

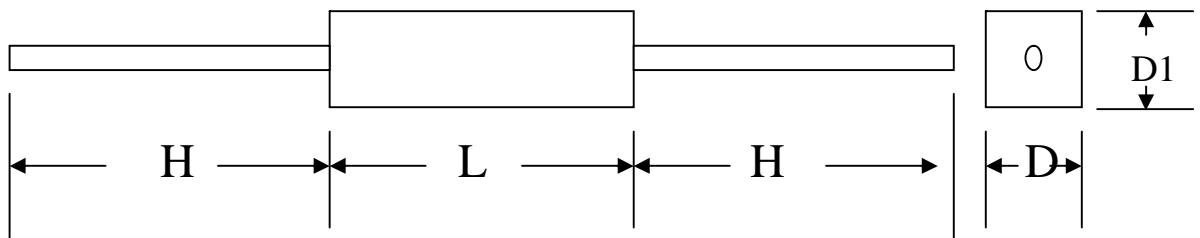
# Cement Resistor

## SQP (STANDARD TYPE)



### FEATURE

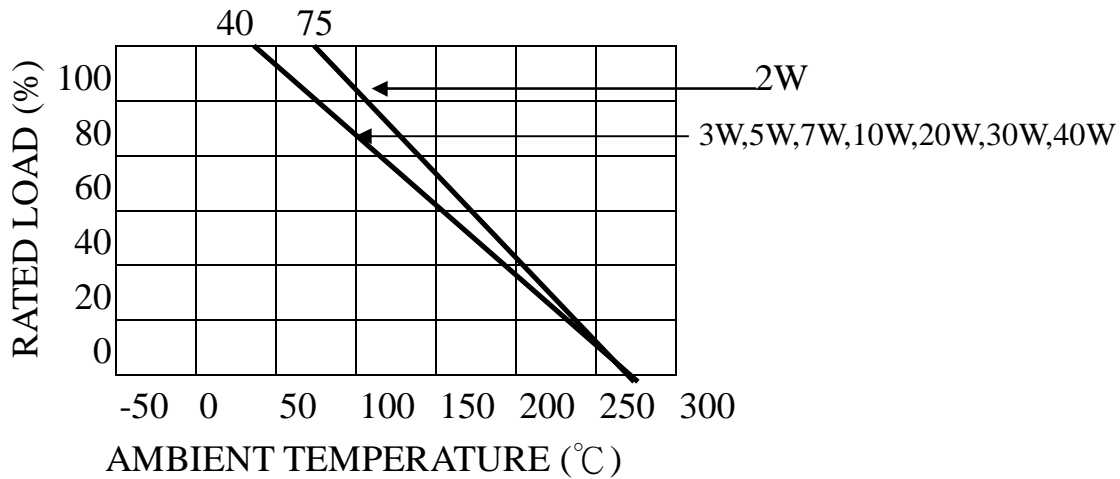
- I HEAT AND FLAME RESISTANCE
- I COMPLETELY INSULANT CHARACTER SUITABLE FOR PRINTED CIRCUIT BOARD.
- I FOR HIGH RESISTANCE VALUE, THE WINDING CORE WILL BE REPLACED BY METAL OXIDE FILM CUTTING CORE (RS TYPE).
- I NON-INDUCTIVE TYPE ARE AVAILABLE ON REQUEST.
- I TOLERANCE :  $\pm 5\%$   $\pm 10\%$ .



