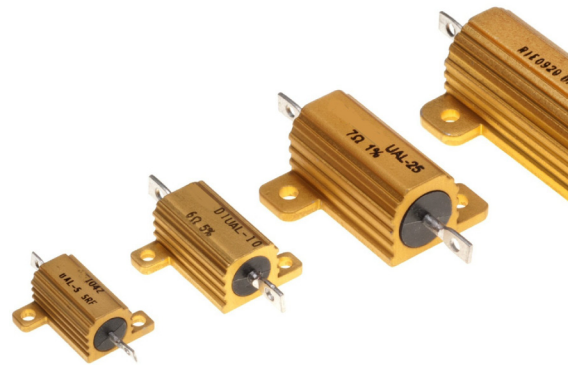


### Aluminum Housed Wire Wound Resistors

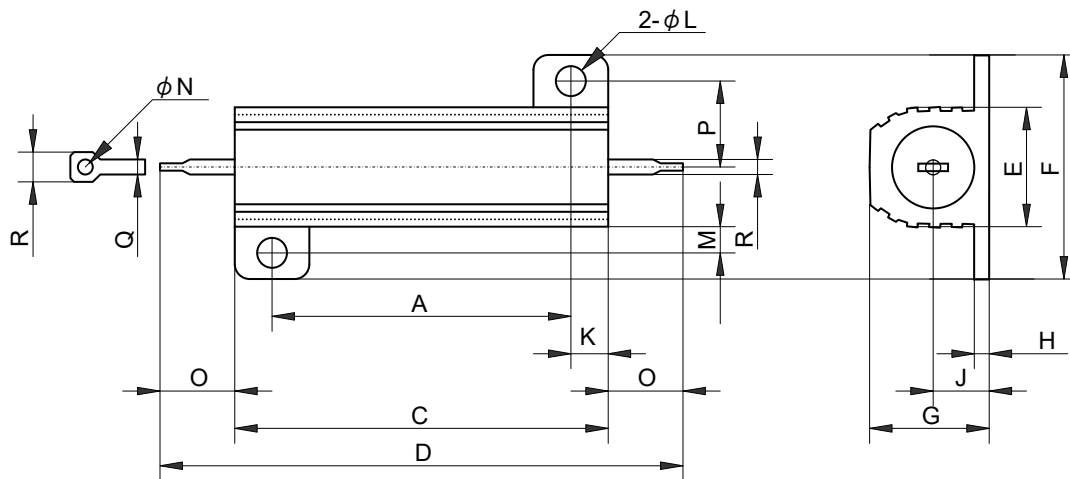
UAL-5, UAL-10, UAL-25, UAL-50, UAL-100, UAL-180,  
UAL-250, UAL-300



### Features and Applications

- Power rating 5W to 50W
- High temperature operation, -55 deg C to 275 deg C
- Rush current protection.
- All welded construction.
- Low TCR 20ppm/K and Tolerance 1% in standard.
- Non-inductive winding is available, called UALN.
- MIL-R-39009 and MIL-R-18546 style.

