



Power Resistors

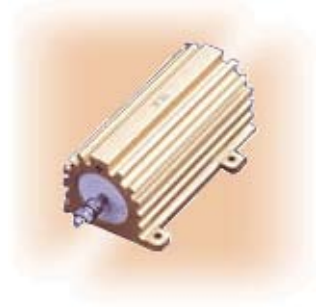
Aluminum Housed Power Resistor - AH Series / 功率铝壳电阻

▶ AH Resistor Features

- High power rating , small size and ultra precision.
- Standard winding & non-inductive winding types.
- High stability , strong construction.

▶ General Specification:

- Wattage Range: 6 styles to choose ranging from 5 to 250 watts.
- Resistance Tolerance: 10%, 5%, 3%, 2%, 1%, 0.5%.
- Operating Temperature Range : -55% to +275°C
- Dielectric Strength: AH-5 AH-10 AH-25 1000V AH-50 1500V



▶ Aluminum Housed Power Resistor Standard Electrical Specification

Type	MIL	25°C Rated Power (W)		Resistance Range (Ω)			
	Type	Industry	Military	± 0.05%, ±0.1%	±0.25%	±0.5%	±1%,±5%,±10%
AH-5	RE60G	5	5	1.0~510Ω	0.5~1.5K	0.1~1.2K	0.10~3.32K
AH-5N	RE60N	5	5	1.0~100Ω	1.0~200Ω	1.0~860Ω	1.0~1.65K
AH-10	RE65G	10	10	1.0~1.2K	0.5-2.7K	0.1~2.7K	0.10~5.62K
AH-10N	RE65N	10	10	1.0~860Ω	1.0~1.2K	1.0~1.2K	1.0~2.8K
AH-25	RE70G	25	20	0.5~2.7K	0.1~3.9K	0.1~3.9K	0.10~12.1K
AH-25N	RE70N	25	20	1.0~1.2K	1.0~2.7K	1.0~2.7K	1.0~6.04K
AH-50	RE75G	50	30	0.5~3.9K	0.1~5.6K	0.1~5.6K	0.10~39.2K
AH-50N	RE75N	50	30	1.0~2.7K	1.0~3.9K	1.0~3.9K	1.0~19.6K
AH-100	RE77G	100	75	1.0~5.6K	0.1~8.2K	0.05~12K	0.05~29.4K
AH-100N	RE77N	100	75	1.0~3.9K	1.0~5.6K	1.0~5.6K	1.0~14.7K
AH-250	RE80G	250	120	0.1~12K	0.1~27K	0.1~27K	0.1~35.7K
AH-250N	RE80N	250	120	1.0~5.6K	1.0~8.2K	1.0~8.2K	1.0~17.4K

Notice: All dimensions might be changed or modified, please refer to last updating specification.

▶ Aluminum Housed Power Resistor Performance

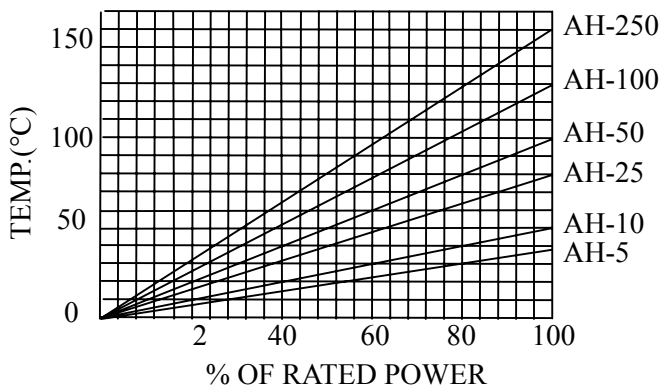
Parameters	Test Conditions	Specifications
Short Time Over Load	5 × wattage rating-5sec.	Δ R±(0.5%+0.05Ω)Max.
Moisture Resistance	temp 40°C moisture 95% DC 100V 500Hr	Δ R±(0.5%+0.05Ω)Max.
Moisture Load Life	temp 40°C moisture 95% 1/10 × wattage rating (1.5Hr on-0.5Hr OFF)- Repeat 1000Hr	Δ R±(0.5%+0.05Ω)Max.
Load Life	Load Rating (chassis mounted) (1.5Hour on 0.5Hour OFF) Repeat 1000Hours	Δ R±(1.5%+0.05Ω)Max.
Vibration	10c/s~50c/s~10c/s(1Min)-2Hours each of paralleled and right angle	Δ R±(0.2%+0.05Ω)Max.
Heat Resistance	275°C 2Hours	Δ R±(0.5%+0.05Ω)Max.
Dielectric Strength	AH-5 AH-10 AH-25 1000V AH-50 1500V AH-100 AH-250 2500V	Δ R±(0.5%+0.05Ω)Max.
Insulation Resistance	Under the same test condition of Dielectric Strength, Load DC500V and measure the Insulation R.	1000MΩMin.
Terminal Strength	(1)Pull Test (30 sec Min) AH-5 1kg, AH-10 2.3kg, AH-25, AH-50 4.5kg (2)Torque Test(5~15sec) AH-100 27kg-cm, AH-250 36kg-cm	Δ R±(0.2%+0.05Ω)Max.



