

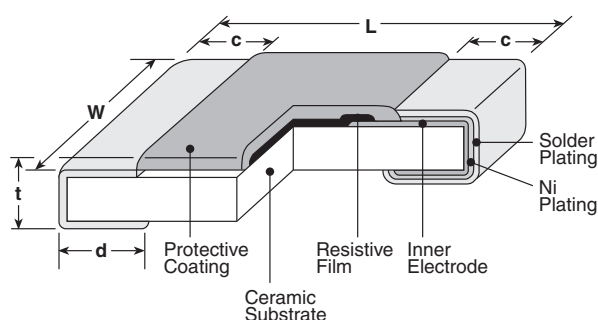
10-ohm 0.5%, 1%, 2%, 5% tolerance thick film current sense resistor



features

- RuO₂ thick film resistor element
- Marking: 1H,1E: no marking on black protective coating
2A~W3A: three or four digit marking on indigo protective coating; 1J: No marking
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Qualified: 0402 (1E), 0603 (1J), 0805 (2A), 1206 (2B), 1210 (2E), 2010 (2H/W2H), 2512 (3A/W3A)

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
1H (0201)	.024±.001 (0.6±0.03)	.012±.001 (0.3±0.03)	.004±.002 (0.1±0.05)	.006±.002 (0.15±0.05)	.009±.001 (0.23±0.03)
1E (0402)	.039 ^{+0.04} _{-.002} (1.0 ^{+0.1} _{-0.05})	.02 ^{+0.04} _{-.002} (0.5 ^{+0.1} _{-0.05})	.01±.004 (0.25±0.1)	.01±.004 (0.25±0.1)	.014±.002 (0.35±0.05)
1J (0603)	.063±.008 (1.6±0.2)	.031 ^{+0.006} _{-.004} (0.8 ^{+0.15} _{-0.1})	.014±.004 (0.35±0.1)	.014±.004 (0.35±0.1)	.018±.004 (0.45±0.1)
2A (0805)	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.016±.008 (0.4±0.2)	.012 ^{+0.008} _{-.004} (0.3 ^{+0.2} _{-0.1})	.02±.004 (0.5±0.1)
2B (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.012 (0.5±0.3)	.016 ^{+0.008} _{-.004} (0.4 ^{+0.2} _{-0.1})	.024±.004 (0.6±0.1)
2E (1210)		.102±.008 (2.6±0.2)			
2H (2010)	.197±.008 (5.0±0.2)	.098±.008 (2.5±0.2)			
W2H (2010)				.026±.006 (0.65±0.15)	
3A (2512)	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)		.016 ^{+0.008} _{-.004} (0.4 ^{+0.2} _{-0.1})	
W3A (2512)				.026±.006 (0.65±0.15)	

ordering information

New Part #	SR73	2B	T	TD	1R00	F
Type		Size	Termination Material	Packaging	Nominal Resistance	Tolerance
		1H 1E 1J 2A 2B 2E W2H W3A 2H 3A	T: Sn L: SnPb (1E, 1J, 2A, 2B, 2E, 2H, 3A) G: Au (2A: 0.1Ω - 10Ω - contact factory)	TCM: 0201 only: 7" 2mm pitch pressed paper TPL:0402 only: 2mm pitch punch paper TP: 0402, 0603, 0805: 7" 2mm pitch punch paper TD: 0603, 0805, 1206, 1210: 7" 4mm pitch punched paper TDD: 0603, 0805, 1206, 1210: 10" paper tape TE: 0805, 1206, 1210, 2010 & 2512: 7" embossed plastic TED: 0805, 1206, 1210, 2010 & 2512: 10" embossed plastic For further information on packaging, please refer to Appendix A	±2%, ±5%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω ±1%: 3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω All values less than 0.1Ω (100mΩ) are expressed in mΩ with "L" as decimal Example: 20mΩ = 20L (3-digit)	D: ±0.5% F: ±1% G: ±2% J: ±5%

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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applications and ratings

