

# RWS7 & RWS10 Precision Power Wirewound SMD Resistors



This product has been uniquely designed to meet the rising power requirement for surface mount components. Optimised thermal design is targeted to give greater efficiency and improved surge capacity of up to 5 times for 5 seconds, whilst reducing surface temperature rise compared with other resistors. It has high reliability and has been engineered to reduce long term thermal damage to boards and surrounding components. Available in low inductance format, close TCR and tolerance bands. This product is RoHS compliant.



- Highest power SMD commercially available
- Optimised thermal design
- Excellent overload characteristics
- Very high power density for SMD
- Good stability and low standard TCR
- Low inductance available

## Electrical Specifications

| Type  | Wattage | Tolerance                    | Resistance Range |     | Resistance Range Non-inductive |     |
|-------|---------|------------------------------|------------------|-----|--------------------------------|-----|
|       |         |                              | Min              | Max | Min                            | Max |
| RWS7  | 7       | D (0.5%)<br>F (1%)<br>J (5%) | R1               | 5K  | R1                             | 1K  |
| RWS10 | 10      |                              | R1               | 10K | R1                             | 2K  |

## Characteristics

|                          |   |
|--------------------------|---|
| Operating temperature:   | -55°C to +275°C   |
| Temperature coefficient: | ± 90ppm/°C R1 - R99, ± 50ppm/°C 1R - 10R, ± 20ppm/°C > 10R  |
| Max. working voltage:    | (P×R) <sup>1/2</sup>  |
| Short time overload:     | 5 times rated power for 5 seconds, ±(0.5% + 0.5mΩ) ΔR   |
| Solderability:           | Bath temperature 260±5°C, immersion time 5±0.5 seconds JIS C 5201 4.18, > 90% of contact face covered new solder                            |
| Life:                    | Test temperature at 70°C ±2°C, rated DC continuous working voltage applied, 1.5 hours on and 0.5 hours off for 1000 hours, ±(2.0% +0.5mΩ)ΔR |

## Ordering Procedure

Standard Resistor: Series, Resistance Value, Tolerance, Packaging (T&R or Bulk)  
e.g. RWS7 R005 F T&R

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The information contained herein does not form part of a contract and is subject to change without notice. Arcol operate a policy of continual product development, therefore, specifications may change.

It is the responsibility of the customer to ensure that the component selected from our range is suitable for the intended application. If in doubt please ask Arcol.

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## Temperature Rise



## Derating Curve



## Dimensions (mm ±0.38)

| Type  | L <sub>1</sub> | L <sub>2</sub> | W <sub>1</sub> | H <sub>1</sub> | W <sub>2</sub> |
|-------|----------------|----------------|----------------|----------------|----------------|
| RWS7  | 20.5           | 1.50           | 9.30           | 10.30          | 8.97           |
| RWS10 | 28.60          | 2.54           | 12.00          | 13.00          | 11.54          |

| Solder Pad Dimensions |                |                |                |
|-----------------------|----------------|----------------|----------------|
| Type                  | L <sub>3</sub> | L <sub>4</sub> | W <sub>3</sub> |
| RWS7                  | 5.70           | 22.50          | 11.30          |
| RWS10                 | 14.00          | 30.60          | 14.00          |



## Soldering Recommendation



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