



**THE DATASHEET OF  
MR10610K000TAE66**



## Wirewound Resistor, Ultra Precision, Epoxy Molded, Axial Lead


**FEATURES**

- Resistance values up to 6 MΩ
- Resistance tolerances down to ± 0.005 %
- Tighter tolerances and lower resistance values available, please contact factory
- Temperature coefficients down to ± 2 ppm/°C, and up to 6000 ppm/°C
- Matched resistance sets available in tolerances down to ± 0.001 %, and in temperature coefficients down to ± 0.5 ppm/°C, please contact factory
- Custom design capability available, please contact factory
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

| STANDARD ELECTRICAL SPECIFICATIONS |                               |                                   |   |   |  |  |
|------------------------------------|-------------------------------|-----------------------------------|---|---|--|--|
| GLOBAL MODEL                       | POWER RATING W <sup>(1)</sup> | RESISTANCE RANGE Ω                | RESISTANCE RANGE Ω                          | RESISTANCE RANGE Ω                                    | RESISTANCE RANGE Ω   | MAXIMUM WORKING VOLTAGE V <sup>(2)</sup> |
|                                    |                               | ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 % | ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 % | ± 0.01 %, ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 % | ± 0.005 %, ± 0.01 %, ± 0.05 %, ± 0.1 %, ± 0.25 %, ± 0.5 %, ± 1 % |  |
| MR101                              | 0.120                         | 1 to 400K                         | 5 to 400K                                   | 50 to 400K  | 1K to 400K   | 150                                      |
| MR102                              | 0.175                         | 1 to 750K                         | 5 to 750K                                   | 50 to 750K  | 1K to 750K   | 200                                      |
| MR103                              | 0.200                         | 1 to 750K                         | 5 to 750K                                   | 50 to 750K  | 1K to 750K   | 200                                      |
| MR104                              | 0.150                         | 1 to 500K                         | 5 to 500K                                   | 50 to 500K  | 1K to 500K   | 100                                      |
| MR105                              | 0.200                         | 1 to 1.0M                         | 5 to 1.0M                                   | 50 to 1.0M  | 1K to 1.0M   | 200                                      |
| MR106                              | 0.250                         | 1 to 1.2M                         | 5 to 1.2M                                   | 50 to 1.2M  | 1K to 1.2M   | 300                                      |
| MR107                              | 0.330                         | 1 to 2.5M                         | 5 to 2.5M                                   | 50 to 2.5M  | 1K to 2.5M   | 400                                      |
| MR108                              | 0.400                         | 1 to 3.8M                         | 5 to 3.8M                                   | 50 to 3.8M  | 1K to 3.8M   | 300                                      |
| MR110                              | 0.500                         | 1 to 3.8M                         | 5 to 3.8M                                   | 50 to 3.8M  | 1K to 3.8M   | 400                                      |
| MR111                              | 0.500                         | 1 to 3.8M                         | 5 to 3.8M                                   | 50 to 3.8M  | 1K to 3.8M   | 400                                      |
| MR112                              | 0.750                         | 1 to 6.0M                         | 5 to 6.0M                                   | 50 to 6.0M  | 1K to 6.0M   | 600                                      |
| MR114                              | 1.000                         | 1 to 6.0M                         | 5 to 6.0M                                   | 50 to 6.0M  | 1K to 6.0M   | 800                                      |
| MR115                              | 1.500                         | 1 to 6.0M                         | 5 to 6.0M                                   | 50 to 6.0M  | 1K to 6.0M   | 900                                      |
| MR116                              | 2.000                         | 1 to 6.0M                         | 5 to 6.0M                                   | 50 to 6.0M  | 1K to 6.0M   | 1000                                     |

**Notes**

<sup>(1)</sup> Power rating is based on tolerance, please see derating chart.

