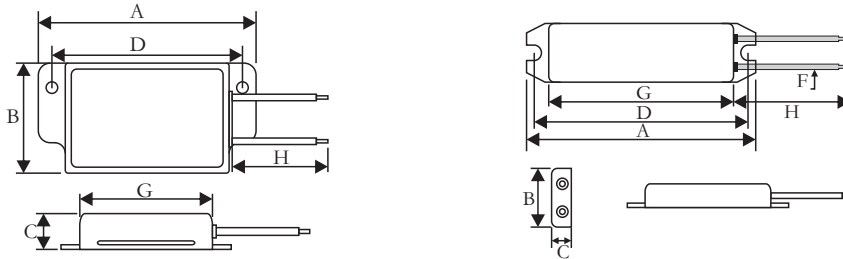


## ● Features

- I Aluminum crust surface with good performance in heat radiation, suitable for cooling plate installation, can be used in the atrocious 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 easy to fix.
- V Widely used in power supply, Transducer, Elevator, Arena audio and high requirement equipment industry.
- VI Resistance tolerance:  $\pm 1\%$ ,  $\pm 2\%$ ,  $\pm 5\%$ ,  $\pm 10\%$ .

## ● Dimensions



Type	Power (W)	Dimensions (mm)						
		A $\pm 1$	B $\pm 1$	C $\pm 0.5$	D $\pm 0.5$	G $\pm 1$	F	H $\pm 10$
MNH	40	79	36	13	69	58	0.75mm <sup>2</sup>	300
	60	100	30	13	90	75	0.75mm <sup>2</sup>	300
	100	130	42	21	118	108	0.75mm <sup>2</sup>	300
	200	182	42	214	165	157	0.75mm <sup>2</sup>	300

## ● Ordering Information

Example:

MNH	600	J	10R0
(1)	(2)	(3)	(4)
Series Name	Power Rating	Resistance Tolerance	Resistance

(1) Type: MNH SERIES

(2) Power Rating: 40=40W、60=60W、100=100W、200=200W

(3) Tolerance: J =  $\pm 5\%$

(4) Resistance Value: R100=0.1 $\Omega$ , 1R00=1 $\Omega$ , 10R0=10 $\Omega$

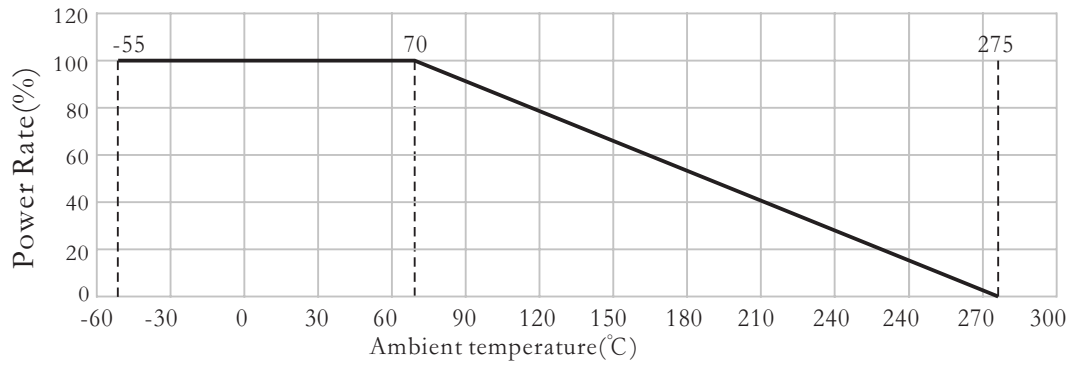
## ● Reference Standards

JISC 5201-1

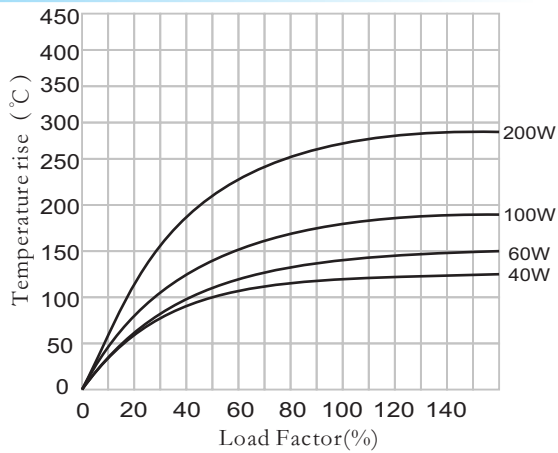
## ● Applications And Ratings

Rated Power (W)	Resistance Range( $\Omega$ )		Tolerance	T.C.R	Max Working Voltage	Max Overload Voltage	Dielectric Withstanding Voltage
	Standard	Non-inductive					
40	1 $\Omega$ ~30K	1~2K	J $\pm 5\%$	$\pm 300\text{PPM}/^\circ\text{C}$	$\sqrt{P \cdot R}$	$\sqrt{10 \cdot P \cdot R}$	1500V/Ac
60	1 $\Omega$ ~30K	1~2K					
100	1 $\Omega$ ~30K	1~2K					
200	1 $\Omega$ ~30K	1~2K					

## Derating Curve



## Surface Temperature Rise



## Performance

Test Items	Performance	Test Methods(JIS C 5201-1)
Temperature coefficient	$\pm 300\text{ppm}/^\circ\text{C}$	Test resistance value at normal temperature and normal temperature added $100^\circ\text{C}$ , calculate $^\circ\text{C}$ resistance value change rate.
Short time overload	$\Delta R \leq \pm (2\%R_0 + 0.05\Omega)$	10X rated power or Max. overload voltage(get the lower) for 5seconds.
Resistance to soldering heat	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$	Immerge into the $350 \pm 10^\circ\text{C}$ tin stove for 2~3 seconds
Dielectric withstanding voltage	No obvious mechanical damage or spark-over	Add AC 1500V or 2000V or 2500V for 1min.
Temperature cycle	$\Delta R \leq \pm (1\%R_0 + 0.05\Omega)$	At $-55^\circ\text{C}$ for 30min, then at $+25^\circ\text{C}$ for 10~15min, then at $+125^\circ\text{C}$ for 30min, then at $+25^\circ\text{C}$ for 10~5, min, total 5cycles.
Load life in humidity	$\Delta R \leq \pm (3\%R_0 + 0.05\Omega)$	Overload rated voltage or Max.working voltage(get the lower) for 1000hours (1.5hours on and half-hour off) at the $40 \pm 2^\circ\text{C}$ and 90~95% relative humidity.
Load life in heat	$\Delta R \leq \pm (3\%R_0 + 0.05\Omega)$	Overload rated voltage or Max.working voltage(get the lower) for 1000hours (1.5hours on and half-hour off) at the $70 \pm 2^\circ\text{C}$ .
Terminal strength	$\Delta R \leq \pm (2\%R_0 + 0.1\Omega)$	Pull:100N
Vibration	$\Delta R \leq \pm (2\%R_0 + 0.1\Omega)$	Frequency:10~55Hz, Swing:0.75mm, Test time:6hours
Nonflammability	No visible flame	Respectively load AC voltage by 5,10,16 times rated power for 5 minutes.