

# FIXED WIRE WOUND RESISTORS (CEMENT TYPE)

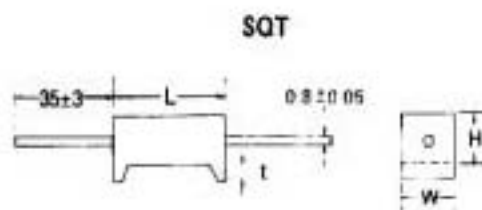
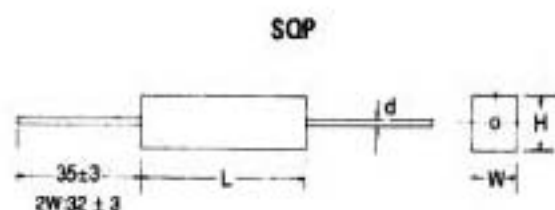
KOME

## Features:

- 1 Materials used are all non-inflammable. So that even if overcurrent flows, no self-ignition occurs, thus giving high safety.
- 2 Hermetically sealed. Sealed in a highly insulated box type case with special cement.
- 3 Highly heat resistant and moisture resistant. High mechanical strength.
- 4 Can be mounted with high degree of safety. High heat radiation effect. Box type closely bonded to the chassis. Most suitable for printed wiring.
- 5 Use TH-SQZ, TH-SQH type according to the condition of the place where it is mounted and the way it is mounted.
- 6 Can be used as complying with safety standards, such as UL Standard, Electric Apparatus Control Law, etc....

## HOW TO ORDER

| SQP                                | 25   | J         | 2     | 100   |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
|------------------------------------|--|-----------|-------|-------|-------|----|-------|-----|-----|-----|-----|-----|-----|------|------|--|--|---|-----|---|-----|---|------|--|-----------|--|------------------------------------|--|--|--------|--------------------------------------|--------|---|
| Product Code                       | Type   | Tolerance |       | Value |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| Fix Wire Wound resistor            | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>12</td><td>1.600</td></tr> <tr><td>25</td><td>1.400</td></tr> <tr><td>50</td><td>1.200</td></tr> <tr><td>100</td><td>100</td></tr> <tr><td>200</td><td>200</td></tr> <tr><td>500</td><td>500</td></tr> <tr><td>1000</td><td>1000</td></tr> </table> | 12        | 1.600 | 25    | 1.400 | 50 | 1.200 | 100 | 100 | 200 | 200 | 500 | 500 | 1000 | 1000 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>F</td><td>±1%</td></tr> <tr><td>J</td><td>±5%</td></tr> <tr><td>K</td><td>±10%</td></tr> </table> |  | F | ±1% | J | ±5% | K | ±10% | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center;">Total Cl.</td></tr> <tr><td colspan="2" style="text-align: center;">No. of Total Character (100-100=2)</td></tr> </table> | Total Cl. |  | No. of Total Character (100-100=2) |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>E-24 :</td><td>Significant figures + number of zero</td></tr> <tr><td>E-96 :</td><td>No. of character + Significant figures + number of zero</td></tr> </table> | E-24 : | Significant figures + number of zero | E-96 : | No. of character + Significant figures + number of zero |
| 12                                 | 1.600  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| 25                                 | 1.400  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| 50                                 | 1.200  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| 100                                | 100  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| 200                                | 200  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| 500                                | 500  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| 1000                               | 1000   |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| F                                  | ±1%  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| J                                  | ±5%  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| K                                  | ±10%   |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| Total Cl.                          |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| No. of Total Character (100-100=2) |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| E-24 :                             | Significant figures + number of zero   |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| E-96 :                             | No. of character + Significant figures + number of zero  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| Example                            |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| E-24 1R0 = 1Ω, 103 = 10KΩ          |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| E-96 5 1002 = 10KΩ                 |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| E-96 5 1003 = 100KΩ                |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| Letter R is decimal point          |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |
| Jumper is expressed by 000         |  |           |       |       |       |    |       |     |     |     |     |     |     |      |      |  |  |   |     |   |     |   |      |  |           |  |                                    |  |  |        |                                      |        |   |



| Type | Dimension (mm) |      |       |        | Resistance Range (Ω) |           | Max Working Voltage |
|------|----------------|------|-------|--------|----------------------|-----------|---------------------|
|      | W±H            | H±H  | L±L J | d±0.05 | SQP                  | ES + SQP  |                     |
| 2W   | 7              | 7    | 18    | 0.45   | 0.1~82               |           | 15V                 |
| 3W   | 8              | 8    | 22    | 0.8    | 0.1~180              | 181~33K   | 350V                |
| 5W   | 10             | 9    | 22    | 0.8    | 0.1~180              | 181~50K   | 350V                |
| 7W   | 10             | 9    | 35    | 0.8    | 0.1~430              | 431~50K   | 500V                |
| 10W  | 10             | 9    | 48    | 0.8    | 0.1~470              | 471~50K   | 750V                |
| 15W  | 12.5           | 11.5 | 48    | 0.8    | 0.5~600              | 601~150K  | 1000V               |
| 20W  | 14             | 13.5 | 40    | 0.8    | 0.5~1K               | 1.1K~150K | 1000V               |
| 25W  | 14             | 13.5 | 40    | 0.8    | 0.5~1K               | 1.1K~150K | 1000V               |

