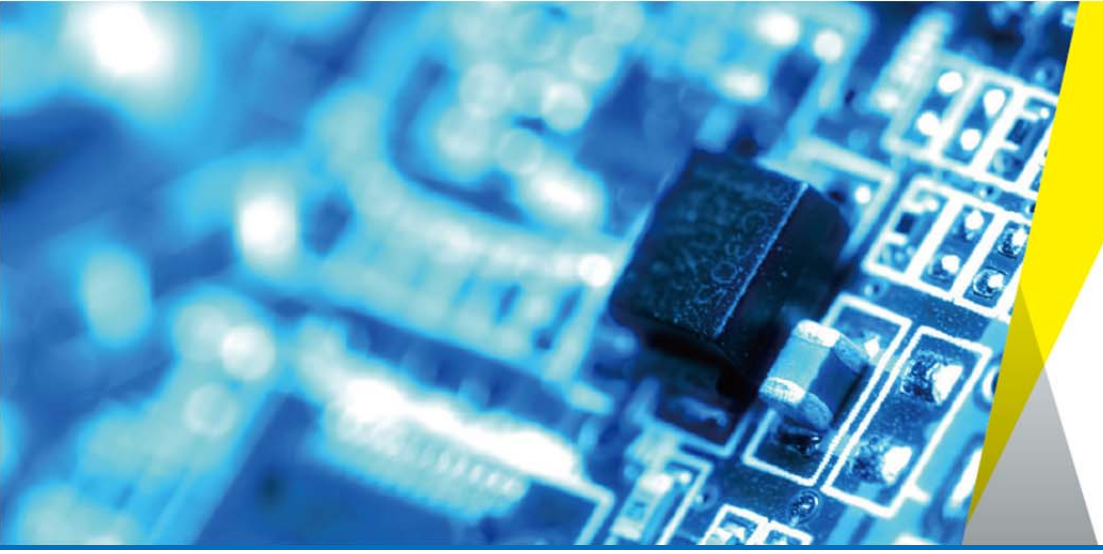

DATASHEET

Product Name	**Metal Plate Crowbar Resistors**
Part Name	**MPCR 500W ±10% 0.25Ω**
Part No.	**MPCR00K025K500**
File No.	**DIP-SP-095**

Uniroyal Electronics Global Co., Ltd.

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Manufacture Plant	Uniroyal Electronics Industry Co., Ltd.
	Aeon Technology Corporation
	Royal Electronic Factory (Thailand) Co., Ltd.
	Royal Technology (Thailand) Co., Ltd.

1. Scope

1.1 This data sheet for approve relates Metal Plate Crowbar Resistors manufactured by UNI-ROYAL.

1.2 Anti-vibration,high stability

1.3 Application: All kinds of frequency converters and harsh environments.

1.4 Compliant with RoHS directive.

1.5 Halogen free requirement.

2. Part No. System

The standard Part No. includes 14 digits with the following explanation:

2.1 Coated type, the 1st to 4rd digits are to indicate the product type and 4th digit is the special feature.

Example: MPCR= Metal Plate Crowbar Resistors

2.2 5th~6th digits:

2.2.1 For power rating of 100W & over, the 5th & 6th digits will be indicated with "00" and the actual wattage being indicated at the last 3 digits (12th ~14th) of the Part No.

2.3 The 7th digit is to denote the Resistance Tolerance. The following letter code is to be used for indicating the standard Resistance Tolerance.

Example: K= ±10%

2.4 The 8th to 11th digits is to denote the Resistance Value.

2.4.1 If value belongs to standard value of E-24 series 10%, the 8th code is zero, 9th~10th codes are the significant figures of resistance value, and the11th code is the power of ten.

2.4.3 The following number s and the letter codes are to be used to indicate the number of zeros in the 11th digit:

$0=10^0$ $1=10^1$ $2=10^2$ $3=10^3$ $4=10^4$ $5=10^5$ $6=10^6$ $J=10^{-1}$ $K=10^{-2}$ $L=10^{-3}$ $M=10^{-4}$

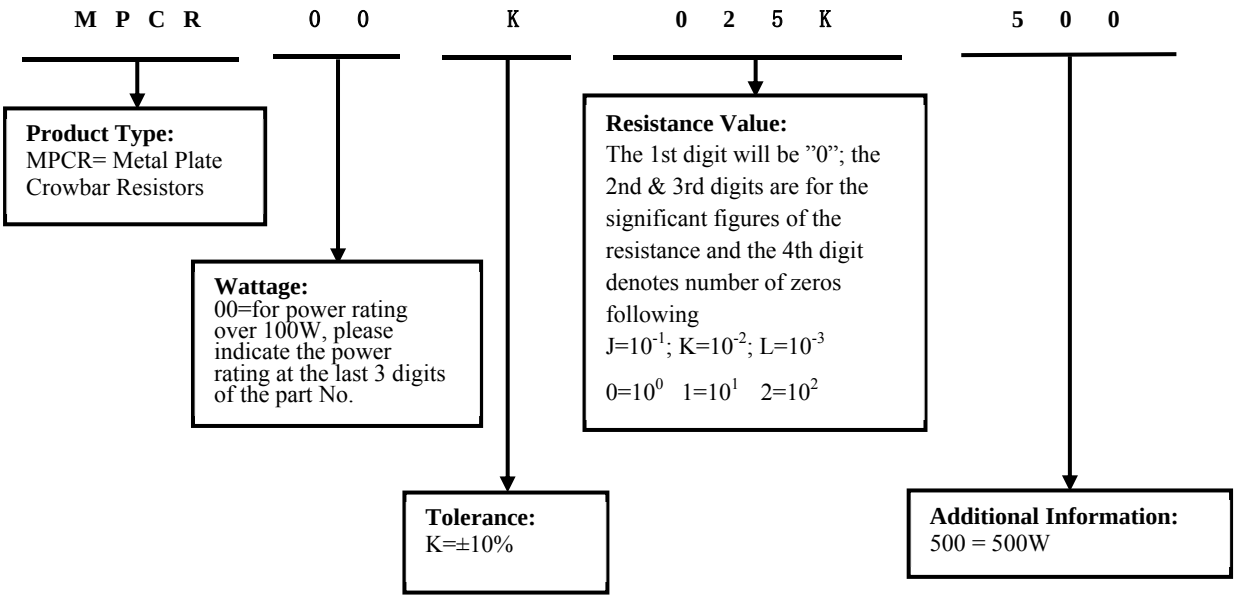
2.5 The 12th ~14th digits.

