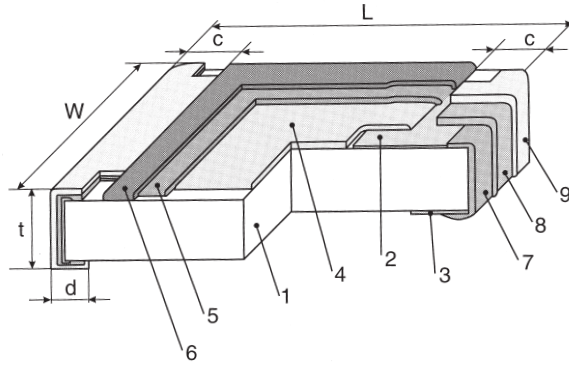
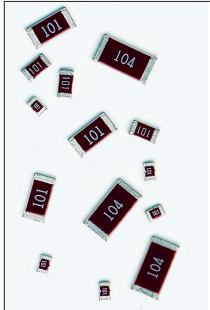


**FLAT CHIP  
SURGE CURRENT  
THICK FILM  
SG73 • SG73S • SG73P**



**STRUCTURE**

- 1 Ceramic substrate
- 2 Top termination
- 3 Bottom termination
- 4 Resistive layer
- 5 Glass layer
- 6 Protective layer
- 7 End termination
- 8 Diffusion barrier (Ni)
- 9 Solder plating

**IDENTIFICATION**

PRODUCT CODE	COATING COLOR	MARKING
SG73	Wine red	White, 3 digits
SG73S 1E, SG73P 1E	Black	None
SG73S 1J, SG73P 1J		None
SG73S 2A, 2B, 2E	Green	White, 3 digits
SG73P 2A, 2B, 2E		Black, 3 digits

Products with Pb-free terminations meet EU-RoHS requirements

**TYPE DESIGNATION (HOW TO ORDER)**

SG73	2A	T	TD	103	K
PRODUCT CODE SG73 SG73S SG73P	STYLE 1E...W3A	TERMINATION** SURFACE MATERIAL T: Sn (L: Sn/Pb)	TAPING* TP, TD, TE BK <small>*Please see "PACKAGING"</small>	NOMINAL RESISTANCE D,F: 4 digits G,J,K,M: 3 digits	TOLERANCE D: (±0.5%), F: (±1%) G: (±2%), J: (±5%) K: (±10%), M: (±20%)

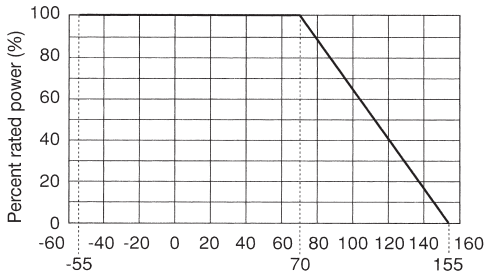
Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS

\*\*SG73S and SG73P are only available in "T".

**FEATURES**

- RuO<sub>2</sub> thick film resistor element
- Anti-leaching nickel barrier terminations
- Superior to chip resistor of RK73 series in surge withstanding voltage and pulse withstanding voltage
- If tight tolerances (down to ±0.5%) are requested, the **SG73S (for surge)** and the **SG73P (for pulse)** are ideal
- Ideal for use in E.C.U.'s and in circuits to catch inductive lightning surge
- Rated ambient temperature: +70° C
- Operating temperature range: -55° C ... +155° C
- Parts are tested according to AEC-Q200 requirements
- Meets or exceeds IEC 60 115-8, JIS C 5201-8, EIAJ RC-2134C
- Suitable for reflow and wave soldering

