



Current Sense Resistors Selection Guide

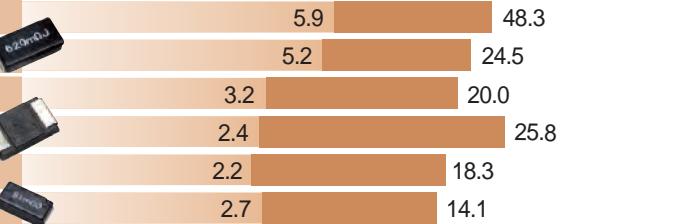
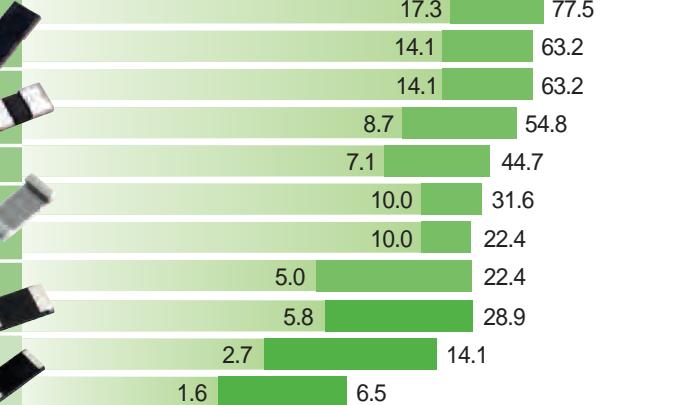
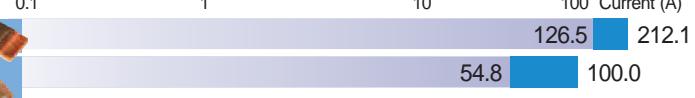
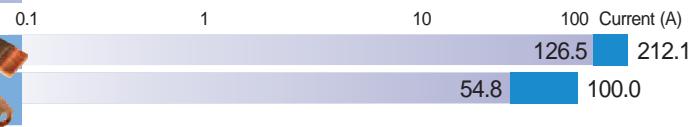
KOA SPEER ELECTRONICS, INC.

KOA offers complete family of Current Sense Resistors capable of sensing large to small currents with ultra-low resistance

Applications: Current management sensor including charge/discharge of secondary batteries • Current control sensor of motors and DC/DC converters • Circuit protecting sensor by overcurrent detection

Current Sense Resistors

Current Ratings (A)



Specifications

| Resistance | Rated Power | Size | Tolerance |
|------------------|-------------|-------------|-------------|
| 50µΩ | 50W | 80x22mm | ±5% |
| 100/200µΩ | 36W/18W | 40x22mm | ±5% |
| 80x18mm | | 80x18mm | |
| 40x15mm | | 40x15mm | |
| Resistance Range | Rated Power | Size (Inch) | Tolerance |
| 0.2m~0.5mΩ | 8W/9W | 2512 | ±1% |
| 0.5m~1mΩ | 5W/3W | 1216 | ±1% |
| 0.5m~10mΩ | 3W~5W | 2512 | ±1% |
| 0.5m~10mΩ | 2W | 2512 | ±1% |
| 0.5m~10mΩ | 2W | 2010 | ±1% |
| 0.5m~20mΩ | 3W/1.5W | 1206 | ±1% |
| 0.5m~20mΩ | 1W | 1206 | ±1% |
| 0.5m~10mΩ | 1W | 2010 | ±1% |
| 2m~10mΩ | 1W | 0805 | ±1% |
| 1m~20mΩ | 0.5W | 1206 | ±1% |
| 6m~120mΩ | 4~5W | 2512 | ±1% |
| 10m~270mΩ | 2W | 2512 | ±1% |
| 10m~100mΩ | 0.25~0.5W | 0805 | ±1% |
| 3m~200mΩ | 7W | 4527 | ±0.5,1,5% |
| 5m~110mΩ | 3W | 4527 | ±0.5,1,5% |
| 5m~200mΩ | 2W | 4527 | ±0.5,1,5% |
| 3m~360mΩ | 2W | 4527 | ±0.5,1,2,5% |
| 3m~200mΩ | 1.5W/1W/1W | 2512 | ±0.5,1,2,5% |
| 5m~100mΩ | 1W/0.75W | 2010 | ±1,5% |



