

SMD - Widerstände 0402

| Übersicht | Größe | Toleranz | Reihe | Temperaturkoeff. |
|---------------------------|-------|----------|--------|------------------|
| SMD-Widerstände | 0402 | 1% | E24/96 | TK50 |
| | 0402 | 1% | E24/96 | TK100 |
| | 0402 | 5% | E24 | TK200 |
| SMD-Jumper | 0402 | | | |
| SMD-Präzisionswiderstände | 0402 | 0.1% | | |
| SMD – Sortimente | 0402 | | | |

SMD - Nullohm - Widerstand 0402

Baugröße 0402 (1.0 x 0.5 x 0.35 mm)
Widerstand < 50 Milliohm
Strom max. 0.5 Ampere

Spannung max. 100 Volt
Temperaturbereich - 55 + 125 °C
gegurtet (8mm Gurt)

| Best.Nr. | ab 10 | ab 100 | ab 1000 | ab 5000 | ab 10.000 (=VPE) |
|----------|-------|--------|---------|---------|------------------|
| 7116/000 | -.08 | -.0110 | -.0030 | -.0015 | -.0010 |

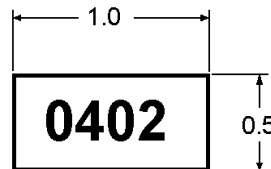
SMD - Widerstände 5% 0402

Metallglasurschicht-Widerstand (Dickschicht)
Baugröße 0402 (1.0 x 0.5 x 0.35 mm)
Toleranz ± 5%
Wertreihe E24
Temperaturkoeff.: < $\pm 200 \times 10^{-6}/K$
Nennbelastbarkeit 0.063 Watt
Spannung max. 50 Volt
Isolationsspannung 100 Volt
Temperaturbereich -55 + 125 °C

Nickelsperrschicht-Kontaktierung
Thermischer Widerstand 880/KW
Klimakategorie 55/125/56
Spannungskoeff. < $50 \times 10^{-6}/K$
Lastminderung linear 70 ... 125°C (0W)
kein Werteaufdruck
gegurtet (8mm-Gurt)

Sortimente auf Anfrage

| | | | | | | |
|-----|----|-----|------|-----|------|------|
| 1.0 | 10 | 100 | 1k | 10k | 100k | 1M |
| | 11 | 110 | 1.1k | 11k | 110k | 1.1M |
| | 12 | 120 | 1.2k | 12k | 120k | 1.2M |
| | 13 | 130 | 1.3k | 13k | 130k | 1.3M |
| 1.5 | 15 | 150 | 1.5k | 15k | 150k | 1.5M |
| | 16 | 160 | 1.6k | 16k | 160k | |
| | 18 | 180 | 1.8k | 18k | 180k | |
| 2.0 | 20 | 200 | 2.0k | 20k | 200k | 2.0M |
| 2.2 | 22 | 220 | 2.2k | 22k | 220k | 2.2M |
| 2.4 | 24 | 240 | 2.4k | 24k | 240k | |
| 2.7 | 27 | 270 | 2.7k | 27k | 270k | |
| 3.0 | 30 | 300 | 3.0k | 30k | 300k | |
| 3.3 | 33 | 330 | 3.3k | 33k | 330k | |
| 3.6 | 36 | 360 | 3.6k | 36k | 360k | |
| 3.9 | 39 | 390 | 3.9k | 39k | 390k | |
| 4.3 | 43 | 430 | 4.3k | 43k | 430k | |
| 4.7 | 47 | 470 | 4.7k | 47k | 470k | |
| 5.1 | 51 | 510 | 5.1k | 51k | 510k | |
| 5.6 | 56 | 560 | 5.6k | 56k | 560k | |
| 6.2 | 62 | 620 | 6.2k | 62k | 620k | |
| 6.8 | 68 | 680 | 6.8k | 68k | 680k | |
| 7.5 | 75 | 750 | 7.5k | 75k | 750k | |
| 8.2 | 82 | 820 | 8.2k | 82k | 820k | |
| 9.1 | 91 | 910 | 9.1k | 91k | 910k | |



| Best.Nr. | | ab 10 | ab 100 | ab 1000 | ab 5000 | ab 10.000 (=VPE) |
|-------------|--------------|-------|--------|---------|---------|------------------|
| 1.0Ω - 10Ω | 7116/Ohmwert | -.08 | -.0120 | -.0032 | -.0017 | -.0011 |
| 11Ω - 2.2MΩ | 7116/Ohmwert | -.08 | -.0110 | -.0030 | -.0015 | -.0010 |