For power rating over 100watt, the 12th to the 14th digits are to denote the actual wattage of the products.

Example: 500 = 500W

3. Ordering Procedure

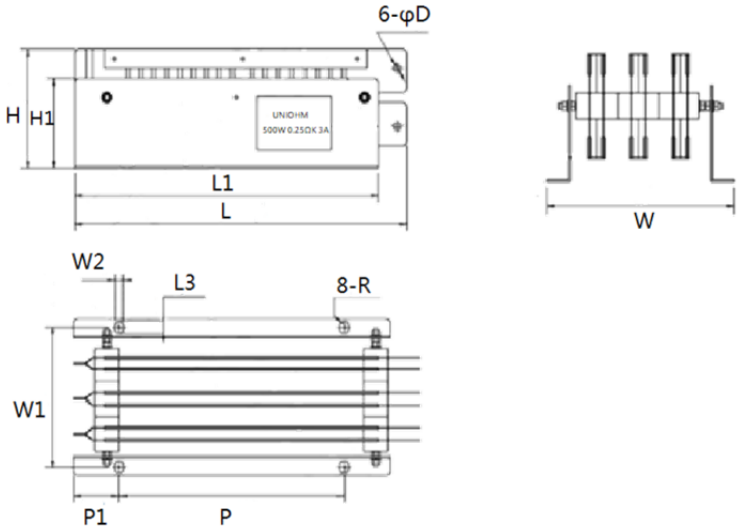
(Example: MPCR 500W ±10% 0.25Ω B/B)



4. Ratings

Type	Power Rating	Resistance	Tolerance	Rated Operational Voltage	Dielectric withstanding Voltage	Operating Temperature
MPCR	500W	0.25Ω	±10%	11V	3500V	-40℃~85℃

5. Dimension (Unit: mm)



Type	L±3	L1±2	L3+0/-1	W±3	W1±2	W2 + 0/ - 1	H±3
MPCR 500W	355	325	16	203	181	8	123
	H1±2	H2±1	H3±1	P±1	P1±1	6-ΦD±0.05	8-R±0.05
	93	19	23	230	47.5	7	4

6. Performance Specification

Characteristic	Limits	Test Method
Insulation resistance	≥100MΩ	Apply DC1000V, 1Min
Dielectric withstanding voltage	No evidence of flashover mechanical damage, arcing or insulation break down.	Apply AC3500V, 1Min; Leakage current
Terminal strength	△R≤±(2%+0.05Ω) with no evidence of mechanical damage	Pull: 90N; 10sec
Vibration	△R≤±(3%+0.05Ω)	Take an amplitude of 0.35mm and continuously sweep back and forth within the frequency range of 10-55-10Hz. The test is only conducted in the perpendicular direction to the installation surface, with a logarithmic frequency sweep form, a frequency sweep rate of 1oct/min, and 5 frequency sweep cycles.
Humidity (steady state)	△R≤±(5%+0.05Ω) with no evidence of mechanical damage	40±2℃;（93±3）%RH ;48h

Salt spray test	The surface of the resistor should not have obvious oxidation points, rust, or visible damage adhered to it	Continuous atomization at (35 ± 2) ℃ for 96 hours, with a concentration of 5% by weight of the salt solution (If the volume of the test chamber is limited, parts of the same material can be used to replace the entire resistor)
Rapid change of temperature	ΔR/R ≤ ±(2%+0.05 Ω) with no evidence of mechanical damage	Temperature -55 ℃~200 ℃, 5 cycles, 30 minutes each time
Load life	ΔR/R ≤ ±(5%+0.05 Ω) with no evidence of mechanical damage (Allow the resistor to change color)	Rated working voltage at ambient temperature for 96 hours

7. Note

7.1. UNI-ROYAL recommend products store in warehouse with temperature between 15 to 35℃ under humidity between 25 to 75%RH.
Even under storage conditions recommended above, solder ability of products will be degraded stored over 1 year old.

7.2. Cartons must be placed in correct direction which indicated on carton, otherwise the reel or wire will be deformed.

7.3. Storage conditions as below are inappropriate:

a. Stored in high electrostatic environment

b. Stored in direct sunshine, rain, snow or condensation.

c. Exposed to sea wind or corrosive gases, such as Cl_2, H_2S, NH_3, SO_2, NO_2, Br,etc.

8. Record

Version	Description	Page	Date	Amended by	Checked by
1	First edition	1~4	Jul.27，2024	Haiyan Chen	Yuhua Xu