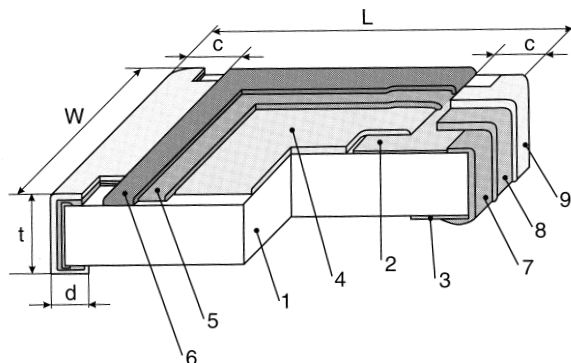
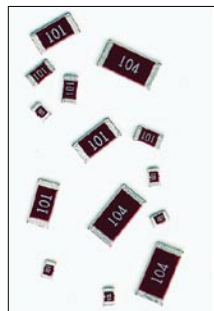


**FLAT CHIP  
SURGE CURRENT  
THICK FILM  
SG73 • SG73S • SG73P**

**NEW**

**NEW**



**STRUCTURE**

- 1 Ceramic substrate
- 2 Top termination (Ag Pd)
- 3 Bottom termination (Ag)
- 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 |
| SG73P 1J          |               | None            |
| SG73S, 2A, 2B, 2E | Green         | White, 3 digits |
| SG73P, 2A, 2B, 2E |               | Black, 3 digits |

Products with Pb-free terminations  
meet RoHS requirements

**TYPE DESIGNATION (HOW TO ORDER)**

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

**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  $\pm 0.5\%$ ) 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:  $+70^{\circ}\text{C}$
- Operating temperature range:  $-55^{\circ}\text{C} \dots +155^{\circ}\text{C}$
- Meets or exceeds IEC 60 115-8, JIS C 5201-8, EIAJ RC-2134A
- Suitable for reflow and wave soldering

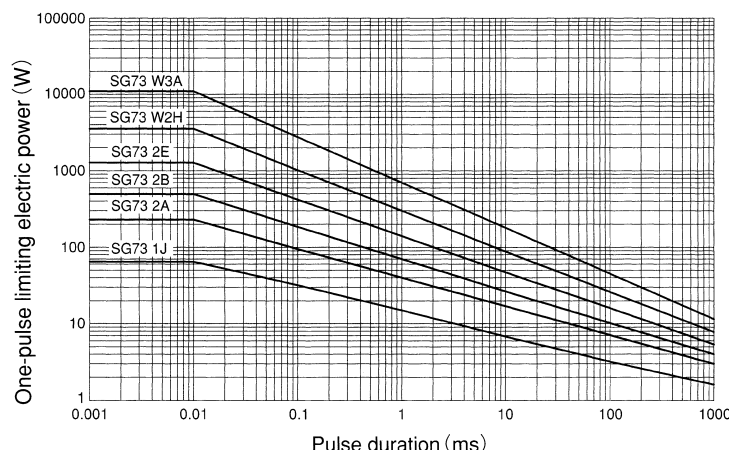
**DIMENSIONS (mm)**

| SIZE | TYPE         | L ±0.2 | W          | c                                   | d                                   | t ±0.1 |
|------|--------------|--------|------------|-------------------------------------|-------------------------------------|--------|
| 0603 | SG73 1J      | 1.6    | 0.8 ± 0.1  | 0.3 ± 0.1                           | 0.3 ± 0.1                           | 0.45   |
| 0805 | SG73 2A      | 2.0    | 1.25 ± 0.1 | 0.4 ± 0.2                           | 0.3 <sup>+0.2</sup> <sub>-0.1</sub> | 0.5    |
| 1206 | SG73 2B      | 3.2    | 1.6 ± 0.2  | 0.5 ± 0.3                           | 0.4 <sup>+0.2</sup> <sub>-0.1</sub> | 0.6    |
| 1210 | SG73 2E      |        | 2.6 ± 0.2  |                                     |                                     |        |
| 2010 | SG73 W2H*    |        | 2.5 ± 0.2  |                                     |                                     |        |
| 2512 | SG73 W3A*    |        | 3.1 ± 0.2  |                                     |                                     |        |
| 0603 | NEW SG73P 1J | 1.6    | 0.8 ± 0.1  | 0.3 ± 0.1                           | 0.3 ± 0.1                           | 0.45   |
| 0805 | NEW SG73S 2A | 2.0    | 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    |
|      | SG73P 2A     |        |            |                                     |                                     |        |
| 1206 | NEW SG73S 2B | 3.2    | 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    |
|      | SG73P 2B     |        |            |                                     |                                     |        |
| 1210 | NEW SG73S 2E |        | 2.6 ± 0.2  |                                     |                                     |        |
|      | SG73P 2E     |        |            |                                     |                                     |        |