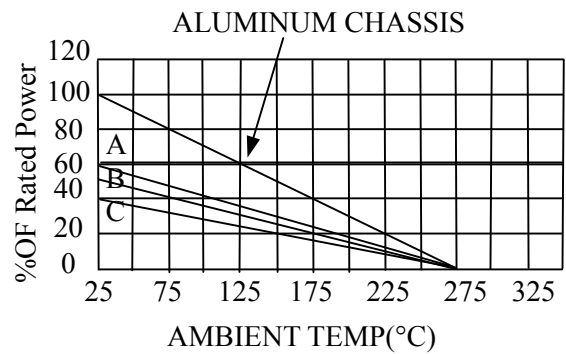


Power Resistors

► Surface Temperature Versus Power Load (on Chassis)



Derating



Derating is required to reduce chassis outting area and for high ambient temperatures.

Curves: A=5 & 10 watt unites, unmounted. B=25 watt units, unmounted. C=50,100 & 250 watt units, unmounted.

► Materials

Encapsulant : Silicone

End caps : Stainless steel

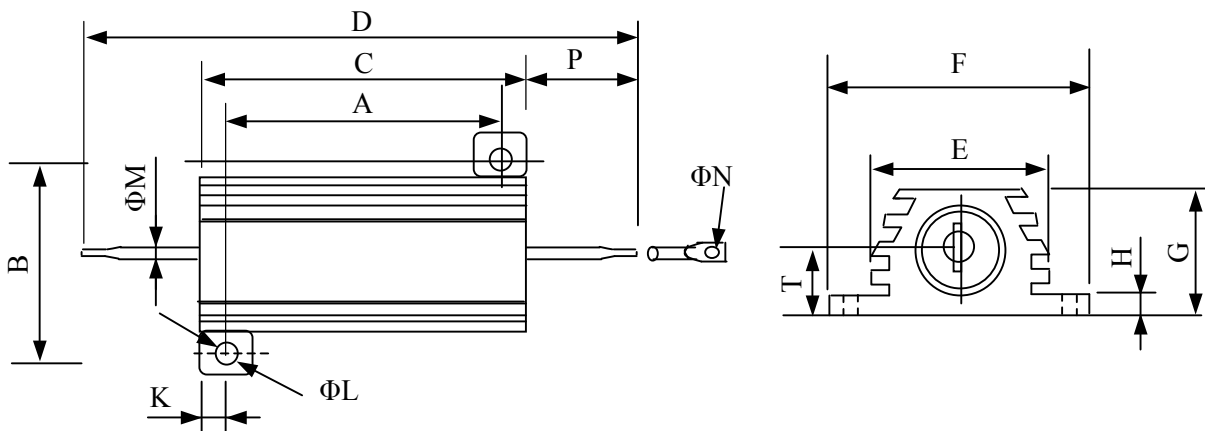
Core : Ceramic steatite or alumina

Housing : Aluminum with hard anodic coating

Element : Copper-nickel alloy, nickel-chrome alloy or manganese copper

Standard Terminals : 5~50W Tinned terminals , 100~250W Threaded terminals.

