RHA Aluminum Housed Power Resistors

Features

Ⅰ Aluminum crust surface with good performance in heat radiation, suitable for cooling plate installation, can be used in the rugged environment.

Ⅱ Small size, high power load.

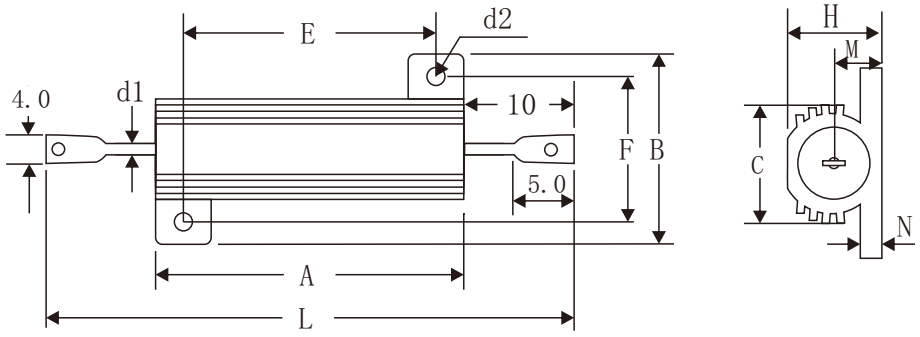
Ⅲ High insulating capacity, encapsulation by non-flame inorganic material, good performance in vibration.

Ⅳ Multi connection form will be easily to fix.

Ⅴ Widely used in power supply, transducer, elevator, arena audio and high requirement equipment industry.

Ⅵ Resistance tolerance: ±1%, ±2%, ±5%, ±10%.

Dimensions



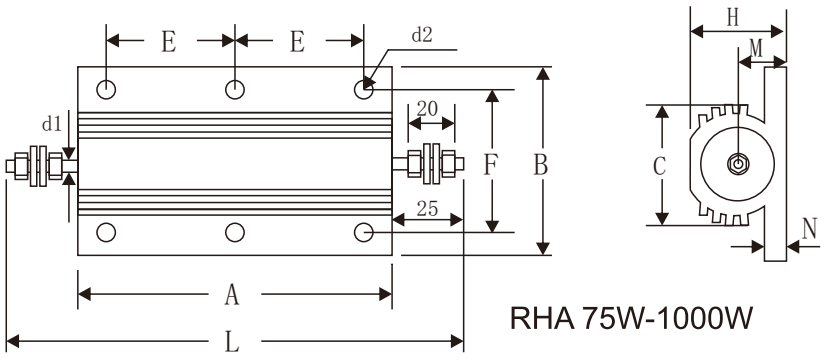
RHA 5W-50W

Type	Rated power (25℃)	Dimensions (mm)												Weight (g)
		Resistor										Heat radiator Aluminum		
		A ±1.0	B ±1.0	L ±2.0	H ±1.0	C ±1.0	E ±1.0	F ±1.0	M ±0.5	N ±0.5	d1 ±0.5	d2 ±0.0	Surface area (cm²)	Thickness (mm)	
RHA	5W	15.5	16	36.5	8.0	8.5	11.4	12	4.4	1.5	1.5	2.2	415	1	3
	10W	19.5	21	40.5	10.0	11.2	14.0	16	5.0	2.0	2.0	2.5	415		6
	20W	27.0	27	48.0	13.0	14.3	18.3	20	7.0	2.0	2.0	3.5	535		11
	25W	27.0	27	48.0	13.0	14.3	18.3	20	7.0	2.0	2.0	3.5	535		11
	30W	34.0	29	55.0	15.5	16.3	25.0	22	7.3	2.0	2.0	3.5	535		18
	50W	50.0	29	71.0	15.5	16.3	40.0	22	7.3	2.0	2.0	3.5	995		30

