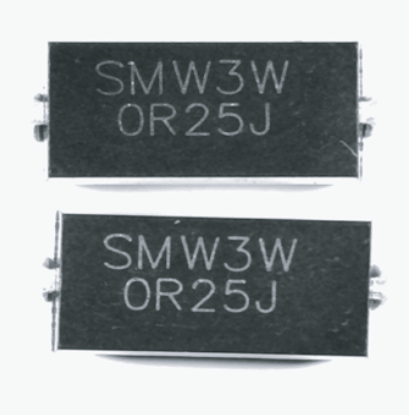
Power Wire Wound Resistor
SMW Series: Surface Mount Device



FEATURES

- Flameproof UL94V0 molded plastic
- Small sizes are good for high density application
- Good thermal stability and low surface temperature rise
- Suitable for processing on automatic SMD assemply systems

APPLICATIONS

- Telecommunications
- Medical equipment
- Measurement/Testing Equipment
- Automotive
- Industrial

MAKING A PART NUMBER

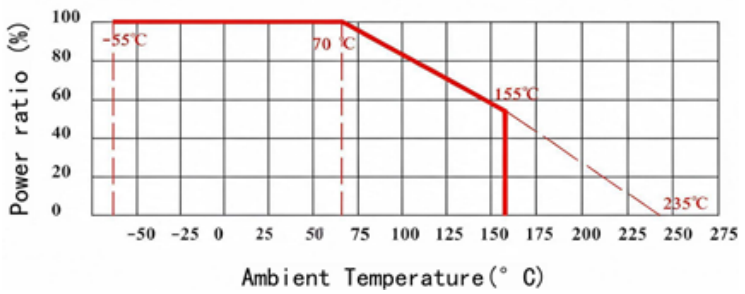
SMW 3W 10R0 J

- SMW — Series
- 3W — Rated Wattage
- 10R0 — Nominal Resistance
- J — Tolerance
- Temperature Coefficient (omit for standard)

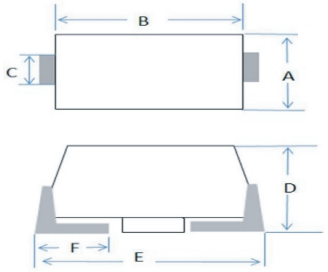
ELECTRICAL CHARACTERISTICS

ITEMS	Power @ 70℃	Operating Temperature Range in ℃	Resistance Range ±1% •± 2% •± 5%
SMW1W	1W	-55 ~ 175	0.1Ω~50Ω
SMW2W	2W	-55 ~ 175	0.1Ω~100Ω
SMW2.5W	2.5W	-55 ~ 175	0.1Ω~100Ω
SMW3W	3W	-55 ~ 175	0.1Ω~300Ω
SMW5W	5W	-55 ~ 175	0.1Ω~300Ω

DERATING CURVE



DIMENSIONS



series	A±0.3 (mm)	B±0.3 (mm)	C±0.3 (mm)	D±0.3 (mm)	EMax (mm)	F±0.3 (mm)	Weight @ 1000pcs	Reel quantity and size (inch)
SMW1W	2.6	4.05	1.4	2.3	5.2	1.25	75g	2,000 (7.0")
SMW2W	3.8	6.5	1.4	3.08	7.7	1.3	185g	2,500 (13.0")
SMW2.5W	4.15	8.35	1.75	3.5	9.9	2.1	335g	2,000 (13.0")
SMW3W	5.5	10.5	1.7	5	12	2.3	610g	1,000 (13.0")
SMW5W	6.8	14.2	2	6.55	16	2.5	2065g	800 (13.0")

■ ELECTRICAL CHARACTERISTICS

Item	Requirement	Test Method
Temperature Coefficient	300 PPM/℃	-55℃~+125℃, 25℃ is the reference temperature
Short Time Overload	≦(±1% +0.05Ω)	5 times the rated wattage for 5 seconds
Power Rating Load	≦(±1% +0.05Ω) Surface temp. 275 Max.	RCWV for 30 minutes
Damp Heat with Load	≦(± 2.0% +0.05Ω)	40±2℃, 90~@95% R.H. RCWV for 500 hrs. (with1.5 hrs ON and 0.5 hrs OFF)
Endurance	≦(± 2.0% +0.05Ω)	70±2℃ RCWV for 1,000 hrs. (with1.5 hrs ON and 0.5 hrs OFF)
Bending Strength	≦(± 0.5% +0.05Ω)	Bending once for 5 seconds with 2mm.
Solderability	≧95% min. coverage	245±5℃ for 3 seconds
Resistance to Heat	No evidence of damage ≦(±1% +0.05Ω)	260±5℃ for 10 seconds
Temperature Cycle	≦(± 2% +0.05Ω)	-55℃(30 min.) > room temp. (3 sec) > +175℃(30 min.) > room temp. (3 min.) / (5 cycles)
Voltage Proof	No breakdown or flashover	AC 500V for 1 minute.
Insulation Resistance	>1,000Ω	DC 500V Meg. Meter.

