



CEMENTED RESISTORS

JDRCW Series

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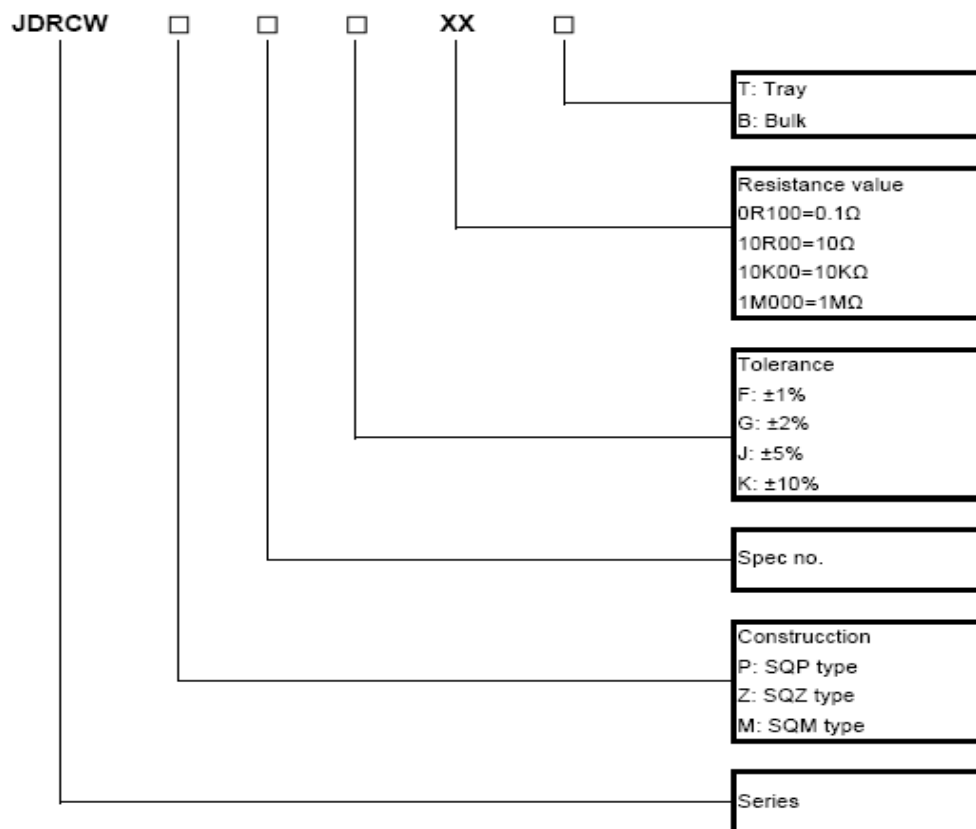
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Data Sheet

Features

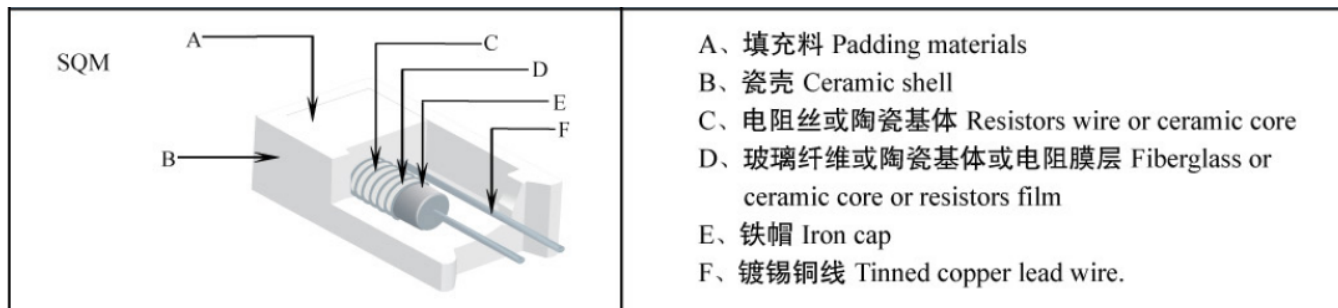
1. Good heat-durability, high overload power.
2. Tolerance: $\pm 2\%$, $\pm 5\%$, $\pm 10\%$ available.
3. Tinned copper wire.
4. RoHS compliant.

