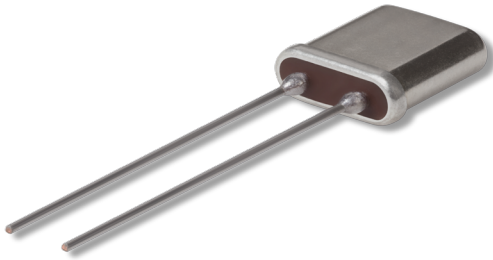


Data Sheet for Precision Resistors

Ultra Precise Metal Foil Resistor

Series MZH



- Temperature coefficient 0ppm/°C @25°C
- Metal Foil Resistor with excellent long term stability
- Resistance range from 100Ω..100kΩ
- Ultra precise, resistance tolerances from ±0,005%
- Hermetically sealed metal housing

Electrical Specification

| | |
|--------------------------------------|----------------|
| Resistance range | 100Ω..100kΩ |
| Resistance tolerance | ±0,005%..±1% |
| Power rating @ 70°C (0W @ +150°C) | 0,3W |
| Max. working voltage | 300V |
| TCR-rate | ±0ppm/°C @25°C |
| Working temperature range (max.) | -65..+150°C |

Mechanical Specification

| | |
|----------------------------------|-----------------------------|
| Resistance technology / material | Metal foil |
| Housing material | Metal (hermetically sealed) |
| Connections | Radial cooper tinned |

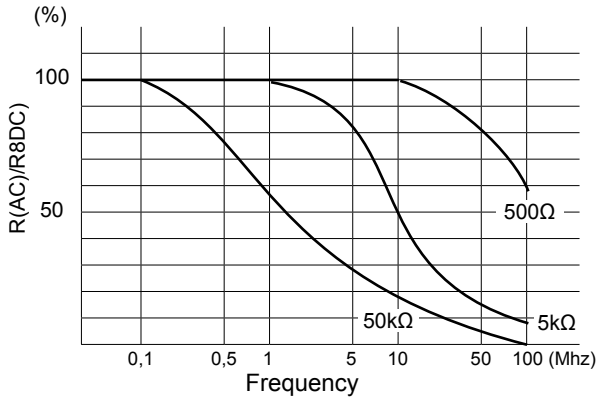
| Parameters | Test Conditions | Specification |
|------------------------------|---|----------------|
| Power Conditioning | 25°C, rated voltage, 96 h | ΔR ±0,0025% |
| Short time overload | 2,5 x rated voltage, 5 sec. | ΔR ±0,0025% |
| Life span (biased) | 70°C, rated power,, 90 min. on 30 min off, 2000 h | ΔR ±0,01% |
| High temperature / humidity | +65°C..-10°C, 90..98% RH rated voltage, 10 cycles, 240h | ΔR ±0,0025% |
| Temperature shock | -65°C (30 min.), +150°C (30 min), 5 cycles | ΔR ±0,0025% |
| High temperature exposure | +150°C, no load 2000 h | ΔR ±0,01% |
| Solderability | 245°C, 2 sec. | Coverage > 95% |
| Resistance to soldering heat | 350°C, 3 sec. | ΔR ±0,0025% |
| Isolation resistance | 500 VDC, 2 min. | >10.000MΩ |
| Dielectric strength | Atmo. Pres.: 300 VAC, 1 min. | ΔR ±0,0025% |
| Shock | 100G, 6 ms, halfsine, X, Y, Z each 10 shocks | ΔR ±0,0025% |
| High frequency vibration | 20G, 10Hz zu 2kHz zu 10Hz, 20 min. X, Y, Z each 2,5 h | ΔR ±0,0025% |
| Current noise | | -42 dB |

