 | 25.4562 | 24.9672 |
| 6 | 24.6872 | 24.2274 | 23.7738 |
| 7 | 23.4912 | 23.0650 | 22.6443 |
| 8 | 22.3599 | 21.9650 | 21.5750 |
| 9 | 21.2897 | 20.9239 | 20.5622 |
| 10 | 20.2768 | 19.9380 | 19.6028 |
| 11 | 19.3178 | 19.0041 | 18.6937 |
| 12 | 18.4096 | 18.1193 | 17.8318 |
| 13 | 17.5493 | 17.2807 | 17.0146 |
| 14 | 16.7340 | 16.4857 | 16.2394 |
| 15 | 15.9612 | 15.7317 | 15.5040 |
| 16 | 15.2284 | 15.0164 | 14.8059 |
| 17 | 14.5333 | 14.3376 | 14.1432 |
| 18 | 13.8738 | 13.6933 | 13.5139 |
| 19 | 13.2479 | 13.0816 | 12.9160 |
| 20 | 12.6537 | 12.5005 | 12.3479 |
| 21 | 12.0895 | 11.9485 | 11.8080 |
| 22 | 11.5535 | 11.4239 | 11.2946 |
| 23 | 11.0442 | 10.9252 | 10.8064 |
| 24 | 10.5602 | 10.4510 | 10.3419 |
| 25 | 10.1000 | 10.0000 | 9.9000 |
| 26 | 9.6709 | 9.5709 | 9.4710 |
| 27 | 9.2623 | 9.1626 | 9.0630 |
| 28 | 8.8732 | 8.7738 | 8.6747 |
| 29 | 8.5025 | 8.4037 | 8.3052 |
| 30 | 8.1494 | 8.0512 | 7.9534 |
| 31 | 7.8128 | 7.7154 | 7.6184 |
| 32 | 7.4919 | 7.3953 | 7.2993 |
| 33 | 7.1859 | 7.0903 | 6.9953 |
| 34 | 6.8940 | 6.7995 | 6.7056 |
| 35 | 6.6156 | 6.5221 | 6.4294 |
| 36 | 6.3498 | 6.2576 | 6.1660 |
| 37 | 6.0962 | 6.0051 | 5.9148 |

| | | | |
|----|--------|--------|--------|
| 38 | 5.8540 | 5.7642 | 5.6752 |
| 39 | 5.6227 | 5.5342 | 5.4465 |
| 40 | 5.4018 | 5.3146 | 5.2283 |
| 41 | 5.1907 | 5.1049 | 5.0199 |
| 42 | 4.9890 | 4.9045 | 4.8210 |
| 43 | 4.7961 | 4.7130 | 4.6309 |
| 44 | 4.6117 | 4.5300 | 4.4494 |
| 45 | 4.4354 | 4.3551 | 4.2759 |
| 46 | 4.2667 | 4.1878 | 4.1100 |
| 47 | 4.1053 | 4.0278 | 3.9515 |
| 48 | 3.9508 | 3.8748 | 3.7999 |
| 49 | 3.8030 | 3.7283 | 3.6548 |
| 50 | 3.6614 | 3.5882 | 3.5161 |
| 51 | 3.5258 | 3.4540 | 3.3833 |
| 52 | 3.3960 | 3.3255 | 3.2562 |
| 53 | 3.2715 | 3.2025 | 3.1346 |
| 54 | 3.1523 | 3.0846 | 3.0181 |
| 55 | 3.0380 | 2.9717 | 2.9065 |
| 56 | 2.9285 | 2.8635 | 2.7996 |
| 57 | 2.8234 | 2.7597 | 2.6972 |
| 58 | 2.7227 | 2.6603 | 2.5990 |
| 59 | 2.6260 | 2.5649 | 2.5049 |
| 60 | 2.5333 | 2.4734 | 2.4147 |
| 61 | 2.4443 | 2.3856 | 2.3282 |
| 62 | 2.3589 | 2.3014 | 2.2452 |
