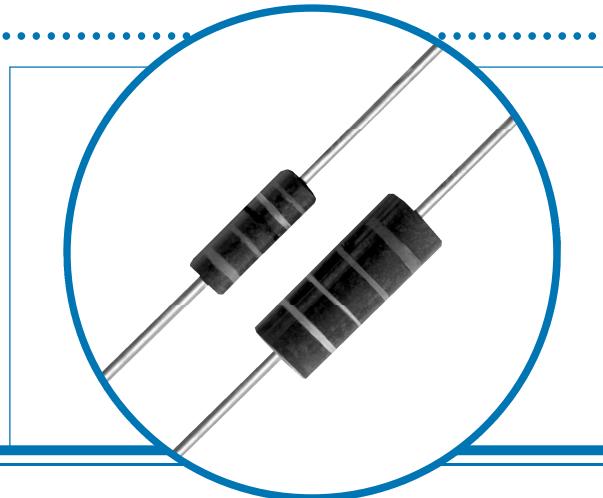


General-Purpose Failsafe Moulded Wirewound Resistors



SP20/SP20F Series

- Drop-in replacement for BW20/BW20F
- Predictable fusing characteristics
- 1 watt rated with 1/2 watt dimensions
- 0.1 ohm to 1200 ohms
- Weldable and solderable magnetic leads



Electrical Data

Type	SP20	SP20F
EIA RS-344 Style	CRU 1	RC20/RC32
MIL-R-11 Style		
Resistance Range ohms	0R1 to 1k2	0R1 to 1k
Tolerance %	±5, ±10	
Power rating watts	1 at 50°C 0.75 at 70°C 0.5 at 100°C Derating to 0 at 160°C	1 at 50°C 0.75 at 70°C - Derating to 0 at 160°C
Maximum continuous working voltage	√PR	
Minimum insulation resistance dry	10,000 Meg	
	wet	100 Meg
Minimum dielectric withstanding volts ATM	700V	
Reduced pressure RMS	450V	
Hotspot temperature rise	120°C at 1 watt	
Current noise	Negligible	

Physical Data

Dimensions (mm)				
Type	L	D	d	f
SP20	9.91±0.25	3.56±0.20	0.813±0.05	38.1±3.2
SP20F	9.91±0.25	3.56±0.20	0.813±0.05	38.1±3.2



Resistive Element

All resistor types have resistance alloy winding on a braided fibreglass substrate. Intermediate silicone coatings are used to enhance processibility and to provide protection to the resistive element.

Termination

The SP20 and SP20F resistors are terminated using an alloy coated copper flashed steel lead welded to a cap of the same material. This termination assembly is mechanically crimped, utilizing an improved crimp design, to the resistive element.

Encapsulation

The SP20 and SP20F are encapsulated utilizing a compression molded phenolic plastic material. The SP20F has a flame resistance coating applied over the resistive element to provide flammability protection when destructive overloads may occur.

Marking

All products are marked utilizing heat and solvent resistant colour code bands consistent with EIA/MIL requirements. The first band is double width to designate wirewound construction. A fifth band, blue in colour, is used for flameproof identification.

General Note

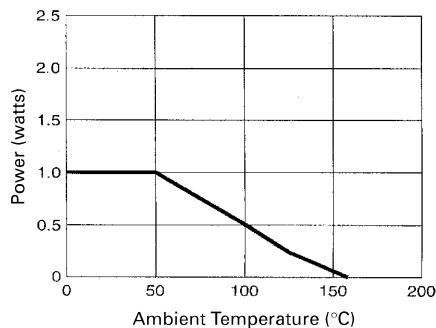
Welwyn Components reserves the right to make changes in product specification without notice or liability.
All information is subject to Welwyn's own data and is considered accurate at time of going to print.

Performance Data

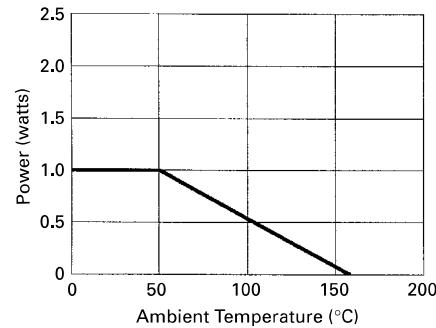
Test		SP20	SP20F
Temperature coefficient (ppm)	ppm/ $^{\circ}\text{C}$	<1R ± 800 $\geq 1\text{R} \pm 150$	<1R $\pm 800^*$ $\geq 1\text{R} \pm 150$
Dielectric withstanding voltage	RMS		700V
Momentary overload	%		5
Low temperature operation	%		5
Temperature cycle	%		5
Humidity	%		5
Load life	%		5
Terminal strength	%		5
Resistance to solder heat	%		5

*0.1 ohm SP20F <1000 ppm.

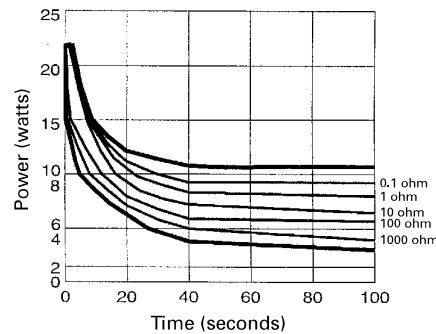
SP20 Power Derating



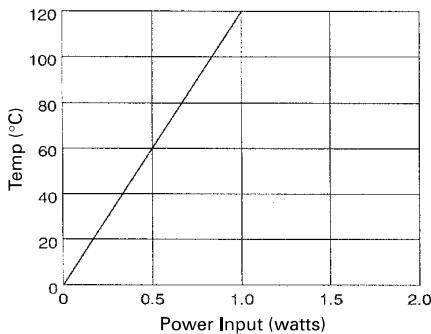
SP20F Power Derating



SP20F Typical Fusing



SP20 and SP20F Temperature Rise



Packaging

Resistors are supplied tape and reel. 4,000 pcs per reel.