



Features:

- Self-extinguishing
- Excellent flame and moisture resistance
- Extremely small, sturdy and mechanically safe
- Non-inductive types available for all cement types
- Availability of very low or very high ohmic values on wirewound and power film types

Explanation of Part Numbers:

SQM	5W	102	J
1	2	3	4

1 Style:

SQ	SQM	SPS	SQZC	SQZD	SQHG
SQT	SQMA	SQZA	SQVA	SQU	
SQC	SQMB	SQZB	SQVB	TFM	

2 Wattage:

1 w = 1 watt	5 w = 5 watt	15 w = 15 watt
2 w = 2 watt	7 w = 7 watt	20 w = 20 watt
3 w = 3 watt	10 w = 10 watt	25 w = 25 watt

3 Nominal Resistance Value:

E24 Series (5% Tolerance)

The first two digits are significant figures of resistance and the third digit denotes the number of zeros (decimal point is expressed by the letter "R").

i.e. 102 = 1k

1R2 = 1.2

E96 Series (1% Tolerance)

The first three digits are significant figures of resistance and the fourth digit denotes the number of zeros.

i.e. 1001 = 1k

10R0 = 10

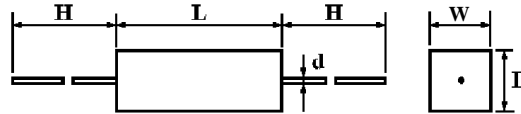
4 Tolerance:

F = 1% J = 5%

G = 2% K = 10%

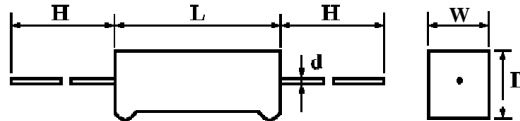
Cement Power Resistors

(1) SQ Type



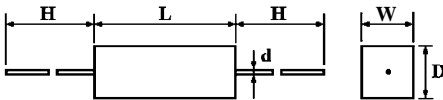
Style	Dimension (mm)					Resistance Range	
	W±1	D±1	L±1	d ^{+0.02} _{-0.05}	H±5	Wirewound	Power Film
SQ 2W	7	7	18	0.6	28	0.1 ~27	28 ~33K
SQ 3W	8	8	22	0.7	35	0.1 ~39	40 ~56K
SQ 5W	10	9	22	0.7	35	0.1 ~47	48 ~100K
SQ 7W	10	9	35	0.8	35	.01 ~680	681 ~200K
SQ 10W	10	9	49	0.8	35	0.1 ~910K	911 ~200K
SQ 15W	12.5	11.5	49	0.8	35	1 ~1K	
SQ 20W	14.5	13.5	60	0.8	35	2 ~1.2K	
SQ 25W	14.5	13.5	64	0.8	35	2 ~1.2K	

(2) SQT Type



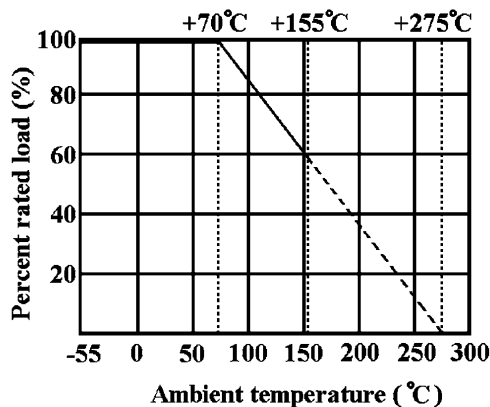
Style	Dimension (mm)					Resistance Range	
	W±1	D±1	L±1	d ^{+0.02} _{-0.05}	H±5	Wirewound	Power Film
SQT 2W	7	7	18	0.7	28	0.1 ~27	28 ~33K
SQT 5W	10	9	22	0.8	35	0.1 ~47	48 ~100K
SQT 7W	10	9	35	0.8	35	.01 ~680	681 ~200K
SQT 10W	10	9	49	0.8	35	0.1 ~910K	911 ~200K