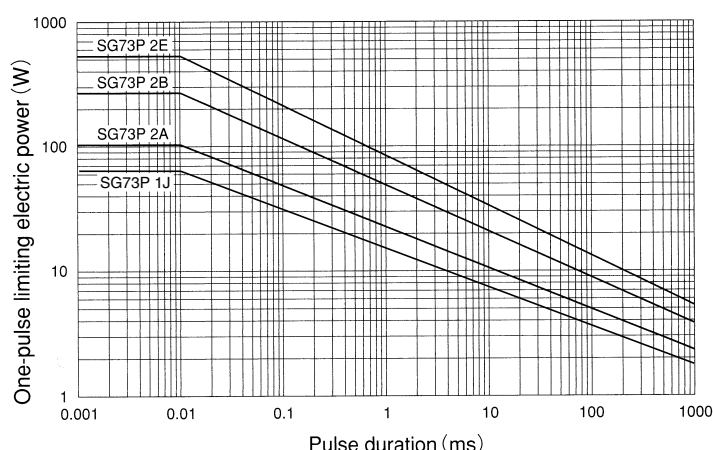
\* SG73 2H and SG73 3A are also still available (different "d" dimensions =  $0.4 \pm 0.2$  mm)

**ONE-PULSE LIMITING ELECTRIC POWER**

**SG73**



**SG73P**



## FLAT CHIP

## SURGE CURRENT THICK FILM

## SG73 • SG73S • SG73P

NEW

NEW

## RATING

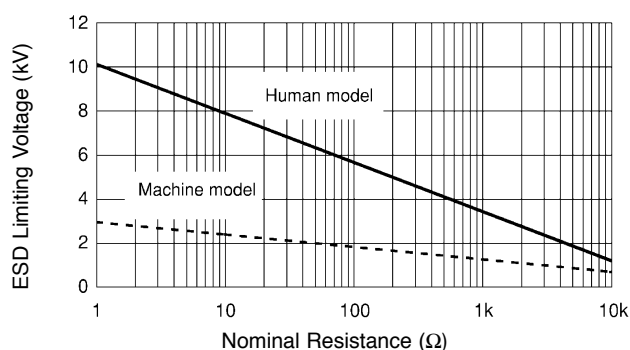
| SIZE     | TYPE     | T.C.R.<br>(ppm/K) | POWER*<br>RATING | MAX.<br>WORKING<br>VOLTAGE | MAX.<br>OVERLOAD<br>VOLTAGE | RESISTANCE RANGE  |                                |                           |                                | OPERATING<br>TEMPERATURE<br>RANGE |
|----------|----------|-------------------|------------------|----------------------------|-----------------------------|-------------------|--------------------------------|---------------------------|--------------------------------|-----------------------------------|
|          |          |                   |                  |                            |                             | D (± 0.5%)<br>E24 | F (± 1%)<br>E24                | G (± 2%), J (± 5%)<br>E24 | K (± 10%), M (± 20%)<br>E12    |                                   |
| 0603     | SG73 1J  | ± 400<br>± 200    | 0.1 W            | 50 V                       | 100 V                       | —                 | —                              | —                         | 1 Ω ... 8.2 Ω<br>10 Ω ... 1 MΩ | -55°C ... +155°C                  |
| 0805     | SG73 2A  | ± 400<br>± 200    | 0.125 W          | 150 V                      | 200 V                       | —                 | —                              | —                         | 1 Ω ... 8.2 Ω<br>10 Ω ... 1 MΩ |                                   |
| 1206     | SG73 2B  | ± 400<br>± 200    | 0.25 W           | 200 V                      | 400 V                       | —                 | —                              | —                         | 1 Ω ... 8.2 Ω<br>10 Ω ... 1 MΩ |                                   |
| 1210     | SG73 2E  | ± 400             | 0.5 W            |                            |                             | —                 | —                              | —                         | 1 Ω ... 8.2 Ω<br>10 Ω ... 1 kΩ |                                   |
|          |          | ± 200             | 0.33 W           |                            |                             | —                 | —                              | —                         | 1.2 kΩ ... 1.MΩ                |                                   |
