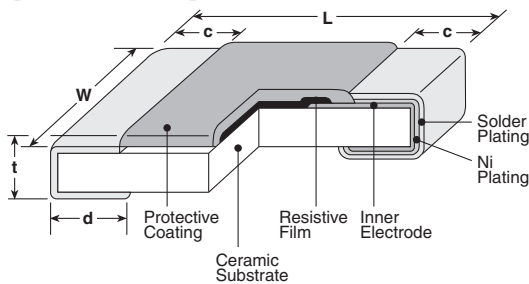




**features**

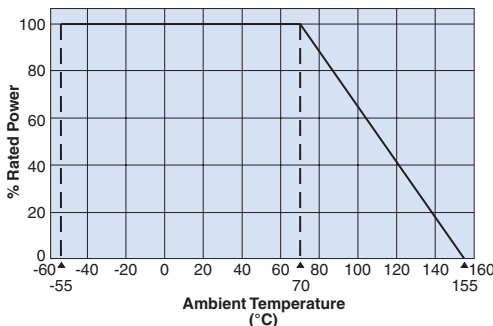
- Superior to RK73B/RK73H series in surge dielectric withstanding voltage
- Marking: SG73: White three-digit on wine red protective coat  
SG73P: Black three-digit on green protective coating  
SG73S: White three-digit on green protective coating  
SG73P/S 1E, 1J: no marking  
SG73P/S 1E: Black coating
- 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
<b>NEW</b> SG73P1E, SG73S1E (0402)	.039 <sup>+0.004</sup> <sub>-.002</sub> (1.0 <sup>+0.1</sup> <sub>-0.05</sub> )	.02±.002 (0.5±0.05)	.006±.004 (0.15±0.1)	.010 <sup>+0.002</sup> <sub>-.004</sub> (0.25 <sup>+0.05</sup> <sub>-0.1</sub> )	.014±.002 (0.35±0.05)
SG731J,SG73P1J SG73S1J (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)
SG732A (0805)	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.016±.008 (0.4±0.2)	.012 <sup>+0.008</sup> <sub>-.004</sub> (0.3 <sup>+0.2</sup> <sub>-0.1</sub> )	.02±.004 (0.5±0.1)
SG73P2A, SG73S2A (0805)			.012 <sup>+0.008</sup> <sub>-.004</sub> (0.3 <sup>+0.2</sup> <sub>-0.1</sub> )		
SG732B (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.012 (0.5±0.3)	.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-0.1</sub> )	.024±.004 (0.6±0.1)
SG73P2B, SG73S2B (1206)			.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-0.1</sub> )		
SG732E (1210)			.02±.012 (0.5±0.3)		
SG73P2E, SG73S2E (1210)	.197±.008 (5.0±0.2)	.098±.008 (2.5±0.2)	.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-0.1</sub> )	.026±.006 (0.65±0.15)	.024±.004 (0.6±0.1)
SG732H (2010)					
SG73W2H (2010)	.248±.008 (6.3±0.2)	.122±.008 (3.1±0.2)	.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-0.1</sub> )	.026±.006 (0.65±0.15)	.024±.004 (0.6±0.1)
SG733A (2512)					
SG73W3A (2512)					

**Derating Curve**



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

**ordering information**

New Part #	SG73	2B	T	TD	102	K
Type	SG73 SG73P SG73S	Size NEW1E 1J 2A 2B 2E W2H W3A 2H 3A	Termination Material T: Sn L: SnPb: (NOT available in SG732H/W2H, SG733A/W3A, SG73P series, SG75S series)	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 "R" indicates decimal on value <100Ω ±2%, ±5%, ±10%, ±20%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω	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 @ 70°C	T.C.R. (ppm/°C) Max.	Resistance Range				Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Operating Temp. Range
			(E-24)/E-96 (D±0.5%)	(E-24)/E-96 (F±1%)	(E-24) (G±2%,J±5%)	(E-12) (K±10%,M±20%)			
SG731J (0603)	1/10W (.1W)	±200 ±400	—	—	—	10Ω - 1MΩ 1Ω - 8.2Ω	50V	100V	-55°C to +155°C
SG732A (0805)	1/8W (.125W)	±200 ±400	—	—	—	10Ω - 1MΩ 1Ω - 8.2Ω	150V	200V	
SG732B (1206)	1/4W (.25W)	±200 ±400	—	—	—	10Ω - 1MΩ 1Ω - 8.2Ω	200V	400V	
SG732E (1210)	1/3W (.33W)	±200 ±400	—	—	—	10Ω - 1MΩ 1Ω - 8.2Ω			
SG732H/W2H (2010)	3/4W (.75W)	±200 ±400	—	—	—	10Ω - 1MΩ 1Ω - 8.2Ω			
SG733A/W3A (2512)	1W	±200 ±400	—	—	—	10Ω - 1MΩ 1Ω - 8.2Ω			
NEW SG73P1E, SG73S1E (0402)	1/8W (.125W)	±200	10Ω - 1MΩ	1Ω - 1MΩ	1Ω - 10MΩ	—	50V	100V	
SG73P1J, SG73S1J (0603)	1/5W (.2W)	±100**							
SG73S2A, SG73P2A (0805)	1/4W (.25W)	±200	10Ω - 1MΩ	1Ω - 1MΩ	1Ω - 10MΩ	—	150V (200V)***	200V (400V)***	
SG73S2B, SG73P2B (1206)	1/3W (.33W)	±200	10Ω - 1MΩ	1Ω - 1MΩ	1Ω - 10MΩ	—	200V	400V	
SG73S2E, SG73P2E (1210)	1/2W (.5W)	±200	10Ω - 1MΩ	1Ω - 1MΩ	1Ω - 10MΩ	—			

\* Parentheses indicate EIA package size codes.

\*\* Cold T.C.R.: +150 x 10<sup>-6</sup>/K

\*\*\* Please consult with factory for Max. working voltage and Max. overload voltage with ()

## environmental applications

### Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+01\Omega)$		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

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

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