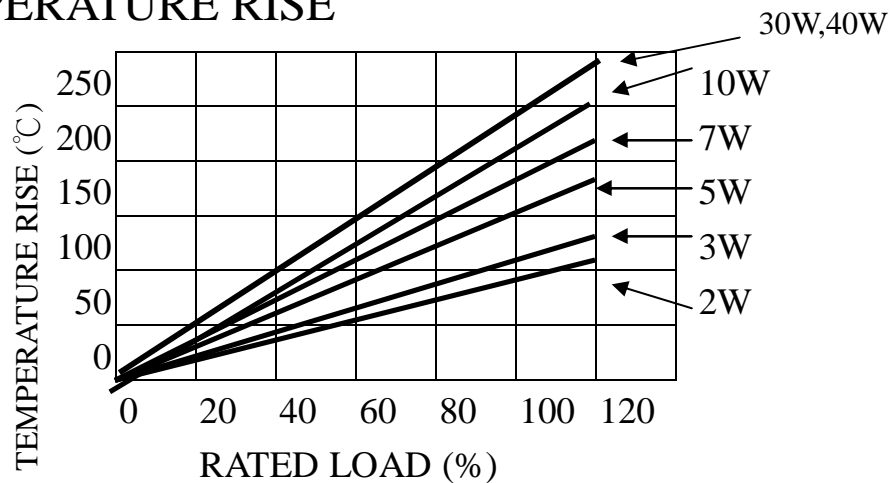
SQP	DIMENSION(mm)					Value Range		Max working voltage
	L	H	D	D1	d	Wire wound	Metal oxide	
2W	18.0	32.0 $\pm 3$	7.0	7.0	0.65 $\pm$ 0.03	0.1 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~20K	150V
3W	22.0	32.0 $\pm 3$	8.0	8.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~33K	300V
4W	20.0	32.0 $\pm 3$	6.5	6.5	0.8 $\pm$ 0.03	0.02 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~33K	300V
5W	22.0	32.0 $\pm 3$	9.5	9.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~50K	350V
7W	35.0	32.0 $\pm 3$	9.5	9.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~50K	500V
10W	48.0	32.0 $\pm 3$	9.5	9.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~50K	500V
15W	48.0	32.0 $\pm 3$	12.5	12.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~150K	500V
20W	60.0	32.0 $\pm 3$	14.0	13.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~150K	500V
25W	60.0	32.0 $\pm 3$	14.0	13.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~150K	1000V
30W	77.0	32.0 $\pm 3$	18.0	17.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~500 $\Omega$	100 $\Omega$ ~150K	1000V
40W	90.0	32.0 $\pm 3$	19.0	18.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~500 $\Omega$	100 $\Omega$ ~150K	1000V
50W	90.0	32.0 $\pm 3$	19.0	18.0	0.8 $\pm$ 0.03	0.1 $\Omega$ ~500 $\Omega$	100 $\Omega$ ~150K	1000V

1. Resistance Range for standard resistance , below or over this resistance on request.
2. Non-inductive type up 20 $\Omega$  only.

## DERATING CURVE



## TEMPERATURE RISE



## PERFORMANCE

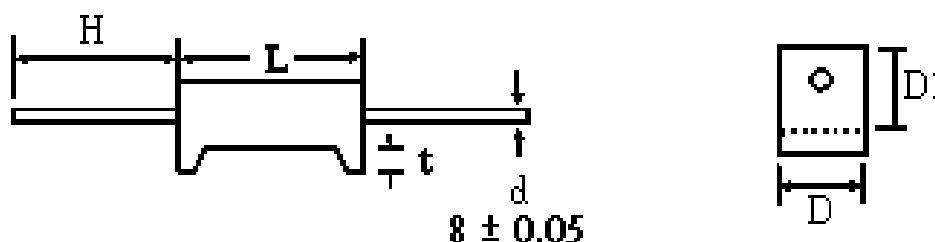
TEMPERATURE COEFFICIENT	±300 PPM/°C
INSULATION RESISTANCE	> 100MΩ
LOAD LIFE (1,000HOURS)	±5%+0.05 Ω
SHORT-TIME OVERLOAD	±2%+0.05 Ω
DIELECTRIC WITHSTANDING VOLT	±2%+0.05 Ω
MOISTURE RESISTANCE	±5%+0.05 Ω
SHOCK AND VIBRATION	±1%+0.05 Ω
EFFECT OF SOLDERING	±2%+0.05 Ω