(Preise je Widerstandswert)

Nettopreise in € per St. ab Lager Nürnberg, zuzügl. der gesetzl. Mehrwertsteuer

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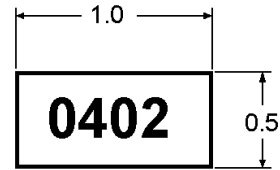
SMD - Widerstände 1% 0402

Metallglasurschicht-Widerstand (Dickschicht)
 Baugröße 0402 (1.0 x 0.5 x 0.35 mm)
 Toleranz ± 1%
 Wertereihe E24 und E96
 Temperaturkoeff.: <math>< \pm 100 \times 10^{-6} / K</math> (<math>< 10R: \pm 200 \times 10^{-6} / K</math>)
 Nennbelastbarkeit 0.063 Watt
 Spannung max. 50 Volt
 Isolationsspannung 100 Volt
 Temperaturbereich -55 + 125 °C

Nickelsperrschicht-Kontaktierung
 Thermischer Widerstand 880/KW
 Klimakategorie 55/125/56
 Spannungskoeff. <math>< 50 \times 10^{-6} / K</math>
 Lastminderung linear 70 ... 125°C (0W)
 kein Werteaufdruck
 gegurtet (8mm-Gurt)

Sortimente ab Lager

| | | | | | | | |
|-----|----|-----|------|-----|------|------|-----|
| 1.0 | 10 | 100 | 1k | 10k | 100k | 1M | 10M |
| 1.1 | 11 | 110 | 1.1k | 11k | 110k | 1.1M | |
| 1.2 | 12 | 120 | 1.2k | 12k | 120k | 1.2M | |
| 1.3 | 13 | 130 | 1.3k | 13k | 130k | 1.3M | |
| 1.5 | 15 | 150 | 1.5k | 15k | 150k | 1.5M | |
| 1.6 | 16 | 160 | 1.6k | 16k | 160k | 1.6M | |
| 1.8 | 18 | 180 | 1.8k | 18k | 180k | 1.8M | |
| 2.0 | 20 | 200 | 2.0k | 20k | 200k | 2.0M | |
| 2.2 | 22 | 220 | 2.2k | 22k | 220k | 2.2M | |
| 2.4 | 24 | 240 | 2.4k | 24k | 240k | 2.4M | |
| 2.7 | 27 | 270 | 2.7k | 27k | 270k | 2.7M | |
| 3.0 | 30 | 300 | 3.0k | 30k | 300k | 3.0M | |
| 3.3 | 33 | 330 | 3.3k | 33k | 330k | 3.3M | |
| 3.6 | 36 | 360 | 3.6k | 36k | 360k | 3.6M | |
| 3.9 | 39 | 390 | 3.9k | 39k | 390k | 3.9M | |
| 4.3 | 43 | 430 | 4.3k | 43k | 430k | 4.3M | |
| 4.7 | 47 | 470 | 4.7k | 47k | 470k | 4.7M | |
| 5.1 | 51 | 510 | 5.1k | 51k | 510k | 5.1M | |
| 5.6 | 56 | 560 | 5.6k | 56k | 560k | 5.6M | |
| 6.2 | 62 | 620 | 6.2k | 62k | 620k | 6.2M | |
| 6.8 | 68 | 680 | 6.8k | 68k | 680k | 6.8M | |
| 7.5 | 75 | 750 | 7.5k | 75k | 750k | 7.5M | |
| 8.2 | 82 | 820 | 8.2k | 82k | 820k | 8.2M | |
| 9.1 | 91 | 910 | 9.1k | 91k | 910k | 9.1M | |



