



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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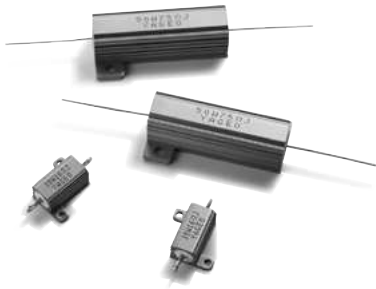
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Aluminum Housed
Resistors

Power Wirewound Type

Lug / Threaded Style [AHA Series]
Straight Leadwire Style [AHP Series]

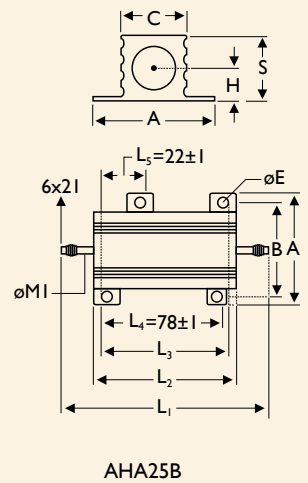
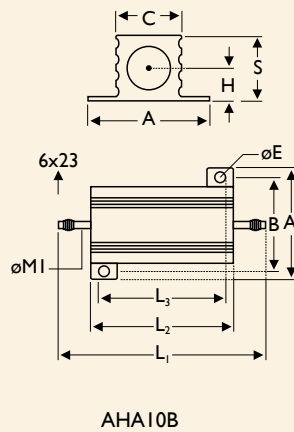
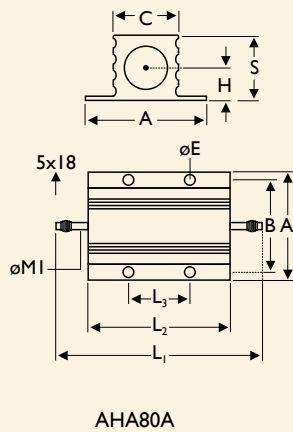
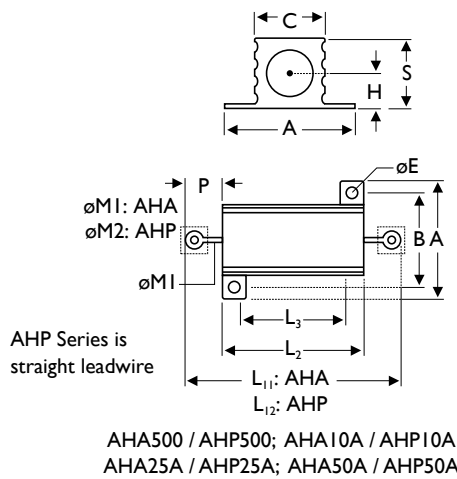


FEATURES

Power Rating	5W, 10W, 25W, 50W, 80W, 100W, 250W
Resistance Tolerance	±0.25%, ±0.5%, ±1%, ±5%, ±10%
T.C.R.	±50ppm/°C, ±100ppm/°C, ±200ppm/°C

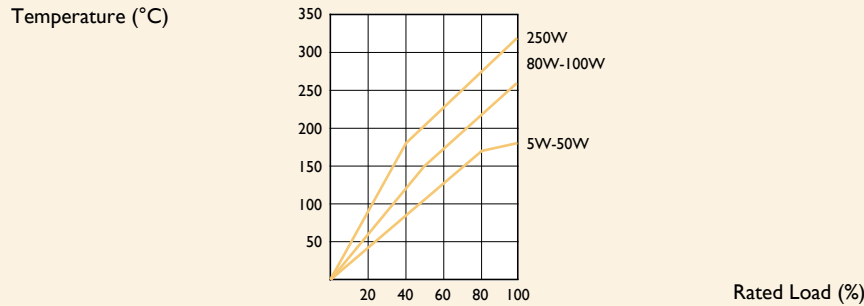
DIMENSIONS

Unit: mm



STYLE	DIMENSION													
	Normal	L11	L12	L2	L3	A	B	C	ØE	S	H	P	M1	M2
AHA500/AHP500		28.6±1.5	71.2±1.5	15.2±0.5	11.5±0.5	16.4±0.5	12.5±0.5	8.5±0.5	2.4±0.3	8.1±1.0	3.8±1.0	6.7±1.0	1.5±0.05	0.8±0.05
AHA10A/AHP10A		34.9±1.5	75.0±1.5	19.0±0.5	14.2±0.5	20.3±0.5	15.9±0.5	10.7±0.5	2.4±0.3	9.9±1.0	4.2±1.0	7.95±1.0	2.0±0.05	0.8±0.05
AHA25A/AHP25A		49.2±1.5	80.0±1.5	27.0±0.5	18.2±0.5	27.4±0.5	19.8±0.5	14.0±0.5	3.2±0.3	13.9±1.0	5.9±1.0	11.1±1.0	2.0±0.05	0.8±0.05
AHA50A/AHP50A		70.6±1.5	106±1.5	50.0±0.5	40.0±0.5	29.0±0.5	21.4±0.5	16.0±0.5	3.2±0.3	15.5±1.0	6.6±1.0	10.3±1.0	2.0±0.05	0.8±0.05
AHA80A		102±2.0	-	66.0±1.0	35.0±0.5	47.0±0.5	37.0±0.5	28.0±0.5	4.5±0.3	25.0±1.0	12.0±1.0	-	2.0±0.05	-
AHA10B		139±2.0	-	89.0±1.0	70.0±0.5	71.2±0.5	57.2±0.5	46.0±0.8	4.8±0.3	44.6±1.0	19.6±1.0	-	5.0±0.05	-
AHA25B		177±2.0	-	144.4±1.0	76.2±0.5	76.0±0.5	64.0±0.5	54.0±0.8	4.8±0.3	55.6±1.0	24.4±1.0	-	6.0±0.05	-

