

# KOA® Current Sense Resistors Selection Guide

KOA SPEER ELECTRONICS, INC.

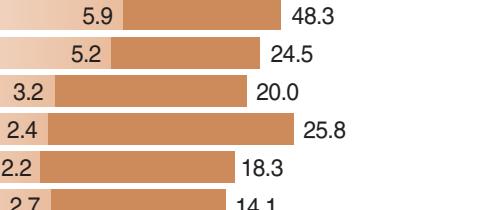
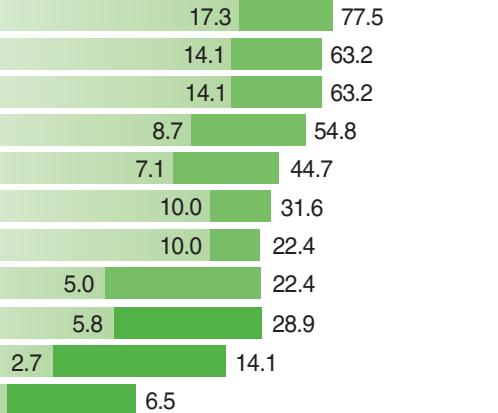
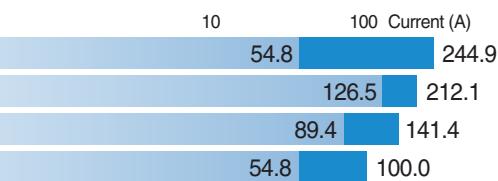
KOA offers complete family of Current Sense Resistors capable of sensing large to small currents with ultra-low resistance

**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)							
Large Current Shunt Resistors	HSAN2P4022 HSAN2P4015	1	10	100	300	1000			
• Metal Plate Resistive Element									
• Large Current, High Precision									
Power Shunt Chip Resistors	PSJ2 PSL2 PSG4 PSF4	0.1	1	10	54.8	244.9	100	Current (A)	
• Metal Plate Resistive Element									
• Large Current, High Precision									
Metal Plate Chip Type Low Resistance Resistors	TLR 3AP TLR 3AW TLR 2HW TLR 2BP TLR 2BW TLR 2H TLR 2A TLR 2B/2BN TLRH 3AP TLRH 3AW TLRH 2A			17.3	77.5				
• Metal Plate Resistive Element									
• High Precision									
Current Sense Chip Resistors	SLN5 SLN3 SLN2 SL2 SLW1/SL1/TSL1 SLW07/SL07			5.9	48.3				
• Metal Plate Resistive Element									
• Mold Package									
• High Reliability									
Current Sense Chip Resistors (SLP)	SLP3AW SLP2HW SLP3A SLP2H			7.1	14.1				
• Metal Plate Resistive Element									
• Mold Package									
• High Precision									

## Current Ratings (A)



## Specifications

Resistance	Rated Power	Size	Tolerance
50µΩ	50W	40x22mm	±5%
100/200µΩ	36W/18W	40x15mm	±5%
Resistance Range	Rated Power	Size (Inch)	Tolerance
0.2m~4mΩ	5W~12W	3920	±1%
0.2m~0.5mΩ	8W/9W	2512	±1%
0.5m~1mΩ	10W/8W	2725	±1%
0.5m~1mΩ	5W/3W	1216	±1%
0.5m~10mΩ	3W	2512	±1%
0.5m~10mΩ	2W	2512	±1%
0.5m~10mΩ	2W	2010	±1%
0.5m~20mΩ	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%
10m~40mΩ	2W	2512	±0.5,1%
10m~40mΩ	2W	2010	±0.5,1%
10m~100mΩ	1W	2512	±0.5,1%
10m~100mΩ	1W	2010	±0.5,1%



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## Current Sense Resistors

		Current Ratings (A)				100 Current (A)
		0.1	1	10	100	
Wide Terminal Flat Chip Resistors	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 <sup>*1</sup>	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	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	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%
100m~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.
  - Please confirm our catalog or delivery specification for the details of each product.
- <sup>\*1</sup> UR73/UR73D is only applied for car accessories as automotive use. Please ask us for details.

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