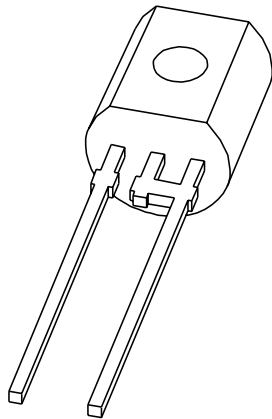


DATA SHEET



KTY81-2 series **Silicon temperature sensors**

Product specification
Supersedes data of 1996 Dec 06
File under Discrete Semiconductors, SC17

1998 Mar 26

Silicon temperature sensors

KTY81-2 series

DESCRIPTION

The temperature sensors in the KTY81-2 series have a positive temperature coefficient of resistance and are suitable for use in measurement and control systems. The sensors are encapsulated in the SOD70 leaded plastic package.

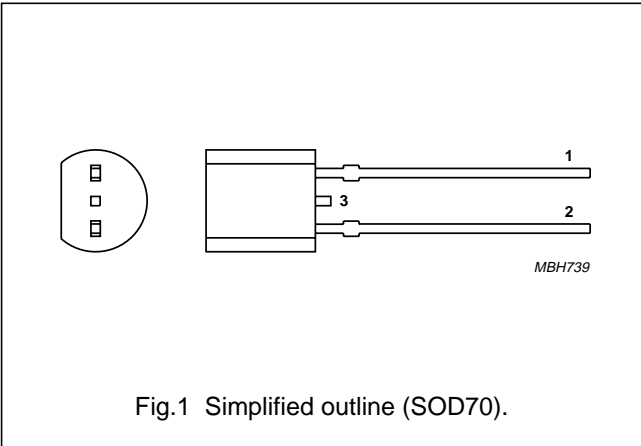
Tolerances of 0.5% or other special selections are available on request.

MARKING

| TYPE NUMBER | CODE |
|-------------|------|
| KTY81-210 | 210 |
| KTY81-220 | 220 |
| KTY81-221 | 221 |
| KTY81-222 | 222 |
| KTY81-250 | 250 |
| KTY81-251 | 251 |
| KTY81-252 | 252 |

PINNING

| PIN | DESCRIPTION |
|-----|------------------------------------|
| 1 | electrical contact |
| 2 | electrical contact |
| 3 | not to be connected to a potential |



QUICK REFERENCE DATA

| SYMBOL | PARAMETER | CONDITIONS | MIN. | MAX. | UNIT |
|------------------|-------------------------------|--|------|------|------|
| R ₂₅ | sensor resistance | T _{amb} = 25 °C; I _{cont} = 1 mA | | | |
| | KTY81-210 | | 1980 | 2020 | Ω |
| | KTY81-220 | | 1960 | 2040 | Ω |
| | KTY81-221 | | 1960 | 2000 | Ω |
| | KTY81-222 | | 2000 | 2040 | Ω |
| | KTY81-250 | | 1900 | 2100 | Ω |
| | KTY81-251 | | 1900 | 2000 | Ω |
| | KTY81-252 | | 2000 | 2100 | Ω |
| T _{amb} | ambient operating temperature | | -55 | +150 | °C |

Silicon temperature sensors

KTY81-2 series

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

| SYMBOL | PARAMETER | CONDITIONS | MIN. | MAX. | UNIT |
|-------------------|-------------------------------|---|------|------|------|
| I_{cont} | continuous sensor current | in free air; $T_{\text{amb}} = 25\text{ °C}$ | – | 10 | mA |
| | | in free air; $T_{\text{amb}} = 150\text{ °C}$ | – | 2 | mA |
| T_{amb} | ambient operating temperature | | –55 | +150 | °C |

CHARACTERISTICS

$T_{\text{amb}} = 25\text{ °C}$, in liquid, unless otherwise specified.

| SYMBOL | PARAMETER | CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|------------------|-------------------------------|---|-------|-------|-------|----------|
| R_{25} | sensor resistance | $I_{\text{cont}} = 1\text{ mA}$ | | | | |
| | KTY81-210 | | 1980 | – | 2020 | Ω |
| | KTY81-220 | | 1960 | – | 2040 | Ω |
| | KTY81-221 | | 1960 | – | 2000 | Ω |
| | KTY81-222 | | 2000 | – | 2040 | Ω |
| | KTY81-250 | | 1900 | – | 2100 | Ω |
| | KTY81-251 | | 1900 | – | 2000 | Ω |
| | KTY81-252 | | 2000 | – | 2100 | Ω |
| TC | temperature coefficient | | – | 0.79 | – | %/K |
| R_{100}/R_{25} | resistance ratio | $T_{\text{amb}} = 100\text{ °C}$ and 25 °C | 1.676 | 1.696 | 1.716 | |
| R_{-55}/R_{25} | resistance ratio | $T_{\text{amb}} = -55\text{ °C}$ and 25 °C | 0.480 | 0.490 | 0.500 | |
| τ | thermal time constant; note 1 | in still air | – | 30 | – | s |
| | | in still liquid; note 2 | – | 5 | – | s |
| | | in flowing liquid; note 2 | – | 3 | – | s |
| | rated temperature range | | –55 | – | +150 | °C |