TEMPERATURE RISE



ELECTRICAL CHARACTERISTICS

STYLE	AHA500 AHP500	AHA10A AHP10A	AHA25A AHP25A	AHA50A AHP50A	AHA80A	AHA10B	AHA25B
Power Rating on std. heatsink at 25°C	5W	10W	25W	50W	80W	100W	250W
Voltage Proof on Insulation	1,000V			2,000V		4,500V	
Resistance Range	0.1Ω - 1KΩ	0.1Ω - 1.5KΩ	0.1Ω - 10KΩ	0.1Ω - 33KΩ	0.1Ω - 39KΩ	0.1Ω - 51KΩ	
Operating Temp. Range	-55°C to +250°C						
Temperature Coefficient	±50ppm/°C, ±100ppm/°C, ±200ppm/°C						

Note: Special value is available on request.

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	IEC 60115-1 4.13	5 times of rated power for 5 sec.	±1.0%+0.05Ω
Voltage Proof on Insulation	IEC 60115-1 4.7	in V-block for 60 Sec., test voltage by type	By type
Temperature Coefficient	IEC 60115-1 4.8	-55°C to +250°C	By type
Insulation Resistance	IEC 60115-1 4.6	in V-block for 60 Sec.	>100MΩ
Solderability	IEC 60115-1 4.17	235±5°C for 3±0.5 Sec.	95% Min. coverage
Solvent Resistance of Marking	IEC 60115-1 4.30	IPA for 5±0.5 Min. with ultrasonic	No deterioration of coatings and markings
Robustness of Terminations	IEC 60115-1 4.16	Pull test (30 Sec. Min): 5W: 1kg, 10W: 2.3kg, 25 - 50W: 4.5kg Torque test (5 - 15 Sec): 80W: 2N, 100W: 2.7N, 250W: 3.7N	±0.2%+0.05Ω
Damp Heat Steady State	IEC 60115-1 4.24	40±2°C, 90-95% RH for 56 days, loaded with 0.1 times RCWV	±5.0%+0.05Ω
Endurance at 70°C	IEC 60115-1 4.25	70±2°C at RCWV for 1,000 Hr. (1.5 Hr. on, 0.5 Hr. off)	±5.0%+0.05Ω
Temperature Cycling	IEC 60115-1 4.19	-55°C ⇌ Room Temp. ⇌ +155°C ⇌ Room Temp. (5 cycles)	±1.0%+0.05Ω
Resistance to Soldering Heat	IEC 60115-1 4.18	260±3°C for 10±1 Sec., immersed to a point 3±0.5mm from the body	±1.0%+0.05Ω

Note: Rated Continuous Working Voltage (RCWV) = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$ or Max. working voltage listed above, whichever less.



EXPLANATIONS OF ORDERING CODE

MFR	-12	F	T	F	52-	100R
Code 1 - 3 Series Name See Index	Code 4 - 6 Power Rating -05 = \varnothing d0.5mm -06 = \varnothing d0.6mm -07 = \varnothing d0.7mm -08 = \varnothing d0.8mm -10 = \varnothing d1.0mm -14 = \varnothing d1.4mm -12 = 1/6W -25 = 1/4W 25S = 1/4WS -50 = 1/2W 50S = 1/2WS 100 = 1W 1WS = 1WS 200 = 2W 2WS = 2WS 204 = 0.4W 207 = 0.6W 300 = 3W 3WS = 3WS 3WM = 3WM 400 = 4W 500 = 5W 5WS = 5WS 5SS = 5WSS 700 = 7W 7WS = 7WS 10A = 10W 20A = 20W 30A = 30W 40A = 40W 50A = 50W 10S = 10WS 15A = 15W 25A = 25W 10B = 100W 25B = 250W	Code 7 Tolerance P = ± 0.02 % A = ± 0.05 % B = ± 0.1 % C = ± 0.25 % D = ± 0.5 % F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % - = Base on Spec.	Code 8 Packing Style T = Tape/Box R = Tape/Reel B = Bulk	Code 9 Temperature Coefficient of Resistance - = Base on Spec. A = ± 5 ppm/ $^{\circ}$ C B = ± 10 ppm/ $^{\circ}$ C C = ± 15 ppm/ $^{\circ}$ C S = ± 20 ppm/ $^{\circ}$ C D = ± 25 ppm/ $^{\circ}$ C E = ± 50 ppm/ $^{\circ}$ C F = ± 100 ppm/ $^{\circ}$ C G = ± 200 ppm/ $^{\circ}$ C H = ± 250 ppm/ $^{\circ}$ C I = ± 300 ppm/ $^{\circ}$ C J = ± 350 ppm/ $^{\circ}$ C	Code 10 - 12 Forming Type 26- = 26mm 52- = 52.4mm 73- = 73mm 81- = 81mm 91- = 91mm F = F Type FK = FK Type FKK = FKK Type FFK = F-form Kink M = M-Type Forming MB = M-form W/flat MT = MT Type Forming MR = MR Type AV = AVIsert PN = PANAsert	Code 13 - 17 Resistance Value 0R1 = 0.1 100R = 100 10K = 10,000 10M = 10,000,000

EXCEPTION:

• Cement series:

<Code 8>: Special packing style code

- B: Bulk with wirewound or metal oxide sub-assembly for resistance value
- W: Bulk with ceramic based wirewound sub-assembly for resistance value
- M: Bulk with metal oxide sub-assembly for resistance value
- F: Bulk with Fiberglass based wirewound sub-assembly for resistance value

<Code 10-12>: Without forming code

Example: **SQP500JB-10R**

• JPW series:

<Code 13-17>: without resistance value code

Example: **JPW-06-T-52-**