## SQT (STANDARD TYPE)



### FEATURE

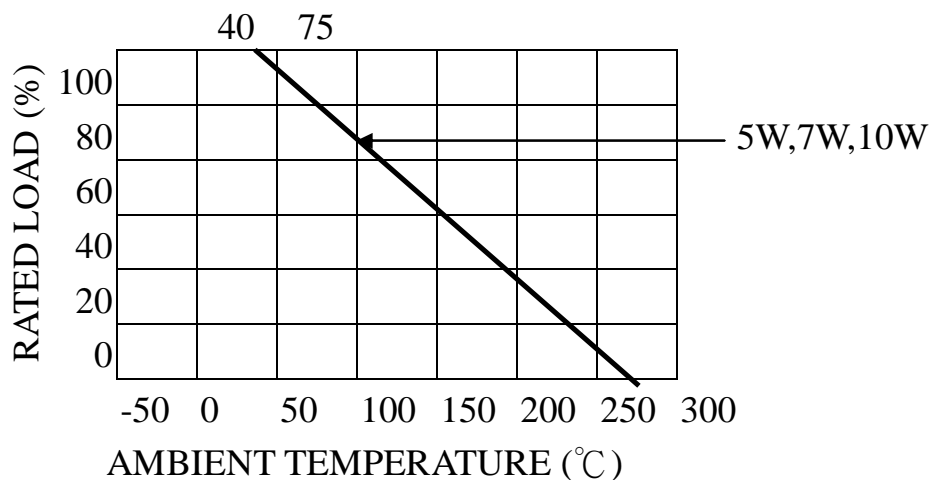
- I HEAT AND FLAME RESISTANCE
- I COMPLETELY INSULANT CHARACTER SUITABLE FOR PRINTED CIRCUIT BOARD.
- I FOR HIGH RESISTANCE VALUE, THE WINDING CORE WILL BE REPLACED BY METAL OXIDE FILM CUTTING CORE (RS TYPE).
- I NON-INDUCTIVE TYPE ARE AVAILABLE ON REQUEST.
- I TOLERANCE :  $\pm 5\%$   $\pm 10\%$ .



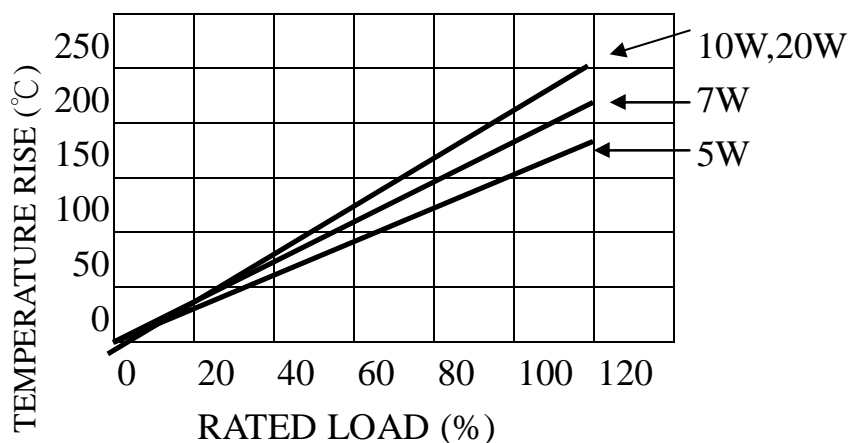
SQT	DIMENSION(mm)					Value Range		Max working voltage
	L	H	D	D1	t	Wire wound	Metal oxide	
5W	22.0	27.0 $\pm 3$	10.0	9.0	1.5	0.1 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~50K	350V
7W	35.0	27.0 $\pm 3$	10.0	9.0	3.0	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	500V
10W	48.0	27.0 $\pm 3$	10.0	9.0	3.0	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	750V
15W	48.0	27.0 $\pm 3$	12.5	12.5	3.0	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	750V
20W	60.0	27.0 $\pm 3$	13.0	14.0	5.0	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	750V
25W	60.0	27.0 $\pm 3$	13.0	14.0	5.0	0.1 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	750V

1. Resistance Range for standard resistance , below or over this resistance on request.
2. Non-inductive type up 50  $\Omega$  only.