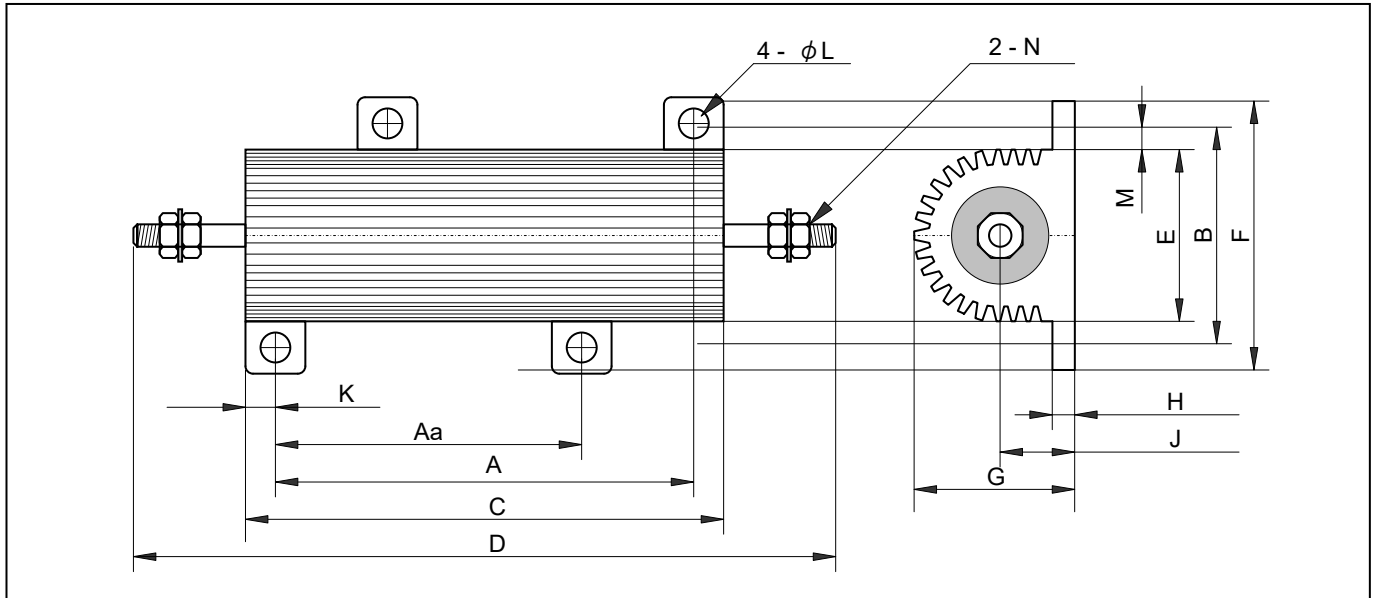
### Dimensions (mm)



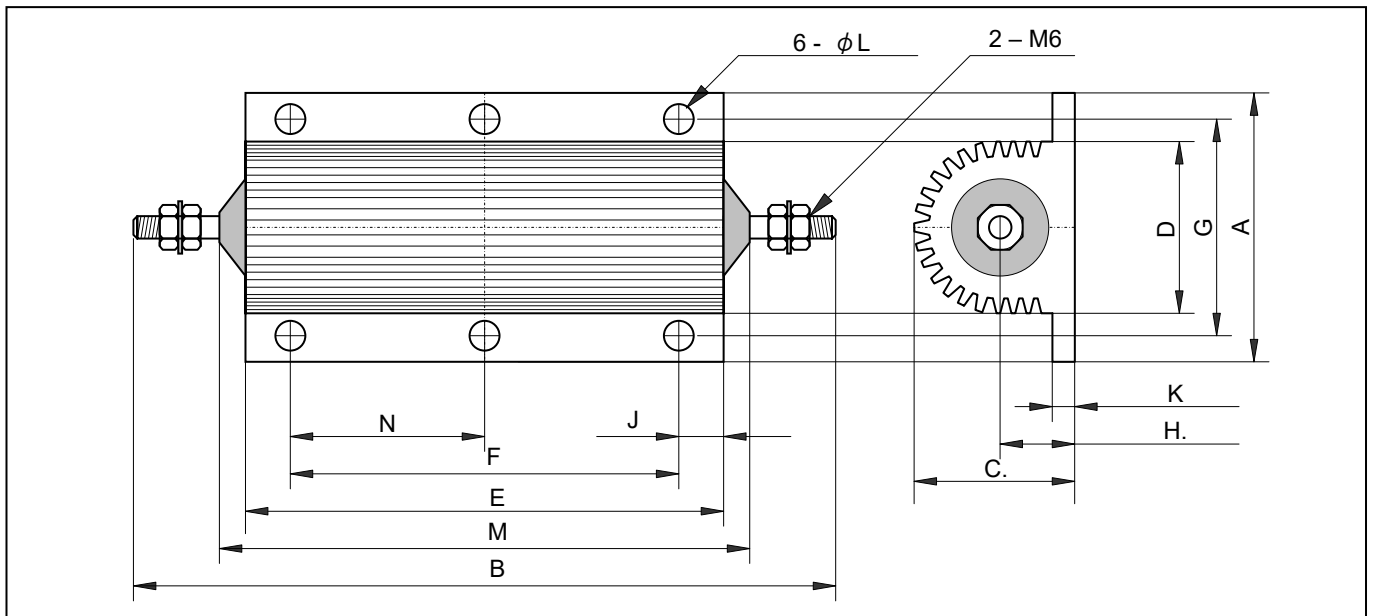
(mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
	±0.13	±0.13	±0.80	±3.10	±0.40	±0.40	±0.40	±0.25	±0.25	±0.25	±0.13±	±0.40	±0.15	±3.10	±0.80	±0.05	±0.80
UAL5	11.3	12.4	15.2	28.5	8.5	16.4	8.1	1.7	3.6	2.0	2.4	2.0	1.3	6.8	6.2	1.30	2.2
UAL-10	14.3	15.9	19.1	33.5	10.9	20.3	10.2	1.9	4.8	2.4	2.4	2.6	2.0	7.9	7.9	2.00	4.0
UAL-25	18.3	19.8	27.0	47.5	13.5	27.4	14.2	2.2	6.6	4.4	3.2	3.2	2.0	11.1	9.9	2.49	4.7
UAL-50	39.7	21.4	50.0	70.0	15.6	29.0	15.6	2.2	7.6	5.0	3.2	3.2	2.0	11.1	10.7	2.49	4.7
UALN-5	11.3	12.4	15.2	28.5	8.5	16.4	8.1	1.7	3.6	2.0	2.4	2.0	1.3	6.8	6.2	1.30	2.2
UALN-10	14.3	15.9	19.1	33.5	10.9	20.3	10.2	1.9	4.8	2.4	2.4	2.6	2.0	7.9	7.9	2.00	4.0
UALN-25	18.3	19.8	27.0	47.5	13.5	27.4	14.2	2.2	6.6	4.4	3.2	3.2	2.0	11.1	9.9	2.49	4.7
UALN-50	39.7	21.4	50.0	70.0	15.6	29.0	15.6	2.2	7.6	5.0	3.2	3.2	2.0	11.1	10.7	2.49	4.7