► AH Resistor Dimensions - AH-5, 10, 15, 50, AH-5N 10N, 15N, 50N



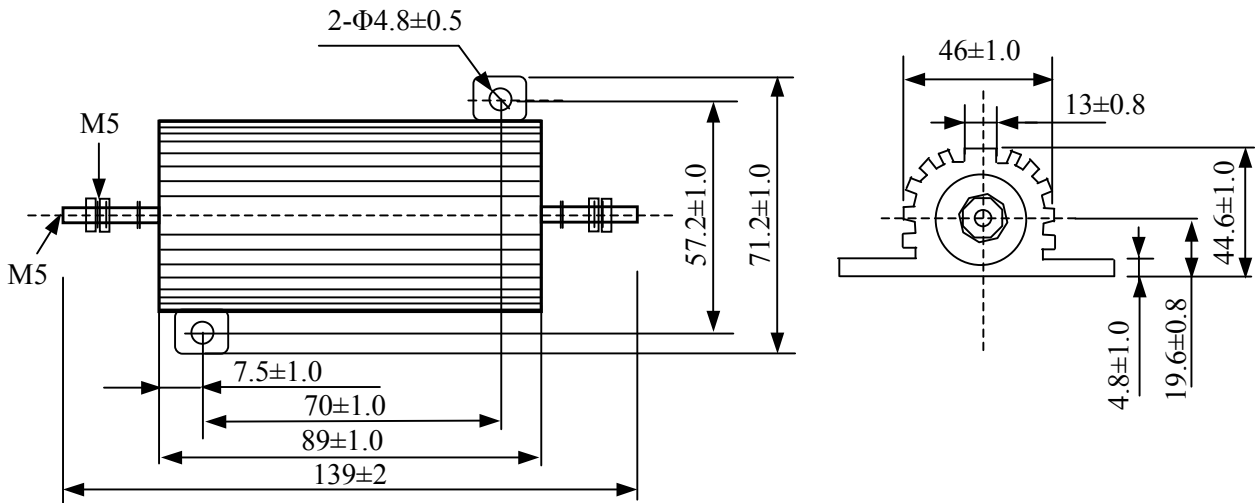
Type	Dimensions(mm)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
AH-5	± 1.0	± 1.0	± 1.0	± 2.0	± 1.0	± 1.0	± 1.0	± 0.8	± 1.0	± 0.8	± 0.5	± 0.5	± 0.2	± 0.8
AH-10	11.2	125	15.2	28.6	8.5	16.4	8.1	1.7	3.8	2	2.4	1.5	1.3	6.7
AH-25	14.2	15.9	19	34.9	10.7	20.3	9.9	1.9	4.2	2.4	2.4	2	2.2	7.95
AH-50	18.2	19.8	27	49.2	14	27.4	13.9	1.9	5.9	4.4	3.2	1	2.2	11.1
AH-50	40	21.4	50	70.6	16	29	15.5	2.2	6.6	5	3.2	2	2.2	10.3

Notice: All dimensions might be changed or modified, please refer to last updating specification.

