

Manufactured in line with the requirements of MIL 18546 and IEC 115, designed for direct heatsink mounting with thermal compound to achieve maximum performance.

- High Power to volume
- Wound to maximise High Pulse Capability
- Values from R005 to 100K
- Custom designs welcome
- RoHS Compliant



## Characteristics

|                                    |                                                                                                          |
|------------------------------------|----------------------------------------------------------------------------------------------------------|
| Tolerance (Code):                  | Standard $\pm 5\%$ (J) and $\pm 10\%$ (K). Also available $\pm 1\%$ (F), $\pm 2\%$ (G) and $\pm 3\%$ (H) |
| Tolerance for low $\Omega$ values: | Typically $\geq R05 \pm 5\% \leq R047 \pm 10\%$                                                          |
| Temperature coefficients:          | Typical values $< 1K$ 100ppm Std. $> 1K$ 25ppm Std. For lower TCR's please contact Arcol                 |
| Insulation resistance (Dry):       | 10,000 M $\Omega$ minimum                                                                                |
| Power dissipation:                 | At high ambient temperature dissipation derates linearly to zero at 200°C                                |
| Ohmic values:                      | From R005 to 100K depending on wattage size                                                              |
| Low inductive (NHS):               | Specify by adding N before HS Series code, e.g. NHS50                                                    |
| NHS ohmic value:                   | Divide standard HS maximum value by 4                                                                    |
| NHS working volts:                 | Divide standard HS maximum working voltage by 1.414                                                      |

## Temp. Rise & Power Dissipation

Surface temperature of resistor related to power dissipation. The resistor is standard heatsink mounted using a proprietary heatsink compound.



## Heat Dissipation

Heat dissipation: Whilst the use of proprietary heat sinks with lower thermal resistances is acceptable, uprating is not recommended. For maximum heat transfer it is recommended that a heat sink compound be applied between the resistor base and heat sink chassis mounting surface. It is essential that the maximum hot spot temperature of 200°C is not exceeded, therefore, the resistor must be mounted on a heat sink of correct thermal resistance for the power being dissipated.

## Ordering Procedure

Standard Resistor. To specify standard: Series, Watts, Ohmic Value, Tolerance Code, e.g.: HS25 2R2 J

Non Inductive Resistor. To specify add N, e.g.: NHS100 10R J

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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.

| Size  | Style MIL-R 18546 | Power rating on std. heatsink @25°C | Watts with no heatsink @25°C | Resistance range | Limiting element voltage | Voltage proof AC Peak | Voltage proof AC rms. | Approx weight gms | Typical surface rise HS mounted | Standard heatsink |              |
|-------|-------------------|-------------------------------------|------------------------------|------------------|--------------------------|-----------------------|-----------------------|-------------------|---------------------------------|-------------------|--------------|
|       |                   |                                     |                              |                  |                          |                       |                       |                   |                                 | cm²               | Thickness mm |
| HS10  | RE 60             | 10                                  | 5                            | R005-10K         | 160                      | 1400                  | 1000                  | 4                 | 5.8                             | 415               | 1            |
| HS15  | RE 65             | 15                                  | 7                            | R005-10K         | 265                      | 1400                  | 1000                  | 7                 | 5.1                             | 415               | 1            |
| HS25  | RE 70             | 25                                  | 9                            | R005-36K         | 550                      | 3500                  | 2500                  | 14                | 4.2                             | 535               | 1            |
| HS50  | RE 75             | 50                                  | 14                           | R01-86K          | 1250                     | 3500                  | 2500                  | 32                | 3.0                             | 535               | 1            |
| HS75  |                   | 75                                  | 24                           | R01-50K          | 1400                     | 6363                  | 4500                  | 85                | 1.1                             | 995               | 3            |
| HS100 |                   | 100                                 | 30                           | R01-70K          | 1900                     | 6363                  | 4500                  | 115               | 1.0                             | 995               | 3            |
| HS150 |                   | 150                                 | 45                           | R01-100K         | 2500                     | 6363                  | 4500                  | 175               | 1.0                             | 995               | 3            |
| HS200 |                   | 200                                 | 50                           | R01-50K          | 1900                     | 7070                  | 5000                  | 475               | 0.7                             | 3750              | 3            |
| HS250 |                   | 250                                 | 55                           | R01-50K          | 2200                     | 7070                  | 5000                  | 600               | 0.6                             | 4765              | 3            |
| HS300 |                   | 300                                 | 60                           | R01-68K          | 2500                     | 7070                  | 5000                  | 700               | 0.6                             | 5780              | 3            |