Aluminum Housed Wire Wound Resistors

UAL-5, UAL-10, UAL-25, UAL-50, UAL-100, UAL-180, UAL-250, UAL-300



(mm)	A	Aa	B	C	D	E	F	G	H	J	K	L	M	N	P	Screw
	±0.13	±0.13	±0.13	±0.8	±1.6	±0.4	±0.40	±0.40	±0.25	±0.4	±0.4	±0.13	±0.4		±0.4	
UAL-100	69.9	-	57.15	88.9	139	45.7	71.5	44.5	4.78	20.3	9.52	4.78	-	12-24	-	#8
UAL-180	69.9	-	63.5	88.9	139	54	76.2	55.6	6.4	24.1	9.5	4.8	5.1	12-24	-	#8
UAL-250	98.4	76.2	63.5	114	178	54	76.2	55.6	6.4	25.4	7.9	4.8	5.1	1/4-20	30.7	#8



(mm)	A	B	C	D	E	F	G	H	J	K	L	M	N
	max	max	max	max	max	±0.3	±0.3	max	max	max	±0.3	max	±0.3
UAL-250	72.5	167.0	41.8	45.5	109.7	89.0	57.2	20.5	10.4	5.5	6.6	122.4	44.5
UAL-300	72.5	184.4	41.8	45.5	127.7	104.0	59.0	20.5	12.4	5.5	6.6	141.4	52.0

## Aluminum Housed Wire Wound Resistors

UAL-5, UAL-10, UAL-25, UAL-50, UAL-100, UAL-180, UAL-250, UAL-300

## Ordering Information

Model UAL-50	Resistance 50ohm	Tolerance 1%, F	Note 1%, standard
UAL-5 / UALN-5 UAL-10 / UALN-10 UAL-25 / UALN-25 UAL-50 / UALN-50 UAL-100 / UALN-100 UAL-180 / UALN-180 UAL-250 / UALN-250 UAL-300 / UALN-300	any value in above range	0.05%, A 0.10%, B 0.25%, C 0.50%, D 1.00%, F	Inductive winding