## DERATING CURVE



## TEMPERATURE RISE



## PERFORMANCE

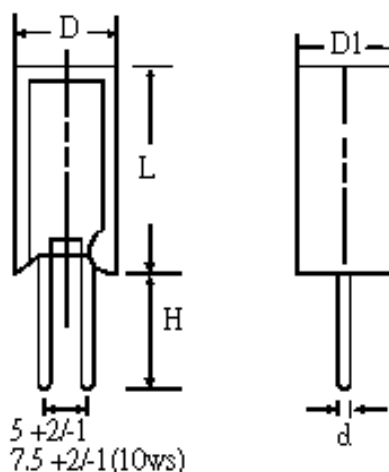
TEMPERATURE COEFFICIENT	$\pm 300$ PPM/°C
INSULATION RESISTANCE	$> 100M \Omega$
LOAD LIFE (1,000HOURS)	$\pm 5\% + 0.05 \Omega$
SHORT-TIME OVERLOAD	$\pm 2\% + 0.05 \Omega$
DIELECTRIC WITHSTANDING VOLT	$\pm 2\% + 0.05 \Omega$
MOISTURE RESISTANCE	$\pm 5\% + 0.05 \Omega$
SHOCK AND VIBRATION	$\pm 1\% + 0.05 \Omega$
EFFECT OF SOLDERING	$\pm 2\% + 0.05 \Omega$

## SQM (RADIL TYPE)



### FEATURE

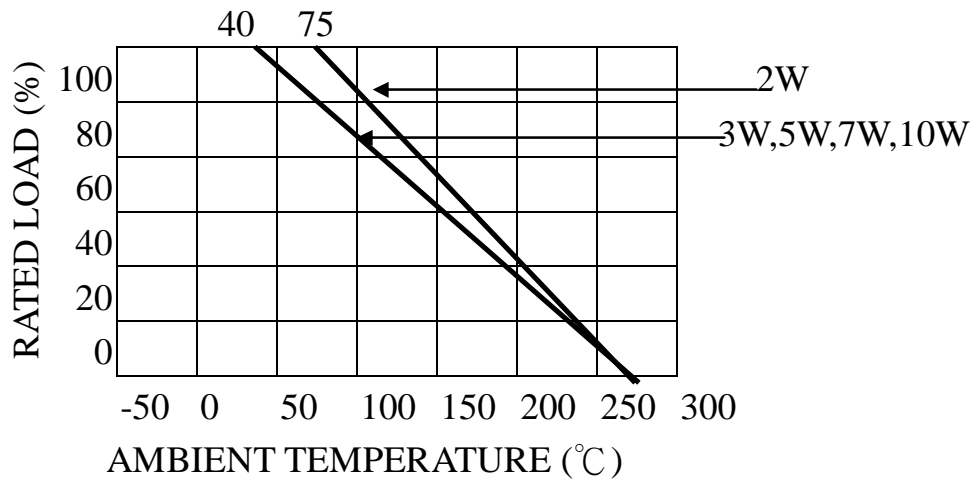
- I HEAT AND FLAME RESISTANCE
- I COMPLETELY INSULANT CHARACTER SUITABLE FOR PRINTED CIRCUIT BOARD.
- I FOR HIGH RESISTANCE VALUE, THE WINDING CORE WILL BE REPLACED BY METAL OXIDE FILM CUTTING CORE (RS TYPE).
- I NON-INDUCTIVE TYPE ARE AVAILABLE ON REQUEST.
- I TOLERANCE :  $\pm 5\%$   $\pm 10\%$ .



