# CEMENT RESISTORS SQM SERIES

## Feature

- Small size and low cost.
- Super heat dissipation, instant overload capability.
- Instant overload capability
- Standard tolerance: ±1%, ±5%
- Standard Value: E24 series as range below
- For high resistance values, metal oxide film rods, will be utilized to replace the wire winding core.
- .Operating temperature : -55ºC ~+275ºC

## Material

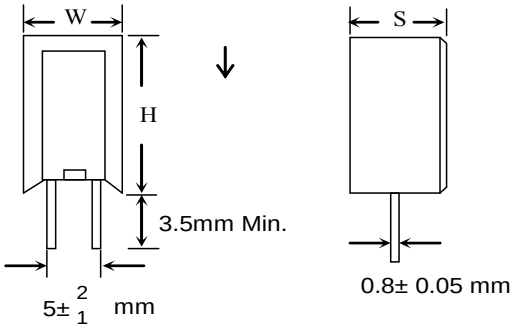
Element: Alloy Resistance Wire

Core: High purity ceramic Al2O3

Termination: Standard solder-plated copper lead

Case: Ceramic bathtub

## Dimension



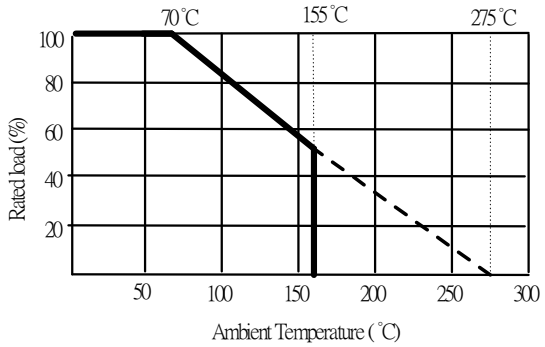

## General Specification

| TYPE | DIMENSION(mm) | | | | POWER RATING | MAXIMUM WORKING VOLTAGE | MAXIMUM OVERLOAD VOLTAGE | RESISTANCE RANGE | |
|---|---|---|---|---|---|---|---|---|---|
| | H | W | S | d±0.05 | | | | WIREWOUND | MOR RODS |
| SQM20 | 20.0 | 11.5 | 7.0 | 0.8 | 2W | 500V | 1000V | 0.1Ω-80Ω | 81Ω-1MΩ |
| SQM30 | 25.0 | 12.5 | 8.5 | 0.8 | 3W | 500V | 1000V | 0.1Ω-100Ω | 101Ω-1MΩ |
| SQM50 | 25.4 | 13.0 | 9.0 | 0.8 | 5W | 750V | 1500V | 0.1Ω-100Ω | 101Ω-1MΩ |
| SQM70 | 39.0 | 13.0 | 9.0 | 0.8 | 7W | 1000V | 1500V | 0.1Ω-300Ω | 301Ω-47KΩ |
| SQM100 | 51.0 | 13.0 | 9.0 | 0.8 | 10W | 1000V | 1500V | 0.1Ω-600Ω | 601Ω-47KΩ |
| SQM110 | 51.0 | 13.0 | 9.0 | 0.8 | 11W | 1000V | 1500V | 0.1Ω-600Ω | 601Ω-47KΩ |

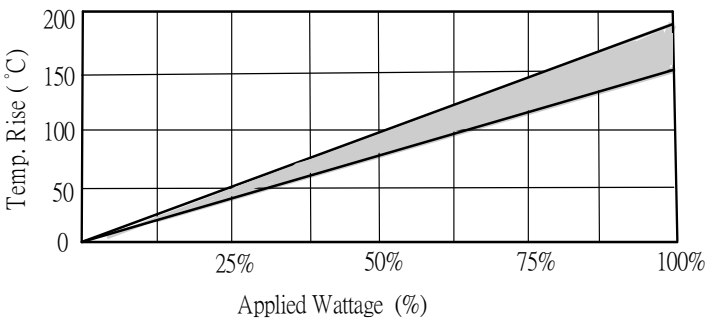
* Maximum Working Voltage determined by E=√P*R, where E should not exceed value listed in column above.

**Maximum Overload Voltage equals to 2.5XE, but should not exceed value listed in column above.

## Derating Curve




## Temperature Rise



HITANO
ENTERPRISE CORP.®

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## Characteristics

| Item | Requirement | Test Method |
|---|---|---|
| Short Time Overload | ±2%+0.05Ω | JIS-C-5201-1 5.5<br>RCWV*2.5 or Max. overload voltage for 5 seconds |
| Insulation Resistance | ＞1000MΩ | JIS-C-5201-1 5.6<br>Apply 100VDC for 1 minute |
| Endurance | ±5%+0.05Ω | JIS-C-5201-1 7.10<br>70±2℃, Max. RCWV for 1000 hrs with 1.5 hrs “ON” and 0.5hrs “OFF” |
| Damp Heat with Load | ±5%+0.05Ω | JIS-C-5201-1 7.9<br>40±2℃, 90~95% R.H. RCWV for 1000 hrs with 1.5 hrs “ON” and 0.5hrs “OFF” |
| Solderability | 90% min. Coverage | JIS-C-5201-1 6.5<br>245±5°C for 3 seconds |
| Dielectric Withstanding Voltage | 1000V | JIS-C-5201-1 5.7<br>Apply Max. Overload Voltage for 1 minute |
| Temperature Coefficient | ±300PPM/℃ | Resistance value at room temperature and room Temperature+100°C |
| Pulse Overload | ±1%+0.05Ω | JIS-C-5201-1 5.8<br>4 times RCWV for 10000 cycles with 1 second “ON” and 25 seconds “OFF” |
| Resistance To Solvent | No deterioration of coatings and markings | JIS-C-5201-1 6.9<br>Trichroethane for 1 min. with ultrasonic |
| Terminal Strength | Tensile: ≧2.5 kg | Direct Load for 10 seconds<br>In the direction off the terminal leads |
| Shelf Life | ΔR=±0.1% | 12 months at room temperature<br>25±3°C, 80%RH Max. |

***Storage Temperature : 25±3℃; Humidity＜80%RH**

## Part Numbering

| **SQM50** | **J** | **B** | - | **100R** |
|---|---|---|---|---|
| ↓ | ↓ | ↓ | | ↓ |
| Type/Power | Tol. | Package | | Resistance |
| SQM20 | F=±1% | B=Bulk | | 0R1 = 0.1Ω |
| SQM30 | J=±5% | | | 10R = 10Ω |
| SQM50 | | | | 1K2R = 1.2KΩ |
| SQM70 | | | | |
| SQM100 | | | | |