

High Precision Chip Resistors Product Selection Guide



KOA Corporation offers high precision resistors in thin film technology and in thick film technology.

- Thin film resistor advantages: Excellent tolerance, T.C.R., long term stability and noise performance
- Thick film resistor advantages: ESD resistance, power rating and electro corrosion

High Precision Chip Resistor Comparison

	Thick Film		Thin Film	
	RK73G High precision	RS73 Ultra high prec. & High reliability	RN73R Thin Film General	RN73H Thin Film, High Heat Resistance
Size (inch)	0201 ~ 1206	0603 ~ 1206	0402 ~ 1210	0402 ~ 1210
Resistance range (Ω)	10 ~ 1M	10 ~ 10M	10 ~ 1.5M	10 ~ 1.5M
Resistance tolerance (%)	$\pm 0.25 \sim \pm 1$	$\pm 0.1 \sim \pm 1$	$\pm 0.05 \sim \pm 1$	$\pm 0.05 \sim \pm 1$
T.C.R. (ppm/K)	± 50	$\pm 25, \pm 50$	$\pm 5 \sim \pm 100$	$\pm 5 \sim \pm 100$
Power rating 0603 size (W)	0.1	0.2	0.1	0.1
Short time overload (%)	2	0.2	0.05	0.05
Solder dip resistance (%)	1	0.2	0.05	0.05
Long term stability (%)	2 / 3	0.2	0.1	0.1
Current noise ($\mu V/V$)	3.3	2.1	0.1	0.1
Sulfidation resistance	Std	High	High	High
ESD resistance	High	High	Low	Low
Electro corrosion	Not occur	Not occur	Can occur	Not occur

Benefit

NEW

KOA's new RS73-series are ESD transient tolerant, high precision and high reliability resistors using thick film technology.

With a T.C.R. down to ± 25 ppm and a tolerance as low as $\pm 0.1\%$, 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 RS73-series is ideal for applications where thin-film is not suitable.

The new RS73-series also features excellent long term stability.
The 3 sizes 0603, 0805 and 1206 are now available in mass production.

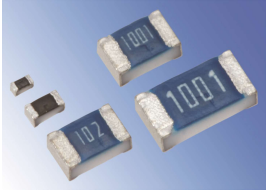
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High Precision Resistors Summary



Thick Film Chip Resistors

RK73G Series



High Precision Thick Film

■ Features & Benefits

- $\pm 0.25\%$, $\pm 0.5\%$ or $\pm 1\%$
- ± 50 ppm/K
- $10\ \Omega$ to $1\ \text{M}\Omega$
- 0201, 0402, 0603, 0805, 1206 inch

RS73 Series



Ultra High Precision Thick Film & High Reliability

■ Features & Benefits

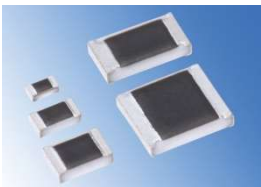
- $\pm 0.2\%$ ~ Long term stability
- $\pm 0.1\%$, $\pm 0.25\%$, $\pm 0.5\%$ or $\pm 1\%$
- ± 25 or ± 50 ppm/K
- $10\ \Omega$ to $10\ \text{M}\Omega$
- 0603, 0805, 1206 inch

Application Examples for all High Precision Resistors

- Automotive electronics
- Motor Controls
- AC adapters
- A/D conversion
- Switching boards
- Industrial equipment
- Test & measurement
- Power Grid
- LED lighting
- Medical equipment
- High precision voltage divider
- VCO

Thin Film / Metal Film Chip Resistors

RN73R Series



High Precision Metal Film

■ Features & Benefits

- $\pm 0.1\%$ ~ Long term stability
- Rated power at $+85\ ^\circ\text{C}$
- $\pm 0.05\%$ to $\pm 1\%$
- ± 5 to ± 100 ppm/K
- $10\ \Omega$ to $1.5\ \text{M}\Omega$
- 0402 to 1210 inch

RN73H Series



High Precision & High Heat resistance

■ Features & Benefits

- Advanced moisture & high heat resistance
- $\pm 0.1\%$ ~ Long term stability
- Rated power at $+85\ ^\circ\text{C}$
- $\pm 0.05\%$ to $\pm 1\%$
- ± 5 to ± 100 ppm/K
- $10\ \Omega$ to $1.5\ \text{M}\Omega$
- 0402 to 1210 inch
- Lab Kits are available

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