Notes

- The thermal time constant is the time taken for the sensor to reach 63.2% of the total temperature difference.
For example, if a sensor with a temperature of 25 °C is moved to an environment with an ambient temperature of 100 °C , the time for the sensor to reach a temperature of 72.4 °C is the thermal time constant.
- Inert liquid, e.g. FC43 manufactured by the 3M company.

Silicon temperature sensors

KTY81-2 series

Table 1 Ambient temperature, corresponding resistance, temperature coefficient and maximum expected temperature error for KTY81-210 and KTY81-220 $I_{\text{cont}} = 1 \text{ mA}$.

| AMBIENT TEMPERATURE | | TEMP. COEFF. | KTY81-210 | | | | KTY81-220 | | | |
|---------------------|-----|--------------|----------------|------|------|-----------------|----------------|------|------|-----------------|
| °C | °F | %/K | RESISTANCE (Ω) | | | TEMP. ERROR (K) | RESISTANCE (Ω) | | | TEMP. ERROR (K) |
| | | | MIN. | TYP. | MAX. | | MIN. | TYP. | MAX. | |
| −55 | −67 | 0.99 | 951 | 980 | 1009 | ±3.02 | 941 | 980 | 1019 | ±4.02 |
| −50 | −58 | 0.98 | 1000 | 1030 | 1059 | ±2.92 | 990 | 1030 | 1070 | ±3.94 |
| −40 | −40 | 0.96 | 1105 | 1135 | 1165 | ±2.74 | 1094 | 1135 | 1176 | ±3.78 |
| −30 | −22 | 0.93 | 1218 | 1247 | 1277 | ±2.55 | 1205 | 1247 | 1289 | ±3.62 |
| −20 | −4 | 0.91 | 1338 | 1367 | 1396 | ±2.35 | 1325 | 1367 | 1410 | ±3.45 |
| −10 | 14 | 0.88 | 1467 | 1495 | 1523 | ±2.14 | 1452 | 1495 | 1538 | ±3.27 |
| 0 | 32 | 0.85 | 1603 | 1630 | 1656 | ±1.91 | 1587 | 1630 | 1673 | ±3.08 |
| 10 | 50 | 0.83 | 1748 | 1772 | 1797 | ±1.67 | 1730 | 1772 | 1814 | ±2.88 |
| 20 | 68 | 0.80 | 1901 | 1922 | 1944 | ±1.41 | 1881 | 1922 | 1963 | ±2.66 |
| 25 | 77 | 0.79 | 1980 | 2000 | 2020 | ±1.27 | 1960 | 2000 | 2040 | ±2.54 |
| 30 | 86 | 0.78 | 2057 | 2080 | 2102 | ±1.39 | 2036 | 2080 | 2123 | ±2.68 |
| 40 | 104 | 0.75 | 2217 | 2245 | 2272 | ±1.64 | 2194 | 2245 | 2295 | ±2.97 |
| 50 | 122 | 0.73 | 2383 | 2417 | 2451 | ±1.91 | 2359 | 2417 | 2475 | ±3.28 |
| 60 | 140 | 0.71 | 2557 | 2597 | 2637 | ±2.19 | 2531 | 2597 | 2663 | ±3.61 |
| 70 | 158 | 0.69 | 2737 | 2785 | 2832 | ±2.49 | 2709 | 2785 | 2860 | ±3.94 |
| 80 | 176 | 0.67 | 2924 | 2980 | 3035 | ±2.8 | 2894 | 2980 | 3065 | ±4.3 |
| 90 | 194 | 0.65 | 3118 | 3182 | 3246 | ±3.12 | 3086 | 3182 | 3278 | ±4.66 |
| 100 | 212 | 0.63 | 3318 | 3392 | 3466 | ±3.46 | 3284 | 3392 | 3500 | ±5.05 |
| 110 | 230 | 0.59 | 3523 | 3607 | 3691 | ±3.93 | 3487 | 3607 | 3728 | ±5.61 |
| 120 | 248 | 0.53 | 3722 | 3817 | 3912 | ±4.7 | 3683 | 3817 | 3950 | ±6.59 |
| 125 | 257 | 0.49 | 3815 | 3915 | 4016 | ±5.26 | 3775 | 3915 | 4055 | ±7.31 |
| 130 | 266 | 0.44 | 3901 | 4008 | 4114 | ±6 | 3861 | 4008 | 4154 | ±8.27 |
| 140 | 284 | 0.33 | 4049 | 4166 | 4283 | ±8.45 | 4008 | 4166 | 4325 | ±11.46 |
| 150 | 302 | 0.20 | 4153 | 4280 | 4407 | ±14.63 | 4110 | 4280 | 4450 | ±19.56 |

