



### Style HS – Aluminium Housed heat sink resistors

#### Introduction

The HS range of LPC Aluminium Housed Resistors are manufactured in line with the requirements of MIL 18546 and IEC 115, designed for direct heatsink mounting with thermal compound to achieve maximum performance. They are wound to maximize High Pulse Capability with a high power to volume ratio. Values range from R005 to 100K. They are RoHS Compliant.

#### Ordering Procedure

**Standard Resistors**—Specify: Series, Watts, Ohmic Value, Tolerance.

E.g. HS25 2R2 ±5%

**Non Inductive Resistor**—To specify add 'N'.

E.g. NHS100 10R ±5%

#### General Notes

#### 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

#### Product Characteristics

Tolerance: Standard ±5% (J) and ±10% (K). Also available ±1% (F) and ±2% (G) and ±3% (H).

Tolerance for low Ohmic Values: Typically ≥ R05 ±5% (J) and ≤ R047 ±10% (K).

Temperature Coefficients: Typical values < 1K 100ppm Std. > 1K 25ppm Std. For lower TCR's please contact LPC.

Insulation resistance (Dry): 10,000 MΩ 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.

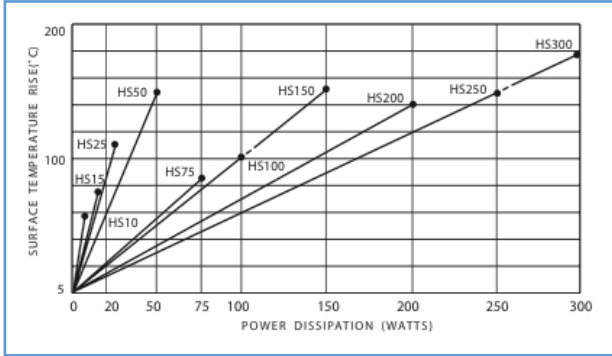
Low inductive (NHS): Specify by adding N before HS Series code e.g. NHS50.

NHS Ohmic value: Divide standard HS maximum value by 4.

NHS working volts: Divide standard HS maximum working voltage by 1.414.

### Temperature Rise & Power Dissipation

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

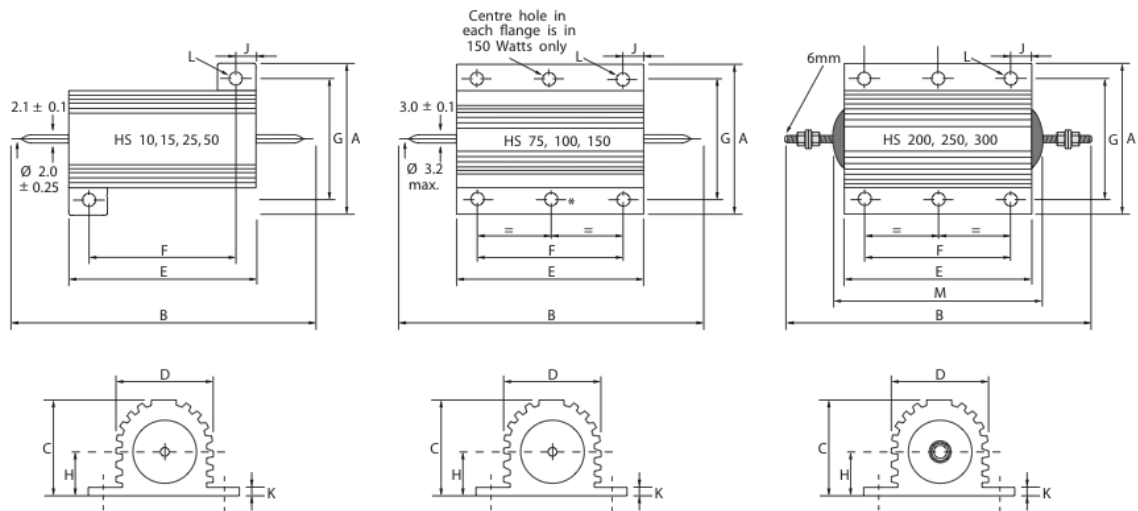


### Heat Dissipation

Whilst the use of proprietary heat sinks with lower thermal resistance 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 the 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.

### Dimensions

Dimensions for the HS10—HS300 Standard Resistors are shown below in 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	14.8	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

\* HS200-HS300 Watts is ± 0.45