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HCLR

Ultra-thin Aluminum Housed Resistor

Resistance	**1Ω~1KΩ**
Rated power	**40W~150W**
Ultra thin	**7mm thickness**

Applications

Servo driver
Motor control
Power converter

Better Solution for Sustainable High End Manufacturing

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Capable of absorbing high energy in short time

Introduction

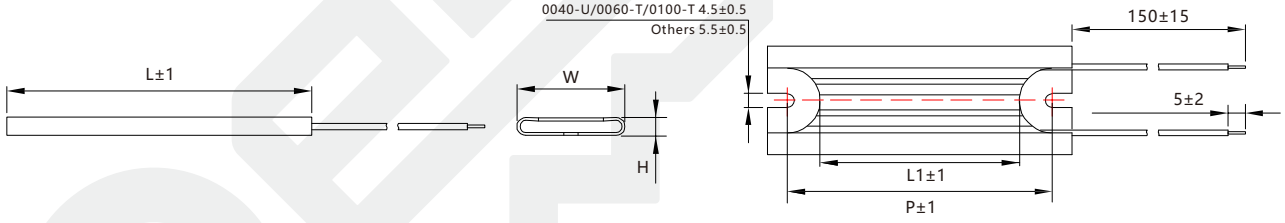
The HCLR series high-power aluminum housing resistors stand out with their compact size and low-profile design. Equipped with a heat sink, they ensure reliable operation at rated power even in harsh environmental conditions.

Key features include:
•Capable of absorbing high energy in short time.
•An extended operating temperature range , enabling adaptability to extreme environments.
•A minimum temperature coefficient of ±100ppm/℃ and a tolerance as low as ±1% for precise performance.

These resistors are ideally suited for applications such as dynamic braking, bleed resistors, snubber circuits, and dummy load systems, where high durability and stable performance are critical.

Dimensions and Parameters

Unit: mm



Type	Power W	Resistance Ω	Withstand voltage	L ±1.0	W ±0.5	H ±0.5	P ±1.0	L1 ±1.0	N.W g	Tolerance %	TCR ppm/℃
0040-U	40	1~220	AC1000V	61	26	7	55	47	25		
0060-U	60	1~220	AC1000V	115	41	7	100	86	135		
0060-T	60	1~220	AC1000V	72.5	27.5	11	65	60	30		
0080-U	80	1~330	AC1000V	140	41	7	125	112	165	±1%	
0100-U	100	1~330	AC1000V	165	41	7	150	140	195	±2% ±5%	±100~±400
0100-T	100	1~330	AC1000V	100	27.5	11	86.5	80	41		
0120-U	120	1~510	AC1000V	185	41	7	175	165	216		
0150-U	150	1~1K	AC1000V	215	41	7	200	190	251		

Remark:
The power, TCR, lead wire, dielectric voltage and dimension can be customized.

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Part Number Information

Example: HCLR0100J50R0E9U (HCLR 100W ±5% 50Ω ±300ppm/℃ Standard ultrathin)

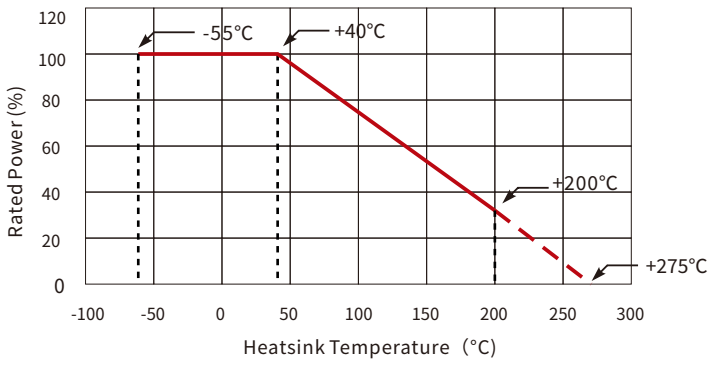
H	C	L	R	0	1	0	0	J	5	0	R	0	E	9	U

Series	Rated power	Tolerance	Resistance	TCR	Code	Style
HCLR	0040=40W 0060=60W 0080=80W 0100=100W 0120=120W 0150=150W	F=±1% G=±2% J=±5%	1R00=1Ω 100R=100Ω 1K00=1000Ω	K=±100ppm/℃ S=±200ppm/℃ E=±300ppm/℃ G=±400ppm/℃	9=Standard X=Other options	U=7mm ultrathin T=11mm thickness

Performance

Test	Test Method	Test Result
Short Time Overload	5 times rated power for 10s;10 times rated power for 5s	△R≤±(2%R+0.1Ω)
Dielectric Withstand Voltage	1KV Vac 60s	leakage current≤ 2.5mA
Insulation Resistance	1000Vdc	50~1000MΩ, 1Min
Terminal Tensile Strength	20N	No off
Vibration resistance	1.5mm, 10-55-10Hz, each 2hours	No damage, No off
Load Life	At rated voltage, 90 min "On",30 min "Off" , total 500hours	△R≤±(3%R+0.1Ω)
Low Temp.Resistance	Store at - 55 ℃ ± 2 ℃ for 16h	△R≤±(1%R+0.1Ω)
High Temp.Resistance	Store at 70 ℃± 2 ℃ for 16h	△R≤±(1%R+0.1Ω)
Non-flammability	10 times rated power, power on for 5Min	Without combustion

Derating Curve



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Revision

Version	Revised Content	Date	Approver
V0	Initial Issue	2021.2.12	CFD

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