

Data Sheet No.:E19026

Version:V0

Date:2025/7/9



SQLR

High Power Cement Wirewound Resistor

Resistance	10Ω~300Ω
Tolerance	±1%~±10%
Rated Power	60W
Operating Temperature	-55°C~+225°C

Applications

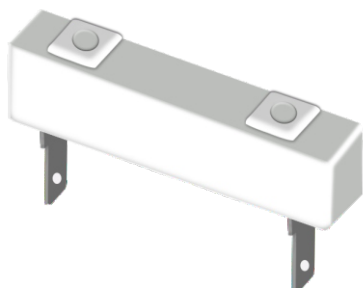
HEV
PHEV
EV

**Better Solution for Sustainable
High End Manufacturing**



Excellent flame retardance, insulation, strong impact resistance, and superior heat resistance

Introduction



SQLR high power cement wirewound resistor employs non-combustible material. It features outstanding insulation, robust impact resistance, exceptional explosion-proof performance, and superior heat resistance. Equipped with standard 250 plug terminals, it satisfies 700,000 pre-charging life cycles for electric vehicles.

SQLR maintains resistance change rate within $\pm 2\%$ under short-term overload and load life conditions. Insulation resistance between terminals and insulated ends reaches 500M Ω . This series operates within -55°C to $+225^{\circ}\text{C}$.

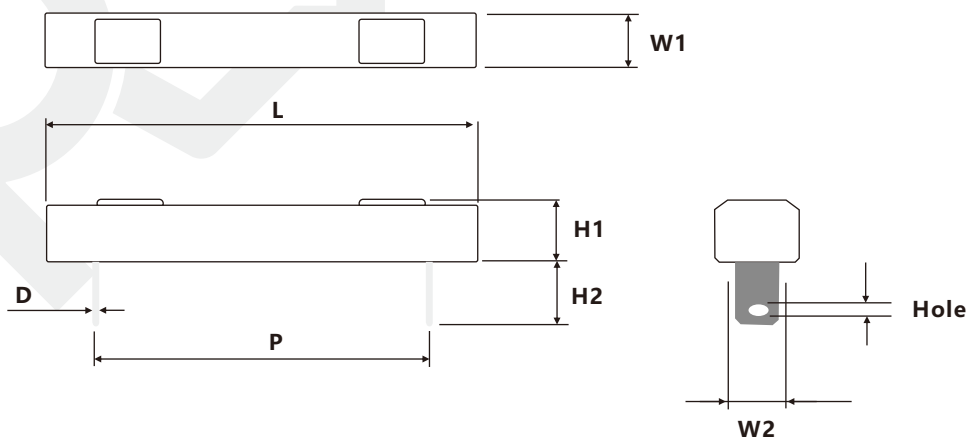


Electrical Characteristics

Series	Rated Power W	Resistance Ω	Tolerance %	TCR ppm/ $^{\circ}\text{C}$	Max. Operating Voltage	Operating Temperature
SQLR	60	10~300	$\pm 1 \sim \pm 10$	± 150	680V	$-55^{\circ}\text{C} \sim +225^{\circ}\text{C}$

Dimensions

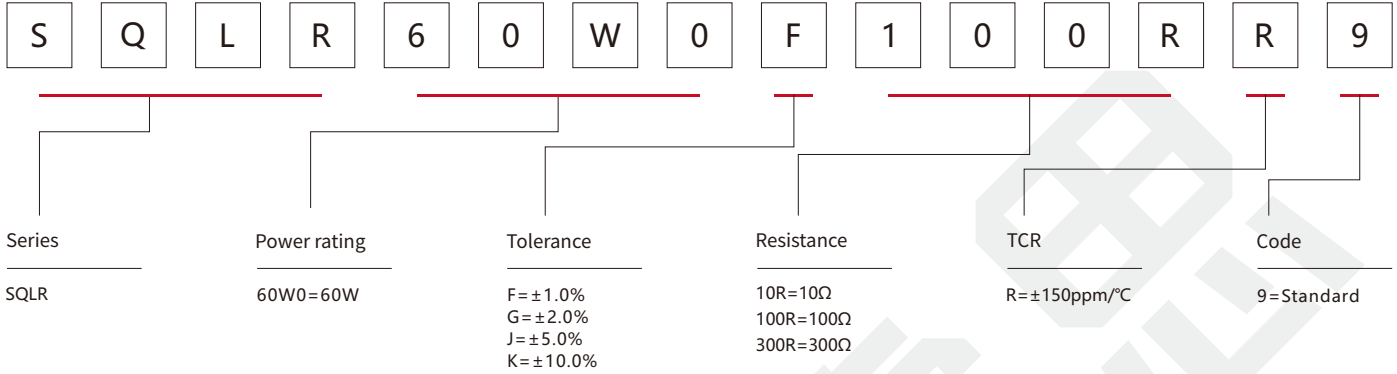
Unit:mm



Series	L	W1	W2	H1	H2	P	D	Hole
SQLR	90 ± 1	18 ± 1	6.3 ± 0.3	20 ± 1	9 ± 1	69.5 ± 1	0.8 ± 0.2	1.5 ± 0.2

