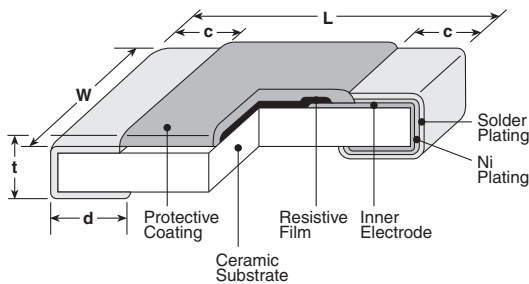


## features

- Excellent anti-sulfuration characteristic due to using high sulfuration-proof inner top electrode material/pulse
- Superior to RK73 series chip resistors in pulse withstanding voltage
- 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

## dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
SG73 1J (0603)	.063±.008 (1.6±0.2)	.031±.004 (0.8±0.1)	.012±.004 (0.3±0.1)	.012±.004 (0.3±0.1)	.018±.004 (0.45±0.1)
SG73 2A (0805)	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.016±.008 (0.4±0.2)	.012 <sup>+.008</sup> <sub>-.004</sub> (0.3 <sup>+.02</sup> <sub>-.01</sub> )	.02±.004 (0.5±0.1)
SG73 2B (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.012 (0.5±0.3)	.016 <sup>+.008</sup> <sub>-.004</sub> (0.4 <sup>+.02</sup> <sub>-.01</sub> )	.024±.004 (0.6±0.1)
SG73 2E (1210)		.102±.008 (2.6±0.2)			
SG73 W2H (2010)	.197±.008 (5.0±0.2)	.098±.008 (2.5±0.2)		.026±.006 (0.65±0.15)	
SG73 W3A (2512)	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)			

## ordering information

SG73	2A	RT	TD	103	K
Type	Power Rating	Termination Material	Packaging	Nominal Resistance	Resistance Tolerance
SG73	1J 2A 2B 2E W2H W3A	RT: Sn Anti-Sulfur	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	±10%, ±20%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω	K: ±10% M: ±20%

### applications and ratings

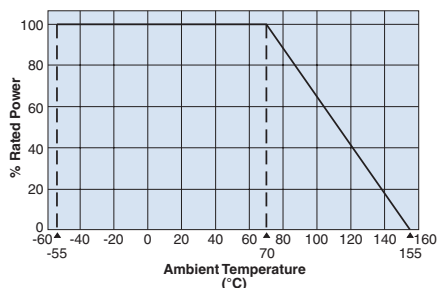
Part Designation	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (ppm/°C) Max.	Resistance Range K: ±10% M: ±20% E-12	Maximum Working Voltage	Maximum Overload Voltage	Operating Temp. Range
SG73 1J (0603)	0.1W	70°C	125°C	±400	1Ω - 8.2Ω	50V	100V	-55°C to +155°C
				±200	10Ω - 1MΩ			
SG73 2A (0805)	0.125W	70°C	125°C	±400	1Ω - 8.2Ω	150V	200V	
				±200	10Ω - 1MΩ			
SG73 2B (1206)	0.33W	70°C	125°C	±400	1Ω - 8.2Ω	200V	400V	
				±200	10Ω - 1MΩ			
SG73 2E (1210)	0.50W	70°C	125°C	±400	1Ω - 8.2Ω			
				±200	10Ω - 1MΩ			
SG73 W2H (2010)	0.75W	70°C	125°C	±400	1Ω - 8.2Ω			
				±200	10Ω - 1MΩ			
SG73 W3A (2512)	1W	70°C	125°C	±400	1Ω - 8.2Ω			
				±200	10Ω - 1MΩ			

Rated voltage =  $\sqrt{\text{Power rating} \times \text{resistance value}}$  or max. working voltage, whichever is lower

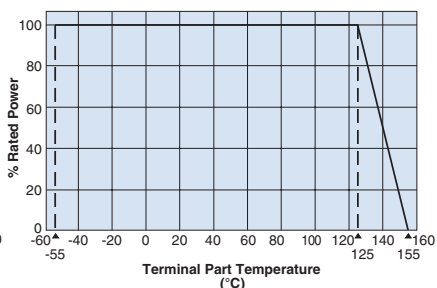
If any questions should arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature," please give priority to the "Rated Terminal Part Temperature." Prior to use and for more details refer to "Introduction of the derating curves on the terminal part temperature" in the beginning of the catalog.

### environmental applications

#### Derating Curve



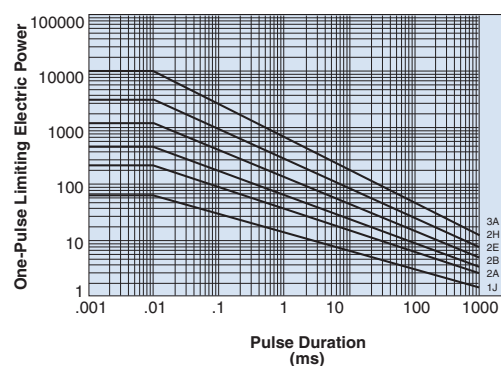
For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the derating curve.



For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve.

Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use.

#### One-Pulse Limiting Electric Power



The maximum applicable voltage is equal to the max. overload voltage. Please contact factory for resistance characteristics of continuous applied pulse.

### Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.1\Omega)$		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	±1%	±0.75%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±0.5%	±0.3%	-55°C (30 minutes), +125°C (30 minutes), 100 cycles
Moisture Resistance	±3%	±0.75%	40°C ± 2°C, 90%~95%RH, 1000 hours; 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±3%	±0.75%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1%	±0.3%	+155°C, 1000 hours
Sulfuration Test	±5%	±0.2%	Soaked in industrial oil with 3.5% sulfur concentration 105°C ± 3°C, 500 hours

Additional environmental applications can also be found at [www.koaspeer.com](http://www.koaspeer.com)

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

11/06/18