Reference Standards

JISC 5201-1

RHA Aluminum Housed Power Resistors



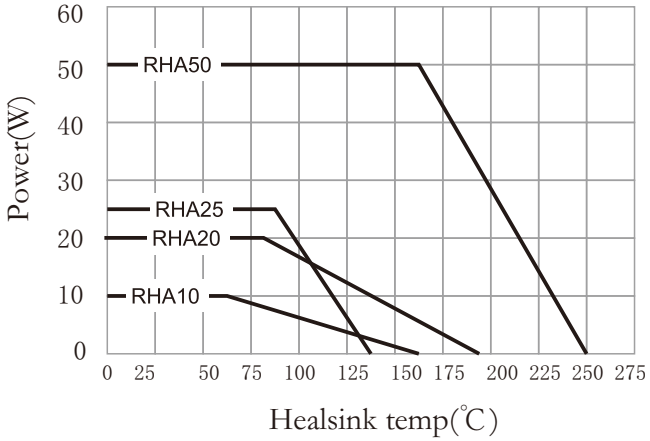
RHA 75W-1000W

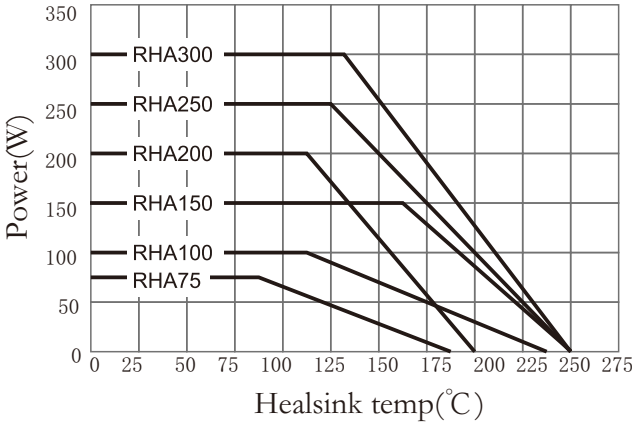
Type	Rated power (25℃)	Dimensions (mm)												Weight (g)
		Resistor										Heat radiator Aluminum		
		A ±1.0	B ±1.0	L ±2.0	H ±1.0	C ±1.0	E ±1.0	F ±1.0	M ±0.5	N ±0.5	d1 ±0.5	d2 ±0.0	Surface area (cm^2)	Thickness (mm)	
RHA	75W	65.5	48	93.5	26	27	23.5	37	11.5	3.5	M4	4.4	995	3	90
	100W	98	48	126	26	27	35	37	11.5	3.5	M4	4.4	995		160
	150W	130	48	158	26	27	52	37	11.5	3.5	M4	4.4	995		240
	200W	92	73	132	45	46.5	35	58	21	5.0	M6	5.5	3750		420
	250W	112	73	152	45	46.5	45	58	21	5.0	M6	5.5	4765		480
	300W	130	73	170	45	46.5	51	58	21	5.0	M6	5.5	5780		580
	500W	204	73	244	45	46.5	87	58	21	5.0	M6	5.5	8500		970
	800W	250	73	290	45	46.5	110	58	21	5.0	M6	5.5	10625		1220
	1000W	300	73	340	45	46.5	125	58	21	5.0	M6	5.5	12750		1500

Power And Resistance etc

Type	Power Rating at 25℃ (W)		Resistance Range(Ω)	Tolerance	T.C.R PPM/℃	Voltage Resistance(V)
	On std. heatsink	No std. heatsink				
RHA	5	3	0.1Ω—1K	±1%	±20	1000
	10	8	0.1Ω—1.5K			
	20	12.5	0.1Ω—10K			
	25	12.5	0.1Ω—10K			
	30	15	0.1Ω—27K			
	50	20	0.1Ω—33K			
	75	45	0.1Ω—39K	±2%	±50	
	100	50	0.1Ω—51K	±5%	±100	2000
	150	75	0.1Ω—56K	±10%		
	200	100	0.1Ω—62K			
	250	120	0.1Ω—68K			
	300	150	0.1Ω—75K			
	500	200	0.1Ω—82K			
	800	300	0.1Ω—100K			2500
	1000	400	0.1Ω—100K			