Part Number Information

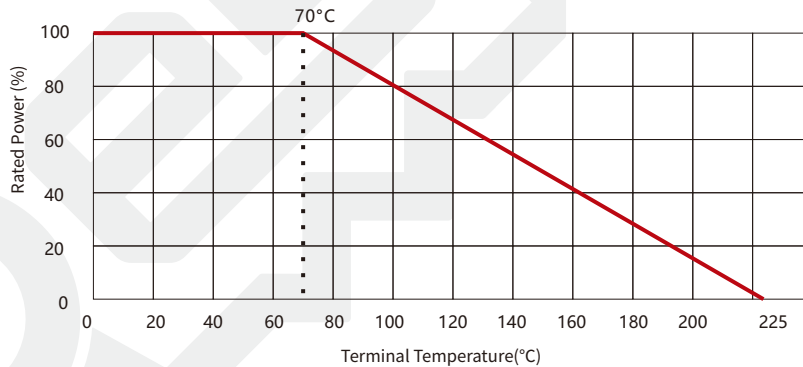
Example: SQLR60W0F100RR9 (SQLR 60W ±1.0% 100Ω ±150ppm/°C Standard)



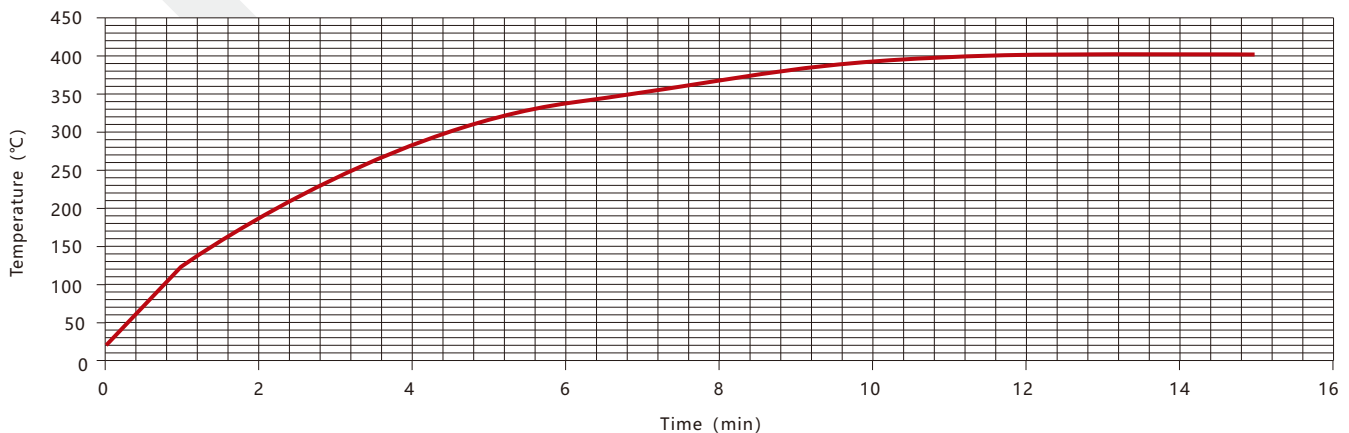
Performance

Test	Test Method	Standards	Test Limits
Short Time Overload	5 × Rated Power, 5s	IEC 60115-14.13	$\Delta R \leq \pm (2.0\% + 0.05\Omega)$
Insulation Resistance	500VDC, 60s	IEC 60115-14.6	500MΩ
Bias Humidity	85°C, 85%RH, 0.1 × Rated Power, 1000h	MIL-STD-202 Method 108	$\Delta R \leq \pm (2.0\% + 0.05\Omega)$
Load Life	125°C, Rated Power, On 90min, Off 30min, 1000h	IEC 60115-14.25	$\Delta R \leq \pm (2.0\% + 0.05\Omega)$
Temperature Cycling	-55°C, +125°C, 30min, 1000cycles	MIL-STD-202 Method 107	$\Delta R \leq \pm (2.0\% + 0.05\Omega)$