Part Designation*	Power Rating @ 70°C	T.C.R. (ppm/°C) Max.	Resistance Range				Absolute Maximum Working Voltage	Maximum Overload Voltage (5 Secs. Max.)	Operating Temperature Range
			E-24, E-96 (D±0.5%)	E-24, E-96 (F±1%)	E-24 (G±2%)	E-24 (J±5%)			
SR731H (0201)	0.1W	0 - ±500	—	—	—	0.18Ω - 0.24Ω	1.0V	2.5V	-55°C to +125°C
		0 - ±400		1Ω - 10Ω**		0.27Ω - 10Ω			
SR731E (0402)	1/8W (.125W) 1/6W (.166W')	±200	—	0.51Ω - 10Ω**	0.51Ω - 10Ω	0.51Ω - 10Ω	1.11V	2.79V	
		±250	—	0.22Ω - 0.47Ω**	0.22Ω - 0.47Ω	0.22Ω - 0.47Ω			
		±300	—	0.1Ω - 0.2Ω**	0.1Ω - 0.2Ω	0.1Ω - 0.2Ω			
SR731J (0603)	1/5W (.2W)	±200	—	0.1Ω - 10Ω	0.1Ω - 10Ω	0.1Ω - 10Ω	1.41V	3.53V	
SR732A (0805)	1/4W (.25W) 1/3W (.33W')	±100	0.15Ω - 10Ω	0.1Ω - 10Ω	—	—	1.58V	3.95V	
		±200	—	—	0.1Ω - 10Ω	0.1Ω - 10Ω			
		±500	—	—	—	0.051Ω - 0.091Ω			
		±800	—	—	—	0.030Ω - 0.047Ω			
SR732B (1206)	1/3W (.33W) 1/2W (.5W')	±100	0.15Ω - 10Ω	0.1Ω - 10Ω	—	—	1.81V	4.54V	-55°C to +150°C
		±200	—	—	0.1Ω - 10Ω	0.1Ω - 10Ω			
		±500	—	—	—	0.056Ω - 0.091Ω			
		±800	—	—	—	0.030Ω - 0.051Ω			
SR732E (1210)	1/2W (.5W) 2/3W (.66W')	±100	—	0.1Ω - 10Ω	—	—	2.23V	5.59V	
		±200	—	—	0.1Ω - 10Ω	0.047Ω - 10Ω			
		±500	—	—	—	0.036Ω - 0.043Ω			
		±1000	—	—	—	0.024Ω - 0.033Ω			
SR732H/W2H ² (2010)	3/4W (.75W)	±100	—	0.1Ω - 10Ω	—	—	2.73V	6.84V	
		±200	—	—	0.1Ω - 10Ω	0.1Ω - 10Ω			
		±500	—	—	—	0.056Ω - 0.091Ω			
		±800	—	—	—	0.033Ω - 0.051Ω			
SR733A/W3A (2512)	1W	±100	—	0.1Ω - 10Ω	—	—	3.16V	7.90V	
		±200	—	—	0.1Ω - 10Ω	0.1Ω - 10Ω			
		±500	—	—	—	0.056Ω - 0.091Ω			
		±800	—	—	—	0.039Ω - 0.051Ω			

* Parentheses indicate EIA package size codes.

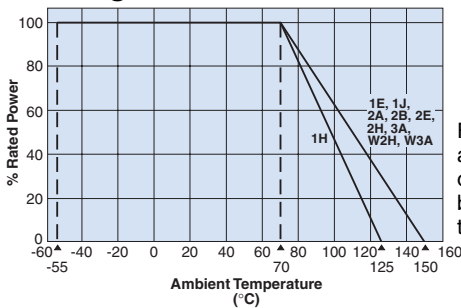
** 1H, 1E (F: ±1%) E-24 values only.

¹ Please contact factory for limitation of Surface Mount Temperature Rise.

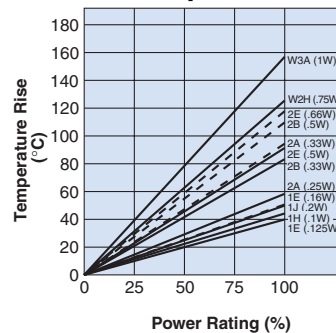
² SR73W3AS (2010 size, 1 Watt) with limited Resistance Range - contact factory for details.

environmental applications

Derating Curve



Surface Temperature Rise



Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.05\Omega)$		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/-55°C and +25°C/+125°C
Overload (Short time)	±2%	±0.5%	Rated Voltage x 2.5 for 5 seconds
Resistance to Solder Heat	1H: ±3%, 1E-W3A: ±1%	1H: ±0.75% 1E-W3A: ±0.3%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±1%	±0.3%	-40°C (30 minutes), +125°C (30 minutes), 100 cycles
Moisture Resistance	1H: ±3% 1E-W3A: ±2%	±1%	40°C ± 2°C, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	1H: ±3% 1E-W3A: ±2%	±1%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.3%	1H: +125°C, 1000 hours; 1E, 1J, 2A, 2B, 2E, W2H, W3A: +150°C, 1000 hours

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