**DERATING CURVE**



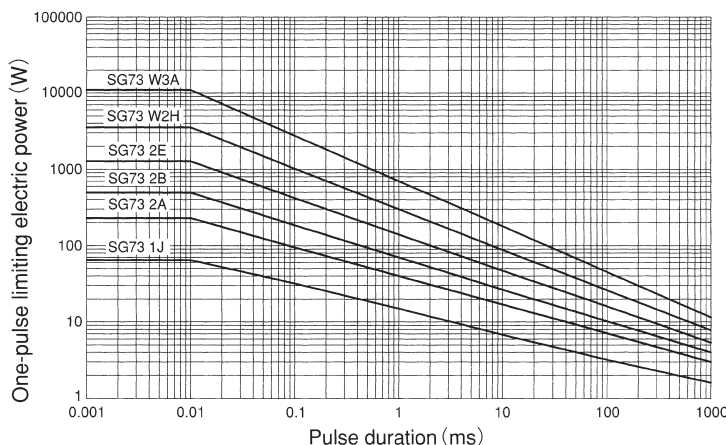
**DIMENSIONS (mm)**

SIZE	TYPE	L	W	c	d	t
0603	SG73 1J	1.6 ± 0.2	0.8 ± 0.1	0.3 ± 0.1	0.3 ± 0.1	0.45 ± 0.1
0805	SG73 2A	2.0 ± 0.2	1.25 ± 0.1	0.4 ± 0.2	0.3 <sup>+0.2</sup> <sub>-0.1</sub>	0.5 ± 0.1
1206	SG73 2B	3.2 ± 0.2	1.6 ± 0.2	0.5 ± 0.3	0.4 <sup>+0.2</sup> <sub>-0.1</sub>	0.6 ± 0.1
1210	SG73 2E		2.6 ± 0.2			
2010	SG73 W2H*	5.0 ± 0.2	2.5 ± 0.2	0.65 ± 0.15		
2512	SG73 W3A*	6.3 ± 0.2	3.1 ± 0.2			
<b>NEW</b> 0402	SG73 S 1E SG73 P 1E	1.0 <sup>+0.1</sup> <sub>-0.05</sub>	0.5 ± 0.05	0.15 ± 0.1	0.25 <sup>+0.05</sup> <sub>-0.1</sub>	0.35 ± 0.05
0603	SG73S 1J SG73P 1J	1.6 ± 0.2	0.8 ± 0.1	0.3 ± 0.1	0.3 ± 0.1	0.45 ± 0.1
0805	SG73S 2A SG73P 2A	2.0 ± 0.2	1.25 ± 0.1	0.3 <sup>+0.2</sup> <sub>-0.1</sub>	0.3 <sup>+0.2</sup> <sub>-0.1</sub>	0.5 ± 0.1
1206	SG73S 2B SG73P 2B	3.2 ± 0.2	1.6 ± 0.2	0.4 <sup>+0.2</sup> <sub>-0.1</sub>	0.4 <sup>+0.2</sup> <sub>-0.1</sub>	0.6 ± 0.1
1210	SG73S 2E SG73P 2E		2.6 ± 0.2			

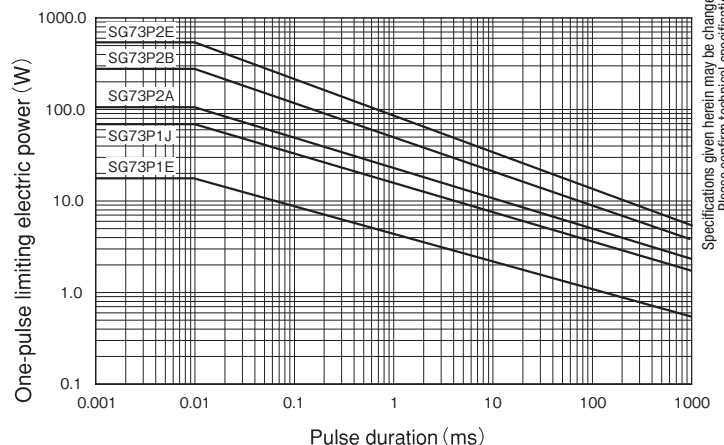
\* SG73 2H and SG73 3A are also still available (different "d" dimensions = 0.4<sup>+0.2</sup><sub>-0.1</sub> mm)

**ONE-PULSE LIMITING ELECTRIC POWER**

**SG73**



**SG73P**



Contact our sales representatives before you use our products for applications including automobiles, medical equipment and aerospace equipment. Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

