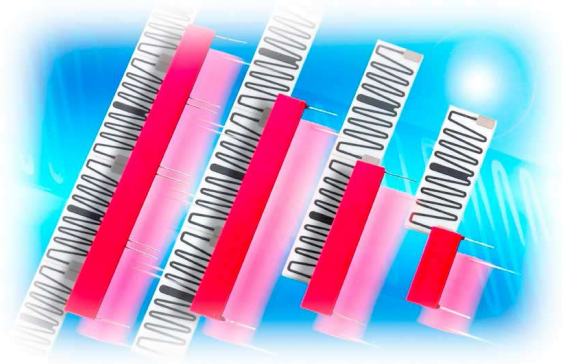
# Ultra-Mox Series

## High Voltage, Thick Film



## FEATURES

- High voltage resistors in thick film technology
- Radial leads, variable lead spacing by bending
- Climatic protection by silicone coating
- Special versions possible
- Resistance values up to 10 teraohm
- Low values of TCR and VCR

## SERIES SPECIFICATIONS

| Series | Power Rating | Working Voltage | Resistance Range | Tolerance | TCR | VCR |
|---|---|---|---|---|---|---|
| UM025 | 1.0 | 15KV | 1M-100M | 0.25-10% | 25, 50, 100 | 1ppm/V |
| | | | >100M-1G | 1-20% | 50, 100, 250 | 2ppm/V |
| | | | >1G-100G | 5-30% | 250, 500 | 10ppm/V |
| | | | >100G-1T | 5-30% | 500, 1000 | 50ppm/V |
| UM030 | 1.0 | 10KV | 1M-100M | 0.25-10% | 25, 50, 100 | 2ppm/V |
| | | | >100M-1G | 1-20% | 50, 100, 250 | 5ppm/V |
| | | | >1G-100G | 5-30% | 250, 500 | 20ppm/V |
| | | | >100G-1T | 5-30% | 500, 1000 | 100ppm/V |
| UM040 | 1.2 | 20KV | 1M-100M | 0.25-10% | 25, 50, 100 | 1ppm/V |
| | | | >100M-1G | 1-20% | 50, 100, 250 | 2ppm/V |
| | | | >1G-100G | 5-30% | 250, 500 | 10ppm/V |
| | | | >100G-1T | 5-30% | 500, 1000 | 50ppm/V |
| UM050 | 3.0 | 30KV | 1M-100M | 0.25-10% | 25, 50, 100 | 1ppm/V |
| | | | >100M-1G | 1-20% | 25, 50, 100 | 1ppm/V |
| | | | >1G-100G | 5-30% | 100, 250 | 5ppm/V |
| | | | >100G-1T | 5-30% | 250, 500 | 25ppm/V |
| | | | >1T-10T | 10-30% | on request | |

Closer tolerance, TCR and VCR, other dimensions, and voltage dividers, on request.

## CHARACTERISTICS

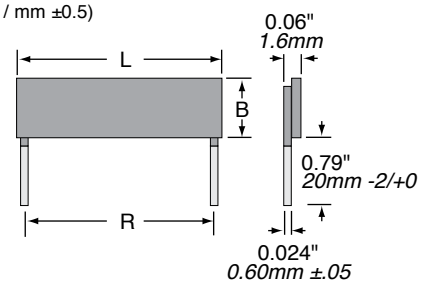
| | |
|---|---|
| **Continuous operating voltage** | $V=\sqrt{(P*R)}$ |
| **Measuring voltage** | Standard measuring voltage is 10V (50V for values >1G). Different voltages on request. |
| **TCR** | in ppm/K; Temperature range +25°C ... +125°C; TCR25/50 and values above 1G: +25°C ... +85°C |
| **Operating temp. range** | -55°C ... +125°C |
| **Climatic category** | to EN 60068-1: 55/125/56 |
| **Humidity-/contact protection** | Lacquer coating. Resistant to most solvents. Isopropyl alcohol recommended for cleaning; do not use acetone or methylene choloride. Avoid mechanical stress to coating. |
| **Stability: Storage** | (125°C/1000h) ≤10G: <1%; >10G: <2% |
| **Stability at Max. voltage** | (Max. voltage/1000h) ≤10G: <1%; >10G: <2% |

# Ultra-Mox Series

## High Voltage, Thick Film

## DIMENSIONS

(in. / mm ±0.5)




| Series | L | B | R |
|---|---|---|---|
| UM025 | 0.98"/25.0 | 0.35"/9.0 | 0.90"/22.9 |
| UM030 | 1.18"/30.0 | 0.24"/6.0 | 1.09"/27.7 |
| UM040 | 1.57"/40.0 | 0.24"/6.0 | 1.49"/37.8 |
| UM050 | 1.97"/50.0 | 0.49"/12.5 | 1.88"/47.8 |

Lead spacing may be changed by bending

Other wire diameters and thicknesses available

Axial versions, versions with formed leads and versions with lead frames are available

## ORDERING INFORMATION

RoHS Compliant

**U M 0 5 0 T 1 0 0 4 J E**

**Ultra-mox**
**High voltage**
**radial lead**

**Style**

**TCR** (ppm)
W = 25
V = 50
T = 100
Z = 250
E = 500
N = 1000
U = 2000

**Ohms**
1004 = 1MΩ
1006 = 100M
1009 = 100G
100A = 1T
100B = 10T

**Tolerance**
D = 0.50%
F = 1%
G = 2%
J = 5%
K = 10%
M = 20%
P = 30%

### Standard Part Numbers

| | |
|---|---|
| UM030T1006FE | UM040Z1009JE |
| UM030Z1007FE | UM040E100AJE |
| UM030Z1008JE | UM050V1006FE |
| UM030Z1009JE | UM050V1007FE |
| UM030E100AJE | UM050T1008JE |
| UM040T1006FE | UM050T1009JE |
| UM040Z1007FE | UM050Z100AJE |
| UM040Z1008JE | UM050E100BKE |