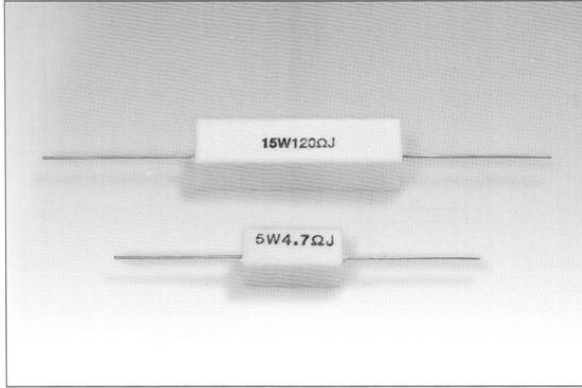




# TECH-MEN ELECTRONICS COMPONENTS

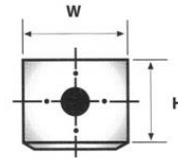
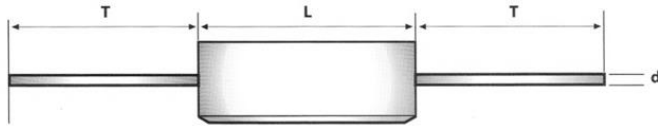
Supply \* Sub Assemblies \* Taping/ Forming Components  
Co. Reg. No: 45730100K

## Cement Resistors



### FEATURES:

- Small volume, vibration resistance, moisture resistance and heat resistance.
- Low noise. The resistance value doesn't change all the year round.
- Excellent electrical characteristics.
- Standard tolerance of 5%.
- Lead free and RoHS compliant part.



### CEMENT RESISTOR (SQP)

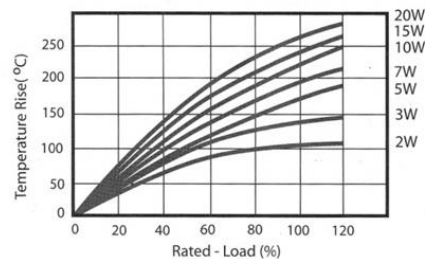
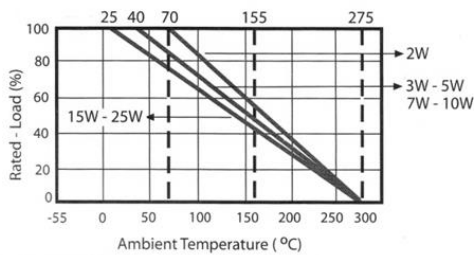
WATTAGE	FINISHED DIMENSION (MM)					RES. VALUES RANGES (Ohm)	
	L ± 1	W ± 1	H ± 1	T ± 3	d ± 0.05	WIRE WOUND	METAL OXIDE RODS
1W	13.20	5.50	5.50	30.00	0.60	0.01 ~ 100	110Ω ~ 100K
2W	18.00	8.00	7.00	32.00	0.78	0.01 ~ 180	200Ω ~ 100K
3W	22.00	8.00	8.00	32.00	0.78	0.02 ~ 680	750Ω ~ 100K
5W	22.00	10.00	9.00	32.00	0.78	0.02 ~ 680	750Ω ~ 100K
7W	35.00	10.00	9.00	33.00	0.78	0.03 ~ 820	910Ω ~ 100K
10W	48.00	10.00	9.00	35.00	0.78	0.05 ~ 2K7	3KΩ ~ 100K
15W	48.00	12.50	11.50	35.00	0.78	0.05 ~ 2K7	3KΩ ~ 100K
20W / 25W	60.00	14.00	14.00	35.00	0.78	0.1 ~ 4K7	5K1Ω ~ 100K

\*Non-Inductive type up to 50Ω only.

