Ceramic Housed Cement Resistors

Cement Resistors - SQP, SQM, SQT, SQH, SQZ Series

Low-cost Ceramic Cased Resistors Suit High Volumes and High Temperatures

Preview

Token electronics offers commercial grade ceramic-housed power wirewound and film resistors. For medium to high rated power (2W...50W), SQ resistors provide full electrical insulation mounted in a ceramic case.

Axial, radial, vertical styles and several mounting techniques of wire leads or quick disconnects are available from Token's SQP, SQM, SQZ, and SQH.

The SQ series power resistors feature ideal specifications for high volume and high-temperature applications. Frequently used in power supplies, motor controllers, and automotive applications, these products can be custom tailored to individual needs.

With the extended resistance range and high-temperature rating, the resistors can be specified for operation in harsh environments. The SQ series wirewound resistors feature a resistance range from 0.1Ω to 3KΩ, while the SQ series power film resistors have a resistance range of 80Ω to 150KΩ.

Standard tolerances for both devices are to ±5%, with TCRs of ±300ppm/°C and above. Token is equipped to design and produce custom components to meet many design and reliability demands. Contact us with your specific needs.

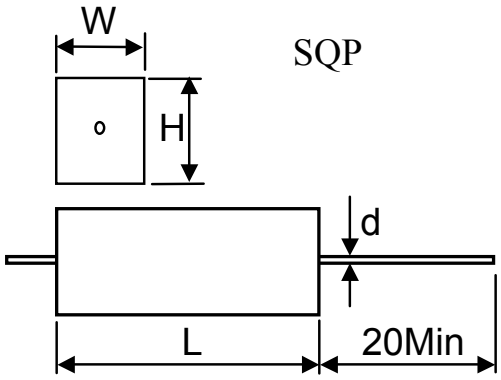
Applications

- Power supplies
- Voltage dividers
- Motor controllers
- Automotive applications
- Power electronics circuits

Features

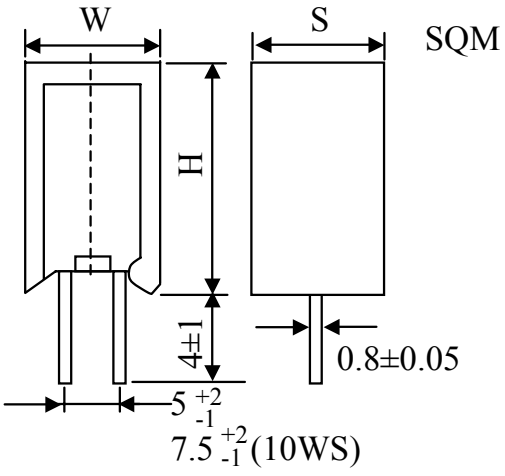
- Low cost, space saving
- RoHS compliant with 100% lead free
- Direct mounting on printed circuit board
- Circuit board lock-in mounting tabs available
- High performance for power required applications
- High power to size ratio, Special inorganic potting compound
- Ceramic case provide high thermal conductivity in a fireproof package

SQP - Dimensions



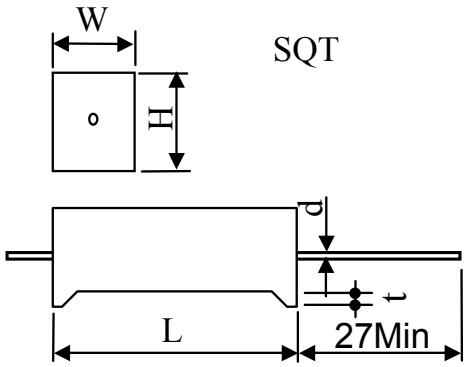
Type	Dimension (mm)				Resistance Range (Ω)	
SQP	W±1	H±1	L±1.5	d±0.05	SQP	RS+SQP
2W	7	7	18	0.5~0.6	0.1~82	
3W	8	8	22	0.7~0.8	0.1~180	181~33K
5W	10	9	22	0.7~0.8	0.1~180	181~50K
7W	10	9	35	0.7~0.8	0.1~430	431~50K
10W	10	9	48	0.7~0.8	0.1~470	471~50K
15W	12.5	11.5	48	0.7~0.8	0.5~600	601~150K
20W-25W	14	13.5	60	0.7~0.8	0.8~1K	1.1~150K

SQM - Dimensions



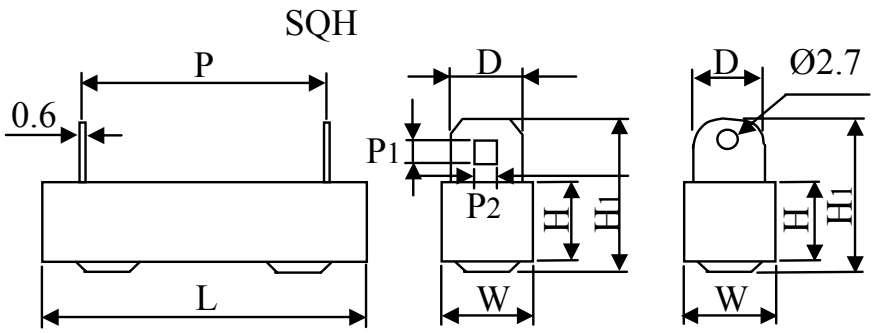
Type	Dimension (mm)			Resistance Range (Ω)	
SQM	H±1.5	W±1	S±1	SQM	RS+SQM
2W	20	12	8	0.1-8.0	81-50K
3W	25	12	8	0.1-180	181-50K
5W	25	13	9	0.1-180	181-50K
7W	39	13	9	0.1-430	431-47K
10W	51	13	12	0.1-470	471-47K
10WS	35	16	12	0.1-430	431-47K