| Wertebereich | Best.Nr. | ab 10 | ab 100 | ab 1000 | ab 5000 | ab 10.000 (=VPE) |
|--------------|--------------|-------|--------|---------|---------|------------------|
| 1.0Ω - 10Ω | 8112/Ohmwert | -08 | -0120 | -0036 | -0022 | -0015 |
| 11Ω - 1.0MΩ | 8112/Ohmwert | -08 | -0115 | -0033 | -0020 | -0013 |
| 1.1MΩ - 10M | 8112/Ohmwert | -08 | -0120 | -0035 | -0021 | -0014 |

(Preise je Widerstandswert)

Reihe E96

| | | | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| (10.0) | 12.1 | 14.7 | 17.8 | 21.5 | 26.1 | 31.6 | 38.3 | 46.4 | 56.2 | 68.1 | 82.5 |
| 10.2 | 12.4 | 15.0 | 18.2 | 22.1 | 26.7 | 32.4 | 39.2 | 47.5 | 57.6 | 69.8 | 84.5 |
| 10.5 | 12.7 | 15.4 | 18.7 | 22.6 | 27.4 | 33.2 | 40.2 | 48.7 | 59.0 | 71.5 | 86.6 |
| 10.7 | 13.0 | 15.8 | 19.1 | 23.2 | 28.0 | 34.0 | 41.2 | 49.9 | 60.4 | 73.2 | 88.7 |
| 11.0 | 13.3 | 16.2 | 19.6 | 23.7 | 28.7 | 34.8 | 42.2 | 51.1 | 61.9 | 75.0 | 90.9 |
| 11.3 | 13.7 | 16.5 | 20.0 | 24.3 | 29.4 | 35.7 | 43.2 | 52.3 | 63.4 | 76.8 | 93.1 |
| 11.5 | 14.0 | 16.9 | 20.5 | 24.9 | 30.1 | 36.5 | 44.2 | 53.6 | 64.9 | 78.7 | 95.3 |
| 11.8 | 14.3 | 17.4 | 21.0 | 25.5 | 30.9 | 37.4 | 45.3 | 54.9 | 66.5 | 80.6 | 97.6 |
| 100 | 121 | 147 | 178 | 215 | 261 | 316 | 383 | 464 | 562 | 681 | 825 |
| 102 | 124 | 150 | 182 | 221 | 267 | 324 | 392 | 475 | 576 | 698 | 845 |
| 105 | 127 | 154 | 187 | 226 | 274 | 332 | 402 | 487 | 590 | 715 | 866 |
| 107 | 130 | 158 | 191 | 232 | 280 | 340 | 412 | 499 | 604 | 732 | 887 |
| 110 | 133 | 162 | 196 | 237 | 287 | 348 | 422 | 511 | 619 | 750 | 909 |
| 113 | 137 | 165 | 200 | 243 | 294 | 357 | 432 | 523 | 634 | 768 | 931 |
| 115 | 140 | 169 | 205 | 249 | 301 | 365 | 442 | 536 | 649 | 787 | 953 |
| 118 | 143 | 174 | 210 | 255 | 309 | 374 | 453 | 549 | 665 | 806 | 976 |
| 1.00k | 1.21k | 1.47k | 1.78k | 2.15k | 2.61k | 3.16k | 3.83k | 4.64k | 5.62k | 6.81k | 8.25k |
| 1.02k | 1.24k | 1.50k | 1.82k | 2.21k | 2.67k | 3.24k | 3.92k | 4.75k | 5.76k | 6.98k | 8.45k |
| 1.05k | 1.27k | 1.54k | 1.87k | 2.26k | 2.74k | 3.32k | 4.02k | 4.87k | 5.90k | 7.15k | 8.66k |
| 1.07k | 1.30k | 1.58k | 1.91k | 2.32k | 2.80k | 3.40k | 4.12k | 4.99k | 6.04k | 7.32k | 8.87k |
| 1.10k | 1.33k | 1.62k | 1.96k | 2.37k | 2.87k | 3.48k | 4.22k | 5.11k | 6.19k | 7.50k | 9.09k |
| 1.13k | 1.37k | 1.65k | 2.00k | 2.43k | 2.94k | 3.57k | 4.32k | 5.23k | 6.34k | 7.68k | 9.31k |
| 1.15k | 1.40k | 1.69k | 2.05k | 2.49k | 3.01k | 3.65k | 4.42k | 5.36k | 6.49k | 7.87k | 9.53k |
| 1.18k | 1.43k | 1.74k | 2.10k | 2.55k | 3.09k | 3.74k | 4.53k | 5.49k | 6.65k | 8.06k | 9.76k |
| 10.0k | 12.1k | 14.7k | 17.8k | 21.5k | 26.1k | 31.6k | 38.3k | 46.4k | 56.2k | 68.1k | 82.5k |
| 10.2k | 12.4k | 15.0k | 18.2k | 22.1k | 26.7k | 32.4k | 39.2k | 47.5k | 57.6k | 69.8k | 84.5k |
| 10.5k | 12.7k | 15.4k | 18.7k | 22.6k | 27.4k | 33.2k | 40.2k | 48.7k | 59.0k | 71.5k | 86.6k |
| 10.7k | 13.0k | 15.8k | 19.1k | 23.2k | 28.0k | 34.0k | 41.2k | 49.9k | 60.4k | 73.2k | 88.7k |
| 11.0k | 13.3k | 16.2k | 19.6k | 23.7k | 28.7k | 34.8k | 42.2k | 51.1k | 61.9k | 75.0k | 90.9k |
| 11.3k | 13.7k | 16.5k | 20.0k | 24.3k | 29.4k | 35.7k | 43.2k | 52.3k | 63.4k | 76.8k | 93.1k |
| 11.5k | 14.0k | 16.9k | 20.5k | 24.9k | 30.1k | 36.5k | 44.2k | 53.6k | 64.9k | 78.7k | 95.3k |
| 11.8k | 14.3k | 17.4k | 21.0k | 25.5k | 30.9k | 37.4k | 45.3k | 54.9k | 66.5k | 80.6k | 97.6k |