Derating Curve

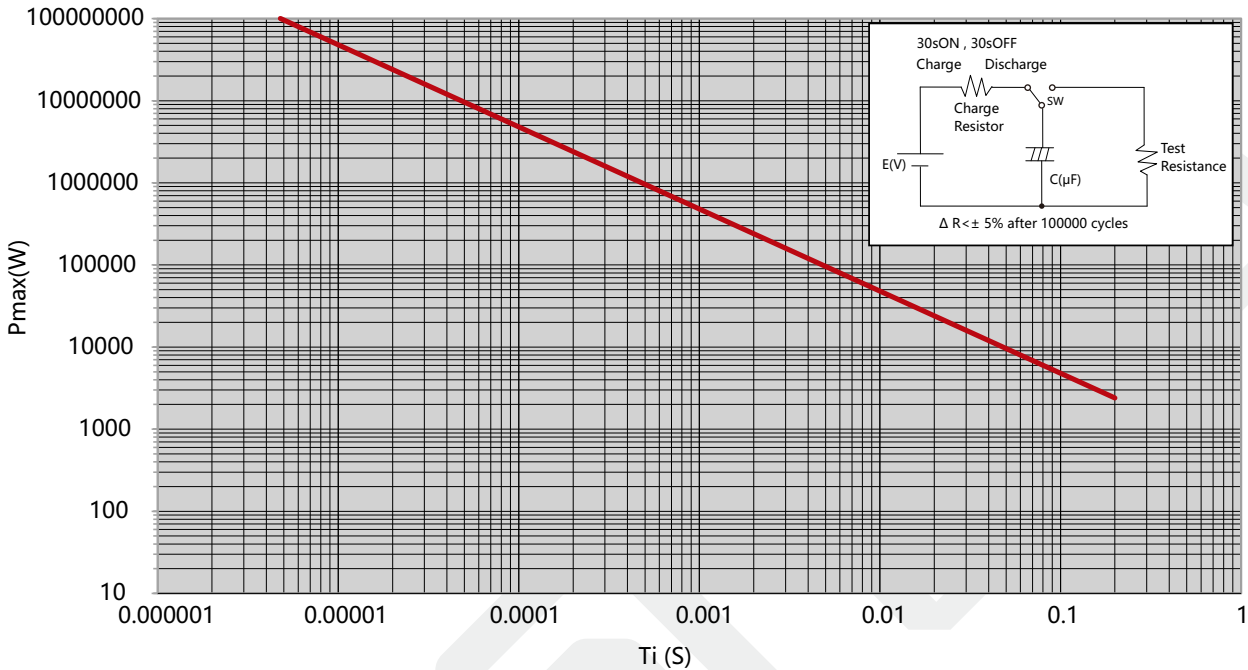


Temperature rise curve



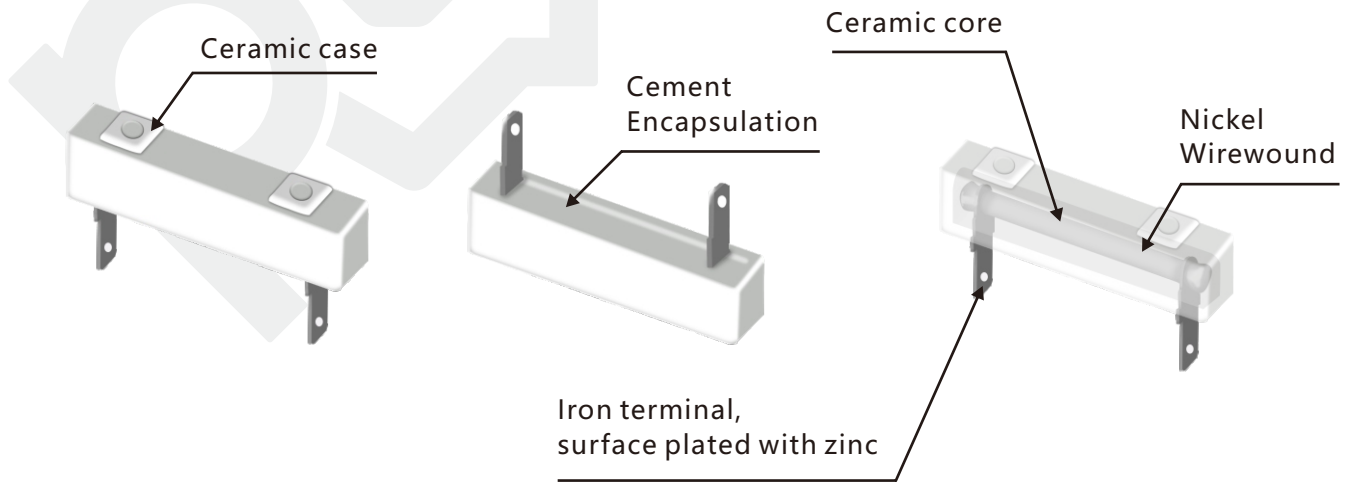
Pulse test curve

SQLR Pulse characteristics



The function of maximum peak pulse power (Pmax) and pulse duration (Ti)

Construction



Revision

Version	Revised Content	Date	Approver
V0	Initial Issue	2025.7.9	CFD

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