Technical drawings of three types of HS (High Speed) motors, showing side and front views with dimensions.

**HS 10, 15, 25, 50**

Side View Dimensions:

- Shaft diameter:  $\varnothing 2.0 \pm 0.25$
- Shaft length:  $2.1 \pm 0.1$
- Motor body length:  $3.0 \pm 0.1$
- Mounting bracket length:  $\varnothing 3.2$  max.
- Dimensions: A, B, C, D, E, F, G, H, J, K, L

Front View Dimensions:

- Dimensions: C, D, H, K

**HS 75, 100, 150**

Side View Dimensions:

- Shaft diameter:  $\varnothing 3.2$  max.
- Motor body length:  $3.0 \pm 0.1$
- Mounting bracket length:  $\varnothing 3.2$  max.
- Dimensions: A, B, C, D, E, F, G, H, J, K, L

Front View Dimensions:

- Dimensions: C, D, H, K

**HS 200, 250, 300**

Side View Dimensions:

- Shaft diameter:  $\varnothing 3.2$  max.
- Motor body length:  $3.0 \pm 0.1$
- Mounting bracket length:  $\varnothing 3.2$  max.
- Dimensions: A, B, C, D, E, F, G, H, J, K, L

Front View Dimensions:

- Dimensions: C, D, H, K

| Size  | A Max | B Max | C Max | D Max | E Max | F±0.3 | G±0.3 | H Max | J Max | K Max | L ±0.25* | M Max |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|
| HS10  | 16.5  | 30.0  | 8.8   | 8.5   | 15.9  | 11.3  | 12.4  | 4.5   | 2.4   | 1.8   | 2.4      |       |
| HS15  | 21.0  | 36.5  | 11.0  | 11.2  | 19.9  | 14.3  | 15.9  | 5.5   | 2.8   | 1.8   | 2.4      |       |
| HS25  | 28.0  | 51.0  | 14.8  | 14.2  | 27.3  | 18.3  | 19.8  | 7.7   | 5.2   | 2.6   | 3.2      |       |
| HS50  | 28.0  | 72.5  | 14.8  | 14.2  | 49.1  | 39.7  | 21.4  | 8.4   | 5.2   | 2.6   | 3.2      |       |
| HS75  | 47.5  | 72.0  | 24.1  | 27.3  | 48.7  | 29.0  | 37.0  | 11.8  | 10.4  | 3.7   | 4.4      |       |
| HS100 | 47.5  | 88.0  | 24.1  | 27.3  | 65.2  | 35.0  | 37.0  | 11.8  | 15.4  | 3.7   | 4.4      |       |
| HS150 | 47.5  | 121.0 | 24.1  | 27.3  | 97.7  | 58.0  | 37.0  | 11.8  | 20.4  | 3.7   | 4.4      |       |
| HS200 | 72.5  | 145.7 | 41.8  | 45.5  | 89.7  | 70.0  | 57.2  | 20.5  | 10.4  | 5.5   | 5.1      | 103.4 |
| HS250 | 72.5  | 167.0 | 41.8  | 45.5  | 109.7 | 89.0  | 57.2  | 20.5  | 10.4  | 5.5   | 5.1      | 122.4 |
| HS300 | 72.5  | 184.4 | 41.8  | 45.5  | 127.7 | 104.0 | 59.0  | 20.5  | 12.4  | 5.5   | 6.6      | 141.4 |

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**Стандарт  
Электрон  
Связь**

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