

# **RS73**

## high reliability chip resistors

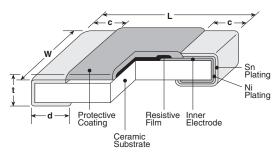


#### features



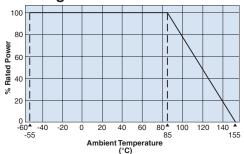
- Metal-glaze thick film resistor for surface mounting
- High precision resistor with T.C.R. ±25x10<sup>-6</sup>/K and tolerance ±0.1%
- High reliability with  $\Delta R$  of  $\pm 0.2\%$  and  $\pm 0.5\%$  in the reliability test
- Suitable for both flow and reflow solderings
- Products with lead-free 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

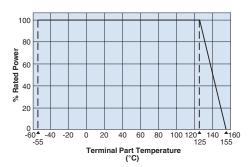


Туре	Dimensions inches (mm)							
(Inch Size Code)	L	W	С	d	t			
1J (0603)	.063±.008 (1.6±0.2)	.031±.004 (0.8±0.1)	.008±.004 (0.2±0.1)	.012±.004 (0.3±0.1)	.018±.004 (0.45±0.1)			
2A (0805)	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.010±.006 (0.25±0.15)	.012 +.008 004 (0.3 +0.2)	.020±.004 (0.5±0.1)			
2B (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.014±.006 (0.35±0.15)	.016 +.008 004 (0.4 +0.2)	.024±.004 (0.6±0.1)			



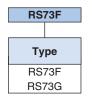


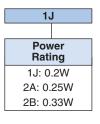
For resistors operated at an ambient temperature of 85°C or above, a power rating shall be derated in accordance with the derating curve.

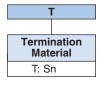


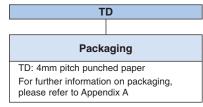
For resistors operated terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve. Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use.

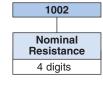
## ordering information











	В					
_						
	Tolerance					
	B: ±0.1%					
_	C: ±0.25%					
	D: ±0.5%					
	F: ±1%					

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

7/01/19





## high reliability chip resistors

## applications and ratings

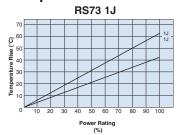
Part	Power	Rated	Rated	T.C.R.	Resistance Range* <sup>2</sup>				Maximum		
Designation	Rating	Ambient Temp.	Terminal Part Temp.	(X 10 <sup>-6</sup> /K)	B±0.1% E-24, E-96	C±0.25% E-24, E-96	D±0.5% E-24, E-96	F±1% E-24, E-96	Working Voltage	Overload Voltage	Temperature Range
RS73F1J (0603)	.2W		+125°C	±25*1	10Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ	100V	150V	-55°C to +155°C
RS73G1J (0603)	.200			±50							
RS73F2A (0805)	.25W	85°C		±25*1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10Ω -		10Ω - 10MΩ	150V	300V	
RS73G2A (0805)	.25	85 0	+125 0	±50		6.8MΩ					
RS73F2B (1206)	.33W			±25*1	10Ω - 1MΩ				200V	400V	
RS73G2B (1206)				±50							

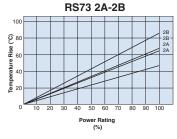
Rated voltage =  $\sqrt{\text{Power rating x resistance value}}$  or max. working voltage, whichever is lower

If any questions 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 in the terminal part temperature" in the beginning of the catalog.

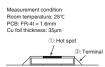
## environmental applications

#### **Temperature Rise**

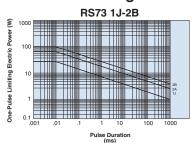




Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.



#### **One-Pulse Limiting Electric Power**



The maximum applicable voltage is equal to the max. overload voltage. Please ask us about the resistance characteristic of continuous applied pulse. The pulse endurance values are not assured values, so be sure to check the products on actual equipment when you use them.

#### **Performance Characteristics**

	Requirement A	AR ±(%+0.05Ω)	Test Method		
Parameter	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)	±0.2%	±0.03%	Rated Voltage x 2.5 for 5 seconds		
Resistance to Solder Heat	±0.2%	±0.1%	260°C ± 5°C, 10 seconds ± 1 second		
Rapid Change of Temperature	±0.2%	±0.05%	-55°C (30 minutes), +125°C (30 minutes), 1000 cycles		
Moisture Resistance	$\pm 0.2\%$ : 1J (100Ω≤R≤200kΩ) 2A, 2B (10Ω≤R≤10MΩ) $\pm 0.4\%$ : other	$\pm 0.04\%$ : 1J (100Ω≤R≤200kΩ) 2A, 2B (10Ω≤R≤10MΩ) $\pm 0.08\%$ : other	40°C ± 2°C, 90%-95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle		
Endurance at 85°C	±0.2%	±0.05%	85°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle		
High Temperature Exposure	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		+155°C, 1000 hours		

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<sup>&</sup>quot; Measurement Temperature: +25°C/+125°C. Cold T.C.R. (-55°C/+25°C) is -50~+25x10°/K

<sup>&</sup>lt;sup>12</sup> Please inquire about E-192