

# 25ppm, 0.1%, High Reliability Thick Film Chip Resistors

**NEW**



## RS73 – Series

KOA's new RS73-series is designed for high precision and high reliability applications by using thick film technology.

With a T.C.R. down to 25ppm and a tolerance as low as 0.1%, the new RS73-series from KOA is ideal for precision designs such as high-accuracy sensing or voltage detection circuits in automotive, industrial and measuring applications, where ESD sensitivity is an issue.

The new RS73-series also offers **excellent long term stability**.

Currently, the RS73 series is only available in 0603 size.

However, 0402, 0805 and 1206 are under development and will be released soon.



### Product Features

- $\pm 0.1\%$ ,  $\pm 0.25\%$ ,  $\pm 0.5\%$  tolerances available
- $\pm 25\text{ppm/K}$ ,  $\pm 50\text{ppm/K}$
- $\pm 0.2\%$ ~ Long term stability (see performance data)
- ESD stability of thick film resistors
- Ideal for applications where thin film is not suitable
- Anti-Sulfuration type also available (RS73-RT)
- AEC-Q200 qualified

### Application Examples

- High precision circuits for automotive and industrial
- Motor circuits
- AC adapters
- A/D signal conversion
- Switching boards
- Industrial equipment & measurement

### Ratings

Type	Size (inch)	Power Rating	Rated Ambient Temp.	Rated Terminal Part Temp.	T.C.R. (ppm/K)	Resistance Range (E24 & E96) <sup>*2</sup>			Max. Working Voltage	Max. Overload Voltage
						B: $\pm 0.1\%$	C: $\pm 0.25\%$	D: $\pm 0.5\%$		
RS73F1J	0603	0.125 W	+70 °C	+125 °C	$\pm 25^{*1}$	100 $\Omega$ ~ 1 M $\Omega$			75 V	150V
RS73G1J					$\pm 50$					

<sup>\*1</sup> Cold T.C.R. (-55°C/+25°C) is -50/~ +25 ppm/K

<sup>\*2</sup> Please contact KOA in case E192 values are needed

Operating Temperature Range: -55 °C ... +155 °C

### Performance

Parameter	Test method	Limit $\Delta R$		Typical $\Delta R$	
		100 $\Omega$ ≤ R ≤ 200k $\Omega$	200k $\Omega$ < R ≤ 1M $\Omega$	100 $\Omega$ ≤ R ≤ 200k $\Omega$	200k $\Omega$ < R ≤ 1M $\Omega$
Short Time Overload	Rated voltage x 2.5 for 5sec (Not exceeding max. overload voltage)	$\pm 0.2\%$		$\pm 0.03\%$	
Resistance to soldering heat	+260°C $\pm 5^\circ\text{C}$ , 10sec $\pm 1\text{sec}$			$\pm 0.1\%$	
Rapid change of temperature	-55°C(30min.) / +125°C(30min.), 1000cycles			$\pm 0.05\%$	
High Temperature exposure	+155°C $\pm 3^\circ\text{C}$ , 1000hrs	$\pm 0.2\%$	$\pm 0.4\%$	$\pm 0.1\%$	$\pm 0.2\%$
Moisture resistance	+40°C $\pm 2^\circ$ , 90~95%RH, 1000hrs 1.5h ON / 0.5h OFF cycle	$\pm 0.2\%$	$\pm 0.4\%$	$\pm 0.04\%$	$\pm 0.08\%$
Rated load	+70°C $\pm 2^\circ$ , 1000hrs, 1.5h ON/0.5h OFF cycle	$\pm 0.2\%$		$\pm 0.05\%$	

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