Rated continuous Working Voltage (RCWV) = $\sqrt{POWER.RATING.* RESISTANCE.VALUE}$

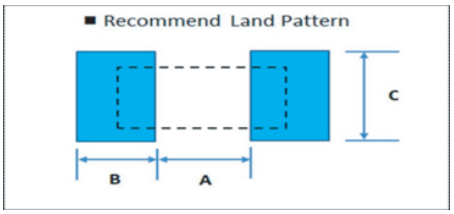
Overload Voltage = √ (5xPxR) or Max. Overload Voltage listed above, whichever is lower

Storage Temperature = 25±3 ℃; Humidity < 80% RH

Reference Standards: IEC 60115-1 ; JIS-C 5201-1

■ RECOMMENDED LAND PATTERN

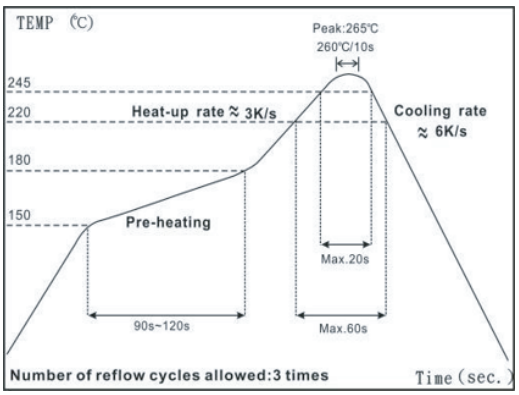
Type	A(mm)	B(mm)	C(mm)
SMW1W	2.0	3.0	2.0
SMW2W	3.69	2.43	2.84
SMW2W	3.69	2.43	2.84
SMW2.5W	5.84	3.93	5.84
SMW3W	5.9	4.00	5.84
SMW5W	10.0	6.00	5.84



■ IR REFLOW SOLDERING

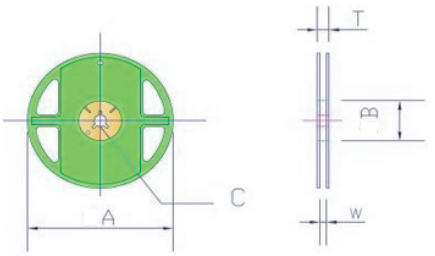
Time of IR reflow soldering at a maximum temperature point of 260℃ : 10 seconds

Time of soldering iron at maximum temperature point of 410℃ : 5 seconds



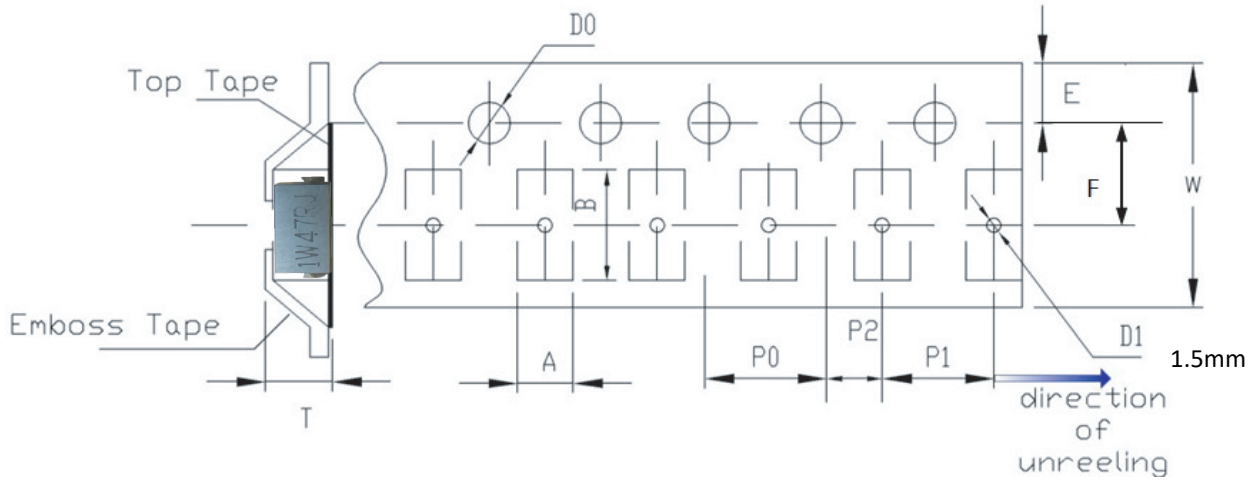
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SMW Series: Surface Mount Device

■ PACKAGING



Type	A	B	C	W	T	Quantity
SMW1W	178.5±1.5	60.0+1.0	13.0±0.5	13.0±0.5	15.5±0.5	2,500
SMW2W	330±1.5	100.0+1.0	13.0±0.5	17.0±0.5	19.5±0.5	2,500
SMW2.5W	330±1.5	100.0+1.0	13.0±0.5	17.0±0.5	19.0±0.5	2,000
SMW3W	330±1.5	100.0+1.0	13.0±0.5	17.0±0.5	19.0±0.5	1,000
SMW5W	330±1.5	100.0+1.0	13.0±0.5	17.0±0.5	19.0±0.5	800

■ EMBOSSED PLASTIC TAPE SPECIFICATIONS



Type	A	B	W	E	F	P0	P1	P2	D0	T
1W	2.80±0.10	5.30±0.10	12.0±0.10	1.75±0.10	5.50±0.05	4.00±0.10	4.00±0.10	2.00±0.10	1.55±0.10	2.36±0.10
2W	4.20±0.10	7.90±0.10	16.0±0.10	1.75±0.10	7.50±0.05	4.00±0.10	8.00±0.10	2.00±0.05	1.55±0.10	3.25±0.10
2.5W	4.60±0.10	11.6±0.10	24.0±0.30	1.75±0.10	7.50±0.10	4.00±0.10	8.00±0.10	2.00±0.05	1.50±0.10	3.80±0.10
3W	6.00±0.10	14.0±0.10	24.0±0.30	1.75±0.10	7.50±0.10	4.00±0.1	8.0±0.100	2.00±0.05	1.50±0.10	5.15±0.10
5W	7.00±0.10	16..1±0.10	24.0±0.30	1.75±0.10	11.50±0.10	4.00±0.1	12.0±0.10	2.00±0.05	1.5±0.05	6.6±0.10