**NEW**

**WK73S** Wide Terminal Type Flat Chip Resistors

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**Features**
- Flat chip resistors of wide terminal type.
- High reliability and performance with T.C.R.: ±100×10⁻⁶/K, resistance tolerance ±0.5%.
- Suitable for both reflow and flow solderings.
- Products meet EU-RoHS requirements.
- EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 qualified.

**Applications**
- Power supply, ECU etc.

**Reference Standards**
- IEC 60115-8
- JIS C 5201-8
- EIAJ RC-2134C

**Type Designation**

**Example**

**Type** | **Power Rating** | **Terminal Series Material** | **Taping** | **Resistance Value (Ω)** | **Resistance Tolerance**
--- | --- | --- | --- | --- | ---
2A:1W⁺⁺ 2B:0.75W 2H:1W 2J:1W 3A:1.5W 2W⁺⁺ | 1W⁺⁺ | Sn | 4mm pitch punch paper | 10m~91m | ±0.5%
2B:0.75W 2H:1W 2J:1W 3A:1.5W 2W⁺⁺ | 0.75W | Bulk | 4mm pitch plastic embossed | 10L~91L | ±1%
2H:1W 2J:1W 3A:1.5W 2W⁺⁺ | 1W⁺⁺ | TE:4mm | 4mm pitch plastic embossed | 22m~32.4m | ±5%
2H:1W 2J:1W 3A:1.5W 2W⁺⁺ | 1W⁺⁺ | TD:4mm | 4mm pitch plastic embossed | 22L~32.4L | ±5%

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping, please refer to APPENDIX C on the back pages.

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**Type**

<table>
<thead>
<tr>
<th>Type</th>
<th>Power Rating</th>
<th>Rated Ambient Temp.</th>
<th>Rated Terminal Part Temp.</th>
<th>T.C.R. (×10⁻⁶/K)</th>
<th>Resistance Range (Ω)</th>
<th>Dimensions (mm)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WK73S2A</td>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>10m~91m</td>
<td>10L~91L</td>
<td>1.25</td>
</tr>
<tr>
<td>0.75W</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>30m~97m</td>
<td>30m~91m</td>
<td>20m~29.4m</td>
<td>20m~27m</td>
</tr>
<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>115°C</td>
<td>±100</td>
<td>430m~9.76</td>
<td>430m~9.76</td>
<td>430m~9.76</td>
<td>430m~9.76</td>
</tr>
<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>30m~422m</td>
<td>30m~390m</td>
<td>10m~27m</td>
<td></td>
</tr>
<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>220m~9.76</td>
<td>220m~9.76</td>
<td>27m~215m</td>
<td>27m~200m</td>
</tr>
<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>100°C</td>
<td>±100</td>
<td>240m~9.76</td>
<td>240m~9.76</td>
<td>10m~24m</td>
<td></td>
</tr>
<tr>
<td>1.5W</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>360m~9.76</td>
<td>360m~9.76</td>
<td>33m~237m</td>
<td>33m~220m</td>
</tr>
<tr>
<td>2W⁺⁺</td>
<td>70°C</td>
<td>115°C</td>
<td>±100</td>
<td>360m~9.76</td>
<td>360m~9.76</td>
<td>33m~237m</td>
<td>33m~303m</td>
</tr>
</tbody>
</table>

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**Dimensions**

<table>
<thead>
<tr>
<th>Type (Inch Size Code)</th>
<th>Power Rating</th>
<th>Terminal Size Material</th>
<th>Taping</th>
<th>TD</th>
<th>TE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A (0508)</td>
<td>1W⁺⁺</td>
<td>30m~97m</td>
<td>22m~32.4m</td>
<td>22m</td>
<td>22L</td>
</tr>
<tr>
<td>2B (0612)</td>
<td>0.75W</td>
<td>30m~97m</td>
<td>22m~30m</td>
<td>22m</td>
<td>22L</td>
</tr>
<tr>
<td>2H (1020)</td>
<td>1W⁺⁺</td>
<td>30m~97m</td>
<td>33m~330m</td>
<td>33m</td>
<td>33L</td>
</tr>
<tr>
<td>2J (1218)</td>
<td>1W⁺⁺</td>
<td>30m~97m</td>
<td>360m~9.76</td>
<td>360m</td>
<td>36L</td>
</tr>
<tr>
<td>3A (1225)</td>
<td>1W⁺⁺</td>
<td>30m~97m</td>
<td>430m~9.76</td>
<td>430m</td>
<td>43L</td>
</tr>
</tbody>
</table>