Silicon temperature sensors

KTY81-2 series

Table 2 Ambient temperature, corresponding resistance, temperature coefficient and maximum expected temperature error for KTY81-221 and KTY81-222 $I_{\text{cont}} = 1 \text{ mA}$.

| AMBIENT TEMPERATURE | | TEMP. COEFF. | KTY81-221 | | | | KTY81-222 | | | |
|---------------------|------|--------------|----------------|------|------|-----------------|----------------|------|------|-----------------|
| (°C) | (°F) | (%/K) | RESISTANCE (Ω) | | | TEMP. ERROR (K) | RESISTANCE (Ω) | | | TEMP. ERROR (K) |
| | | | MIN. | TYP. | MAX. | | MIN. | TYP. | MAX. | |
| −55 | −67 | 0.99 | 941 | 970 | 999 | ±3.02 | 960 | 990 | 1020 | ±3.02 |
| −50 | −58 | 0.98 | 990 | 1019 | 1049 | ±2.92 | 1010 | 1040 | 1070 | ±2.92 |
| −40 | −40 | 0.96 | 1094 | 1123 | 1153 | ±2.74 | 1116 | 1146 | 1176 | ±2.74 |
| −30 | −22 | 0.93 | 1205 | 1235 | 1264 | ±2.55 | 1230 | 1260 | 1290 | ±2.55 |
| −20 | −4 | 0.91 | 1325 | 1354 | 1382 | ±2.35 | 1352 | 1381 | 1410 | ±2.35 |
| −10 | 14 | 0.88 | 1452 | 1480 | 1508 | ±2.14 | 1481 | 1510 | 1538 | ±2.14 |
| 0 | 32 | 0.85 | 1587 | 1613 | 1640 | ±1.91 | 1619 | 1646 | 1673 | ±1.91 |
| 10 | 50 | 0.83 | 1730 | 1754 | 1779 | ±1.67 | 1765 | 1790 | 1815 | ±1.67 |
| 20 | 68 | 0.80 | 1882 | 1903 | 1924 | ±1.41 | 1920 | 1941 | 1963 | ±1.41 |
| 25 | 77 | 0.79 | 1960 | 1980 | 2000 | ±1.27 | 2000 | 2020 | 2040 | ±1.27 |
| 30 | 86 | 0.78 | 2037 | 2059 | 2081 | ±1.39 | 2078 | 2100 | 2123 | ±1.39 |
| 40 | 104 | 0.75 | 2195 | 2222 | 2250 | ±1.64 | 2239 | 2267 | 2295 | ±1.64 |
| 50 | 122 | 0.73 | 2360 | 2393 | 2426 | ±1.91 | 2407 | 2441 | 2475 | ±1.91 |
| 60 | 140 | 0.71 | 2531 | 2571 | 2611 | ±2.19 | 2582 | 2623 | 2664 | ±2.19 |
| 70 | 158 | 0.69 | 2710 | 2757 | 2804 | ±2.49 | 2764 | 2812 | 2860 | ±2.49 |
| 80 | 176 | 0.67 | 2895 | 2950 | 3005 | ±2.8 | 2953 | 3009 | 3065 | ±2.8 |
| 90 | 194 | 0.65 | 3086 | 3150 | 3214 | ±3.12 | 3149 | 3214 | 3279 | ±3.12 |
| 100 | 212 | 0.63 | 3285 | 3358 | 3431 | ±3.46 | 3351 | 3426 | 3501 | ±3.46 |
| 110 | 230 | 0.59 | 3488 | 3571 | 3655 | ±3.93 | 3558 | 3643 | 3728 | ±3.93 |
| 120 | 248 | 0.53 | 3684 | 3779 | 3873 | ±4.7 | 3759 | 3855 | 3951 | ±4.7 |
| 125 | 257 | 0.49 | 3776 | 3876 | 3976 | ±5.26 | 3853 | 3955 | 4056 | ±5.26 |
| 130 | 266 | 0.44 | 3862 | 3967 | 4073 | ±6 | 3940 | 4048 | 4155 | ±6 |
| 140 | 284 | 0.33 | 4009 | 4125 | 4241 | ±8.45 | 4090 | 4208 | 4326 | ±8.45 |
| 150 | 302 | 0.20 | 4112 | 4237 | 4363 | ±14.63 | 4195 | 4323 | 4451 | ±14.63 |