<sup>(2)</sup> The maximum working voltage is the highest voltage that can be applied to the resistor. Below this value, the maximum voltage that can continuously be applied is given by  $(P \times R)^{1/2}$ .

| GLOBAL PART NUMBER INFORMATION   |   |   |              |   |  |                  |   |   |           |   |   |   |   |   |  |  |  |
|--|---|---|--------------|---|--|------------------|---|---|-----------|---|---|---|---|---|--|--|--|
| Global Part Numbering example: <b>MR106250R00TAE66</b> (visit <a href="http://www.vishay.net">www.vishay.net</a> SAP parts manual for all options) |   |   |              |   |  |                  |   |   |           |   |   |   |   |   |  |  |  |
| M  | R | 1 | 0            | 6 | 2  | 5                | 0 | R   | 0         | 0   | T | A   | E | 6 | 6  |  |  |
| GLOBAL MODEL (5 digits)<br>(see Standard Electrical Specifications Global Model column for options)  |   |   |              |   | VALUE (6 digits)<br>R = decimal<br>K = thousand<br>M = million<br>1R5000 = 1.5 Ω<br>1K5000 = 1.5 kΩ<br>1M0000 = 1 MΩ |                  |   | TOLERANCE (1 digit)<br>S = ± 0.005 %<br>T = ± 0.01 %<br>Q = ± 0.02 %<br>A = ± 0.05 %<br>B = ± 0.1 %<br>C = ± 0.25 %<br>D = ± 0.5 %<br>F = ± 1.0 % |           | TC (1 digit)<br>A = standard, 10 to 30 (W)<br>B = 3900 (Q)<br>C = 4500 (M)<br>D = 6000 (N)<br>E = 3500 (P)<br>Y = 10 (≥ 1 Ω)<br>G = 5 (≥ 10 Ω)<br>J = 2 (≥ 100 Ω) |   | PACKAGING CODE (3 digits)<br>E66 = lead (Pb)-free bulk pack |   |   | SPECIAL (up to 2 digits)<br>(dash number)<br>From 1 to 99 as applicable<br>S = 0.025" terminal |  |  |
| Historical Part Number example: <b>MR106W250R0T</b>  |   |   |              |   |  |                  |   |   |           |   |   |   |   |   |  |  |  |
| MR106  |   |   | W = STANDARD |   |  | 250 Ω            |   |   | 0.01 %    |   |   |   |   |   |  |  |  |
| HISTORICAL MODEL   |   |   | TC           |   |  | RESISTANCE VALUE |   |   | TOLERANCE |   |   |   |   |   |  |  |  |



DIMENSIONS in inches [millimeters]

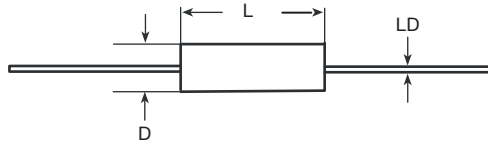


Table with 4 columns: GLOBAL MODEL, DIMENSIONS in inches [millimeters], L ± 0.025 [0.635], D ± 0.005 [0.127], LD ± 0.002 [0.051]. Rows include models MR101 through MR116.

Note

(1) 0.025" [0.635] available, this is called out by putting an "S" in the SPECIAL section of the part number.

MATERIAL SPECIFICATIONS

Element: nickel-chrome alloy, other materials available depending on TC requirements

Core: molded epoxy

Encapsulant: epoxy

Standard Terminals: 100 % matte tinned copper

Part Marking: Mills, model, value, tolerance, date code

Note

- Due to resistor size limitations some resistors will have minimal information marked on parts

DERATING

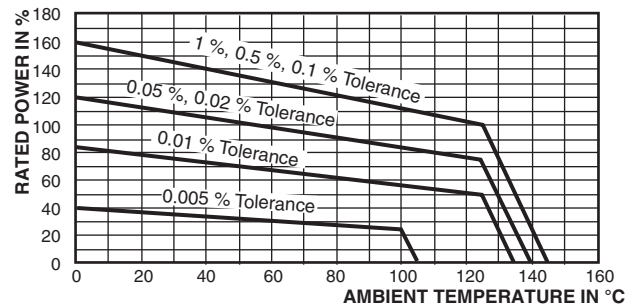


Table with 3 columns: PARAMETER, UNIT, MR100 RESISTOR CHARACTERISTICS. Rows include Temperature Coefficient, Terminal Strength, Dielectric Withstanding Voltage, and Operating Temperature Range.



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