## Power Rating and Resistance

Type	Style MIL-R-39009 MIL-R-18548	Power Rating(W)			Resistance Range(ohm)
		Commercial	MIL	Free Air	
UAL-5	PER-60/RE-60	7.5 (a)	5 (a)	4.5	0.01 - 22k
UAL-10	PER-65/RE-65	12.5 (a)	10 (a)	7.5	0.01 - 47k
UAL-25	PER-70/RE-70	25 (b)	20 (b)	12	0.01 - 90k
UAL-50	PER-75/RE-75	50 (c)	30 (c)	20	0.01 - 250k
UAL-100	---	100 (d)	75(d)	40	0.01 - 70k
UAL-180	---	180 (d)	---	---	0.01 - 50k
UAL-250	PER-80/RE-80	250 (d)	120(d)	100	0.01 - 50k
UAL-300	---	300 (e)	---	---	0.01 - 68k

Note:

- (1) 無誘導巻線を指定する場合は抵抗値範囲の最大抵抗値を 1/2 の値とお考え下さい。  
 (a) 放熱器として 1.0mm アルミ板、面積 832 cm<sup>2</sup> あるいは同等のものがが必要です。  
 (b) 放熱器として 1.0mm アルミ板、面積 1077 cm<sup>2</sup> あるいは同等のものがが必要です。  
 (c) 放熱器として 1.5mm アルミ板、面積 1877 cm<sup>2</sup> あるいは同等のものがが必要です。  
 (d) 放熱器として 3.2mm アルミ板、面積 1896 cm<sup>2</sup> あるいは同等のものがが必要です。  
 (e) 放熱器として 3.2mm アルミ板、面積 5780 cm<sup>2</sup> あるいは同等のものがが必要です。

- (1) For non-inductive windings, please divide maximum resistance by 2.  
 (a) Heat-sink required 1.0mm Aluminum plate of 832 cm<sup>2</sup> or equivalent.  
 (b) Heat-sink required 1.0mm Aluminum plate of 1077 cm<sup>2</sup> or equivalent.  
 (c) Heat-sink required 1.5mm Aluminum plate of 1877 cm<sup>2</sup> or equivalent.  
 (d) Heat-sink required 3.2mm Aluminum plate of 1896 cm<sup>2</sup> or equivalent.  
 (e) Heat-sink required 3.2mm Aluminum plate of 5780 cm<sup>2</sup> or equivalent.

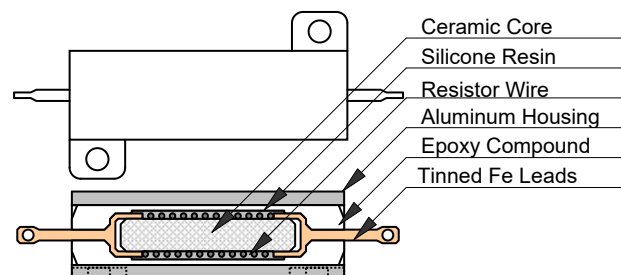
## Specifications

Specifications	Specifications
Tolerance	0.05%, 0.10%, 0.25%, 0.5%, 1%
Temperature Coefficient, over 10ohm	+/-20ppm/K
Temperature Coefficient, 1ohm to 10ohm	+/-50ppm/K
Temperature Coefficient, less than 1ohm	Call factory
Temperature Range	-55 deg C to 275 deg C
Dielectric Strength	1500VAC
Environmental Performance, MIL-STD202	□R
Dielectric	+/-0.2%
Load Life	+/-1.0%
Storage	+/-0.2%
Moisture Resistance	+/-0.2%
Thermal Shock	+/-0.2%
5X – 5 seconds Overload	+/-0.2%
Mechanical Shock	+/-0.1%
Vibration	+/-0.1%

注記: 生産国はアメリカ合衆国です。 Note: Country origin of UAL series is U. S. A.

最小ご注文単位は、50 個です。 Minimum order quantity is 100pcs.