Silicon temperature sensors

KTY81-2 series

Table 3 Ambient temperature, corresponding resistance, temperature coefficient and maximum expected temperature error for KTY81-250 and KTY81-251 $I_{\text{cont}} = 1 \text{ mA}$.

| AMBIENT TEMPERATURE | | TEMP. COEFF. | KTY81-250 | | | | KTY81-251 | | | |
|---------------------|-----|--------------|----------------|------|------|-----------------|----------------|------|------|-----------------|
| °C | °F | %/K | RESISTANCE (Ω) | | | TEMP. ERROR (K) | RESISTANCE (Ω) | | | TEMP. ERROR (K) |
| | | | MIN. | TYP. | MAX. | | MIN. | TYP. | MAX. | |
| −55 | −67 | 0.99 | 911 | 980 | 1049 | ±7.04 | 913 | 956 | 999 | ±4.52 |
| −50 | −58 | 0.98 | 959 | 1030 | 1101 | ±6.99 | 960 | 1004 | 1048 | ±4.45 |
| −40 | −40 | 0.96 | 1060 | 1135 | 1210 | ±6.91 | 1061 | 1106 | 1152 | ±4.3 |
| −30 | −22 | 0.93 | 1168 | 1247 | 1327 | ±6.84 | 1169 | 1216 | 1263 | ±4.16 |
| −20 | −4 | 0.91 | 1283 | 1367 | 1451 | ±6.77 | 1285 | 1333 | 1381 | ±4.01 |
| −10 | 14 | 0.88 | 1407 | 1495 | 1583 | ±6.69 | 1408 | 1457 | 1507 | ±3.84 |
| 0 | 32 | 0.85 | 1538 | 1630 | 1721 | ±6.61 | 1539 | 1589 | 1639 | ±3.67 |
| 10 | 50 | 0.83 | 1677 | 1772 | 1867 | ±6.51 | 1678 | 1728 | 1778 | ±3.48 |
| 20 | 68 | 0.80 | 1824 | 1922 | 2021 | ±6.41 | 1825 | 1874 | 1923 | ±3.28 |
| 25 | 77 | 0.79 | 1900 | 2000 | 2100 | ±6.35 | 1900 | 1950 | 2000 | ±3.18 |
| 30 | 86 | 0.78 | 1974 | 2080 | 2185 | ±6.55 | 1975 | 2028 | 2080 | ±3.33 |
| 40 | 104 | 0.75 | 2127 | 2245 | 2362 | ±6.97 | 2129 | 2189 | 2248 | ±3.64 |
| 50 | 122 | 0.73 | 2287 | 2417 | 2547 | ±7.4 | 2289 | 2357 | 2425 | ±3.97 |
| 60 | 140 | 0.71 | 2453 | 2597 | 2741 | ±7.85 | 2455 | 2532 | 2609 | ±4.31 |
| 70 | 158 | 0.69 | 2626 | 2785 | 2943 | ±8.31 | 2628 | 2715 | 2802 | ±4.67 |
| 80 | 176 | 0.67 | 2805 | 2980 | 3154 | ±8.79 | 2807 | 2905 | 3003 | ±5.05 |
| 90 | 194 | 0.65 | 2990 | 3182 | 3374 | ±9.29 | 2993 | 3102 | 3212 | ±5.43 |
| 100 | 212 | 0.63 | 3182 | 3392 | 3602 | ±9.81 | 3185 | 3307 | 3429 | ±5.84 |
| 110 | 230 | 0.59 | 3379 | 3607 | 3836 | ±10.65 | 3382 | 3517 | 3652 | ±6.45 |
| 120 | 248 | 0.53 | 3569 | 3817 | 4065 | ±12.25 | 3573 | 3721 | 3870 | ±7.53 |
| 125 | 257 | 0.49 | 3658 | 3915 | 4173 | ±13.45 | 3662 | 3817 | 3973 | ±8.33 |
| 130 | 266 | 0.44 | 3741 | 4008 | 4274 | ±15.06 | 3745 | 3907 | 4070 | ±9.4 |
| 140 | 284 | 0.33 | 3883 | 4166 | 4450 | ±20.49 | 3887 | 4062 | 4237 | ±12.96 |
| 150 | 302 | 0.20 | 3982 | 4280 | 4578 | ±34.35 | 3987 | 4173 | 4359 | ±22.02 |

Silicon temperature sensors

KTY81-2 series

Table 4 Ambient temperature, corresponding resistance, temperature coefficient and maximum expected temperature error for KTY81-252 $I_{\text{cont}} = 1 \text{ mA}$.