### CHARACTERISTICS

TEST ITEMS	CONDITIONS	SPEC.
Short Time Overload	2.5 times RCWW for 5 seconds.	±(2% + 0.05Ω)
Dielectric Withstanding Voltage	V-Block for 60 seconds	±(0.5% + 0.05Ω)
Temperature Coefficient of Resistance	Room Temp. ±100 °C	±300ppm/ °C
Insulation Resistance	In V-Block for 60 seconds	>100MΩ
Solderability	235 °C for 5 ±0.5 seconds	95% min. coverage
Pulse Overload	4 times RCWW 10000 cycles (1sec. on , 25 sec. off)	±(3% + 0.05Ω)
Load Life In Humidity	40 ±2 °C , 90~95% RH at RCWW for 1000 hrs. (1.5 hrs. on , 0.5 hrs. off)	±(5% + 0.05Ω)
Load Life	70 °C at RCWW for 1000 hrs. (1.5 hrs. on , 0.5 hrs. off)	±(5% + 0.05Ω)
Resistance To Soldering Heat	350 °C ±10 °C for 3 ±0.5 seconds	±(1% + 0.05Ω)

\*Rated continuous Working Voltage (RCWW) =  $\sqrt{\text{power rating} \times \text{resistance value}}$

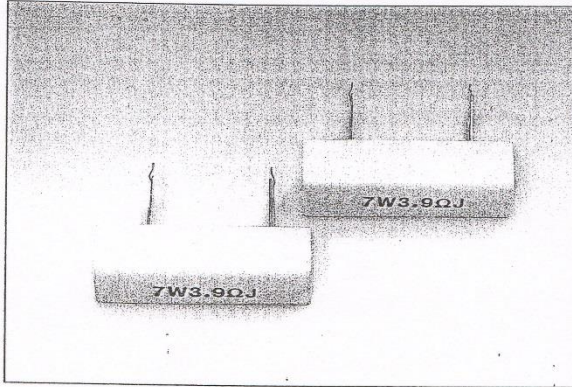




# TECH-MEN ELECTRONICS COMPONENTS

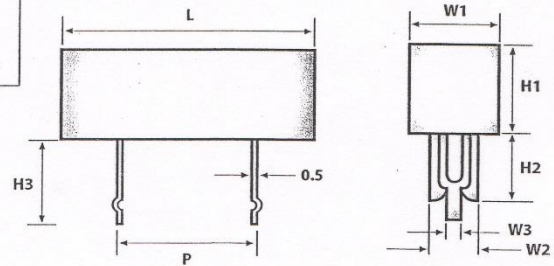
Supply \* Sub Assemblies \* Taping/ Forming Components  
Co. Reg. No: 45730100K

## Cement Resistors



### FEATURES:

- ❑ Space saving stand-off type.
- ❑ Standard tolerance 5%.
- ❑ Completely inflammable.
- ❑ Ability to with stand rigorous load test.
- ❑ Excellent electrical characteristics.
- ❑ Lead free and RoHS compliant part.



## CEMENT RESISTOR (SQZ)

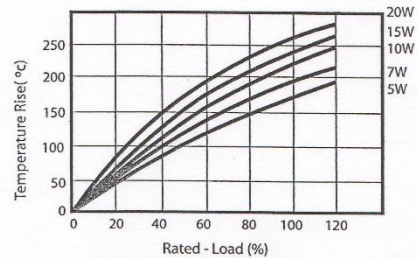
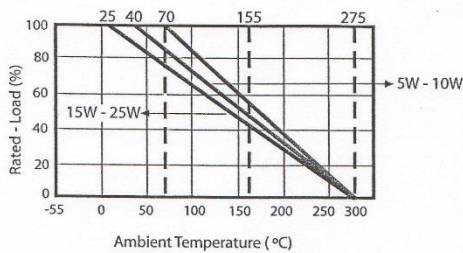
WATTAGE	FINISHED DIMENSION (MM)								RES. VALUES RANGES (Ohm)	
	L ± 2	P ± 1.5	W1 ± 1	W2 ± 0.3	W3 ± 0.3	H1 ± 1	H2 ± 0.5	H3 ± 0.5	WIRE WOUND	METAL OXIDE RODS
5W	27.00	15.00	10.00	5.00	1.50	10.00	9.50	15.00	0.02 ~ 680	750Ω ~ 100K
7W	35.00	20.00	10.00	5.00	1.50	10.00	9.50	15.00	0.03 ~ 820	910Ω ~ 100K
10W	48.00	32.00	10.00	5.00	1.50	10.00	9.50	15.00	0.05 ~ 2K7	3KΩ ~ 100K
15W	48.00	32.00	12.50	10.00	3.00	12.00	15.00	21.00	0.05 ~ 2K7	3KΩ ~ 100K
20W	60.00	42.00	15.00	10.00	3.00	13.00	15.00	21.00	0.1 ~ 4K7	5K1Ω ~ 100K

\*Non-Inductive type up to 50Ω only.

