

# DATA SHEET

## CEMENT RESISTORS

Low Ohmic, Metal Plate  
Vertical Mount

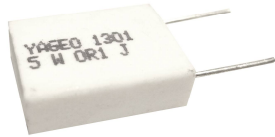
SLR Series

±5%, ±10%

2W to 10W

RoHS compliant & Halogen Free





**APPLICATIONS**

- Home appliance
- Consumer

**FEATURES**

- Ultra miniature size
- Current detecting resistors
- Flameproof cement case
- RoHS compliant and halogen free

**ORDERING INFORMATION**

Part number of the cement resistor is identified by the series, power rating, tolerance, packing, temperature coefficient, resistance value and type code.

**PART NUMBER**

SLR    500    J    B    -    0R035    U  
 (1)    (2)    (3)    (4)    (5)    (6)    (7)

**(1) SERIES**

SLR Series

**(2) POWER RATING**

200 = 2W	700 = 7W
300 = 3W	10A = 10W
500 = 5W	

**(3) TOLERANCE**

J = ±5%	K = ±10%
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**(4) PACKAGING**

B = Bulk

**(5) TEMPERATURE COEFFICIENT OF RESISTANCE**

- = Based on spec.

**(6) RESISTANCE VALUE**

Example:  
 0R035 = 0.035Ω, 0R1 = 0.1Ω, 1R = 1Ω

**(7) TYPE CODE**

Optional code for different type. .

Example:

Null = Standard type

E = SLR200 & SLR300 /  $\psi d=0.8\pm 0.05$ mm copper wire

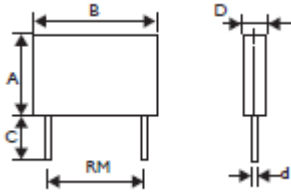
U = SLR500 & SLR700 & SLR10A /  $\psi d=0.6\pm 0.05$ mm copper wire

C = SLR200 & SLR300 /  $\psi d=0.8\pm 0.05$ mm CP- wire

W = SLR500 & SLR700 & SLR10A /  $\psi d=0.6\pm 0.05$ mm CP- wire

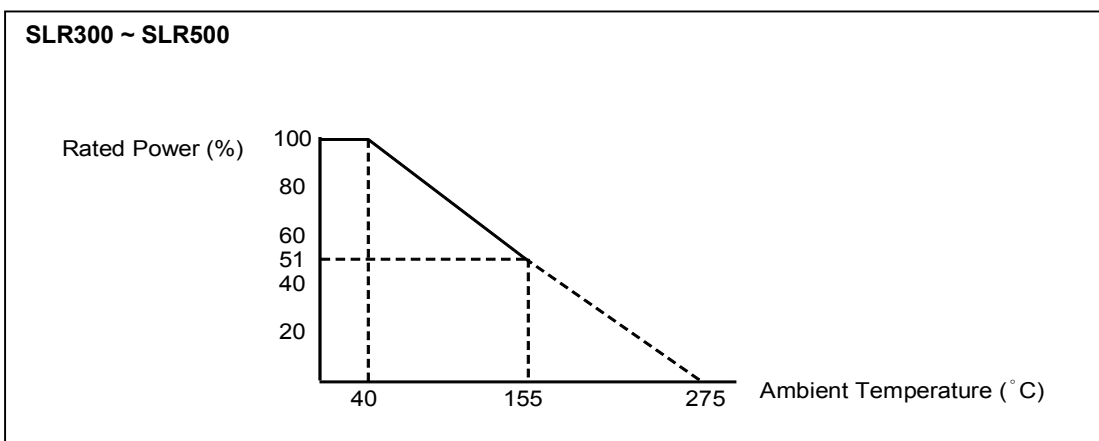
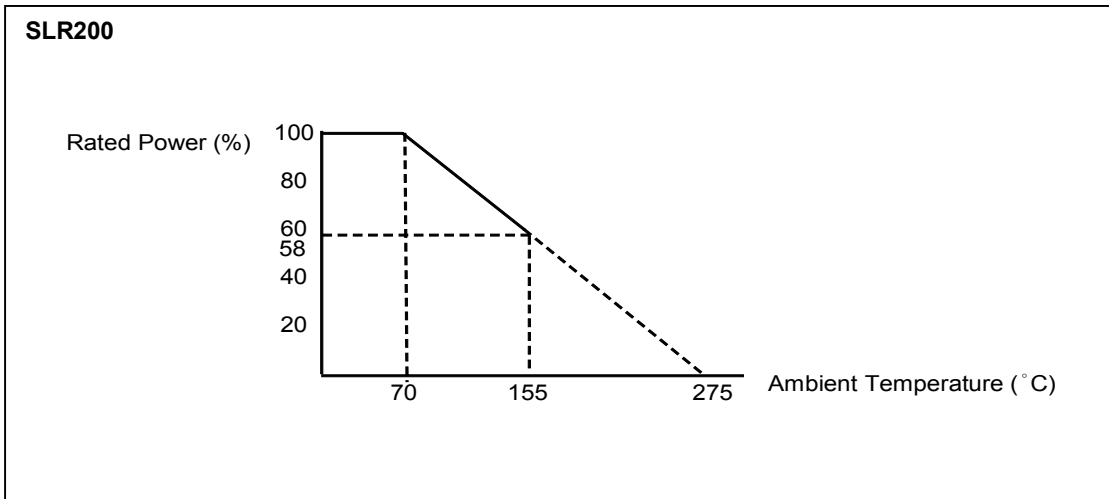
**DIMENSIONS**

