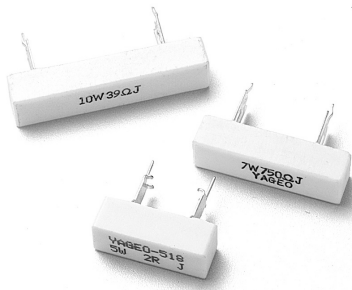


Cement Resistors

Radial Terminals Type

Normal Style [SQZ Series]

Non-Inductive Style [NSZ Series]



INTRODUCTION

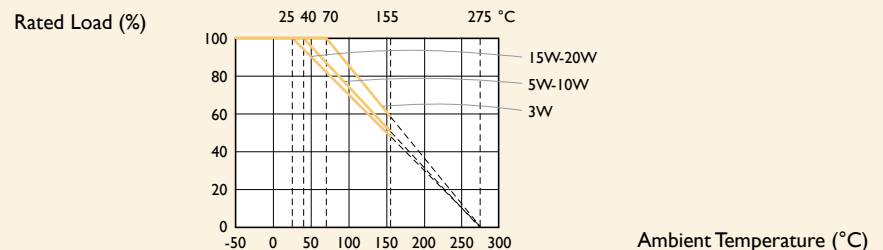
The materials used and the construction techniques ensure excellent flame resistance, arc resistance and moisture resistance as well as self-extinguishing capabilities. They will withstand the most rigorous loading test.

As resistors in radio and television receivers, hazardous conditions such as smoking and redheat can be completely prevented by the proper choice of power resistors.

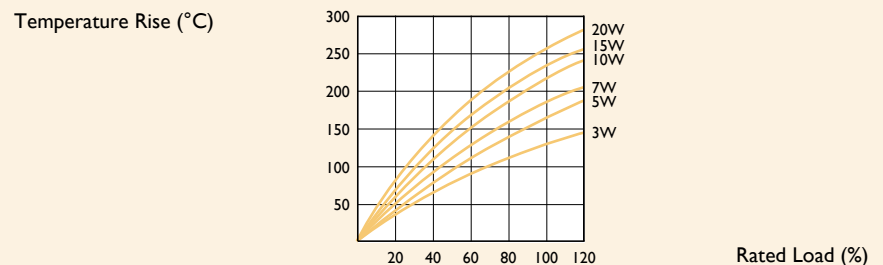
FEATURES

Power Rating	3W, 5W, 7W, 10W, 15W, 20W
Resistance Tolerance	±5%
T.C.R.	±300ppm/°C

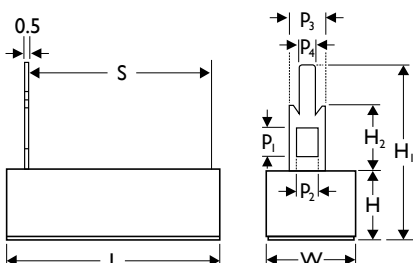
DERATING CURVE



TEMPERATURE RISE



DIMENSIONS



Unit: mm

STYLE		DIMENSION									
Normal	Non-Ind.	L	H	W	S	H ₁	H ₂	P ₁	P ₂	P ₃	P ₄
SQZ300	NSZ300	24.0±1.5	9.0±1	9.0±1	10.0±1	24.0±1	9.5±1.0	4.0±0.2	2.0±0.2	5.0±0.2	1.4±0.1
SQZ500	NSZ500	27.0±1.5	9.5±1	9.5±1	15.0±1	24.0±1	9.5±1.0	4.0±0.2	2.0±0.2	5.0±0.2	1.4±0.1
SQZ700	NSZ700	35.0±1.5	9.5±1	9.5±1	22.5±1	24.0±1	9.5±1.0	4.0±0.2	2.0±0.2	5.0±0.2	1.4±0.1
SQZ10A	NSZ10A	48.0±1.5	9.5±1	9.5±1	32.5±1	24.0±1	9.5±1.0	4.0±0.2	2.0±0.2	5.0±0.2	1.4±0.1
SQZ15A	NSZ15A	48.0±1.5	12.5±1	12.5±1	32.5±1	34.5±1	15.0±1.5	7.0±0.2	6.0±0.2	10.0±0.2	2.7±0.1
SQZ20A	NSZ20A	63.5±2.0	12.5±1	12.5±1	42.5±1	34.5±1	15.0±1.5	7.0±0.2	6.0±0.2	10.0±0.2	2.7±0.1