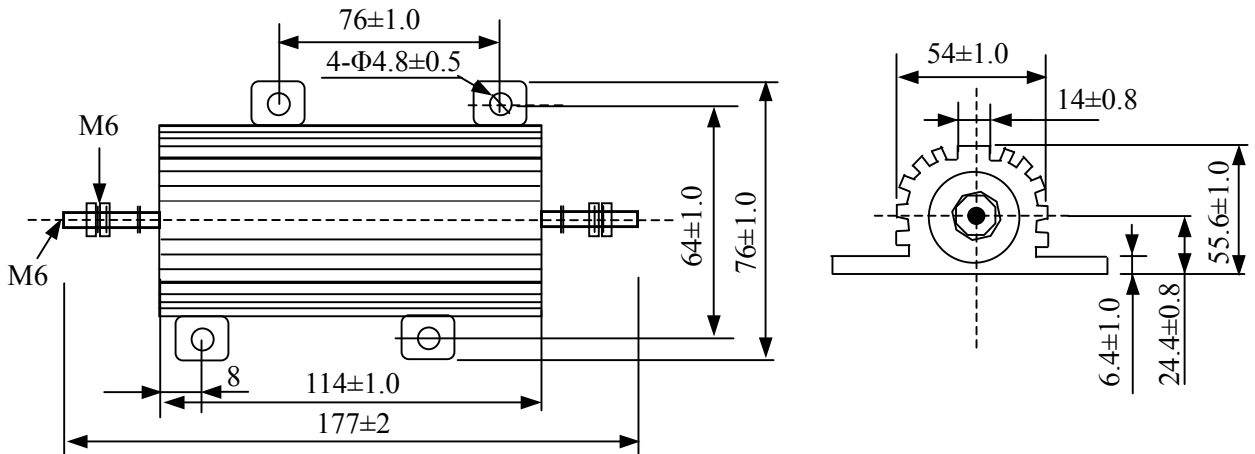


Power Resistors

► AH Resistor Dimensions - AH - 100, AH - 100N



► AH Resistor Dimensions - AH - 250, AH - 250N



► How to Order

AH50 / AHN	50W	20R	D
①	②	③	④

- ① Product Type
- ② Rated Wattage
- ③ Resistance Value (Ω)
- ④ Resistance Tolerance



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▶ Aluminum Housed Power Resistor Standard Electrical Specification

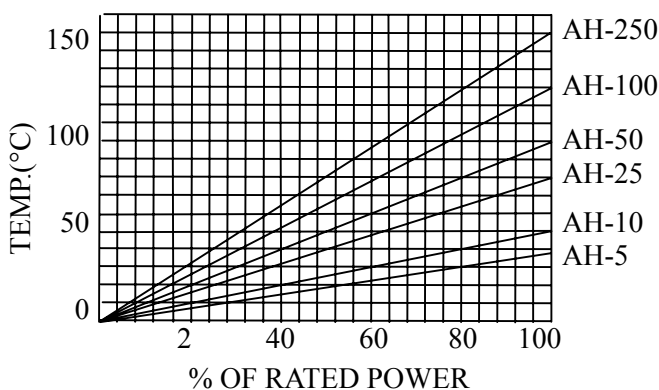
Type	Wattage Rating (W)	Resistance Range (Ω)		Max. Working (V)		Proper heat sink (Aluminum chassis)
		AH Inductive	AHN Non-inductive	AH Inductive	AHN Non-inductive	
AH-25L	25	0.012~15K	0.02~5.5K	500	300	178*127*51*1t
AH-50L	50	0.01~40K	0.02~12K	1300	600	305*305*1.5t
AH-150NL	150	0.4~50K	0.12~25K	1900	1340	305*305*3t
AH-150ANL	150	0.4~50K	0.12~25K	1900	1340	305*305*3t

Notice: All dimensions might be changed or modified, please refer to last updating specification.

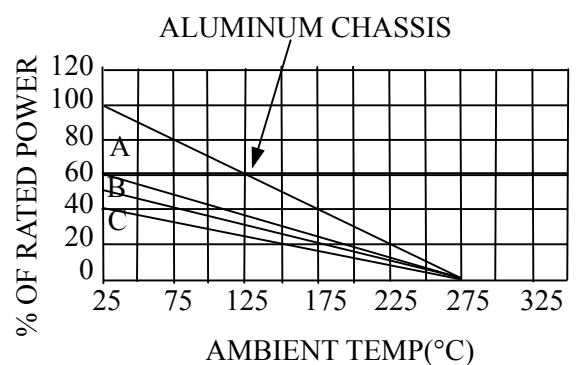
▶ Aluminum Housed Power Resistor Performance

