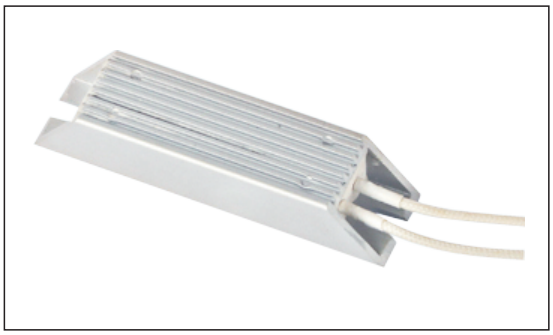
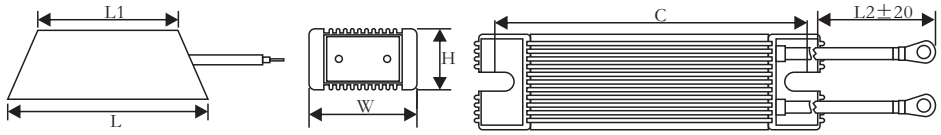
MNA Aluminum Shell Resistor



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: ±1%, ±2%, ±5%, ±10%.

Dimensions



Type	Power (W)	Dimensions(mm)					
		L±1	L1±1	W±0.5	H±0.5	C±0.5	L2
MNA	60	90	66	40	15	70	Customerized lead wire is available
MNA	100	120	95	40	15	106	

Ordering Information

Example:

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

(1)Type: MNA SERIES
(2)Power Rating: 60=60W、100=100W
(3)Tolerance: J=±5%
(4)Resistance Value:R100=0.1Ω,1R00=1Ω,10R0=10Ω

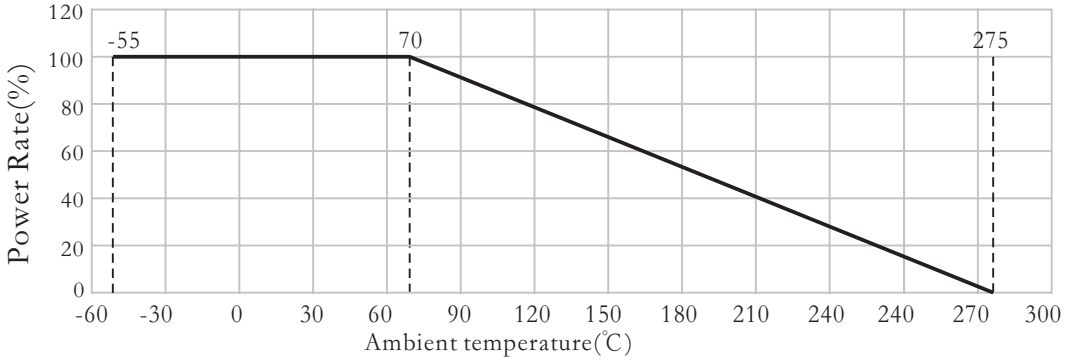
Reference Standards

JISC 5201-1

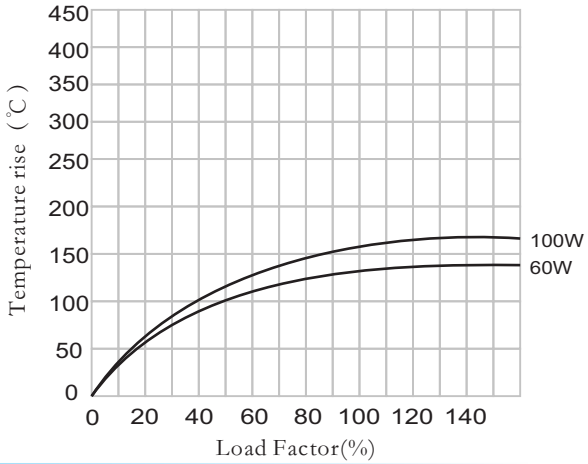
Applications And Ratings

Rated Power (W)	Resistance Range(Ω)	Tolerance	T.C.R	Max Working Voltage	Max Overload Voltage	Dielectric Withstanding Voltage
60	1R~1KR	J±5% K±10%	±300PPM/℃	$\sqrt{P \cdot R}$	$\sqrt{10 \cdot P \cdot R}$	1500V/Ac
100	1R~1KR					

Derating Curve



Surface Temperature Rise



Performance

Test Items	Performance	Test Methods(JIS C 5201-1)
Temperature coefficient	±300ppm/℃	Test resistance value at normal temperature and normal temperature added 100℃, calculate ℃ resistance value change rate.
Short time overload	△R≤ ±(2%R0+0.05Ω)	10X rated power or Max. overload voltage(get the lower) for 5seconds.
Resistance to soldering heat	△R≤ ±(1%R0+0.05Ω)	Immerge into the 350±10℃ 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	△R≤ ±(1%R0+0.05Ω)	At-55℃ for 30min, then at+25℃ for 10~15min,then at +125℃ for 30min, then at +25℃ for 10~5, min,total 5cycles.
Load life in humidity	△R≤ ±(3%R0+0.05Ω)	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5hours on and half-hour off) at the 40±2℃ and 90~95% relative humidity.
Load life in heat	△R≤ ±(3%R0+0.05Ω)	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5hours on and half-hour off) at the 70±2℃.
Terminal strength	△R≤ ±(2%R0+0.1Ω)	Pull:100N
Vibration	△R≤ ±(2%R0+0.1Ω)	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.