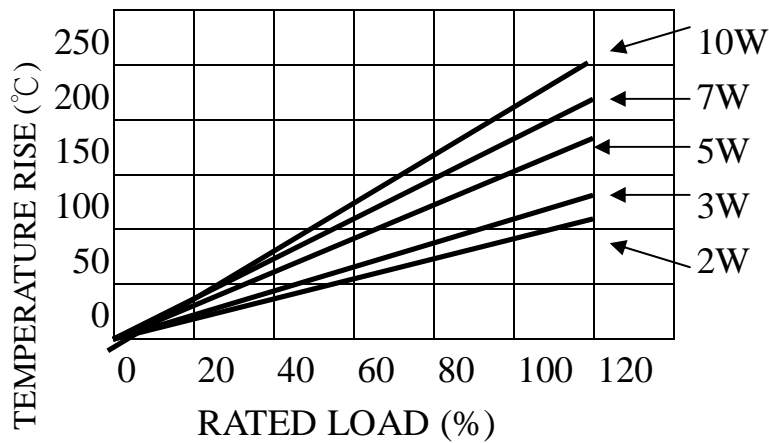
SQM	DIMENSION(mm)					Value Range		Max working voltage
	L	H	D	D1	d	Wire wound	Metal oxide	
2W	20.0	4~15 $\pm 1$	11.5	7.5	0.65 $\pm 0.03$	0.01 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~50K	150V
3W	25.0	4~15 $\pm 1$	12.0	8.5	0.8 $\pm 0.03$	0.01 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~50K	300V
5W	25.0	4~15 $\pm 1$	13.0	9.0	0.8 $\pm 0.03$	0.01 $\Omega$ ~50 $\Omega$	50 $\Omega$ ~50K	350V
7W	39.0	4~15 $\pm 1$	13.0	9.0	0.8 $\pm 0.03$	0.01 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	500V
10W	51.0	4~15 $\pm 1$	13.0	9.0	0.8 $\pm 0.03$	0.01 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	750V
10WS	35.0	4~15 $\pm 1$	16.0	12.0	0.8 $\pm 0.03$	0.01 $\Omega$ ~100 $\Omega$	100 $\Omega$ ~47K	750V

1. Resistance Range for standard resistance , below or over this resistance on request.
2. Non-inductive type up 50 $\Omega$  only.

## DERATING CURVE



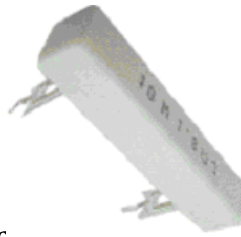
## TEMPERATURE RISE



## PERFORMANCE

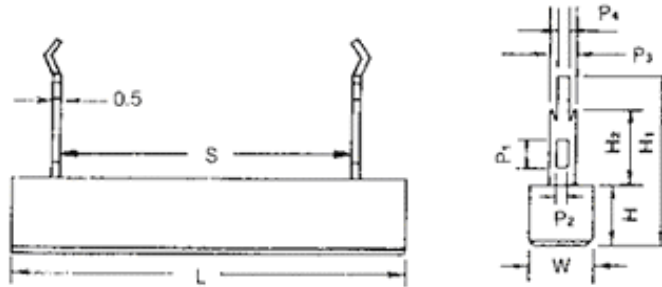
TEMPERATURE COEFFICIENT	±300 PPM/°C
INSULATION RESISTANCE	> 100MΩ
LOAD LIFE (1,000HOURS)	±5%+0.05 Ω
SHORT-TIME OVERLOAD	±2%+0.05 Ω
DIELECTRIC WITHSTANDING VOLT	±2%+0.05 Ω
MOISTURE RESISTANCE	±5%+0.05 Ω
SHOCK AND VIBRATION	±1%+0.05 Ω
EFFECT OF SOLDERING	±2%+0.05 Ω