Parameters	Test Conditions	Specifications
Short Time Over Load	5 × wattage rating-5 sec.	$\Delta R \pm (2\% + 0.1\Omega)$ Max.
Moisture Resistance	Temp 40°C moisture 95% DC 100V 500Hr	$\Delta R \pm (1\% + 0.1\Omega)$ Max.
Moisture Load Life	Temp 40°C moisture 95% 1/10 × wattage rating (1.5Hr on-0.5Hr OFF) - Repeat 200Hr	$\Delta R \pm (1\% + 0.1\Omega)$ Max.
Load Life	Load Rating (chassis mounted) (1.5Hour on 0.5Hour OFF) Repeat 1000Hours	$\Delta R \pm (5\% + 0.1\Omega)$ Max.
Vibration	10c/s~50c/s~10c/s (1Min) - 2Hour search of paralleled and right angle	$\Delta R \pm (1\% + 0.05\Omega)$ Max.
Heat Resistance	260±5°C, 10±1Sec.	$\Delta R \pm (1\% + 0.05\Omega)$ Max.
Dielectric Strength	AH-5, AH-10, AH-25 1000V AH-50 1500V AH-100, AH-250 2000V	$\Delta R \pm (0.5\% + 0.05\Omega)$ Max.
Insulation Resistance	Under the same test condition of Dielectric Strength, Load DC500V and measure the Insulation R.	10M Ω Min.
Terminal Strength	(1) Pull Test (30 sec Min) AH-5 1kg, AH-10 2.3kg, AH-25, AH-50 4.5kg (2) Torque Test (5~15sec) AH-100 27kg-cm, AH-250 36kg-cm	$\Delta R \pm (0.2\% + 0.05\Omega)$ Max.

▶ Surface Temperature Versus Power Load (on Chassis)



Deratning



Derating is required to reduce chassis outting area and for high ambient temperatures.

Curves: A=5 & 10 watt units, unmounted. B=25 watt units, unmounted. C=50, 100 & 250 watt units, unmounted.

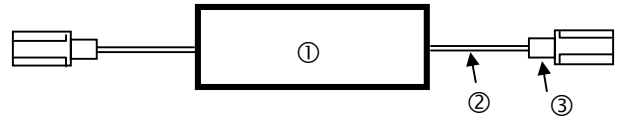




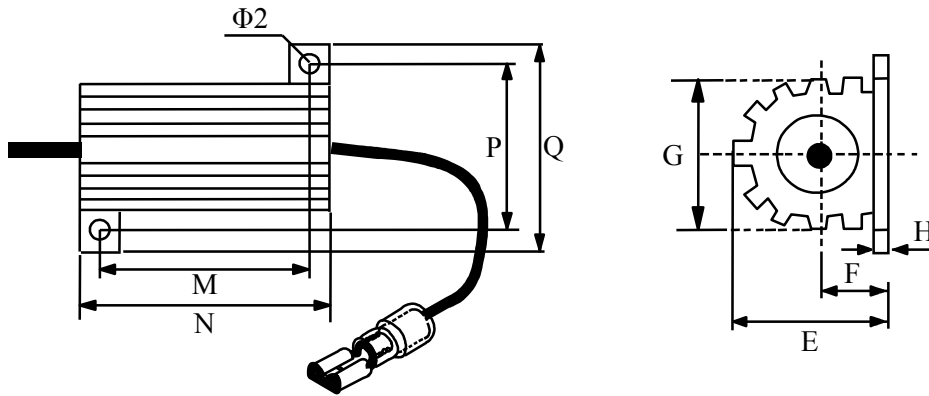
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▶ Aluminum Housed Power Resistor Materials

①	Encapsulant	Silicone			
	End caps	Stainless steel			
	Core	Ceramic steatite or aluminum			
	Housing	Aluminum with hard anodic coating			
	Element	Copper-nickel alloy, nickel-chrome alloy or manganese copper			
②	Wire (14AWG)	AH-25L	AH-50L	AH-150NL	AH-150ANL
		Length=160mm	Length=340mm	Length=500mm	Length=300mm
③	Terminals	LVA2-250, Cu (Nickel-plate), W7.5 × L10mm			

