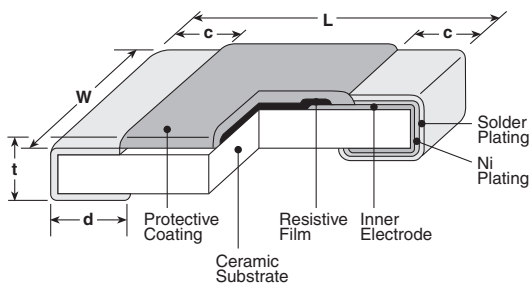


features

- 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
- Marking: White three-digit on wine red protective coat
- 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 ^{+.008} _{-.004} (0.3 ^{+.02} _{-.01})	.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 ^{+.008} _{-.004} (0.4 ^{+.02} _{-.01})	.024±.004 (0.6±0.1)
SG73 2E (1210)		.102±.008 (2.6±0.2)			
SG73 W2H (2010)		.098±.008 (2.5±0.2)		.026±.006 (0.65±0.15)	
SG73 W3A (2512)	.197±.008 (5.0±0.2)	.122±.008 (3.1±0.2)			
NEW SG73S 1E, SG73P 1E (0402)	.039 ^{+.004} _{-.002} (1.0 ^{+.01} _{-.005})	.020±.002 (0.5±0.05)	.006±.004 (0.15±0.1)	.010 ^{+.002} _{-.004} (0.25 ^{+.005} _{-.01})	.014±.002 (0.35±0.05)
NEW SG73S 1J, SG73P 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)
NEW SG73S 2A, SG73P 2A (0805)	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.012 ^{+.008} _{-.004} (0.3 ^{+.02} _{-.01})	.012 ^{+.008} _{-.004} (0.3 ^{+.02} _{-.01})	.020±.004 (0.5±0.1)
NEW SG73S 2B, SG73P 2B (1205)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.016 ^{+.008} _{-.004} (0.4 ^{+.02} _{-.01})	.016 ^{+.008} _{-.004} (0.4 ^{+.02} _{-.01})	.024±.004 (0.6±0.1)
NEW SG73S 2E, SG73P 2E (1210)		.102±.008 (2.6±0.2)			

ordering information

New Part #	SG73	2A	RT	TD	103	K
Type	SG73 NEW SG73P NEW SG73S	Power Rating 1E 1J 2A 2B 2E W2H W3A	Termination Material RT: Sn Anti-Sulfur	Packaging 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	Nominal Resistance ±0.5%, ±1%: 3 significant figures + 1 multiplier ±2%, ±5%, ±10%, ±20%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω	Resistance Tolerance D: ±0.5% F: ±1% G: ±2% J: ±5% K: ±10% M: ±20%

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	T.C.R. (ppm/°C) Max.	Resistance Range				K: ±10% M: ±20% E-12	Maximum Working Voltage	Maximum Overload Voltage	Rated Terminal Part Temp.	Operating Temp. Range				
				D: ±0.5% E-24, E-96	F: ±1% E-24, E-96	G: ±2% E-24	J: ±5% E-24									
NEW	SG73 1J (0603)	0.1W	±400 ±200	—	—	—	—	1Ω - 8.2Ω 10Ω - 1MΩ	50V	100V	80°C	-55°C to +155°C				
	SG73 2A (0805)	0.125W	±400 ±200					1Ω - 8.2Ω 10Ω - 1MΩ	150V	200V	85°C					
	SG73 2B (1206)	0.25W	±400 ±200					1Ω - 8.2Ω 10Ω - 1MΩ	200V	400V	100°C					
	SG73 2E (1210)	0.33W	±400 ±200					1Ω - 8.2Ω 10Ω - 1MΩ								
	SG73 W2H (2010)	0.75W	±400 ±200					1Ω - 8.2Ω 10Ω - 1MΩ					125°C			
	SG73 W3A (2512)	1W	±400 ±200					1Ω - 8.2Ω 10Ω - 1MΩ								
	SG73S 1E SG73P 1E	0.125W (0.2W*)	±200					100Ω - 1MΩ	10Ω - 1MΩ	10Ω - 10MΩ	1Ω - 10MΩ		—	50V	100V	85°C
	SG73S 1J SG73P 1J	0.2W (0.25W*)	±100**											150V (*200V)	200V (*400V)	95°C
	SG73S 2A SG73P 2A	0.25W (0.33W*)	±200	200V	400V	100°C										
	SG73S 2B SG73P 2B	0.33W (0.5W*)		200V	400V	110°C										
	SG73S 2E SG73P 2E	0.5W														

* Please refer to the "Higher Power Ratings" statement in the beginning of the catalog. Also, contact KOA prior to usage and for the max. working voltage and max. overload voltage.

** Cold T.C.R. of SG73P/S 1J is ±150x10⁻⁶/K

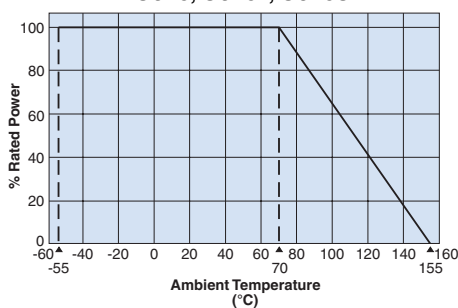
Rated ambient temperature: +70°C

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

environmental applications

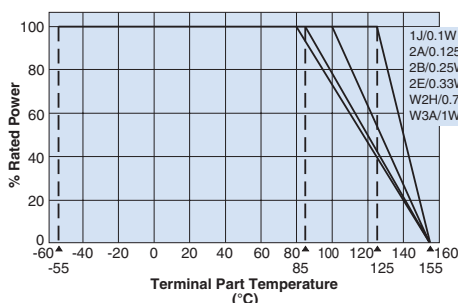
Derating Curve

SG73, SG73P, SG73S

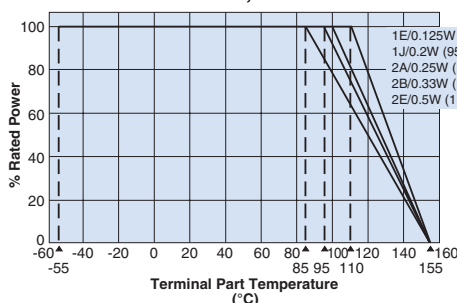


For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the derating curve.