(3) SQC Type

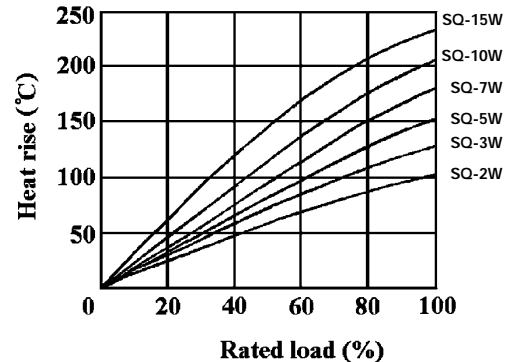


Style	Dimension (mm)					Resistance Range	
	W±1	D±1	L±1	d ^{+0.02} _{-0.05}	H±5	Wirewound	Power Film
SQC 3W	6	6	20	0.7	28	1 -27	28 -33K
SQC 5W	6	6	25	0.8	35	1 -200	201 -100K
SQC 7W	9	9	25	0.8	35	1 -200	201 -100K

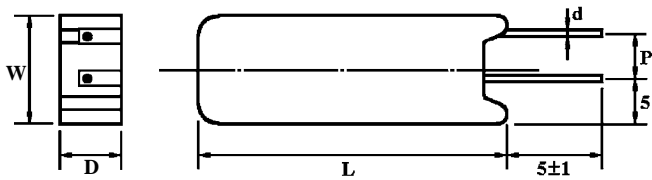
Derating Curve



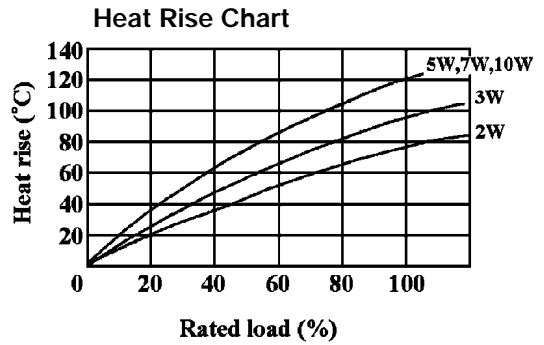
Heat Rise Chart



(4) SQM Type

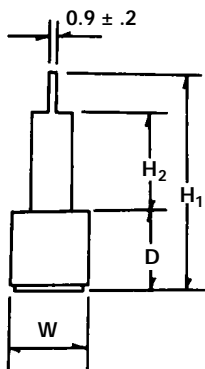


*2W, 3W, 5W, SQMA 5W, SQMA 10W, SQMB 7W:
Leads centered

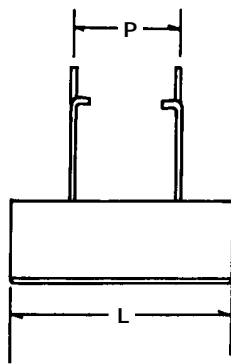


Style	Dimension (mm)					Resistance Range	
	$W \pm 1$	$D \pm 1$	$L \pm 1$	$\phi d \begin{smallmatrix} +0.02 \\ -0.05 \end{smallmatrix}$	$P \pm 1$	Wirewound	Power Film
SQM 2W	11.5	7.5	20	0.7	5	0.1 -27	28 -33K
SQM 3W	12.5	8.5	25	0.7	5	0.1 -39	40 -56K
SQM 5W	12.5	9	25	0.8	5	0.1 -47	48 -100K
SQM 7W	12.5	9	38	0.8	5	0.1 -680	681 -200K
SQM 10W	12.5	9	50	0.8	5	0.1 -910	911 -200K
SQMA 5W	12.5	9	25	0.8	7.5	0.1 -47	48 -100K
SQMA 10W	16	12	35	0.8	7.5	0.1 -560	561 -100K
SQMB 7W	12.5	9	38	0.8	5	0.1 -680	681 -200K0

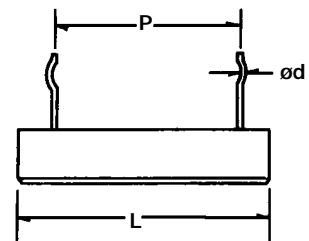
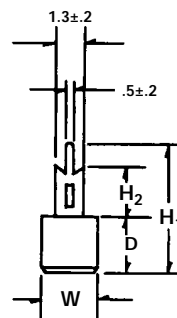
SQMA Type



ød



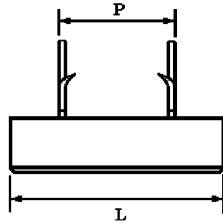
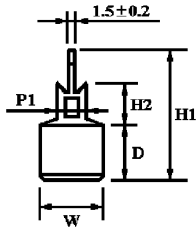
SQMB Type