| AMBIENT TEMPERATURE | | TEMP. COEFF. | KTY81-252 | | | |
|---------------------|------|--------------|----------------|------|------|-----------------|
| (°C) | (°F) | (%/K) | RESISTANCE (Ω) | | | TEMP. ERROR (K) |
| | | | MIN. | TYP. | MAX. | |
| −55 | −67 | 0.99 | 959 | 1005 | 1050 | ±4.52 |
| −50 | −58 | 0.98 | 1009 | 1055 | 1102 | ±4.45 |
| −40 | −40 | 0.96 | 1115 | 1163 | 1211 | ±4.3 |
| −30 | −22 | 0.93 | 1229 | 1278 | 1328 | ±4.16 |
| −20 | −4 | 0.91 | 1351 | 1401 | 1452 | ±4.01 |
| −10 | 14 | 0.88 | 1480 | 1532 | 1584 | ±3.84 |
| 0 | 32 | 0.85 | 1618 | 1670 | 1723 | ±3.67 |
| 10 | 50 | 0.83 | 1764 | 1817 | 1869 | ±3.48 |
| 20 | 68 | 0.80 | 1919 | 1970 | 2022 | ±3.28 |
| 25 | 77 | 0.79 | 2000 | 2050 | 2100 | ±3.18 |
| 30 | 86 | 0.78 | 2077 | 2132 | 2187 | ±3.33 |
| 40 | 104 | 0.75 | 2238 | 2301 | 2364 | ±3.64 |
| 50 | 122 | 0.73 | 2406 | 2478 | 2549 | ±3.97 |
| 60 | 140 | 0.71 | 2581 | 2662 | 2743 | ±4.31 |
| 70 | 158 | 0.69 | 2763 | 2854 | 2946 | ±4.67 |
| 80 | 176 | 0.67 | 2951 | 3054 | 3157 | ±5.05 |
| 90 | 194 | 0.65 | 3147 | 3262 | 3376 | ±5.43 |
| 100 | 212 | 0.63 | 3349 | 3477 | 3605 | ±5.84 |
| 110 | 230 | 0.59 | 3556 | 3697 | 3839 | ±6.45 |
| 120 | 248 | 0.53 | 3756 | 3912 | 4068 | ±7.53 |
| 125 | 257 | 0.49 | 3850 | 4013 | 4177 | ±8.33 |
| 130 | 266 | 0.44 | 3937 | 4108 | 4278 | ±9.4 |
| 140 | 284 | 0.33 | 4087 | 4271 | 4455 | ±12.96 |
| 150 | 302 | 0.20 | 4191 | 4387 | 4583 | ±22.02 |

Silicon temperature sensors

KTY81-2 series

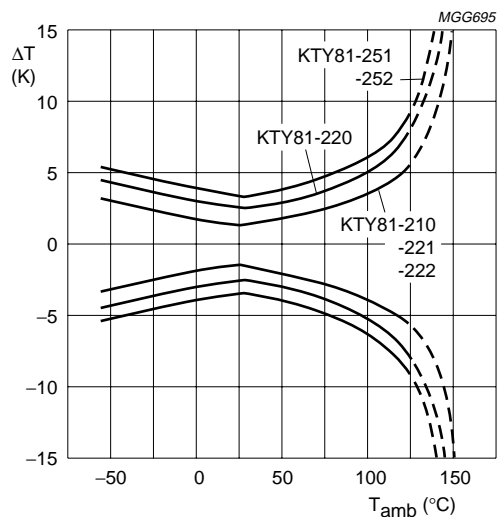
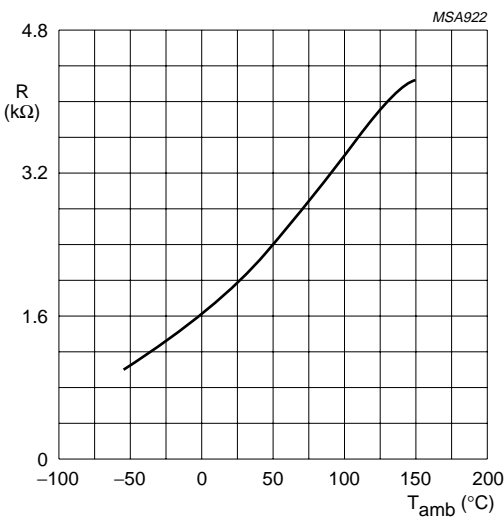
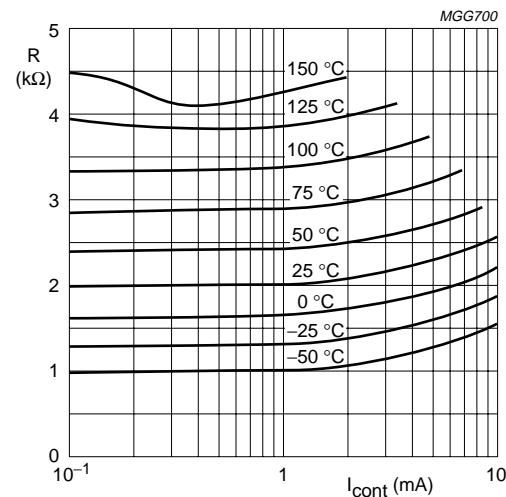


Fig.2 Maximum expected temperature error (ΔT).



