

# HS Aluminium Housed Resistors

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



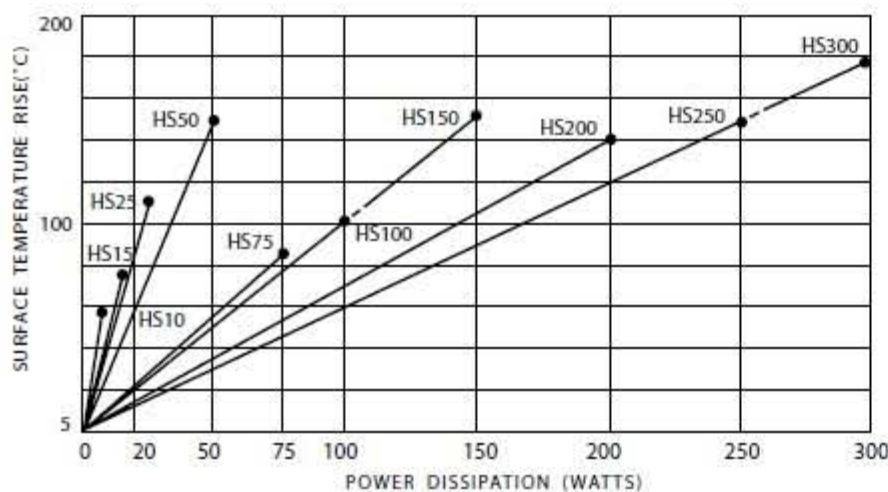
- High Power to volume
- Wound to maximise High Pulse Capability
- Values from R005 to 100K
- Custom designs welcome
- RoHS Compliant

## 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.  |
| 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

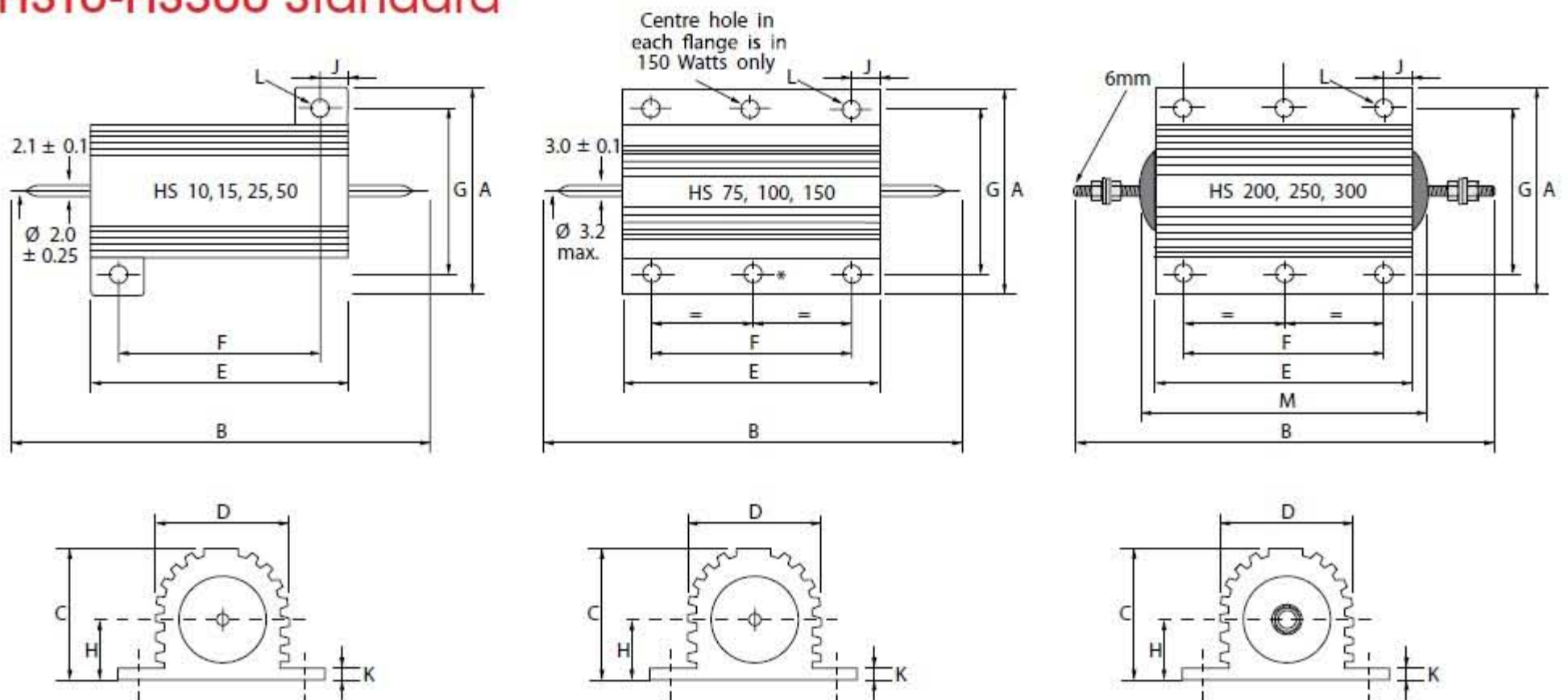


# HS Aluminium Housed Resistors

## Electrical Specifications

| 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 |              |
|-------|-------------------|-------------------------------------|------------------------------|------------------|--------------------------|-----------------------|-----------------------|-------------------|---------------------------------|-------------------|--------------|
|       |                   |                                     |                              |                  |                          |                       |                       |                   |                                 | cm <sup>2</sup>   | 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            |

## HS10-HS300 Standard



## Dimensions (mm)

| 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  | 14.6  | 14.0  | 27.3  | 18.3  | 19.8  | 7.3   | 4.7   | 2.6   | 3.2      |       |
| HS50  | 29.7  | 72.5  | 14.8  | 14.2  | 49.1  | 39.7  | 21.4  | 8.5   | 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 |

\* HS200-HS300 Watts is ± 0.45