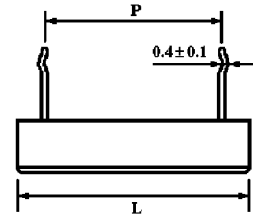
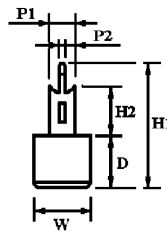


Cement Power Resistors

(5) SQVA Type



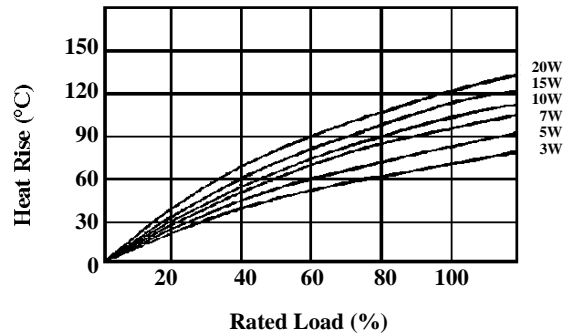
(6) SQVB Type



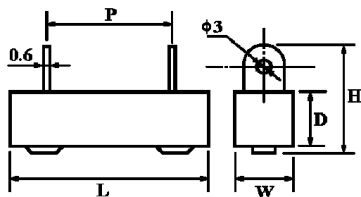
Style	Dimension (mm) ± 1								Resistance Range	
	W	D	L	P	P ₁	H ₁	H ₂	*P ₂ ±0.2	Wirewound	Power Film
SQV (x) 3W	10.0	9.0	22	9.5	5	25.0	10.5	1.3	0.1 ~47	48 ~33K
SQV (x) 5W	10.0	9.0	27/25	15/9.5	5	25.0	10.5	1.3	0.1 ~120	121 ~56K
SQV (x) 7W	10.0	9.0	35	22	5	25.0	10.5	1.3	0.1 ~560	561 ~100K
SQV (x) 10W	10.0	9.0	48	35/32	5	25.0	10.5	1.3	1 ~820	821 ~100K
SQV (x) 15W	12.5	11.5	48	32	5	27.5	10.5	1.3	1 ~1K	
SQV (x) 20W	12.5	13.5	63	45	5	29.5	10.5	1.3	1 ~1.2K	

* Replace (x) with either "A" or "B" style.

Heat Rise Chart (SQVx)



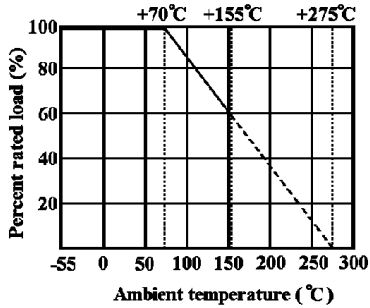
(7) SQU Type



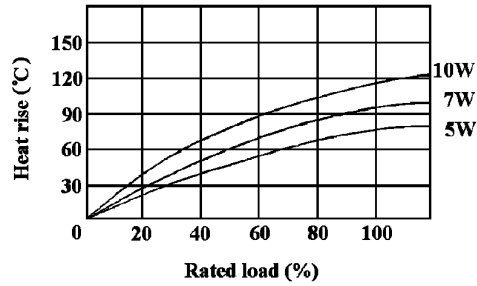
Style	Dimension (mm) ± 1					Resistance Range	
	W	D	L	P	H	Wirewound	Power Film
SQU 10W	10.0	9	48	32	18	1 ~820	821 ~100K
SQU 15W	12.5	11.5	48	32	21	1 ~1K	821 ~100K
SQU 20W	12.5	13.5	63	45	21	2 ~1.2K	821 ~100K
SQU 30W	19.0	19	75	56	32	3 ~1.5K	821 ~100K
SQU 40W	19.0	19	90	70	32	6 ~1.5K	821 ~100K