Data Sheet for Precision Resistors

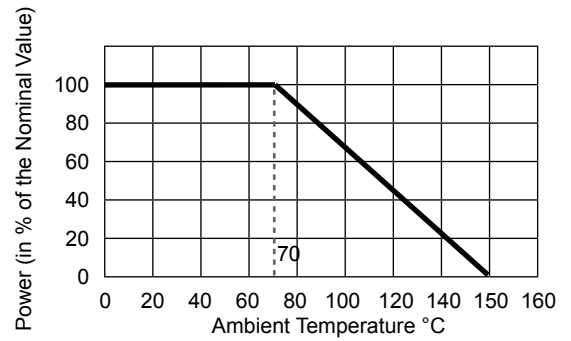
Ultra Precise Metal Foil Resistor

Series MZH

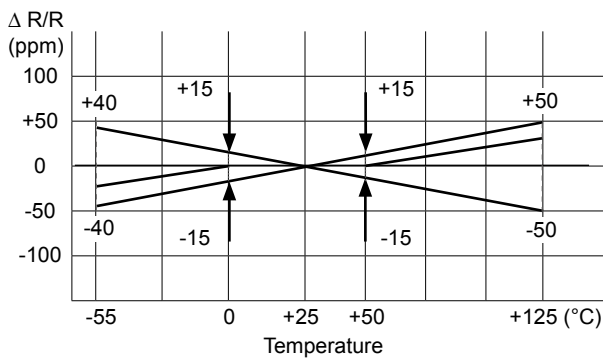
Frequency Characteristics



Power Derating Curve

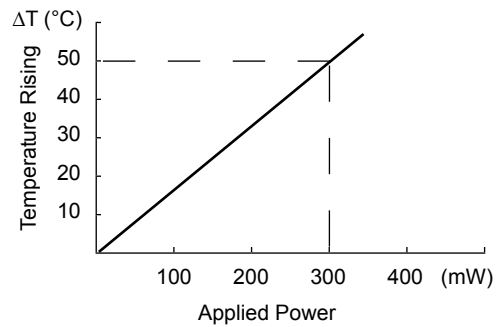


Temperature Characteristics



| Temperature (°C) | ΔR/R (ppm) |
|------------------|------------|
| -55 | ±40 |
| 0 | ±15 |
| +25 | ±0 |
| +50 | ±15 |
| +125 | ±50 |

Temperature of the Resistor Surface

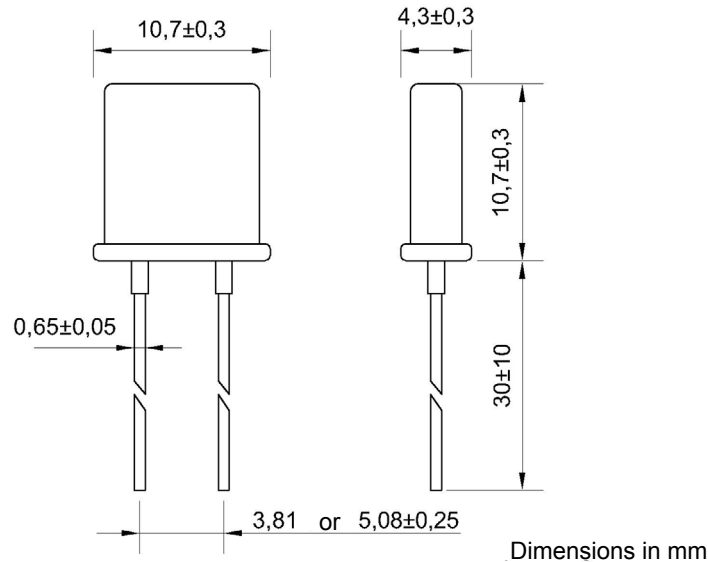


Data Sheet for Precision Resistors

Ultra Precise Metal Foil Resistor

Series MZH

Technical Drawing



Order code

Description Selection: standard=black/bold, possible options=grey/cursive

| | | | | | |
|-----------------------------------|-----|--|-----|---------|------|
| Series: | MZH | | | | |
| Resistance tolerance: | | | | | |
| ±1% | | | | | |
| ±0,5% | | | | | |
| ±0,1% | | | | | |
| ±0,05% | | | | | |
| ±0,02% | | | | | |
| ±0,01% | | | | | |
| ±0,005% | | | | | |
| Temperature coefficient: | | | | | |
| ±0ppm/°C | | | TK0 | | |
| Resistance value - please choose: | | | | | |
| From 100Ω to ≤ 100kΩ | | | | xxxkxxx | |
| Lead-Space: | | | | | |
| 3,81 mm | | | | | 3,81 |
| 5,08 mm | | | | | 5,08 |

| Order Example | Series | Resistance tolerance | Temperature coefficient | Resistance value | Lead-Space |
|---------------|--------|----------------------|-------------------------|------------------|------------|
| Choice | MZH | ±0,1% | 0ppm/°C | 10,1kΩ | 3,81 |
| Code | MZH | W0,1% | TK0 | 10k100 | 3,81 |