# SQZ (RADIL TYPE)



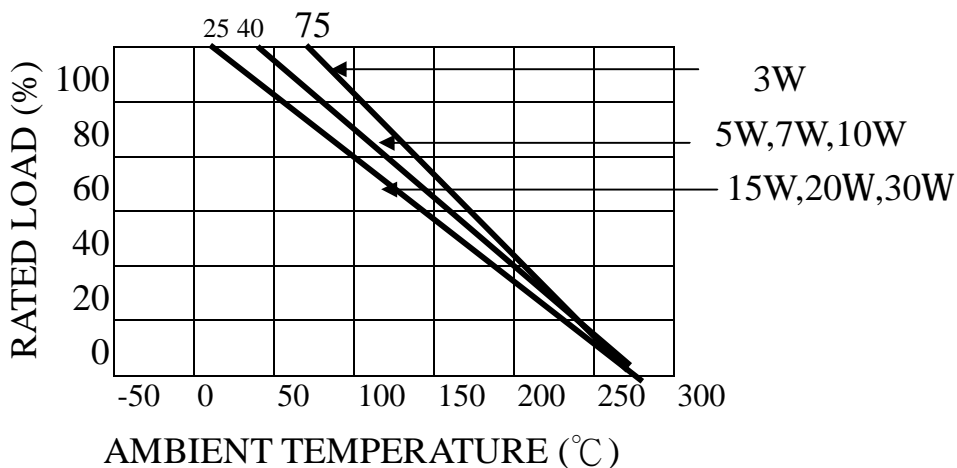
## FEATURE

- | Space saving stand-off type
- | Tolerance: 5%
- | Completely unflamable

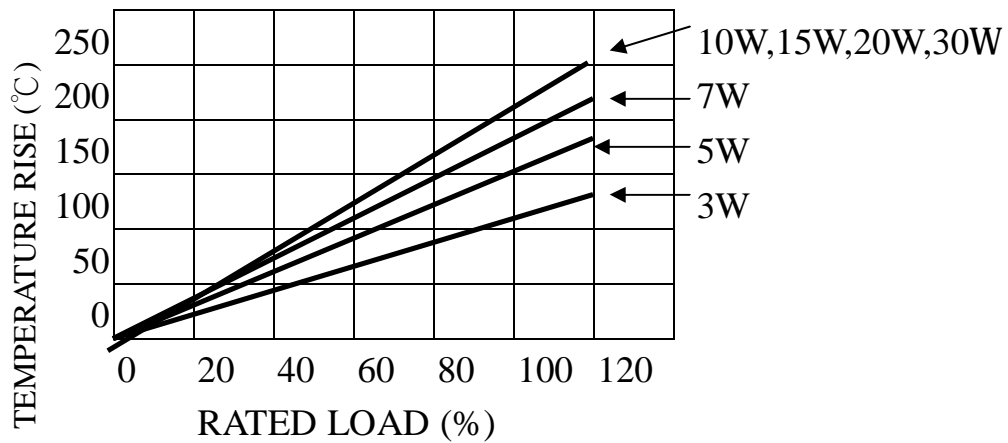


Description	W	RESISTANCE RANGE $\Omega$		DIMENSIONS(mm)									
		SQZ	MO + SQZ	L	H	W	S	H1	H2	P1	P2	P3	P4
SQZ-5	5	0.1 ~ 100 $\Omega$	100 $\Omega$ ~ 50K $\Omega$	27	9.5	9.5	15	24	9.5	4	2	5	1.4
SQZ-7	7	0.1 ~ 500 $\Omega$	500 $\Omega$ ~ 50K $\Omega$	35	9.5	9.5	22.5	24	9.5	4	2	5	1.4
SQZ-10	10	0.2 ~ 500 $\Omega$	500 $\Omega$ ~ 50K $\Omega$	48	9.5	9.5	32.5	24	9.5	4	2	5	1.4
SQZ-15	15	0.5 ~ 500 $\Omega$	500 $\Omega$ ~ 150K $\Omega$	48	12.5	12.5	32.5	34.5	15	7	6	10	2.7
SQZ-20	20	1 ~ 50 $\Omega$	500 $\Omega$ ~ 150K $\Omega$	63.5	12.5	12.5	42.5	34.5	15	7	6	10	2.7
SQZ-3S	3	0.1 ~ 50 $\Omega$	50 $\Omega$ ~ 33K $\Omega$	22	8	8	10	23	12	4	2	5	1.4
SQZ-5S	5	0.1 ~ 50 $\Omega$	50 $\Omega$ ~ 50K $\Omega$	22	9.5	9.5	10	24	12	4	2	5	1.4