Nettopreise in € per St. ab Lager Nürnberg, zuzügl. der gesetzl. Mehrwertsteuer

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| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 100k | 121k | 147k | 178k | 215k | 261k | 316k | 383k | 464k | 562k | 681k | 825k |
| 102k | 124k | 150k | 182k | 221k | 267k | 324k | 392k | 475k | 576k | 698k | 845k |
| 105k | 127k | 154k | 187k | 226k | 274k | 332k | 402k | 487k | 590k | 715k | 866k |
| 107k | 130k | 158k | 191k | 232k | 280k | 340k | 412k | 499k | 604k | 732k | 887k |
| 110k | 133k | 162k | 196k | 237k | 287k | 348k | 422k | 511k | 619k | 750k | 909k |
| 113k | 137k | 165k | 200k | 243k | 294k | 357k | 432k | 523k | 634k | 768k | 931k |
| 115k | 140k | 169k | 205k | 249k | 301k | 365k | 442k | 536k | 649k | 787k | 953k |
| 118k | 143k | 174k | 210k | 255k | 309k | 374k | 453k | 549k | 665k | 806k | 976k |
| | | | | | | | | | | | 1M |

| | | | | | |
|--------------------|-------|-----------------------------|---------|---------|------------------|
| Best.Nr. | ab 10 | ab 100 | ab 1000 | ab 5000 | ab 10.000 (=VPE) |
| 8112/Ohmwert (E96) | -.08 | -.0120 | -.0035 | -.0021 | -.0014 |
| | | (Preise je Widerstandswert) | | | |

SMD – Widerstände 0402 1% TK50

Baugröße 0402 (1.0 x 0.5 x 0.35 mm)
 Toleranz ± 1%
 Wertereihe E24 / E96 auf Anfrage
 Wertebereich 10Ω - 1MΩ
 Temperaturkoeff.: < ±50x10⁻⁶/K
 Nennbelastbarkeit. 0.063 W
 Spannung max. 50 V

