



RIDEE TECH COMPANY LIMITED

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APPROVAL SHEET

Product Name : Surface Mount Power Wire Wound Resistor

Part No. : SMW Series

Description : Size 3910 / 4720 / 6727

For more contact information, please refer to our website: www.rideetech.com

Surface Mount Power Wire Wound Resistor – SMW Series

Applications

- Power Suppliers
- Machine Tools
- Lighting Controls
- Motor Controls



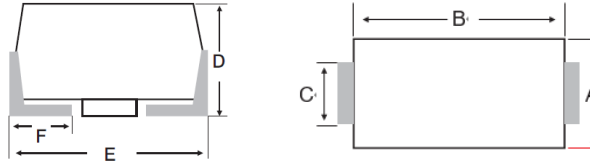
Features

- High Power rating up to 5W
- Flameproof molded encapsulation
- Excellent Stability
- Meet RoHS and Halogen Free

Part Number Explanation

SMW	3910	F	10R0	T	S
Product	Size (Inch)	Tolerance	Resistance	Packaging	Functional
Surface Mount Power Wire Wound Resistor	3910 4720 6727	F : ±1.0% J : ±5.0%	100mΩ=R100 1Ω=1R00 10Ω=10R0 100Ω=100R	T= Tape & Reel	S= Standard Type

Standard Electrical Specifications and Dimension

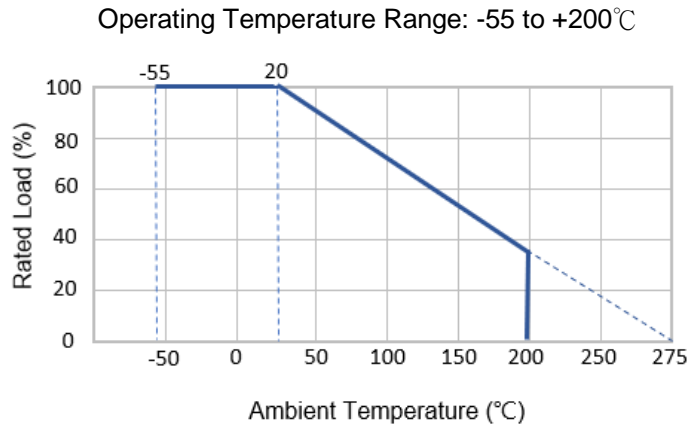


Item Type	Rated Wattage	Max Working Voltage	Resistance Range	Dimension (mm)					
				A	B	C	D	E	F
SMW 3910	2 W	300V	$0.1\Omega \leq R \leq 200\Omega$	4.0 ± 0.3	6.7 ± 0.3	1.4 ± 0.3	3.55 ± 0.3	7.9 (max)	1.5 ± 0.3
SMW 4720	3 W	500V	$0.1\Omega \leq R \leq 300\Omega$	5.5 ± 0.3	10.5 ± 0.3	1.7 ± 0.3	5.0 ± 0.3	12 (max)	2.3 ± 0.3
SMW 6727	5 W	500V	$0.1\Omega \leq R \leq 680\Omega$	7.3 ± 0.3	13.5 ± 0.3	1.7 ± 0.3	6.8 ± 0.3	17 (max)	2.5 ± 0.3

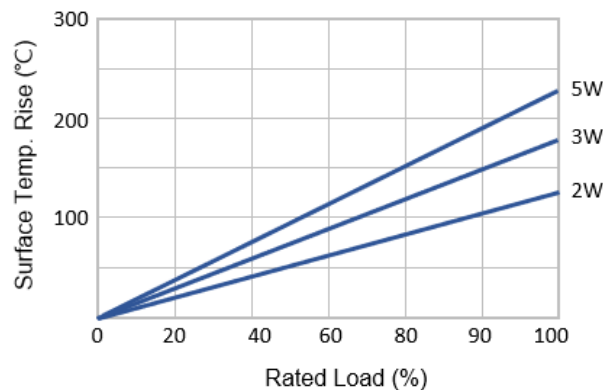
- TCR: ± 200 PPM/ $^{\circ}$ C
- Rated Voltage(V)= $\sqrt{W \cdot R}$. W : Rated Power , R : Resistance Value(Ω)
- Too low or too high ohmic values can be supplied only case by case.
- Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.

Power Derating Curve

For resistors operated in ambient temperatures above 20° C, the power rating must be derated in accordance with the curve below.



Surface Temperature Rise



Reliability Test and Requirement

Test Item	Procedure	Requirements
Temperature Coefficient of Resistance (T.C.R)	TCR(ppm/°C) $=(R2-R1)/R1 \times 1 / (T2-T1) \times 10^6$	±200 PPM/°C
Short Time Overload	5 × Rated wattage for 5sec Measurement at 30 min after test conclusion.	± 1%
Resistance to Soldering Heat	Solder dipping 270±5°C for 10 sec. ±1sec.	ΔR ≤ ± 1% No mechanical damage
Rapid Change of Temperature	Repeat 5 cycles as follows -55±3°C (30 min.) + 25°C (2~3 min.) +200±3°C (30 min.) + 25°C (2~3 min.)	ΔR ≤ ± 1% No mechanical damage
Power Rating Load	Rated voltage for 30 minutes Measurement at 30 min after test conclusion.	ΔR ≤ ± 1%
Load Life	Permanent resistance change after 1000 hours (1.5 hours ON , 0.5 hour OFF) at RCWV or Max. Keep the resistor at 70°C ambient	ΔR ≤ ± 2%
Insulation Resistance	DC : 500V megger	10000MΩ
Dielectric Withstanding Voltage	AC 500V for 1 minute	No mechanical damage
Solderability	After immersing flux, dip in the 235±5°C molten solder bath for 2 sec	Over 95% of termination must be covered
Load Life Humidity	40°C , 90%~95% RH, D.C. rated voltage for 1.5 hours ON 30 minutes OFF. Cycle repeated 500 hours.	ΔR ≤ ± 2%

- Storage Temperature: 5°C~35°C; Humidity 40%~75% RH
- Shelf Life: 1 year from production date
- Reference Standards: IEC 60115-1 / JIS C 5201-1