| 2010     | SG73 W2H | ± 400<br>± 200    | 0.75 W           |                            |                             | —                 | —                              | —                         | 1 Ω ... 8.2 Ω<br>10 Ω ... 1 MΩ |                                   |
| 2512     | SG73 W3A | ± 400<br>± 200    | 1 W              | —                          | —                           | —                 | 1 Ω ... 8.2 Ω<br>10 Ω ... 1 MΩ |                           |                                |                                   |
| NEW 0603 | SG73P 1J | ± 200             | 0.125 W          | 50 V                       | 100 V                       | 10Ω ... 1 MΩ      | 1 Ω ... 1 MΩ                   | 1 Ω ... 10 MΩ             | —                              |                                   |
| NEW 0805 | SG73S 2A |                   | 0.25 W           | 150 V                      | 200 V                       |                   |                                |                           |                                |                                   |
| NEW 1206 | SG73P 2A |                   | 0.33 W           | 200 V                      | 400 V                       |                   |                                |                           |                                |                                   |
| NEW 1210 | SG73S 2B |                   | 0.5 W            |                            |                             |                   |                                |                           |                                |                                   |
|          | SG73P 2E |                   | 0.5 W            |                            |                             |                   |                                |                           |                                |                                   |

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

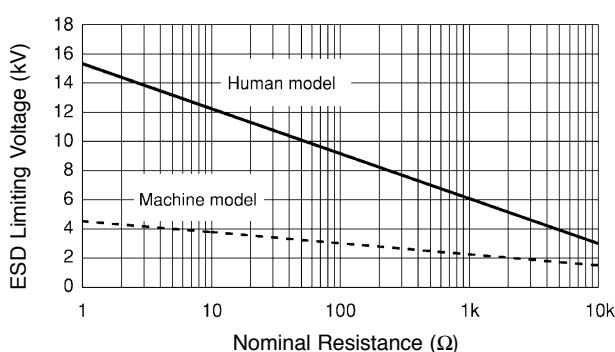
\* For resistors operated in ambient temperature over +70°C, power rating shall be derated like shown in below „DERATING CURVE“.

## ESD LIMITING VOLTAGE AND DERATING CURVE

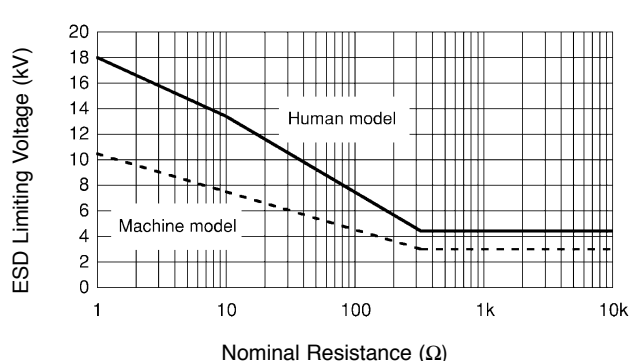
## SG73S 2A



## SG73S 2B



## SG73S 2E



## DERATING CURVE