SQT - Dimensions



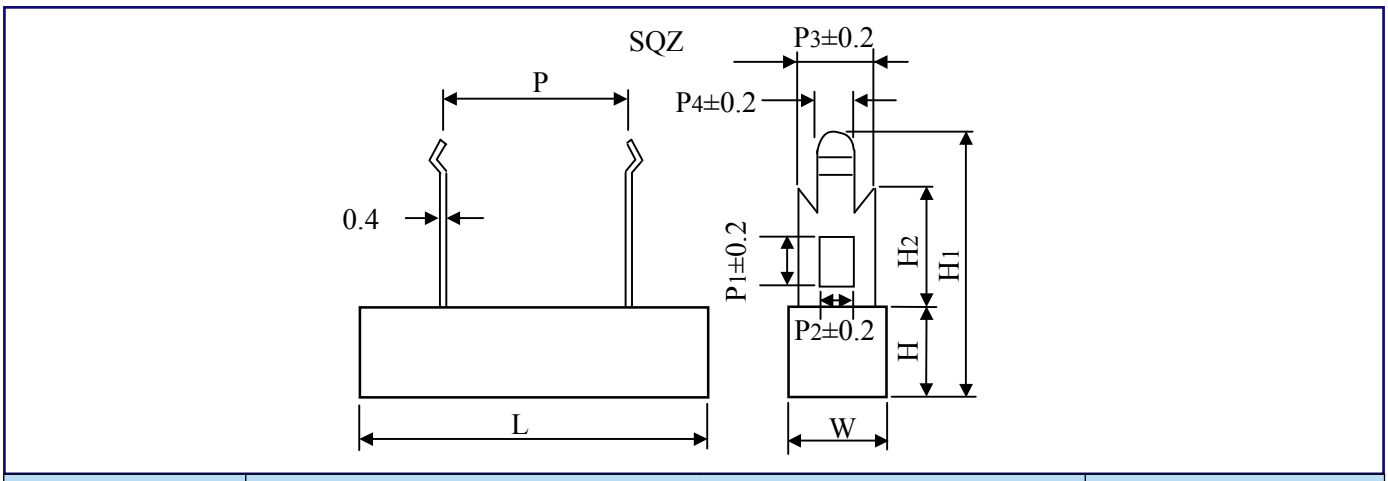
Type	Dimension (mm)				Resistance Range (Ω)	
SQT	H±1.5	W±1	L±1	t±1	SQT	RS+SQM
3W	9	10	22	1.5	0.1-180	181-50K
5W	9	10	22	1.5	0.1-180	181-50K
7W	9	10	35	3.0	0.1-430	431-47K
10W	9	10	48	3.0	0.1-470	471-47K

SQH - Dimensions



Type	Dimension (mm)								Resistance Range (Ω)		MaxWorkingVoltage
SQH	W±1	H±1	L±1.5	P±1	H1±1	D±0.5	P1±0.2	P2±0.2	SQH	RS+SQH	
10W	10	9	48	32	21	5	2.5	2	0.1~500	500~50K	500V
15W	12.5	11.5	48	32	21	5	2.5	2	1~1K	1K~150K	600V
20W	14.5	13.5	60	43	24	6	3.0	2.5	1~2K	2K~150K	700V
30W	19	19	75	56	29	6	3.0	2.5	1~2K		700V
40W	19	19	90	67	29	6	3.0	2.5	2~3K		700V
50W	19	19	90	67	29	6	3.0	2.5	2~3K		700V

SQZ - Dimensions



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	25(28)	10	10	9.5(15)	4.2	2	5	1.5	25	10.5	0.1-130	131-50K
7W	36	10	10	20	4.2	2	5	1.5	25	10.5	0.1-430	431-50K
10W	48	10	10	32	4.2	2	5	1.5	25	10.5	0.2-470	471-50K
15W	48	12.5	12	32	4.2	2	5	1.5	26	10.5	1-600	601-150K
20.25W	60	15	13	42	7	6	10	2.7	36	15.0	1-1K	1.1K-150K

SQP, SQM, SQT, SQH, SQZ - Electrical Performance

TEST ITEMS	CONDITION	SPEC.
Resistance Temp Coeff.	-30°C~ 200°C	±300ppm / °C
Short Time Over Load	2.5 times of rated wattage for 5 sec.	±2 %
Rated Load	Rated wattage for 30 min.	±1 %
Voltage Withstanding	800 v AC 1 min.	no charge
Temp. Cycle	-30°C~ 85°Cfor 5 cycles	±1 %
Load Life	70°Con-off cycle 1000hrs.	±5 %
Moisture-proof Load Life	40°C95% RH on-off cycle 500 hrs.	±5 %
Incombustibility	16 times of rated wattage for 5 min.	not flammed

SQP, SQM, SQT, SQH, SQZ - Material Specifications

- Core :
  High purity grade alumina ceramic rod.

- Terminals :
  Tin/lead plated (Lead (Pb)-free will be 100 % tin).

- Body :
  Steatite ceramic case with inorganic potting compound.

- Element :
  Copper-nickel alloy, nickel-chrome alloy, resistive wirewound or power film depending on resistance value.

How to Order

SQP	5W	100R	J	Bulk
❶	❷	❸	❹	❺

❶ Part Number: SQP, SQM, SQT, SQH, SQZ

❷ Rated Power (W)

❸ Resistance Value (Ω)

Code	Resistance Value
0R1	0.1Ω
100R	100Ω
1K	1KΩ
100K	100KΩ

❹ Resistance Tolerance (%)

Code	Resistance Value
J	±5%

❺ Package

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