(8) SPS Type

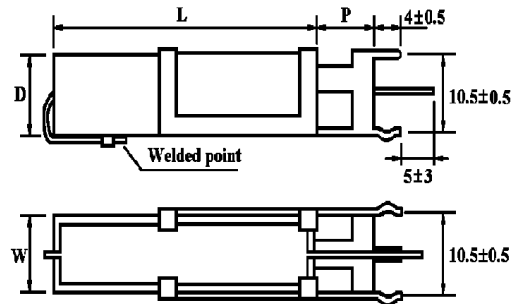
Derating Curve



Heat Rise Chart

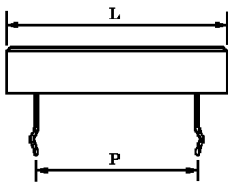


Style	Dimension (mm) ±1				Resistance Range	
	W	D	L	P	Wirewound	Power Film
SPS 5W	10	9	22	5	0.1 ~47	48 ~100K
SPS 7W	10	9	35	10	0.1 ~680	681 ~200K
SPS 10W	10	9	49	10	0.1 ~910	911 ~200K
SPS 15W	12.5	11.5	49	11	1 ~1K	



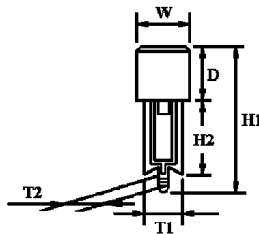
(9) SQZA, SQZB, SQZC, SQZD Type

SQZA, SQZB, SQZC, SQZD

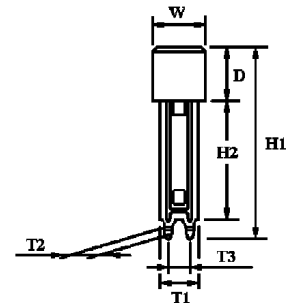


*** Physical Specifications**

SQZA, SQZB



SQZC, SQZD



Recommended Hole

Power Rating	Dimension (mm)		P
	SQZA, SQZB	SQZC, SQZD	
5W			15
7W			22
10W			35
15W			32
20W			45



Cement Power Resistors

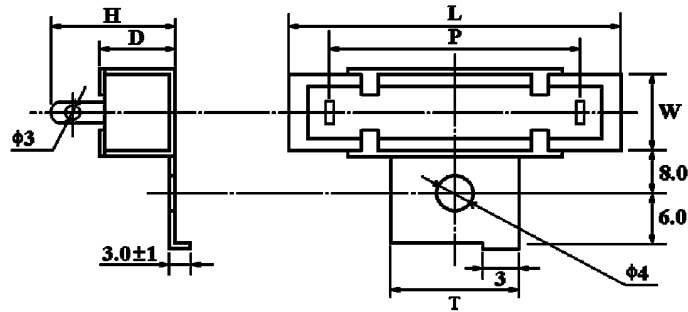
Dimension

Type	Power Rating	Dimension (mm)									Resistance Range	
		W±1	D±1	L	P±1.5	T ₁ ±1	T ₁ ±0.2	T ₂ ±0.5	H ₁ ⁺² ₋₁	H ₂ ⁺² ₋₁	Wirewound	Power Film
SQZA	5W	10	9	25±1	9.5	7	1.6		24	10	0.1 ~47	121 ~56K
				27±1	15							
SQZB		10	9	27±1	15	7	1.6		39	25		
SQZC		10	9	27±1	*15	7	1.5	3.5	36	22		
SQZD	10	9	27±1	15	7	1.5	3.5	24	10			
SQZA	7W	10	9	35±1	22	7	1.6		24	10	0.1 ~560	561 ~100K
				35±1	22							
SQZB		10	9	35±1	22	7	1.6		39	25		
SQZC		10	9	35±1	*22	7	1.5	3.5	36	22		
SQZD	10	9	35±1	22	7	1.5	3.5	24	10			
SQZA	10W	10	9	48±1.5	32/35	7	1.6		24	10	1 ~820	821 ~100K
				48±1.5	32/35							
SQZB		10	9	48±1.5	32/35	7	1.6		39	25		
SQZC		10	9	48±1.5	*32/*35	7	1.5	3.5	36	22		
SQZD	10	9	48±1.5	32.35	9	1.5	3.5	24	10			
SQZA	15W	12.5	11.5	48±1.5	32	10	3		35	15	1 ~1K	
				48±1.5	32							
SQZB		12.5	11.5	48±1.5	32	10	3		47	30		
SQZC	12.5	11.5	48±1.5	*32	10	2	5	47	30			
SQZA	20W	12.5	13.5	63±1.5	45	10	3		35	15	2 ~1.2K	
				63±1.5	45							
SQZB		12.5	13.5	63±1.5	45	10	3		47	30		
SQZC	12.5	13.5	63±1.5	*45	10	2	5	47	30			