## CHARACTERISTICS

TEST ITEMS	CONDITIONS	SPEC.
Short Time Overload	2.5 times RCWW for 5 seconds.	±(2% + 0.05Ω)
Dielectric Withstanding Voltage	V-Block for 60 seconds	±(0.5% + 0.05Ω)
Temperature Coefficient of Resistance	Room Temp. +100 °C	±300ppm/°C
Insulation Resistance	In V-Block for 60 seconds	>100MΩ
Solderability	235 °C for 5 ± 0.5 seconds	95% min. coverage
Pulse Overload	4 times RCWW 10000 cycles (1sec. on, 25 sec. off)	±(2% + 0.05Ω)
Load Life In Humidity	40 ± 2 °C, 90~95% RH at RCWW for 1000 hrs. (1.5 hrs. on, 0.5 hrs. off)	±(5% + 0.05Ω)
Load Life	70 °C at RCWW for 1000 hrs. (1.5 hrs. on, 0.5 hrs. off)	±(5% + 0.05Ω)
Resistance To Soldering Heat	350 °C ± 10 °C for 3 ± 0.5 seconds	±(1% + 0.05Ω)

\*Rated continuous Working Voltage (RCWW) =  $\sqrt{\text{power rating} \times \text{resistance value}}$



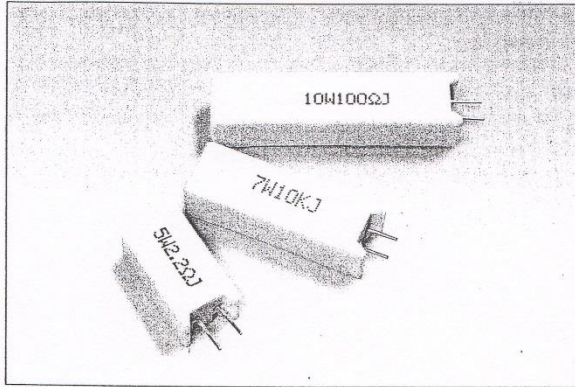




# TECH-MEN ELECTRONICS COMPONENTS

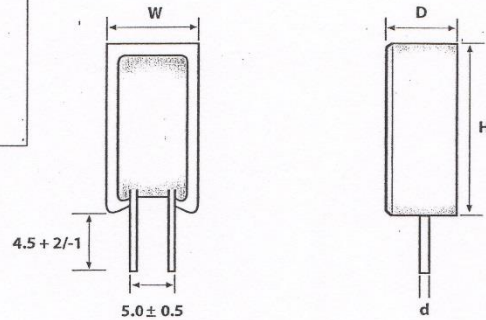
Supply \* Sub Assemblies \* Taping/ Forming Components  
Co. Reg. No: 45730100K

## Cement Resistors



### FEATURES:

- ❑ Space saving stand-off type.
- ❑ Small size, High power capacity.
- ❑ Standard tolerance 5%.
- ❑ Exceptionally Small and Sturdy.
- ❑ Lead free and RoHS compliant part.



## CEMENT RESISTOR (SQM)

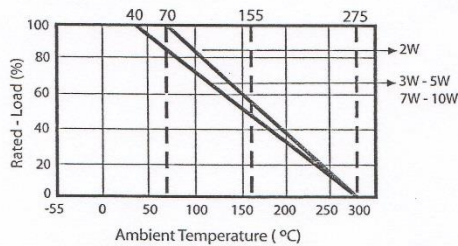
WATTAGE	FINISHED DIMENSION (MM)				RES. VALUES RANGES (Ohm)	
	W ± 1	D ± 1	H ± 1	d ± 0.05	WIRE WOUND	METAL OXIDE RODS
2W	11.00	7.00	20.00	0.78	0.01 ~ 180	200Ω ~ 100K
3W	13.00	8.00	25.00	0.78	0.02 ~ 680	750Ω ~ 100K
5W	13.00	9.00	25.00	0.78	0.02 ~ 680	750Ω ~ 100K
7W	13.00	10.00	39.00	0.78	0.03 ~ 820	910Ω ~ 100K
10W	13.00	10.00	51.00	0.78	0.05 ~ 2K7	3KΩ ~ 100K

\*Non-inductive type up to 50Ω only.