Part Number Rule



Construction

SQP	A、填充料 Padding materials B、镀锡铜线 Tinned copper lead wire. C、瓷壳 Ceramic shell D、玻璃纤维或陶瓷基体或电阻膜层 Fiberglass or ceramic core or resistors film E、电阻丝或陶瓷基体 Resistors wire or ceramic core F、铁帽 Iron cap
SQZ	A、端子 Iron plate B、填充料 Padding materials C、瓷壳 Ceramic shell D、电阻丝或陶瓷基体 Resistors wire or ceramic core E、玻璃纤维或陶瓷基体或电阻膜层 Fiberglass or ceramic core or resistors film



Electronic Specifications

(All dimensions can be specified by client, please consult us)

Spec No.	Power	Resistance	TCR ppm/°C	V1	V2	Tol.
R021	2W	0.1Ω~20Ω	±400	250V	500V	±5%
		20Ω~33KΩ	±300			
R031	3W	0.1Ω~20Ω	±400	300V	600V	±5%
		20Ω~56KΩ	±300			
R051	5W	0.1Ω~20Ω	±400	300V	600V	±5%
		20Ω~100KΩ	±300			
R071	7W	0.1Ω~20Ω	±400	350V	700V	±5%
		20Ω~200KΩ	±300			
R101	10W	0.1Ω~20Ω	±400	500V	1000V	±5%
		20Ω~200KΩ	±300			
R151	15W	0.1Ω~20Ω	±400	700V	1400V	±5%
		20Ω~200KΩ	±300			
R201	20W	0.1Ω~20Ω	±400	750V	1500V	±5%
		20Ω~200KΩ	±300			
R251	25W	0.1Ω~20Ω	±400	750V	1500V	±5%
		20Ω~200KΩ	±300			

V1: Maximum operating voltage

V2: Maximum overload voltage

Rated voltage= $\sqrt{\text{Power} \times \text{Resistance}}$

V5: The smaller value between V1 and Rated voltage

Mechanical Dimensions

SQP Type

(All dimensions can be specified by client, please consult us)

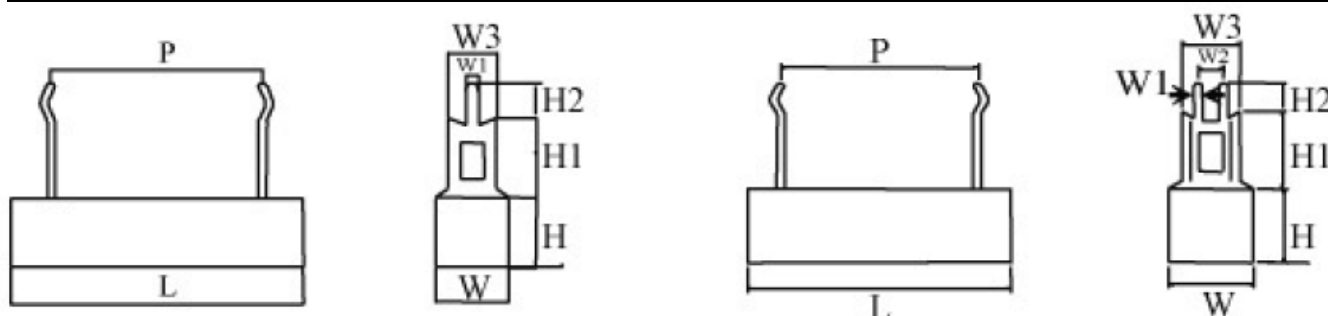
Spec No.	Power	Dimension (mm)				
		L±1	W±1	H±1	C±5	d±0.1
R021	2W	18	7	7	28	0.65
R031	3W	22	8	8	28	0.70
R051	5W	22	8	8	28	0.70
R071	7W	22	10	9	28	0.70
R101	10W	49	10	9	35	0.75
R151	15W	49	12.5	11.5	35	0.75
R201	20W	60	14.5	13.5	35	0.75
R251	25W	64	14.5	13.5	35	0.75



SQZ Type

(All dimensions can be specified by client, please consult us)

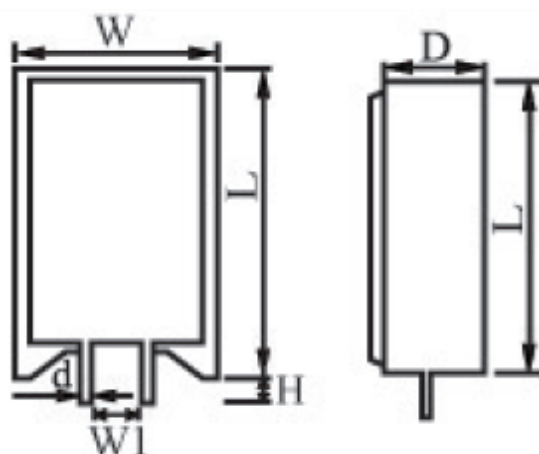
Spec No.	Power	Dimension (mm)								
		L±1	W±1	H±1	P±1	H1±1	H2±0.5	W1±0.5	W2±0.5	W3±0.5
R031	3W	22.0	9.0	9.0	10.0	10.5	4.5	1.5	5.0	7.0
R051	5W	28.0	10.0	10.0	15.0	10.5	4.5	1.5	5.0	7.0
R071	7W	36.0	10.0	10.0	20.0	10.5	4.5	1.5	5.0	7.0
R101	10W	48.0	10.0	10.0	30.0	10.5	4.5	1.5	5.0	7.0
R151	15W	48.0	12.5	12.0	30.0	30.0	4.5	3.0	8.0	10.0
R201	20W	63.0	15.0	13.0	42.0	30.0	4.5	3.0	8.0	10.0
R251	25W	63.0	15.0	13.0	42.0	30.0	4.5	3.0	8.0	10.0