Temperaturbereich -55 + 125 °C
 Thermischer Widerstand 550/KW
 Nickelsperrschicht-Kontaktierung
 Lastminderung linear 70 ... 125°C (0W)
 Isolationswiderstand > 10⁸ Ω

| | |
|-----|-----|
| 330 | 20k |
| 10k | 24k |
| 11k | 62k |
| 12k | 68k |
| 15k | 75k |

weitere Werte auf Anfrage

Lageraufbau nach Kundenwunsch

| | | | | | | |
|--------------|--------------|-----------------------------|--------|---------|---------|------------------|
| Wertebereich | Best.Nr. | ab 10 | ab 100 | ab 1000 | ab 5000 | ab 10.000 (=VPE) |
| 10Ω - 1.0MΩ | 8113/Ohmwert | -.15 | -.0190 | -.0100 | -.0075 | -.0049 |
| | | (Preise je Widerstandswert) | | | | |

SMD – Widerstände Vishay D10/CRCW0402...

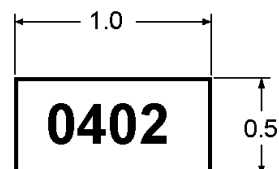
Vishay-Code: D10/CRCW0402...
Baugröße 0402 (1.0 x 0.5 x 0.35 mm)
Toleranz ± 1%
Wertereihe E24 / E96 auf Anfrage
Wertebereich 1.0Ω - 10MΩ + Jumper
 Temperaturkoeff.: < ±100x10⁻⁶/K
 Nennbelastbarkeit. 0.063 W
 Spannung max. 50 V
 Isolationsspannung 500V

Temperaturbereich -55 + 155 °C
 Thermischer Widerstand 550/KW
 Nickelsperrschicht-Kontaktierung
 Lastminderung linear 70 ... 155°C (0W)
Isolationswiderstand > 10⁹ Ω
Ausfallrate : < 0.1 x 10⁻⁹/h
AEC-Q200 qualifiziert



Sortimente ab Lager

| | | | | | |
|----|-----|------|-----|------|----|
| 10 | 100 | 1k | 10k | 100k | 1M |
| 11 | 110 | 1.1k | 11k | 110k | |
| 12 | 120 | 1.2k | 12k | 120k | |
| 13 | 130 | 1.3k | 13k | 130k | |
| 15 | 150 | 1.5k | 15k | 150k | |
| 16 | 160 | 1.6k | 16k | 160k | |
| 18 | 180 | 1.8k | 18k | 180k | |
| 20 | 200 | 2.0k | 20k | 200k | |
| 22 | 220 | 2.2k | 22k | 220k | |
| 24 | 240 | 2.4k | 24k | 240k | |
| 27 | 270 | 2.7k | 27k | 270k | |
| 30 | 300 | 3.0k | 30k | 300k | |
| 33 | 330 | 3.3k | 33k | 330k | |
| 36 | 360 | 3.6k | 36k | 360k | |
| 39 | 390 | 3.9k | 39k | 390k | |
| 43 | 430 | 4.3k | 43k | 430k | |
| 47 | 470 | 4.7k | 47k | 470k | |
| 51 | 510 | 5.1k | 51k | 510k | |
| 56 | 560 | 5.6k | 56k | 560k | |
| 62 | 620 | 6.2k | 62k | 620k | |
| 68 | 680 | 6.8k | 68k | 680k | |
| 75 | 750 | 7.5k | 75k | 750k | |
| 82 | 820 | 8.2k | 82k | 820k | |
| 91 | 910 | 9.1k | 91k | 910k | |



Nettopreise in € per St. ab Lager Nürnberg, zuzügl. der gesetzl. Mehrwertsteuer

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| Wertebereich | Best.Nr. | ab 10 | ab 100 | ab 1000 | ab 5000 | ab 10.000 (=VPE) |
|--------------|--------------|-------|--------|---------|---------|------------------|
| 10Ω - 1.0MΩ | 8116/Ohmwert | -.12 | -.0185 | -.0078 | -.0055 | -.0036 |
| Jumper (0-R) | 8116/000 | -.11 | -.0160 | -.0064 | -.0043 | -.0029 |