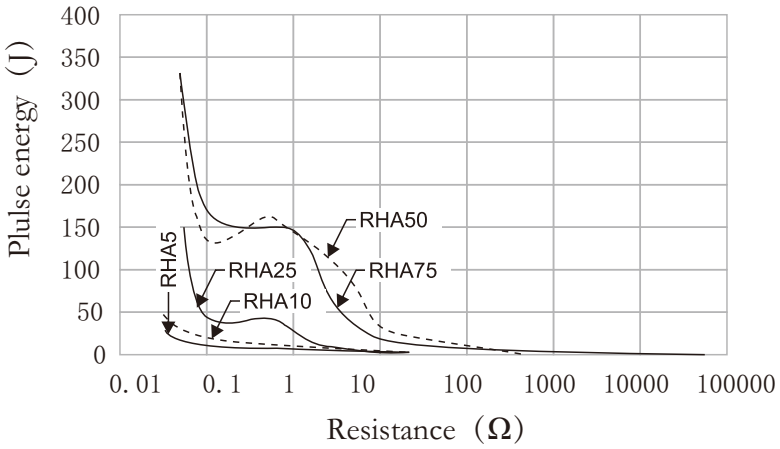
Derating curve



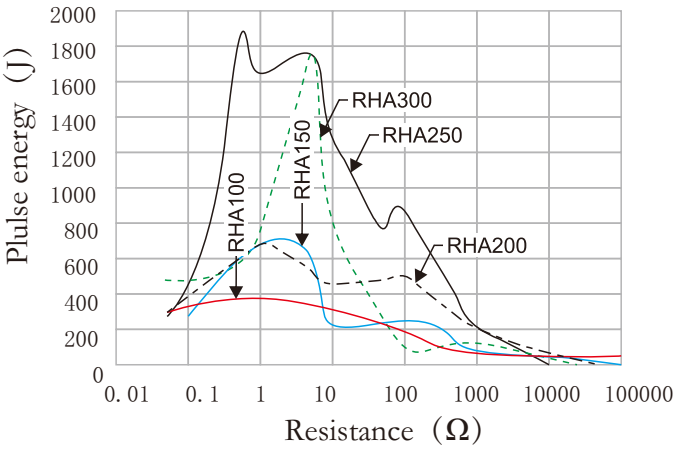


Pulse energy (Pulse length 200ms)