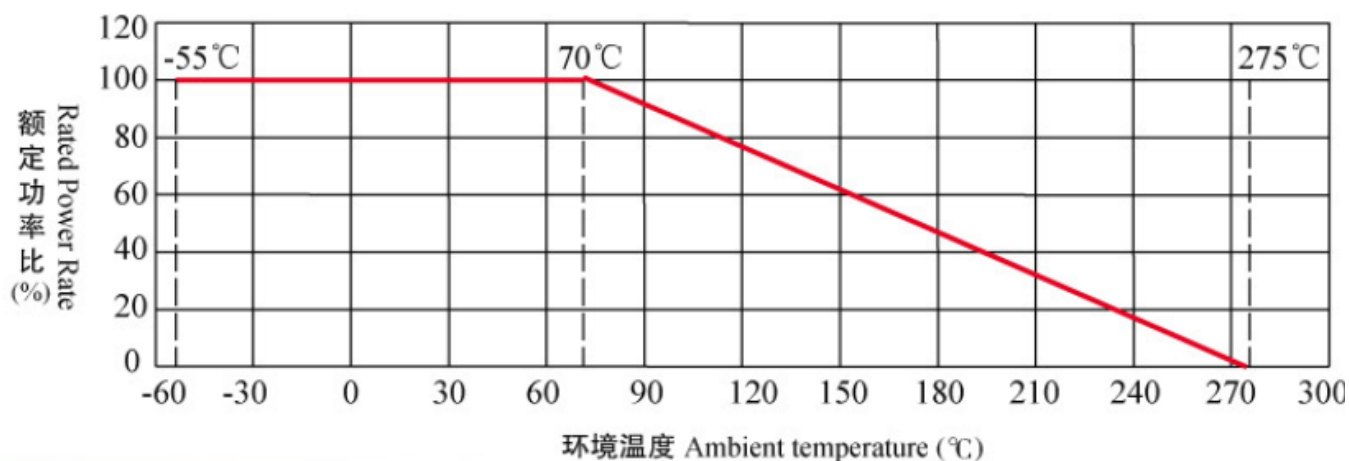
SQM Type

(All dimensions can be specified by client, please consult us)

Spec No.	Power	Dimension (mm)					
		L±1	W±1	D±1	H±1	d±0.1	W1±1
R021	2W	20.5	11.0	7.0	4.0	0.75	4.0
R031	3W	25.0	12.0	8.0	4.0	0.75	4.0
R051	5W	25.0	13.0	10.0	4.0	0.75	4.0
R071	7W	39.0	13.0	10.0	4.0	0.75	4.0
R101S	10W	35.0	16.0	12.0	5.0	0.75	8.0
R101	10W	51.0	13.0	10.0	4.0	0.75	4.0
R111	11W	51.0	13.0	10.0	4.0	0.75	4.0
R151S	15W	35.0	16.0	12.0	5.0	0.75	8.0
R151	15W	51.0	13.0	10.0	4.0	0.75	4.0
R201	20W	35.0	16.0	12.0	5.0	0.75	8.0



Rated Power Derating Curve



Reliability Test

Test Item	Test Condition	Performance
Temperature coefficient	Test the resistance value at +25°C and +125°C, calculate the change value of resistance per °C	See specification
Short time overload	Load 5*V5 for 1/4-4W or 10*V5 for 5-10W for 5 seconds	$\Delta R \leq \pm(2\%R_0 + 0.05\Omega)$
Pulse overload	Load 4*V5 for 10000±200 cycles (1 cycle: 1s on and 25s off)	$\Delta R \leq \pm(1\%R_0 + 0.05\Omega)$
Solder-heat resistance	Immerge into Tin stove at 350±10°C for 2~3 seconds	$\Delta R \leq \pm(1\%R_0 + 0.05\Omega)$
Solderability	Immerge into Tin stove at 245±10°C for 2~3 seconds	The soldering area is over 95%
Temperature cycle	-55°C for 30 minutes → 25°C for 10~15 minutes → +275°C for 30 minutes, total 5 cycles	$\Delta R \leq \pm(1\%R_0 + 0.05\Omega)$
Load life in humidity	Load V5 (1.5 h ON and 0.5h OFF) at 40±2°C 90~95%RH for 1000h	$\Delta R \leq \pm(5\%R_0 + 0.05\Omega)$
Load life in heat	Load V5 (1.5 h ON and 0.5h OFF) at 70±2°C for 1000h	$\Delta R \leq \pm(5\%R_0 + 0.05\Omega)$
Nonflammability	Load V5 by 5x, 10x, 16x respectively for 5 minutes	No visible flame

For example:

JDRCW-P-R021-J22R00T

2W 18x7x7 ±5% 22Ω SQP Type Tray Cemented resistor

JDRCW-M-R031-G4K70B

3W 25x12x8 ±2% 4.7KΩ SQM Type Bulk Cemented resistor