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 ±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, especially where ESD sensitivity is an issue. The ESD tolerance of these parts means that, in certain cases, protection devices, such as varistors etc, can be omitted from the design.

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

### RS73 Series

#### Features
- ±0.1, ±0.25, ±0.5 and ±1 % tolerances available
- ±25 ppm/K, ±50 ppm/K
- ±0.2 %~ long term stability (+85 °C / 1000 h)
- Higher rated power at +85 °C ambient temp.
- ESD stability of thick film resistors
- Ideal for applications where thin film is not suitable
- Anti-Sulfuration type also available (RS73-RT)
- EU-RoHS compliant, AEC-Q200 tested

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

#### Ratings

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>RS73 (F/G) 1E</td>
<td>0.040</td>
<td>0.125 W</td>
<td>+85 °C</td>
<td></td>
<td>+125 °C</td>
<td></td>
</tr>
<tr>
<td>RS73 (F/G) 1J</td>
<td>0.063</td>
<td>0.2 W</td>
<td></td>
<td>F: ±25*1</td>
<td>G: ±50</td>
<td></td>
</tr>
<tr>
<td>RS73 (F/G) 2A</td>
<td>0.085</td>
<td>0.25 W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RS73 (F/G) 2B</td>
<td>0.126</td>
<td>0.33 W</td>
<td></td>
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</tr>
</tbody>
</table>

*1 Measurement Temp. +25°C/ +125°C: ±25ppm/K ambient; Cold T.C.R. -55°C/+25°C: ±50/~+25ppm/K ambient  
*2 Values from E192 series on request. If you use at rated power, keep the condition that the terminal of the resistor is below the rated terminal part temperature and refer to derating curves.

#### Performance

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Methods</th>
<th>Limit ΔR (%) +0.05Ω</th>
<th>Typical ΔR (%) +0.05Ω</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short time overload</td>
<td>Rated voltage x 2.5 for 5sec (Not exceeding max. overload voltage)</td>
<td>±0.2</td>
<td>±0.3</td>
</tr>
<tr>
<td>Resistance to soldering heat</td>
<td>+260°C ±5°C, 10sec ±1sec</td>
<td>±0.2</td>
<td>±0.1</td>
</tr>
</tbody>
</table>
| Rapid change of temperature        | -55°C(30min.) / +125°C(30min.), 1000cycles | ±0.2: 1E (300Ω≤R≤20kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       | ±0.05: 1E (300Ω≤R≤20kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       |
|                                   |              | ±0.4:               | ±0.2:                |
| High temperature exposure          | +155°C ±3°C, 1000hrs | ±0.2: 1E (300Ω≤R≤10kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       | ±0.1: 1E (300Ω≤R≤10kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       | ±0.2~0.3: others |
| Moisture resistance                | +40°C ±20%, 90~95%RH, 1000hrs  
1.5h ON / 0.5h OFF cycle | ±0.2: 1E (300Ω≤R≤10kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       | ±0.04: 1E (300Ω≤R≤10kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       | ±0.08: others |
| Rated load / endurance             | +85°C±2°C or rated terminal part temperature ±2°C, 1000hrs  
1.5h ON/0.5h OFF cycle | ±0.2: 1E (300Ω≤R≤20kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       | ±0.05: 1E (300Ω≤R≤20kΩ)  
1J (100Ω≤R≤1MΩ)  
2A,2B (100Ω≤R≤10MΩ)  
others       | ±0.2: others |

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