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

## FLAT CHIP SURGE CURRENT THICK FILM SG73 • SG73S • SG73P

### RATING

SIZE	TYPE	T.C.R. (ppm/K)	POWER* RATING	MAX. WORKING VOLTAGE	MAX. OVERLOAD VOLTAGE	RESISTANCE RANGE				OPERATING TEMPERATURE RANGE
						D (± 0.5%) E24	F (± 1%) E24	G (± 2%), J (± 5%) E24	K (± 10%), M (± 20%) E12	
0603	SG73 1J	± 400 ± 200	0.1 W	50 V	100 V	-	-	-	1 Ω ... 8.2 Ω 10 Ω ... 1 MΩ	-55°C ... +155°C
0805	SG73 2A	± 400 ± 200	0.125 W	150 V	200 V	-	-	-	1 Ω ... 8.2 Ω 10 Ω ... 1 MΩ	
1206	SG73 2B	± 400 ± 200	0.25 W	200 V	400 V	-	-	-	1 Ω ... 8.2 Ω 10 Ω ... 1 MΩ	
1210	SG73 2E	± 400 ± 200	0.33 W			-	-	-	1 Ω ... 8.2 Ω 10 Ω ... 1 MΩ	
2010	SG73 W2H	± 400 ± 200	0.75 W	200 V	400 V	-	-	-	1 Ω ... 8.2 Ω 10 Ω ... 1 MΩ	
2512	SG73 W3A	± 400 ± 200	1 W			-	-	-	1 Ω ... 8.2 Ω 10 Ω ... 1 MΩ	
0402 <b>NEW</b>	SG73S 1E SG73P 1E	± 200	0.125 W	50 V	100 V	-	-	-	-	
0603	SG73S 1J SG73P 1J	±100**	0.2 W			-	-	-	-	
0805	SG73S 2A SG73P 2A	± 200	0.25 W	150 V	200 V	10Ω ... 1 MΩ	1 Ω ... 1 MΩ	1 Ω ... 10 MΩ	-	
1206	SG73S 2B SG73P 2B		0.33 W	200 V	400 V	-	-	-	-	
1210	SG73S 2E SG73P 2E	0.5 W	-			-	-	-	-	

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

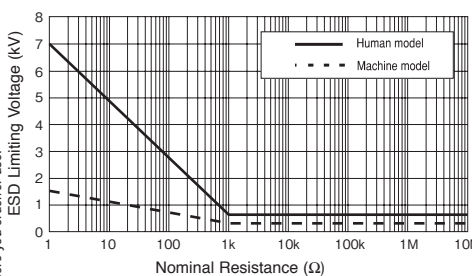
\* For resistors operated in ambient temperature over +70°C, power rating shall be derated like shown in „DERATING CURVE“.

\*\* T.C.R. of SG73 S/P 1J is ±150ppm/K in case of -55°C/+25°C

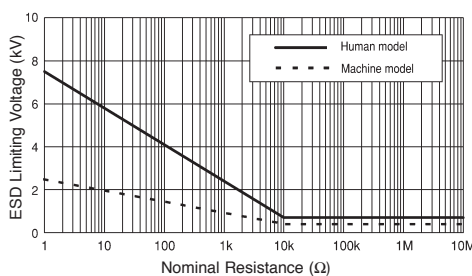
T.C.R. of SG73 S/P 1J is ±100ppm/K in case of +25°C/+125°C

### ESD LIMITING VOLTAGE AND DERATING CURVE

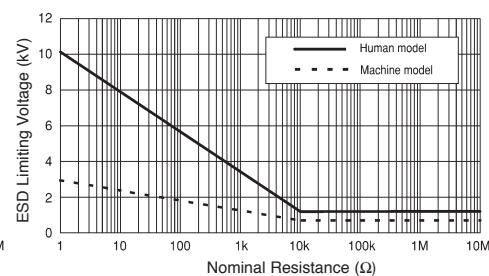
#### SG73S 1E



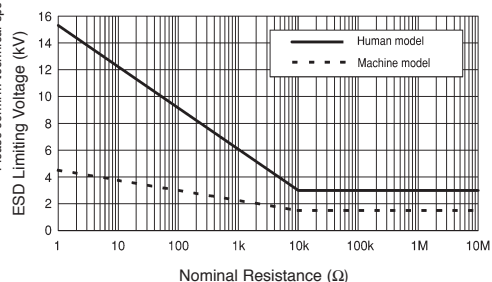
#### SG73S 1J



#### SG73S 2A



#### SG73S 2B



#### SG73S 2E