## DERATING CURVE



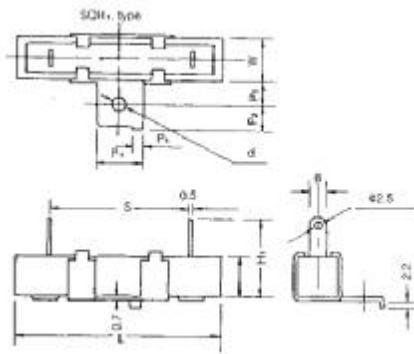
## TEMPERATURE RISE



## PERFORMANCE

TEMPERATURE COEFFICIENT	$\pm 300$ PPM/ $^{\circ}$ C
INSULATION RESISTANCE	$> 100M \Omega$
LOAD LIFE (1,000HOURS)	$\pm 5\% + 0.05 \Omega$
SHORT-TIME OVERLOAD	$\pm 2\% + 0.05 \Omega$
DIELECTRIC WITHSTANDING VOLT	$\pm 2\% + 0.05 \Omega$
MOISTURE RESISTANCE	$\pm 5\% + 0.05 \Omega$
SHOCK AND VIBRATION	$\pm 1\% + 0.05 \Omega$
EFFECT OF SOLDERING	$\pm 2\% + 0.05 \Omega$

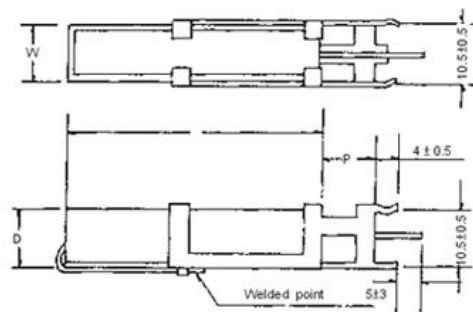
## SQHG





Type	W	RESISTANCE RANGE $\Omega$		DIMENSIONS(mm)									
		SQH	MO + SQH	L $\pm$ 2	H $\pm$ 1	W $\pm$ 1	S $\pm$ 1	H $\pm$ 1	P1 $\pm$ 1	P2 $\pm$ 1	P3 $\pm$ 1	P4 $\pm$ 1	d
SQH-10	10	0.5 $\Omega$ ~ 100 $\Omega$	100 $\Omega$ ~ 150K $\Omega$	48.0	10.0	10.0	33	21	12	6	8.0	3.0	4
SQH-15	15	1 $\Omega$ ~ 100 $\Omega$	100 $\Omega$ ~ 150K $\Omega$	48.0	12.0	12.0	33	21	12	6	8.0	3.0	4
SQH-20	20	1 $\Omega$ ~ 100 $\Omega$	100 $\Omega$ ~ 150K $\Omega$	63.7	12.0	12.0	42	24	12	6	8.0	3.0	4
SQH-30	30	1 $\Omega$ ~ 100 $\Omega$	100 $\Omega$ ~ 150K $\Omega$	75.0	19.0	18.0	56	30	17	8	10.0	3.0	4
SQH-40	40	1 $\Omega$ ~ 100 $\Omega$	100 $\Omega$ ~ 150K $\Omega$	90.0	19.0	18.0	68	30	17	8	10.0	3.0	4

SQS



Style	DIMENSIONS(mm ± 1mm)				RESISTANCE RANGE Ω	
	W	D	L	P	Wirewound	RS
SQS-5	10	9	22	5	0.1 Ω ~ 50 Ω	50 Ω ~ 50K Ω
SQS-7	10	9	35	10	0.1 Ω ~ 100 Ω	100 Ω ~ 50K Ω
SQS-10	10	9	48	10	0.1 Ω ~ 100 Ω	100 Ω ~ 50K Ω
SQS-20	60	14	60	10	0.1 Ω ~ 100 Ω	100 Ω ~ 50K Ω

## I PART NUMBER:

SQPN – 5W

VALUE

F

RES. TOLERANCE 1% / 5% = F / J/K

RESISTANCE 0R1 1R 10R 100R 1K 10K

DIN SIZE , BODY SIZE

NON-INDUCTIVE TYPE

CEMENT FIXED RESISTORS Wirewound RESISTOR