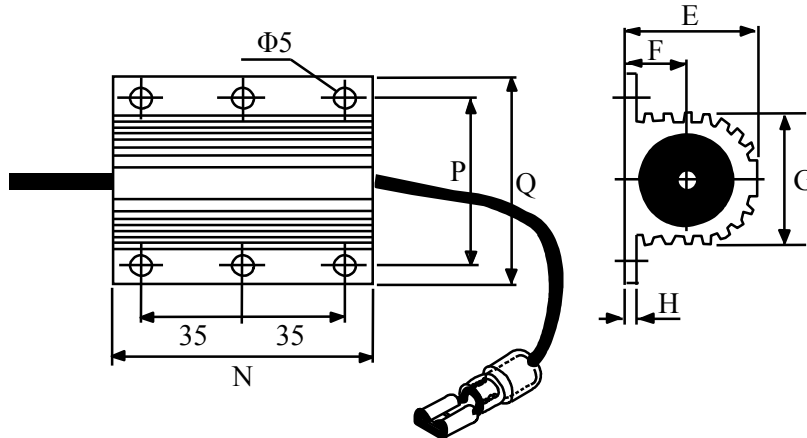


▶ Aluminum Housed Power Resistor Dimensions - AH-25L, AH-50L



Type	Dimensions (Unit: mm)							
	E	F	G	H	M	N	P	Q
AH-25L	13	7	14.3	2	18.3	27	20	27
AH-50L	15.5	7.3	16	2	40	50	22	29

▶ Aluminum Housed Power Resistor Dimensions - AH-150NL, AH-150ANL



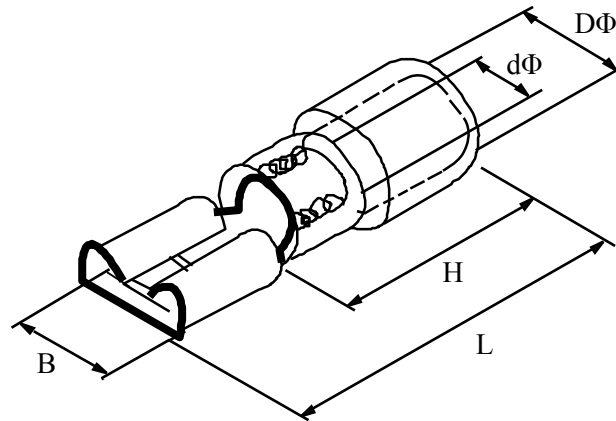
Type	Dimensions (Unit: mm)							
	E	F	G	H	N	P	Q	
AH-150NL	45	9.6	46	5	92	57	72	
AH-150ANL	26	11.5	27	3.5	97	37	48	

Notice: All dimensions might be changed or modified, please refer to last updating specification.



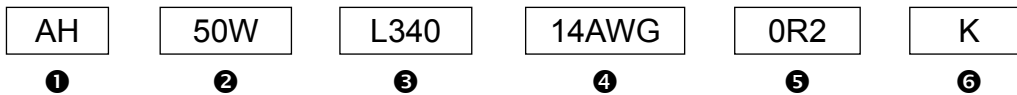
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▶ Aluminum Housed Power Resistor - LVA250 Dimensions



Suitable for 14~16AWG		I _{max} =15A		Unit: mm		Tol.: ±0.2mm	
ITEM	NEMA-TAB	Thickness	B	dΦ	DΦ	L	H
LVA 2-250	0.8 × 6.35	0.4	7.4	2.3	4.3	21.0	10.0

▶ How to Order



- ① Product type : AH(-25L) ; AH(-50L) ; AH(-150NL);AH(-150ANL)
- ② Rated Power : 25W ; 50W ; 150W
- ③ Wire Length (min.) : L160 ; L340 ; L500 ; L300
- ④ Wire Type : 14AWG
- ⑤ Resistance Value (Ω): 12K1 ; 0R2 ; 10KR
- ⑥ Resistance Tolerance (%) : K(±10%)