$I_{cont} = 1 \text{ mA}$.

Fig.3 Sensor resistance as a function of ambient temperature; average values.



To keep the temperature error low, an operating current of $I_{cont} = 1 \text{ mA}$ is recommended for temperatures above 100 °C.

Fig.4 Sensor resistance as a function of operating current.

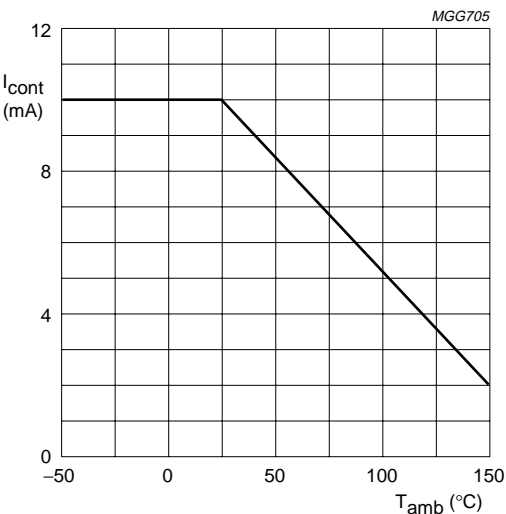
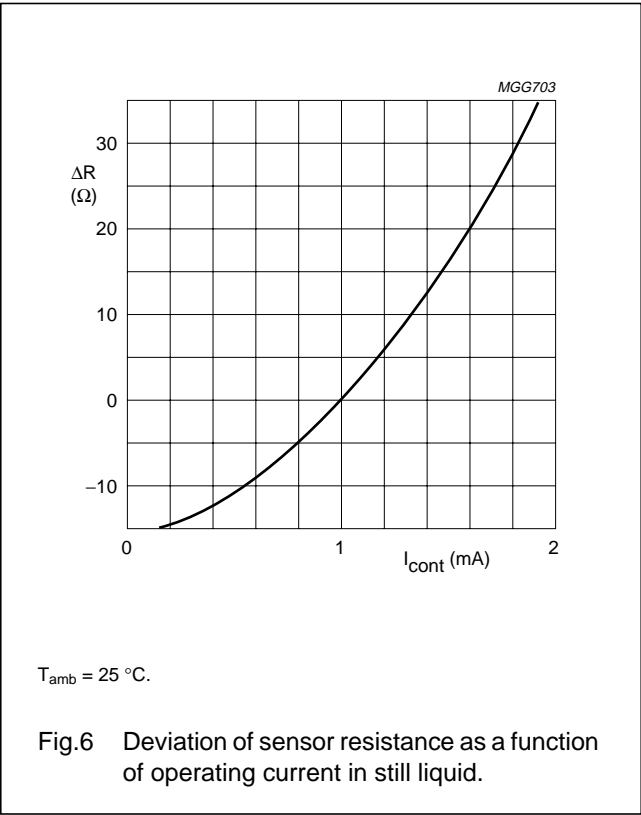


Fig.5 Maximum operating current for safe operation.

Silicon temperature sensors

KTY81-2 series



APPLICATION INFORMATION

| SYMBOL | PARAMETER | CONDITIONS | TYP. | UNIT |
|-----------------|-------------------------------------|--|------|----------|
| ΔR_{25} | drift of sensor resistance at 25 °C | 10000 hours continuous operation; $T_{amb} = 150\text{ }^{\circ}\text{C}$ | 0.5 | Ω |

Silicon temperature sensors

KTY81-2 series

PACKAGING

Sensors in SOD70 encapsulation are delivered in bulk packaging, and also reel packaging for automatic placement on hybrid circuits and printed-circuit boards (see Fig.7).

Note: Types in bulk packaging have a lead-to-lead distance of 2.54 millimetres, whereas the distance for types packaged on reel is 5.08 millimetres.