## CHARACTERISTICS

TEST ITEMS	CONDITIONS	SPEC.
Short Time Overload	2.5 times RCWW for 5 seconds.	±(2% + 0.05Ω)
Dielectric Withstanding Voltage	V-Block for 60 seconds	±(0.5% + 0.05Ω)
Temperature Coefficient of Resistance	Room Temp. +100 °C	±300ppm/ °C
Insulation Resistance	In V-Block for 60 seconds	> 100MΩ
Solderability	235 °C for 5 ± 0.5 seconds	95% min. coverage
Pulse Overload	4 times RCWW 10000 cycles (1sec. on, 25 sec. off)	±(2% + 0.05Ω)
Load Life In Humidity	40 ± 2 °C, 90~95% RH at RCWW for 1000 hrs. (1.5 hrs. on, 0.5 hrs. off)	±(5% + 0.05Ω)
Load Life	70 °C at RCWW for 1000 hrs. (1.5 hrs. on, 0.5 hrs. off)	±(5% + 0.05Ω)
Resistance To Soldering Heat	350 °C ± 10 °C for 3 ± 0.5 seconds	±(1% + 0.05Ω)

\*Rated continuous Working Voltage (RCWW) =  $\sqrt{\text{power rating} \times \text{resistance value}}$



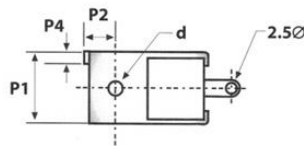
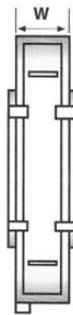
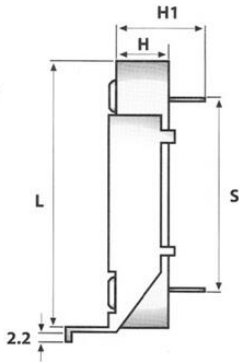
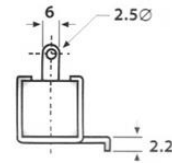


## Cement Resistors

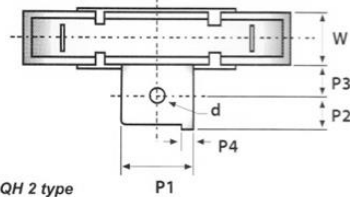
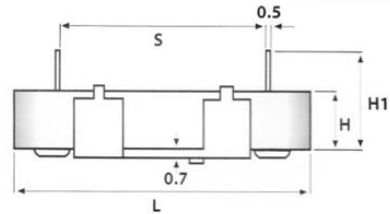


### FEATURES:

- Standard tolerance 5%, 10%.
- Completely inflammable.
- Rectangular, clamp mounting Type.
- Lead free and RoHS compliant part.



SQH 1 type



SQH 2 type

## CEMENT RESISTOR (SQH)

WATTAGE	FINISHED DIMENSION (MM)									
	L	H	W	S	H1	P1	P2	P3	P4	d
10W	48.0 ± 1.5	10.5 ± 1.0	10.5 ± 1	33.0 ± 2	19.5 ± 1.0	11.0 ± 0.2	6.0	8.0	3.0	3.8
15W	48.0 ± 1.5	12.5 ± 1.0	12.5 ± 1	33.0 ± 2	20.5 ± 1.0	11.0 ± 0.2	6.0	8.0	3.0	3.8
20W	63.5 ± 2.0	12.5 ± 1.0	12.5 ± 1	48.0 ± 2	20.5 ± 1.0	11.0 ± 0.2	6.0	8.0	3.0	3.8
25W	63.5 ± 2.0	16.0 ± 1.0	16.0 ± 1	46.0 ± 2	28.0 ± 1.5	11.0 ± 0.2	6.0	10.0	3.0	3.8
30W	70.0 ± 2.0	19.0 ± 1.0	18.0 ± 2.0	56.0 ± 2	28.0 ± 1.5	18.0 ± 0.2	8.0	10.0	3.0	4.2
40W	90.0 ± 3.0	19.0 ± 1.0	18.0 ± 2.0	71.0 ± 2	28.0 ± 1.5	18.0 ± 0.2	8.0	10.0	3.0	4.2