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**Ratings**

<table>
<thead>
<tr>
<th>Type</th>
<th>Power Rating</th>
<th>Rated Ambient Temp.</th>
<th>Rated Terminal Part Temp.</th>
<th>T.C.R. (×10⁻⁶/K)</th>
<th>Resistance Range (Ω)</th>
<th>Taping &amp; Q’ty/Reel (pcs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WK73S2A</td>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
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<td>10L~91L</td>
</tr>
<tr>
<td>0.75W</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>30m~97m</td>
<td>30m~91m</td>
<td>20m~29.4m</td>
</tr>
<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>115°C</td>
<td>±100</td>
<td>430m~9.76</td>
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<td>430m~9.76</td>
</tr>
<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>30m~422m</td>
<td>30m~390m</td>
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<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>125°C</td>
<td>±100</td>
<td>220m~9.76</td>
<td>220m~9.76</td>
<td>27m~215m</td>
</tr>
<tr>
<td>1W⁺⁺</td>
<td>70°C</td>
<td>100°C</td>
<td>±100</td>
<td>240m~9.76</td>
<td>240m~9.76</td>
<td>10m~24m</td>
</tr>
<tr>
<td>1.5W</td>
<td>70°C</td>
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<tr>
<td>2W⁺⁺</td>
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<td>360m~9.76</td>
<td>33m~237m</td>
</tr>
</tbody>
</table>

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**Contact**

For more details, please refer to “Introduction of the derating curves based on the terminal part temperature” on the beginning of our catalog.

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**Current Sensing Resistors**

Coating color : Black

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**If any questions arise whether to use the ‘Rated Ambient Temperature’ or the ‘Rated Terminal Part Temperature’ in your usage conditions, please give priority to the ‘Rated Terminal Part Temperature’.”

For more details, please refer to “Introduction of the derating curves based on the terminal part temperature” on the beginning of our catalog.

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

Contact our sales representatives before you use our products for applications including automotive, medical equipment and aerospace equipment.

Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

www.koaglobal.com
■ Derating Curve

Temperature Rise

For resistors operated at an ambient temperature of 70°C or higher, the power shall be derated according to the derating curve.

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

Test Items | Performance Requirements $ΔR\% = (% + 0.005Ω)$ | Test Methods
--- | --- | ---
Resistance | Within specified tolerance | — |
T.C.R. | Within specified T.C.R | — |
Overload (Short time) | 2 | Rated voltage $× 2.5$ for 5s
 WK73S2A, WK73S2B(1W), WK73S3A(2W)
 Rated voltage $× 2.0$ for 5s
 | 0.2 | |
Resistance to soldering heat | 1 | 260℃±5℃, 10s±1s |
Bending test | 1 | Holding point 90mm, Bending 1time. Bending 5mm |
Rapid change of temperature | 0.5 | $−55℃(30min.) / +125℃(30min.)$ 100 cycles |
Moisture resistance | 2 | 40℃±2℃, 90%±5%RH, 1000h 1.5h ON/0.5h OFF cycle |
Endurance at 70℃ or rated terminal part temperature | 2 | 70℃±2℃ or rated terminal part temperature ±2℃ 1000h 1.5h ON/0.5h OFF cycle |
High temperature exposure | 2: J (±5%) | 0.5: J (±5%) 0.2: others |
 | 1: others | 0.2: others |
High temperature endurance | 155℃, 1000h |

■ Precautions for Use

- The substrate of chip resistors is alumina. Cracks may occur at the connection of solder (solder fillet portion) due to the difference of the coefficient of thermal expansion from a mounting board when heat stress like heat cycle, etc. are repeatedly given to them. Care should be taken to the occurrence of the cracks when the change in ambient temperature or ON/OFF of load is repeated, especially when WK73 series which have self-heating. The occurrence of the crack by heat stress may be influenced by the size of a pad, solder volume, heat radiation of mounting board etc., so please pay careful attention to designing when a big change in ambient temperature and conditions for use like ON/OFF of load can be assumed.
- In the resistance values of 50mΩ or under, the resistance value after soldering may change depending on the size of pad pattern or solder amount. Make sure the effect of decline/increase of resistance value before designing.