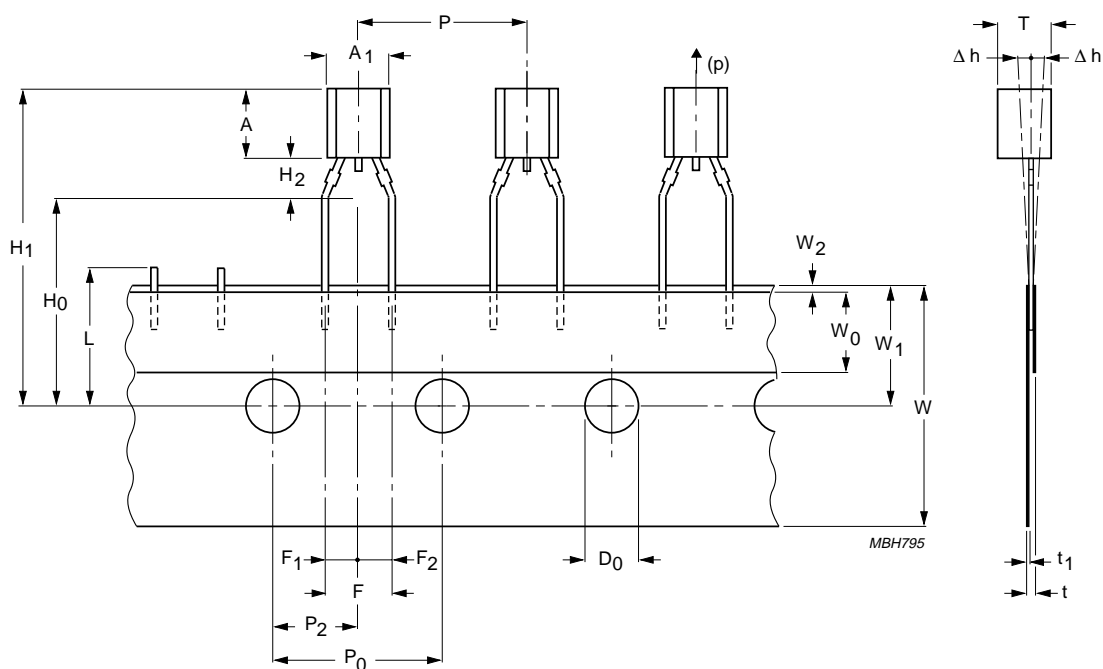


Fig.7 Configuration of bandolier.

Silicon temperature sensors

KTY81-2 series

Table 5 Tape specification

| SYMBOL | DIMENSION | SPECIFICATIONS | | | | | REMARKS |
|---------------------------------|--------------------------------------|----------------|------|-------|-----------|------|------------------------------------|
| | | MIN. | NOM. | MAX. | TOL. | UNIT | |
| A ₁ | body width | 4.4 | — | 4.8 | — | mm | |
| A | body height | 5 | — | 5.2 | — | mm | |
| T | body thickness | 3.6 | — | 3.9 | — | mm | |
| P | pitch of component | — | 12.7 | — | ±1 | mm | |
| P ₀ | feed hole pitch | — | 12.7 | — | ±0.3 | mm | |
| | cumulative pitch error | — | — | — | ±0.1 | | note 1 |
| P ₂ | feed hole centre to component centre | — | 6.35 | — | ±0.4 | mm | to be measured at bottom of clinch |
| F | lead-to-lead distance | — | 5.08 | — | +0.6/−0.2 | mm | |
| Δh | component alignment | — | 0 | 1 | — | mm | at top of body |
| W | tape width | — | 18 | — | ±0.5 | mm | |
| W ₀ | hold-down tape width | — | 6 | — | ±0.2 | mm | |
| W ₁ | hole position | — | 9 | — | +0.7/−0.5 | mm | |
| W ₂ | hold-down tape position | — | 0.5 | — | ±0.2 | mm | |
| H ₀ | lead wire clinch height | — | 16.5 | — | ±0.5 | mm | |
| H ₁ | component height | — | — | 23.25 | — | mm | |
| L | length of snapped leads | — | — | 11 | — | mm | |
| D ₀ | feed hole diameter | — | 4 | — | ±0.2 | mm | |
| t | total tape thickness | — | — | 1.2 | — | mm | t ₁ = 0.3 to 0.6 |
| F ₁ , F ₂ | lead to snapped lead distance | — | 2.54 | — | +0.4/−0.2 | mm | |
| H ₂ | clinch height | — | 2.5 | — | +0.5/0 | mm | |
| (p) | pull-out force | 6 | — | — | — | N | |