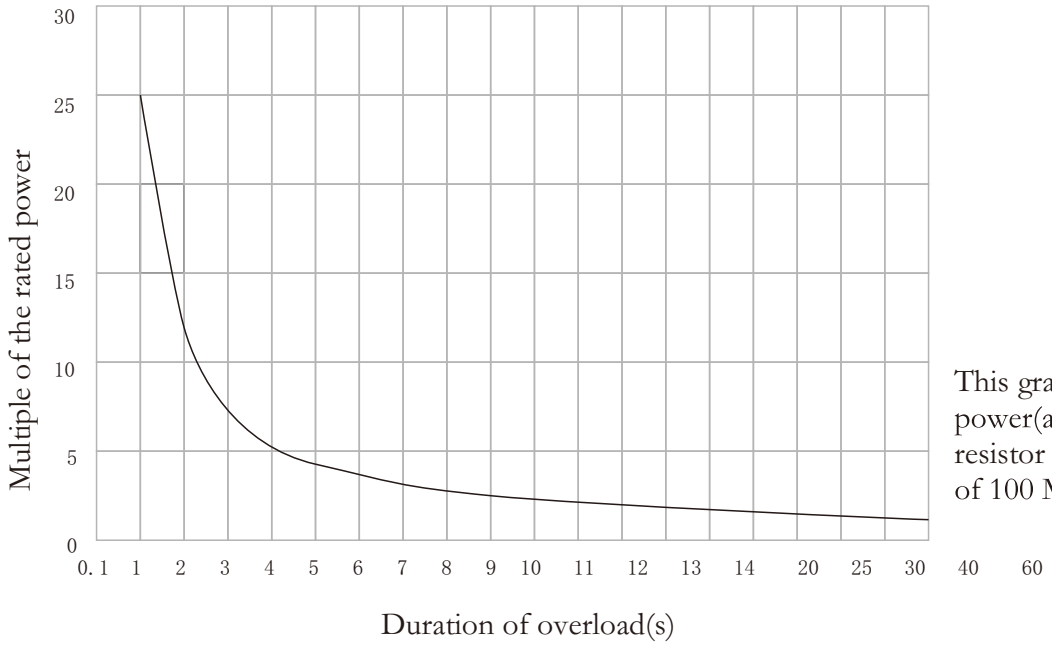
RHA 5W-RHA75W



RHA 100W-RHA300W

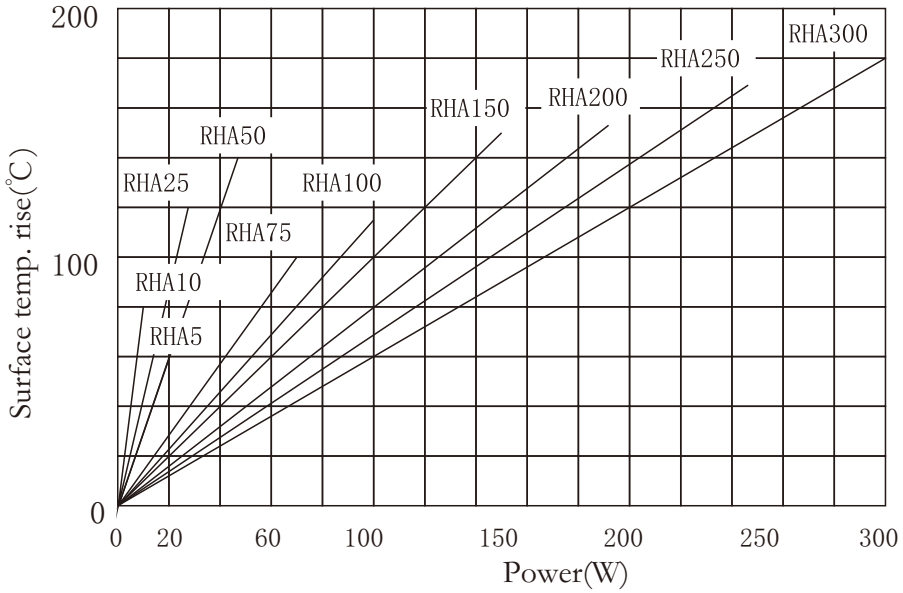


Power overload



This graph indicates the amout that power(at 20℃) of the stand HS Series resistor may be reduced for overloads of 100 MS to 60 S.

Surface temperature rise



For resistor mounted on standard heatsink related to power dissipation.

Remarks: Heatsink is recommended as it got good heat radiation. Even you have used the heatsink, the maximum temperature 200℃ can not be surpassed.

Performance

Item	Performance requirements	Conditons test(JIS C 5201—1)
Temperature coefficients	±20PPM/℃ ±50PPM/℃ ±100PPM/℃	T. C. R= $\frac{R2-R1}{R1\times(T2-T1)}\times 10^{6}$ PPM/℃ R1:normal temperature(T1)resistance value R2:normal temperature+100℃(T2)resistance value
Load life	△R≤±(1.0%R0+0.05Ω)	25℃， PR,1000h
Inslation resistance	1000MΩ MIN	DC500V
Short time overload	△R≤±(1.0%R0+0.05Ω)	Account 5 times rated power to account the voltage or max ,overload voltage(get the lower) 5 seconds.
Resistance to soldering heat	△R≤±(1.0%R0+0.05Ω)	Immerge into the 350±10℃ tin stove for2—3second
solderability	The soldering area is over95%	Immerge into the 245±3℃ tin stove for2—3second
Temperature cycling	△R≤±(1%R0+0.05Ω)	At -55℃ for 30 min ,then at 25℃ for 10—15min,then at 275℃ for 30 min ,then at 25℃ fo10—15min,total 5 cycles.
load life in humidity	△R≤±(5%R0+0.05Ω)	Overload rated voltage or max, working voltage(get the lower) for 1000 hours(1.5 hours on and half -hour off) at the 70±2℃.
load life in heat	△R≤±(5%R0+0.05Ω)	Overload rated voltage or max, working voltage (get the lower) for 1000 hours (1.5 hours on and half-hour off) at the 70±2℃.
Terminal strength	△R≤±(1%R0+0.05Ω)	5W—15W: Pull 20N， Horizontal 10 Second
Vibration	△R≤±(1%R0+0.05Ω)	Frequency: 10—50Hz， Swing: 0.75mm,Times: 6 Hours
Shock proof	△R≤±(0.2%R0+0.05Ω)	100g， 6ms,10 Cycles
Nonflammability	no visible flame	Respectively load AC voltage by 5,10,16 times,rated power for 5Minutes

Ordering Information

Example:

RHA	50	J	100R0	C1
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	Resistance	T.C.R

(1)Type: RHA Series

(2)Power Rating: 05=5W,10=10W,100=100W,200=200W.....

(3)Tolerance: F=±1%,G=±2%,J=±5%,K=±10%

(4)Resistance Value:R100=0.1Ω,1R00=1Ω,10R0=10Ω,100R0=100Ω

(5)T.C.R:C4=±20PPM/℃,C2=±50PPM/℃,C1=±100PPM/℃