Current Sense Resistors Selection Guide

Current Sense Resistors

| | | Current Ratings (A) | | | | |
|---|---------------|---------------------|-----|----|------|-------------|
| | | 0.1 | 1 | 10 | 100 | Current (A) |
| Wide Terminal Flat Chip Resistors • Thick Film Resistive Element • High Power | WK73S 3A/3A3 | 0.41 | | | 17.3 | |
| | WK73S 2H/2H2 | 0.33 | | | 14.1 | |
| | WK73S 2B/2B15 | 0.29 | | | 12.2 | |
| | WK73S 2J | 0.33 | | | 10.0 | |
| | WK73S 2A | 0.33 | | | 7.1 | |
| | WU73 2B/2B15 | | 3.2 | | 12.2 | |
| Low Resistance Flat Chip Resistors[*] • Thick Film Resistive Element • High Precision | UR73V/VD 2B | | 2.2 | | 10.0 | |
| | UR73V/VD 2A | | 2.2 | | 7.1 | |
| | UR73D 3A | | 3.2 | | 10.0 | |
| | UR73D 2H | | 2.7 | | 8.7 | |
| | UR73/D 2B | | 2.2 | | 7.1 | |
| | UR73/D 2A | | 1.8 | | 5.7 | |
| | UR73D 1J | | 1.6 | | 5.0 | |
| | UR73D 1E | | 1.1 | | 2.3 | |
| | SR73 W3A/W3A2 | 0.32 | | | 7.2 | |
| Low Resistance Flat Chip Resistors • Thick Film Resistive Element • General-Purpose Type | SR73 W2H | 0.27 | | | 4.8 | |
| | SR73 2E | 0.22 | | | 5.2 | |
| | SR73 2B | 0.18 | | | 4.1 | |
| | SR73 2A | 0.18 | | | 4.1 | |
| | SR73 1J | 0.14 | | | 1.6 | |
| | SR73 1E | 0.13 | | | 1.3 | |
| | SR73 1H | 0.10 | | | 0.75 | |
| | | 0.1 | 1 | 10 | 100 | Current (A) |
| Large Current Chip Type Jumper • Metal Plate • Anti-Pulse | SLZ1 | | | | 44.0 | |
| | TLRZ2B | | | | 50.0 | |
| | TLRZ2A | | | | 31.6 | |
| | TLRZ1J | | | | 26.0 | |
| | TLRZ1E | | | | 10.0 | |

Specifications

| Resistance Range | Rated Power | Size (Inch) | Tolerance |
|------------------|---------------|-------------|-------------|
| 10m~9.1Ω | 1.5~2W/3W | 0612 | ±0.5,1.5% |
| 10m~9.1Ω | 1W/2W | 1020 | ±0.5,1.5% |
| 10m~9.1Ω | 0.75~1W/1.5W | 0612 | ±0.5,1.5% |
| 10m~9.1Ω | 1W | 1218 | ±0.5,1.5% |
| 20m~9.1Ω | 1W | 0508 | ±0.5,1.5% |
| 10m~100mΩ | 1W/1.5W | 0612 | ±1% |
| 10m~100mΩ | 0.5~0.75W | 1206 | ±1% |
| 10m~100mΩ | 0.5W | 0805 | ±1% |
| 10m~100mΩ | 1W | 2512 | ±1% |
| 10m~100mΩ | 0.75W | 2010 | ±1% |
| 10m~100mΩ | 0.5W | 1206 | ±1% |
| 10m~100mΩ | 0.33W | 0805 | ±1% |
| 10m~100mΩ | 0.25W | 0603 | ±1% |
| 24m~100mΩ | 0.125W | 0402 | ±1% |
| 39m~10Ω | 1W/2W | 2512 | ±0.5,1.2,5% |
| 33m~10Ω | 0.75W | 2010 | ±0.5,1.2,5% |
| 24m~10Ω | 0.5~0.66W | 1210 | ±0.5,1.2,5% |
| 30m~10Ω | 0.33~0.5W | 1206 | ±0.5,1.2,5% |
| 30m~10Ω | 0.33~0.5W | 0805 | ±0.5,1.2,5% |
| 100m~10Ω | 0.2~0.25W | 0603 | ±0.5,1.2,5% |
| 100m~10Ω | 0.166W | 0402 | ±0.5,1.2,5% |
| 180m~10Ω | 0.1W | 0201 | ±0.5,1.2,5% |
| Resistance Range | Rated Current | Size (Inch) | |
| Max. 0.5mΩ | 44A | 2512 | |
| Max. 0.2mΩ | 50A | 1206 | |
| Max. 0.2mΩ | 31.6A | 0805 | |
| Max. 0.2mΩ | 26A | 0603 | |
| Max. 0.5mΩ | 10A | 0402 | |

• This selection guide plots the current value calculated from (Power rating ÷ upper or lower limit of resistance). Please build the design considering heat dissipation.

• This is the guideline to select products by current value. Please confirm product specification for actual design and selecting products and use the products based on the precautions to use.

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• Please confirm our catalog or delivery specification for the details of each product.

* UR73/UR73D is only applied for car accessories as automotive use. Please ask us for details.