SG73



SG73P, SG73S



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" on the beginning of our catalog before use.

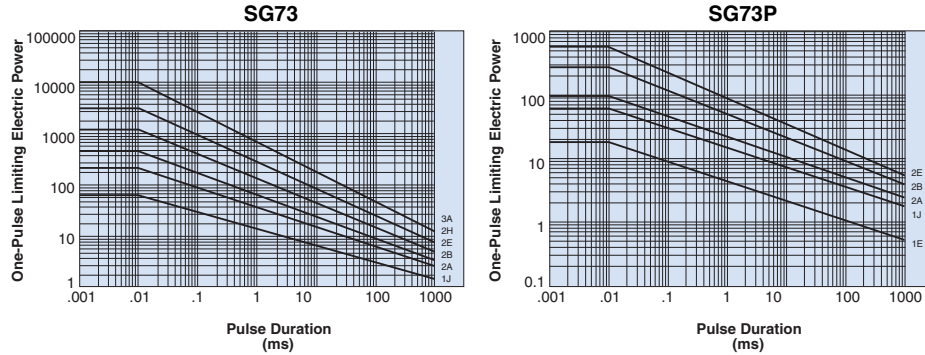
Additional environmental applications can also be found at www.koaspeer.com

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

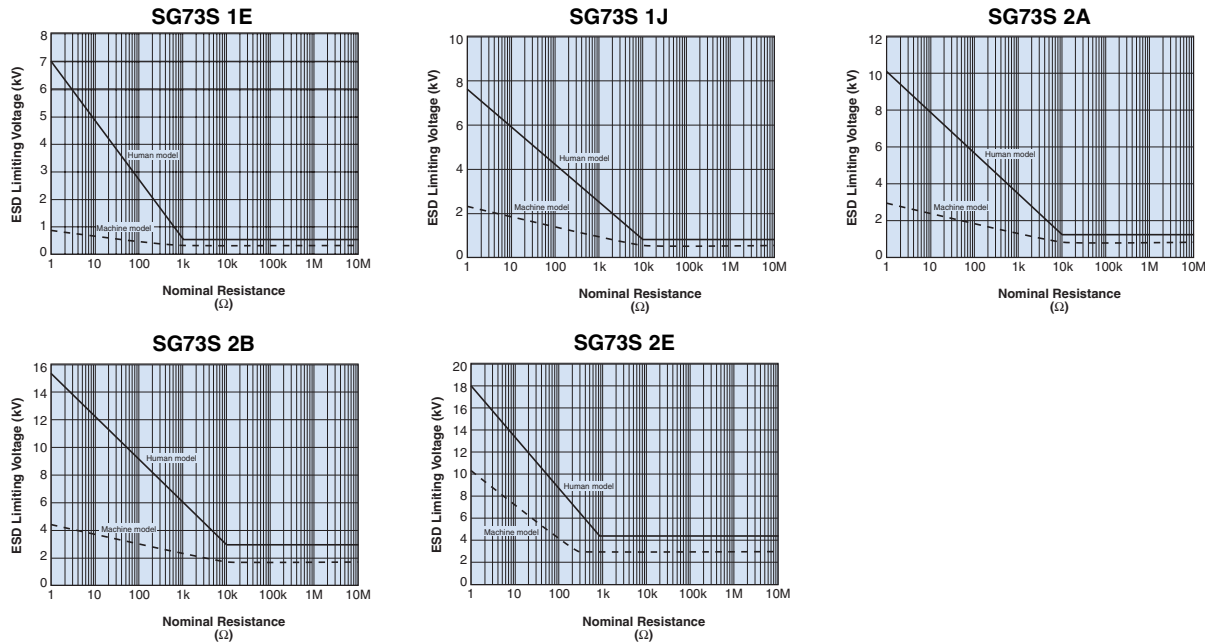
12/05/14

environmental applications

One-Pulse Limiting Electric Power



ESD Limiting Voltage



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)	$\pm 2\%$	$\pm 0.5\%$	Rated Voltage x 2.5 for 5 seconds
Resistance to Solder Heat	$\pm 1\%$	$\pm 0.75\%$	260°C $\pm 5^\circ\text{C}$, 10 seconds ± 1 second
Rapid Change of Temperature	$\pm 0.5\%$	$\pm 0.3\%$	-55°C (30 minutes), +125°C (30 minutes), 100 cycles
Moisture Resistance	$\pm 3\%$	$\pm 0.75\%$	40°C $\pm 2^\circ\text{C}$, 90%~95%RH, 1000 hours; 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	$\pm 3\%$	$\pm 0.75\%$	70°C $\pm 2^\circ\text{C}$, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	$\pm 1\%$	$\pm 0.3\%$	+155°C, 1000 hours
Sulfuration Test	$\pm 5\%$	—	Soaked in industrial oil with 3.5% sulfur concentration 105°C $\pm 3^\circ\text{C}$, 500 hours