| 63 | 2.2768 | 2.2206 | 2.1656 |
| 64 | 2.1981 | 2.1431 | 2.0892 |
| 65 | 2.1224 | 2.0686 | 2.0159 |
| 66 | 2.0498 | 1.9970 | 1.9455 |
| 67 | 1.9800 | 1.9283 | 1.8779 |
| 68 | 1.9129 | 1.8623 | 1.8130 |
| 69 | 1.8484 | 1.7989 | 1.7507 |
| 70 | 1.7864 | 1.7380 | 1.6908 |
| 71 | 1.7267 | 1.6794 | 1.6332 |
| 72 | 1.6694 | 1.6231 | 1.5779 |
| 73 | 1.6142 | 1.5689 | 1.5247 |
| 74 | 1.5612 | 1.5168 | 1.4736 |
| 75 | 1.5101 | 1.4667 | 1.4245 |
| 76 | 1.4610 | 1.4185 | 1.3772 |
| 77 | 1.4137 | 1.3722 | 1.3317 |
| 78 | 1.3681 | 1.3275 | 1.2880 |
| 79 | 1.3243 | 1.2845 | 1.2458 |
| 80 | 1.2820 | 1.2431 | 1.2053 |

| | | | |
|-----|--------|--------|--------|
| 81 | 1.2413 | 1.2033 | 1.1663 |
| 82 | 1.2021 | 1.1649 | 1.1287 |
| 83 | 1.1644 | 1.1279 | 1.0926 |
| 84 | 1.1279 | 1.0923 | 1.0577 |
| 85 | 1.0928 | 1.0580 | 1.0241 |
| 86 | 1.0590 | 1.0249 | 0.9918 |
| 87 | 1.0264 | 0.9930 | 0.9606 |
| 88 | 0.9949 | 0.9623 | 0.9306 |
| 89 | 0.9646 | 0.9326 | 0.9016 |
| 90 | 0.9353 | 0.9040 | 0.8737 |
| 91 | 0.9070 | 0.8764 | 0.8468 |
| 92 | 0.8797 | 0.8498 | 0.8208 |
| 93 | 0.8534 | 0.8241 | 0.7958 |
| 94 | 0.8280 | 0.7994 | 0.7716 |
| 95 | 0.8035 | 0.7754 | 0.7483 |
| 96 | 0.7798 | 0.7523 | 0.7258 |
| 97 | 0.7569 | 0.7300 | 0.7041 |
| 98 | 0.7348 | 0.7085 | 0.6831 |
| 99 | 0.7134 | 0.6877 | 0.6628 |
| 100 | 0.6928 | 0.6676 | 0.6433 |
| 101 | 0.6728 | 0.6482 | 0.6244 |
| 102 | 0.6536 | 0.6295 | 0.6062 |
| 103 | 0.6349 | 0.6113 | 0.5885 |
| 104 | 0.6169 | 0.5938 | 0.5715 |
| 105 | 0.5995 | 0.5769 | 0.5550 |
| 106 | 0.5826 | 0.5605 | 0.5391 |
| 107 | 0.5663 | 0.5447 | 0.5237 |
| 108 | 0.5506 | 0.5293 | 0.5089 |
| 109 | 0.5353 | 0.5145 | 0.4945 |
| 110 | 0.5206 | 0.5002 | 0.4806 |
| 111 | 0.5063 | 0.4863 | 0.4671 |
| 112 | 0.4924 | 0.4729 | 0.4541 |
| 113 | 0.4791 | 0.4599 | 0.4415 |
| 114 | 0.4661 | 0.4474 | 0.4293 |
| 115 | 0.4535 | 0.4352 | 0.4175 |
| 116 | 0.4414 | 0.4234 | 0.4061 |
| 117 | 0.4296 | 0.4120 | 0.3951 |
| 118 | 0.4182 | 0.4009 | 0.3844 |
| 119 | 0.4071 | 0.3902 | 0.3740 |
| 120 | 0.3964 | 0.3799 | 0.3640 |