

Cement Resistors

VERTICAL LEAD TYPE

Standard Type[SQM Series], Non-Inductive Type[NSM Series]



INTRODUCTION

- The materials used and the construction techniques ensure excellent flame resistance, arc resistance and moisture resistances as well as self-extinguishing capabilities. They will withstand the most rigorous loading test
- As resistors in radio and television receivers, the hazardous conditions of smoking and redheat can be completely prevented by the proper choice of power resistors

FEATURES

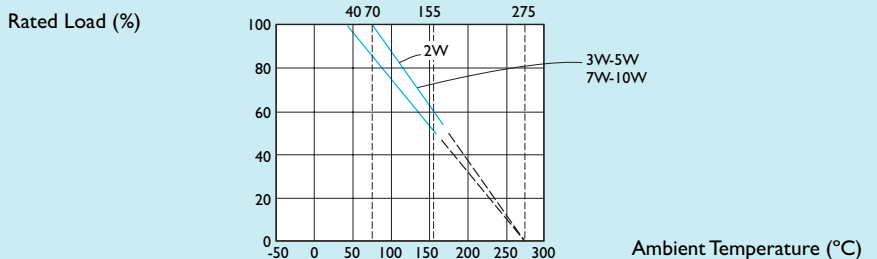
Space Saving Stand-Off Type

Small Size, High Power Capacity

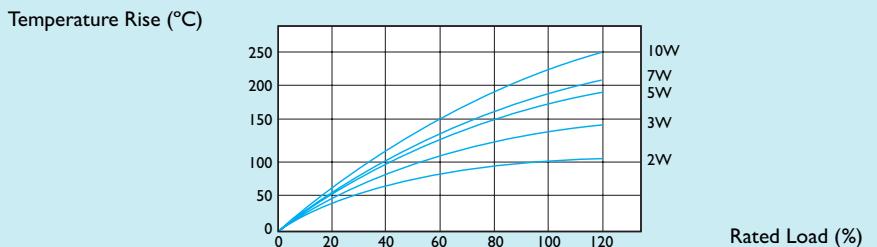
Resistance Tolerance: $\pm 5\%$

Completely Unflamable

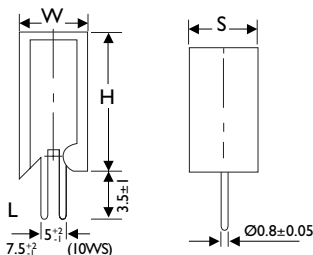
DERATING CURVE



TEMPERATURE RISE



DIMENSIONS



Unit : mm

STYLE	H	W	S
SQM200	20 $\pm$ 1.5	11.0 $\pm$ 1.0	7.0 $\pm$ 1.0
SQM300	25 $\pm$ 1.5	12.0 $\pm$ 1.0	8.0 $\pm$ 1.0
SQM500	25 $\pm$ 1.5	13.0 $\pm$ 1.0	9.0 $\pm$ 1.0
SQM700	39 $\pm$ 1.5	13.0 $\pm$ 1.0	9.0 $\pm$ 1.0
SQM10A	35 $\pm$ 1.5	16.0 $\pm$ 1.0	12.0 $\pm$ 1.0

Note :

ELECTRICAL CHARACTERISTICS

STYLE	SQM200	SQM300	SQM500	SQM700	SQM10A
Power Rating	2W	3W	5W	7W	10W
Operating Temp. Range	-55°C to +155°C				
Maximum Working Voltage	250V	350V	350V	500V	500V
Maximum Overload Voltage	500V	700V	700V	1000V	1000V
Dielectric Withstanding Voltage	500V	700V	700V	1000V	1000V
Value Range $\pm 5\%$ (Ceramic Core)	0.15 Ω ~100 Ω	0.24 Ω ~120 Ω	0.3 Ω ~180 Ω	0.51 Ω ~220 Ω	1 Ω ~270 Ω
Value Range $\pm 5\%$ (Metal Oxide Film)	110 Ω ~10K Ω	130 Ω ~22K Ω	200 Ω ~33K Ω	240 Ω ~10K Ω	300 Ω ~10K Ω
Temperature Coefficient	± 300 ppm/°C				

* 1. Standard resistance is as the above list, below or over this resistance on request.

* 2. Non-Inductive type up to 50 Ω only.

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	JIS-C-5202 5.5	2.5 Times RCW V for 5 Seconds	$\pm (2\%+0.05\Omega)$
Dielectric Withstanding Voltage	JIS-C-5202 5.7	in V-Block for 60 Seconds	by Type
Temperature Coefficient of Resistance	JIS-C-5202 5.2	-55°C to +155°C	± 300 ppm/°C
Insulation Resistance	JIS-C-5202 5.6	in V-Block	>100M Ω
Solderability	JIS-C-5202 6.5	235°C for 5 $\pm$ 0.5 Seconds	95% Min. Coverage
Resistance to Solvent	JIS-C-5202 6.9	Trichroethane for 1 Min. with Ultrasonic	No Deterioration of Coatings and Markings
Terminal Strength	Direct Load for 10 Sec. in The Direction of The Terminal Leads		≥ 2.5 kg (24.5N)
Pulse Overload	JIS-C-5202 5.8	4 Times RCW V 10000 Cycles (1 Sec. on , 25 Sec. off)	$\pm (2\%+0.05\Omega)$
Load Life in Humidity	JIS-C-5202 7.9	40 $\pm$ 2°C, 90~95% RH at RCW V for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)	$\pm (5\%+0.05\Omega)$
Load Life	JIS-C-5202 7.10	70°C at RCW V for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)	$\pm (5\%+0.05\Omega)$
Temperature Cycling	JIS-C-5202 7.4	-55°C $\rightarrow$ Room Temp. $\rightarrow$ +155°C $\rightarrow$ Room Temp. for 5 Cycles	$\pm (2\%+0.05\Omega)$
Resistance to Soldering Heat	JIS-C-5202 6.4	350°C $\pm$ 10°C for 3 $\pm$ 0.5 Seconds	$\pm (1\%+0.05\Omega)$

* Rated Continuous Working Voltage (RCW V)= $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$