(Preise je Widerstandswert)

SMD – Präzisions - Widerstände 0402 0.1%

Metallschicht-Widerstand (Dünnschicht)

Toleranz ± 0.1%
 Nennbelastbarkeit 0.063 Watt
 Spannung max. 25 Volt
 Isolationsspannung 50 Volt

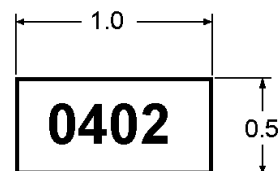
Temperaturbereich -55 + 155°C
 Nickelsperrschicht-Kontaktierung
 Thermischer Widerstand 550/KW
 Klimakategorie 10/85/56
 gegurtet (8mm-Gurt)

SMD – Präzisions - Widerstände TK25 0402 0.1%

Lagerwerte: Reihe E24

Wertebereich: 47Ω - 100k

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| 47 | 51 | 56 | 62 | 68 | 75 | 82 | 91 | |
| 100 | 110 | 120 | 130 | 150 | 160 | 180 | 200 | |
| 220 | 240 | 270 | 300 | 330 | 360 | 390 | 430 | |
| 470 | 510 | 560 | 620 | 680 | 750 | 820 | 910 | |
| 1k | 1.1k | 1.2k | 1.3k | 1.5k | 1.6k | 1.8k | 2.0k | |
| 2.2k | 2.4k | 2.7k | 3.0k | 3.3k | 3.6k | 3.9k | 4.3k | |
| 4.7k | 5.1k | 5.6k | 6.2k | 6.8k | 7.5k | 8.2k | 9.1k | |
| 10k | 11k | 12k | 13k | 15k | 16k | 18k | 20k | |
| 22k | 24k | 27k | 30k | 33k | 36k | 39k | 43k | |
| 47k | 51k | 56k | 62k | 68k | 75k | 82k | 91k | 100k |



| Temperaturkoeff. | Best.Nr. | ab 10 | ab 100 | ab 500 | ab 1000 |
|------------------|---------------|-------|--------|--------|---------|
| TK25 | CS/25/Ohmwert | -.20 | -.086 | -.059 | -.047 |

Preise je Widerstandswert

Wertebereich: 10Ω – 255kΩ

Lieferzeit ca. 3 - 6 Wochen

| Temperaturkoeff. | Best.Nr. | ab 1000 (=VPE) | ab 10000 (=VPE) |
|------------------|---------------|----------------|-----------------|
| TK25 | CS/25/Ohmwert | -.065 | -.049 |

Preise je Widerstand / nur in Vielfachen von VPE lieferbar

SMD – Präzisions - Widerstände TK15 (±15x10⁻⁶/K) 0402 0.1%

Wertebereich: 49.9Ω - 69.8k

Lieferzeit: ca. 3 – 6 Wochen

| Temperaturkoeff. | Best.Nr. | ab 1000 (=VPE) | ab 10000 (=VPE) |
|------------------|---------------|----------------|-----------------|
| TK15 | CS/15/Ohmwert | -.118 | -.108 |

Preise je Widerstand / nur in Vielfachen von VPE lieferbar

SMD – Präzisions - Widerstände TK10 (±10x10⁻⁶/K) 0402 0.1%

Wertebereich: 49.9Ω – 12kΩ

Lieferzeit: ca. 3 - 6 Wochen

| Temperaturkoeff. | Best.Nr. | ab 1000 (=VPE) | ab 10000 (=VPE) |
|------------------|---------------|----------------|-----------------|
| TK10 | CS/10/Ohmwert | -.146 | -.138 |

Preise je Widerstand / nur in Vielfachen von VPE lieferbar

Weitere Toleranzen (0.01%; 0.05%; 0.25%; und 0.5%)

und weitere TK auf Anfrage

Nettopreise in € per St. ab Lager Nürnberg, zuzügl. der gesetzl. Mehrwertsteuer

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