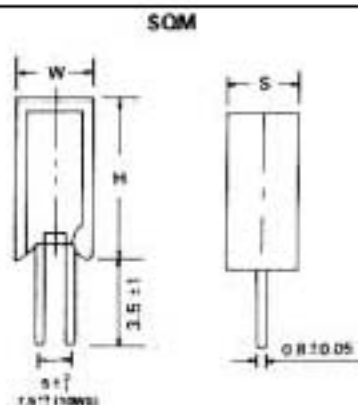
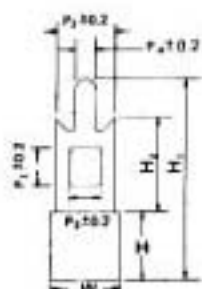
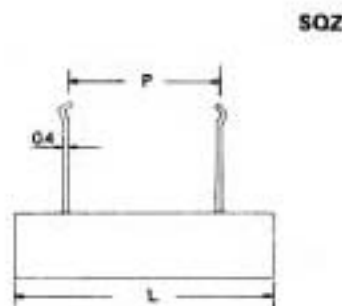
| Type | Dimension (mm) |     |       |       | Resistance Range (Ω) |
|------|----------------|-----|-------|-------|----------------------|
|      | W±H            | H±H | L±L J | t±0.5 |                      |
| 5W   | 10             | 9   | 22    | 1.5   | 0.1~50K              |
| 7W   | 10             | 9   | 35    | 3.0   | 0.1~50K              |
| 10W  | 10             | 9   | 48    | 3.0   | 0.1~50K              |

Note: Wirewound (SQT) & Metal Oxide Film (ES + SQT) resistance range detail same as SQP type

- Note:
1. Max Overload Voltage is 2 times of Max Working Voltage.
  2. Too lower to high ohmic value can be supplied only case by case.
  3. Resistance Value under 0.5Ω, the tolerance shall be ±10%.
  4. Max Working Voltage is fit for all SQ type

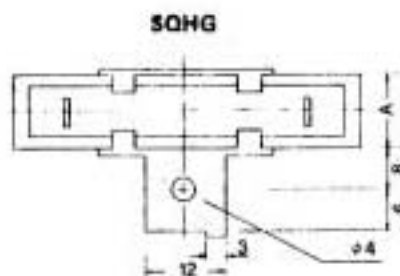
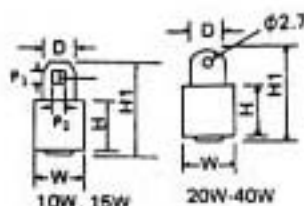
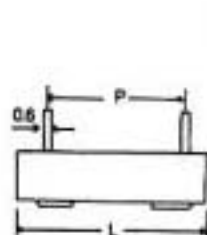
# FIXED WIRE WOUND RESISTORS (CEMENT TYPE)

KOME



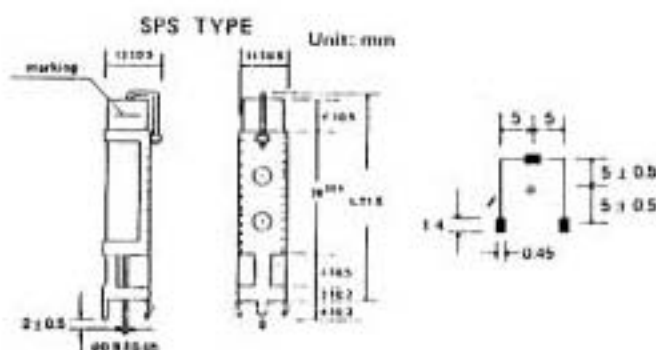
| Type | Dimension (mm) |      |     |         |     |    |    |     |      |      | Resistance Range (Ω) |           |
|------|----------------|------|-----|---------|-----|----|----|-----|------|------|----------------------|-----------|
| SQZ  | L±1.5          | W±1  | H±1 | P±1.5   | P1  | P2 | P3 | P4  | H1±1 | H2±1 | SQZ                  | RS + SQZ  |
| 5W   | 28(25)         | 10   | 10  | 15(0.5) | 4.2 | 2  | 2  | 1.5 | 25   | 10.5 | 0.1-130              | 131-50K   |
| 7W   | 36             | 10   | 10  | 20      | 4.2 | 2  | 2  | 1.5 | 25   | 10.5 | 0.1-430              | 431-30K   |
| 10W  | 48             | 10   | 10  | 32      | 4.2 | 2  | 2  | 1.5 | 25   | 10.5 | 0.2-470              | 471-30K   |
| 15W  | 48             | 12.5 | 12  | 32      | 4.2 | 2  | 2  | 1.5 | 26   | 10.5 | 1-600                | 601-150K  |
| 20W  | 60             | 15   | 13  | 42      | ?   | 4  | 10 | 3   | 36   | 15.0 | 1-1K                 | 1.1K-150K |
| 25W  | 60             | 15   | 13  | 42      | ?   | 4  | 10 | 3   | 36   | 15.0 | 1-1K                 | 1.1K-150K |
| 30W  | 75             | 19   | 19  | 50      | ?   | 4  | 10 | 3   | 36   | 15.0 | 1-1K                 |           |
| 40W  | 75             | 19   | 19  | 50      | ?   | 4  | 10 | 3   | 36   | 15.0 | 1-1K                 |           |
| 50W  | 90             | 19   | 19  | 65      | ?   | 4  | 10 | 3   | 60   | 30   | 1-1K                 |           |