Note

1. Measured over 20 devices.

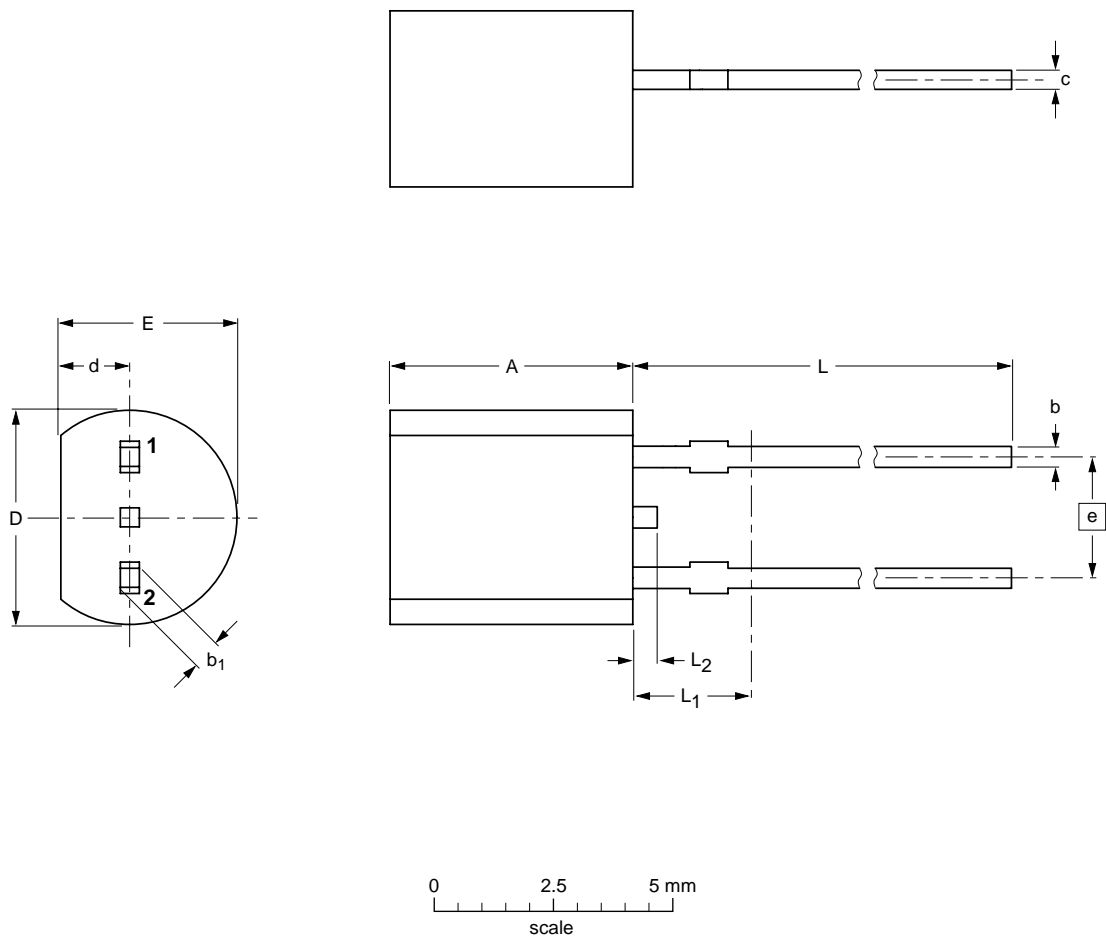
Silicon temperature sensors

KTY81-2 series

PACKAGE OUTLINE

Plastic near cylindrical single-ended package; 2 in-line leads

SOD70

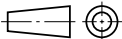


DIMENSIONS (mm are the original dimensions)

| UNIT | A | b | b ₁ | c | D | d | E | e | L | L ₁ ⁽¹⁾ max. | L ₂ |
|------|------------|--------------|----------------|--------------|------------|------------|------------|------|--------------|---------------------------------------|----------------|
| mm | 5.2 5.0 | 0.48 0.40 | 0.66 0.56 | 0.45 0.40 | 4.8 4.4 | 1.7 1.4 | 4.2 3.6 | 2.54 | 14.5 12.7 | 2.5 | 0.7 0.5 |

Notes

1. Terminal dimensions within this zone are uncontrolled to allow for flow of plastic and terminal irregularities.

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|--------------------|------------|-------|------|--|---|------------|
| | IEC | JEDEC | EIAJ | | | |
| SOD70 | | | | |  | 97-05-30 |

Silicon temperature sensors

KTY81-2 series

DEFINITIONS

| Data Sheet Status | |
|---|---|
| Objective specification | This data sheet contains target or goal specifications for product development. |
| Preliminary specification | This data sheet contains preliminary data; supplementary data may be published later. |
| Product specification | This data sheet contains final product specifications. |
| Limiting values | |
| Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability. | |
| Application information | |
| Where application information is given, it is advisory and does not form part of the specification. | |

LIFE SUPPORT APPLICATIONS

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

Silicon temperature sensors

KTY81-2 series

NOTES

Silicon temperature sensors

KTY81-2 series

NOTES

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