ELECTRICAL CHARACTERISTICS

NORMAL STYLE

STYLE	SQZ300	SQZ500	SQZ700	SQZI0A	SQZI5A	SQZ20A
Power Rating at 25°C					15W	20W
Power Rating at 40°C		5W	7W	10W		
Power Rating at 70°C	3W					
Maximum Working Voltage	250V	350V	500V			
Maximum Overload Voltage	500V	700V	1,000V			
Voltage Proof	500V	700V	1,000V			
Resistance Range (Wirewound)	0.3 Ω - 130 Ω	0.36 Ω - 200 Ω		0.56 Ω - 430 Ω	1 Ω - 560 Ω	1.5 Ω - 750 Ω
Resistance Range (Metal Oxide Film)	150 Ω - 1M Ω	220 Ω - 1M Ω	300 Ω - 1M Ω	470 Ω - 1M Ω	750 Ω - 1M Ω	820 Ω - 1M Ω
Operating Temp. Range	-55°C to +155°C					
Temperature Coefficient	±300ppm/°C					

NON-INDUCTIVE STYLE

STYLE	NSZ300	NSZ500	NSZ700	NSZI0A	NSZI5A	NSZ20A
Power Rating at 25°C					15W	20W
Power Rating at 40°C		5W	7W	10W		
Power Rating at 70°C	3W					
Maximum Working Voltage	250V	350V	500V			
Maximum Overload Voltage	500V	700V	1,000V			
Voltage Proof	500V	700V	1,000V			
Resistance Range (Wirewound)	0.1 Ω - 10 Ω			0.1 Ω - 20 Ω		0.1 Ω - 30 Ω
Operating Temp. Range	-55°C to +155°C					
Temperature Coefficient	±300ppm/°C					

Note: Special value is available on request

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	IEC 60115-1 4.13	2.5 times RCWV for 5 Sec.	±2.0%+0.05 Ω
Voltage Proof	IEC 60115-1 4.7	in V-block for 60 Sec., test voltage by type	By type
Temperature Coefficient	IEC 60115-1 4.8	-55°C to +155°C	By type
Insulation Resistance	IEC 60115-1 4.6	in V-block for 60 Sec.	>1,000M Ω
Solderability	IEC 60115-1 4.17	235±5°C for 3±0.5 Sec.	95% Min. coverage
Solvent Resistance of Marking	IEC 60115-1 4.30	IPA for 5±0.5 Min. with ultrasonic	No deterioration of coatings and markings
Robustness of Terminations	IEC 60115-1 4.16	Direct load for 10 Sec. in the direction of the terminal leads	≥2.5kg (24.5N)
Periodic-pulse Overload	IEC 60115-1 4.39	4 times RCWV 10,000 cycles (1 Sec. on, 25 Sec. off)	±2.0%+0.05 Ω
Damp Heat Steady State	IEC 60115-1 4.24	40±2°C, 90-95% RH for 56 days, loaded with 0.1 times RCWV	±5.0%+0.05 Ω
Endurance at 70°C	IEC 60115-1 4.25	70±2°C at RCWV for 1,000 Hr. (1.5 Hr. on, 0.5 Hr. off)	±5.0%+0.05 Ω
Temperature Cycling	IEC 60115-1 4.19	-55°C ⇒ Room Temp. ⇒ +155°C ⇒ Room Temp. (5 cycles)	±2.0%+0.05 Ω
Resistance to Soldering Heat	IEC 60115-1 4.18	260±3°C for 10±1 Sec., immersed to a point 3±0.5mm from the body	±1.0%+0.05 Ω

Note: Rated Continuous Working Voltage (RCWV) = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$