Unit: mm

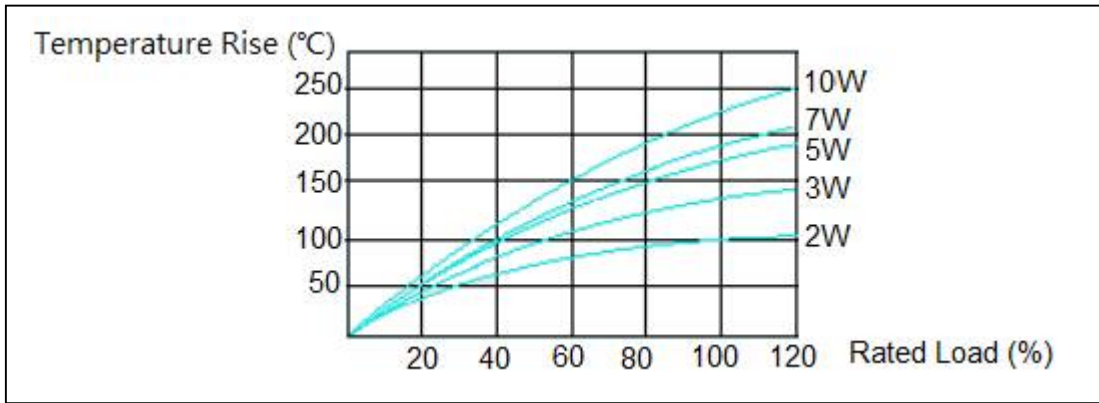


	Normal	A	B	C	D	$\psi d$	RM
SLR200	8±1	13±1	3.5±1	5±1	0.60±0.05	9±1	
SLR300	13±1	13±1	3.5±1	5±1	0.60±0.05	9±1	
SLR500	18±1	14±1	3.5±1	5±1	0.80±0.05	10±1	
SLR700	18±1	26±1	3.5±1	5±1	0.80±0.05	20±1	
SLR10A	20±1	26±1	3.5±1	5±1	0.80±0.05	20±1	

**DERATING CURVE**



**TEMPERATURE CURVE**



**ELECTRICAL CHARACTERISTICS**

CHARACTERISTICS	SLR200	SLR300	SLR500	SLR700	SLR10A
Power Rating at 70 °C	2W				
Power Rating at 40 °C		3W	5W	7W	10W
Voltage Proof on Insulation	500V	700V	700V	1000V	1000V
Resistance Range	0.1Ω ~ 0.68Ω	0.01Ω ~ 1Ω	0.01Ω ~ 3.3Ω	0.01Ω ~ 3.3Ω	0.01Ω ~ 3.3Ω
Maximum Working Voltage	$\sqrt{P \times R}$				
Operating Temp. Range	- 55°C to +155°C				
Temperature Coefficient	±250ppm/°C				

Note: For resistance value out of above range is by request.

**TABLE I MATERIALS OF LEAD WIRE**

TYPE	Resistance Value	
SLR Series	≤0.05Ω	>0.05Ω
	Copper Wire	CP Wire

**TEST AND REQUIREMENTS**

TEST	TEST METHOD	PROCEDURE	APPRAISE
Short Time Overload	IEC 60115-1 4.13	2.5 times RCWV for 5 sec.(Not more than maximum overload voltage)	±2.0%+0.05Ω
Voltage Proof on Insulation	IEC 60115-1 4.7	In V-Block for 60 sec. test voltage as above table	No Breakdown
Temperature Coefficient	IEC 60115-1 4.8	Between -55°C to +155°C	By Type
Insulation Resistance	IEC 60115-1 4.6	In V-Block for 60 sec.	>1,000MΩ
Solderability	IEC 60115-1 4.17	245±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)D
Periodic-pulse Overload	IEC 60115-1 4.39	4 times RCWV 10,000 cycles (1 Sec. on, 25 Sec.off)	±2.0%+0.05Ω
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%+0.05Ω
Endurance at 70°C	IEC 60115-1 4.25	70±2°C at RCWV(or Umax., whichever less) for 1,000 Hr.(1.5 Hr.on,0.5 Hr. off)	±5.0%+0.05Ω
Temperature Cycling	IEC 60115-1 4.19	→ -55°C → Room Temp. → +155°C Room Temp.(5 cycles)	±2.0%+0.05Ω
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%+0.05Ω

Note:

**RCWV (Rated Continuous Working Voltage ):**

The DC or AC (rms) continuous working voltage corresponding to the rated power is determined by the following formula:

$$V=\sqrt{(P \times R)}$$

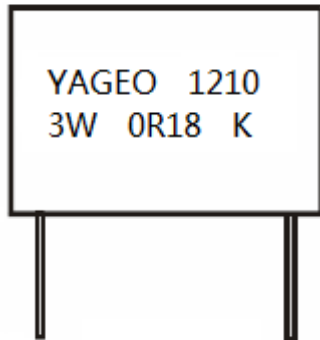
or max. working voltage whichever is less

Where

V=Continuous rated DC or  
AC (rms) working voltage (V)

P=Rated power (W)

R=Resistance value (Ω)

**MARKING****Example:**

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YAGEO	= Brand
1210	= Date code
3W	= Power rating
0R18	= Resistance
K	= Tolerance

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**REVISION HISTORY**

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Aug.2, 2021	-	- First issue of this specification

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