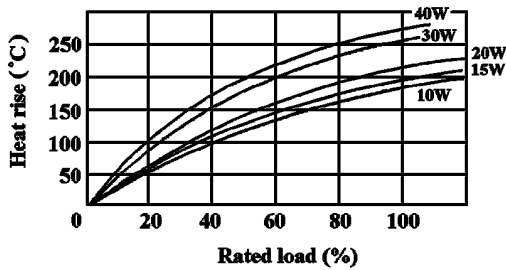
* SQZC Type Pitch Tolerance = -2~+6



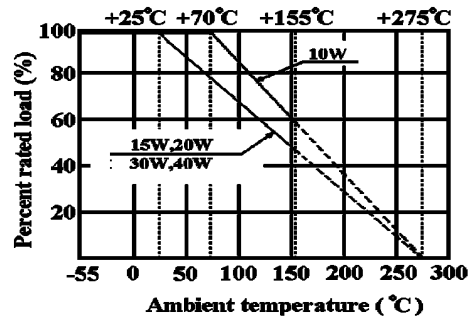
(10) SQHG Type



Heat Rise Chart (SQHG)



Derating Curve



Style	Dimension (mm) ± 1						Resistance Range	
	W	D	L	P	H	T	Wirewound	Power Film
SQHG 10W	10.0	9	48	32	18	12	1 ~820	821 ~100K
SQHG 15W	12.5	11.5	48	32	21	12	1 ~1K	821 ~100K
SQHG 20W	12.5	13.5	63	45	21	12	2 ~1.2K	821 ~100K
SQHG 30W	19.0	19	75	56	32	18	3 ~1.5K	821 ~100K
SQHG 40W	19.0	19	90	70	32	18	6 ~1.5K	821 ~100K

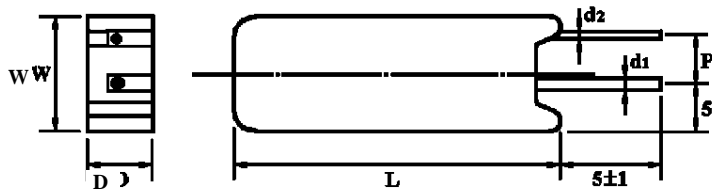


Cement Thermal Fusible Resistors

Features:

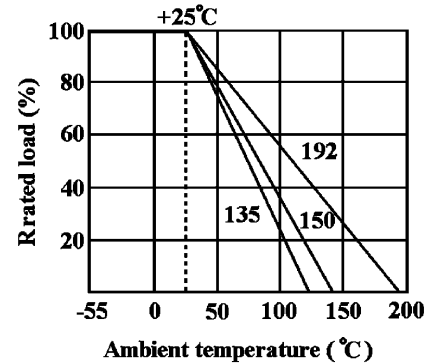
- Self Extinguishing
- Extremely small and mechanically safe
- Excellent flame and moisture resistance
- Provides outstanding feature against surges
- Very low or Very high ohmic values available upon request

Dimension



* TFM3, TFM5, TFM10C: Leads centered

Derating Curve



Style	Dimension (mm)					
	D±1	L±1	d1	d2 ^{+0.02} _{-0.05}	P±1	W±1
TFM 3	8.5	25	0.6	0.7	5.0	12.5
TFM 5	9.0	25	0.6	0.8	5.0	12.5
TFM 7	9.0	38	0.6	0.8	5.0	12.5
TFM 10C	12	35	1.0	0.8	5.0	16.0

Rating

Style	Rated Temp.	Cut-Off Temp.	Power Rating	Current Rating	Voltage Rating	Resistance Range	Tolerance
TFM 3A	135°C	130°C±4°C	1.5W	2A	250V	1 -100	J=5% K=10%
TFM 3B	150°C	145°C±4°C	2.0W				
TFM 5A	135°C	130°C±4°C	1.6W				
TFM 5B	150°C	145°C±4°C	2.1W				
TFM 7A	135°C	130°C±4°C	2.2W				
TFM 7B	150°C	145°C±4°C	2.7W				
TFM 10C	192°C	188°C±3/1°C	3.5W	10A	250V	1 -200	