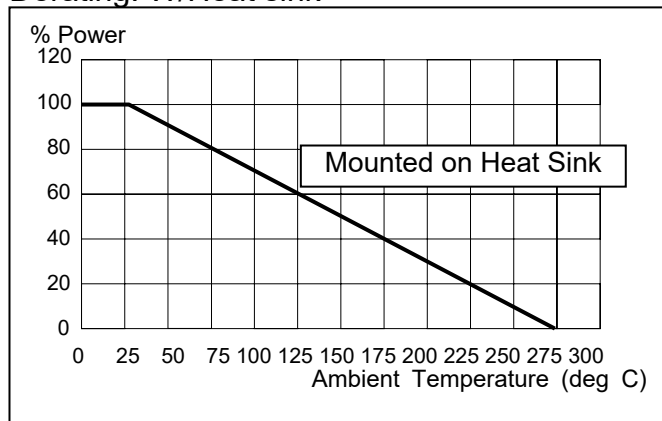
## Construction



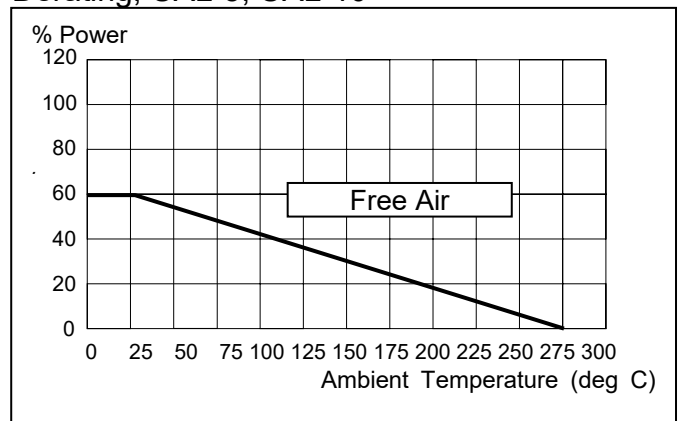
Aluminum Housed Wire Wound Resistors

UAL-5, UAL-10, UAL-25, UAL-50, UAL-100, UAL-180, UAL-250, UAL-300

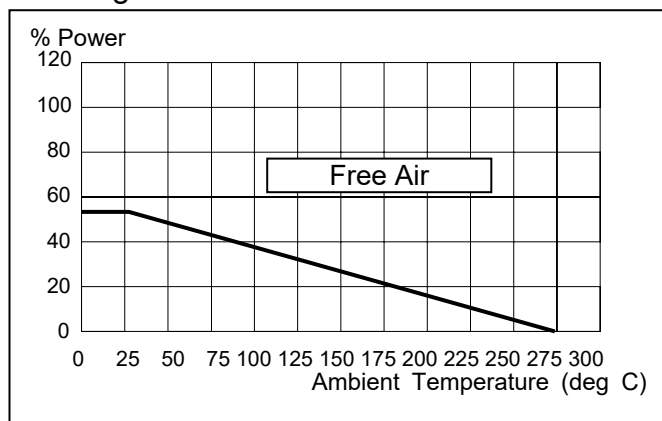
Derating. W/Heat sink



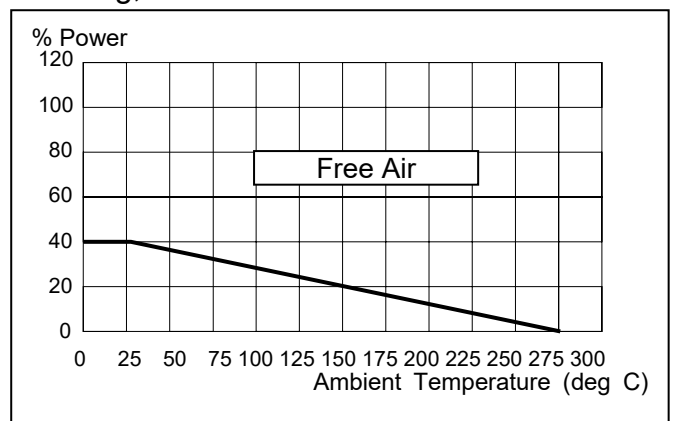
Derating, UAL-5, UAL-10



Derating. UAL-25



Derating, UAL-50 UAL100 UAL250



Derating. UAL-300