| Type | Dimension (mm) |     |     | Resistance Range (Ω) |           |
|------|----------------|-----|-----|----------------------|-----------|
| SQM  | H±1.5          | W±1 | S±1 | SQM                  | RS + SQM  |
| 2W   | 20             | 11  | ?   | 0.1-82               | 832-10K   |
| 3W   | 25             | 12  | 3   | 0.1-130              | 1310-50K  |
| 5W   | 25             | 13  | 9   | 0.1-130              | 1310-50K  |
| 7W   | 39             | 13  | 9   | 0.1-430              | 4310-50K  |
| 10W  | 51             | 13  | 9   | 0.1-470              | 4710-75K  |
| 10WS | 35             | 16  | 12  | 0.1-300              | 1610-100K |



| Type | Dimension (mm) |      |       |      |      |       |        |        |  |  | Resistance Range (Ω) |           |
|------|----------------|------|-------|------|------|-------|--------|--------|--|--|----------------------|-----------|
| SOH  | W±1            | H±1  | L±1.5 | P    | H1±1 | D±0.5 | P1±0.2 | P2±0.2 |  |  | SOH                  | RS + SOH  |
| 10W  | 10             | 10   | 48    | 32±1 | 21   | 3     | 2.5    | 1.7    |  |  | 0.5-100              | 101-30K   |
| 15W  | 12.5           | 12   | 48    | 32±1 | 21   | 3     | 2.5    | 1.7    |  |  | 1-600                | 601-150K  |
| 20W  | 14.5           | 13.5 | 60    | 42±1 | 24   | 4     | 3.0    | 2.5    |  |  | 1-1K                 | 1.1K-150K |
| 30W  | 19             | 19   | 75    | 52±2 | 31   | 7.5   |        |        |  |  | 1-2K                 |           |
| 40W  | 19             | 19   | 90    | 67±2 | 31   | 7.5   |        |        |  |  | 1-2K                 |           |

Note: 1. Max Overload Voltage is 2 times of Max Working Voltage.  
2. Too low to high ohmic value can be supplied only case by case.

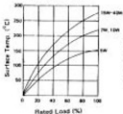


| Type | Dimension (mm) |       | Resistance Range |          |
|------|----------------|-------|------------------|----------|
| SPS  | L±1.5          | H±0.5 | SPS              | RS + SPS |
| 7W   | 48             | 8.5   | 0.1-430          | 431-50K  |
| 10W  | 60             | 20    | 0.1-470          | 471-50K  |

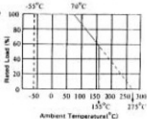
# FIXED WIRE WOUND RESISTORS (CEMENT TYPE)

KOME

RATED LOAD VS.  
SURFACE TEMP.



DERATING CURVE



## ELECTRICAL PERFORMANCE

| Test Items               | Condition                            | Spec.      |
|--------------------------|--------------------------------------|------------|
| Resistance Temp. Coeff.  | -55°C ~ 155°C                        | +300ppm/°C |
| Short Time Over Load     | 10 times of rated wattage for 5 sec. | +2%        |
| Rated Load               | Rated wattage for 30 min.            | +1%        |
| Voltage Withstanding     | 1000V AC 1 min.                      | no change  |
| Insulation Resistance    | 500V megger                          | 1000MΩ     |
| Temp. Cycle              | -30°C ~ 85°C for 5 cycles            | +1%        |
| Load Life                | 70°C on-off cycle 1000 hrs.          | +5%        |
| Moisture-proof Load Life | 40°C 95% RH on-off cycle 1000 hrs.   | +5%        |
| Incombustibility         | 16 times of rated wattage for 5 min. | not flamed |

- Notes:
1. Max Overload Voltage is 2 times of Max Working Voltage.
  2. Too low or too high ohmic value can be supplied only case by case
  3. "RS + SQ" short time over load is 5 times of rated wattage for 5 sec.