

SMD Power Resistors

flame retardant, fusible and safety versions



Specifications

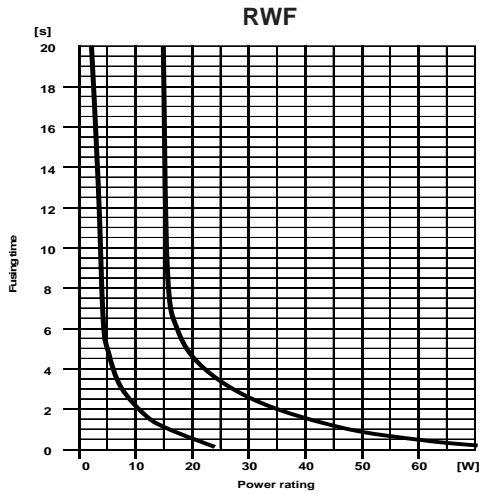
Type		RWF 5020 Fusible	RWS 5020 Safety
Styles		wirewound on core	5020 wirewound on ceramic
Power rating	W		P_{25} 2,2 P_{40} 2,0 P_{70} 1,6
Resistance range	Ω	0R1 ... 1K	1R ²⁾ ... 100R
E-Series		Diverging values on request	
Tolerance	%	5 , 10 (J , K)	5 (J)
Temperature coefficient	$10^{-6} \cdot K^{-1}$	± 1000	120 ⁺⁵⁰
max. cont. work. voltage	$V_{\text{eff/RMS}}$		$\sqrt{P_{70} \cdot R}$
Thermal resistance	K/W		100 ¹⁾
Climatic category			55 / 175 / 56
Temperature range	$^{\circ}\text{C}$		-55 ... 200
Endurance (P_{70} , 70 $^{\circ}\text{C}$, 1000h)	$\left[\frac{\Delta R}{R}\right]$ %		3 avg
Damp heat, steady state	$\left[\frac{\Delta R}{R}\right]$ %		< 2
Insulation voltage	$V_{\text{eff/RMS}}$		1000
Insulation resistance			> 1000M Ω (dry)
Resistance to soldering heat	$\left[\frac{\Delta R}{R}\right]$ %		$\leq 0,25$
Short time overload ($5 \cdot P_{70}/5\text{sec}$)	$\left[\frac{\Delta R}{R}\right]$ %		$\leq 1\%$
Temperature shock			$\leq 0,25$
Solderability			CECC 00802 A (dip test)
Board-bending-test			no interruption

¹⁾ Thermal data according to DIN 44050 with solder pads as on next page.

²⁾ Resistance values < 10R are flame retardant.

The interruption mechanism is not clearly defined and has to be tested in the final application!

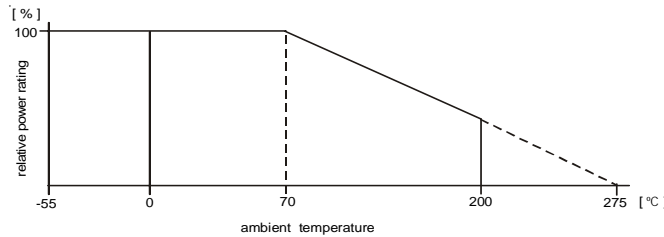
Fusing Characteristics



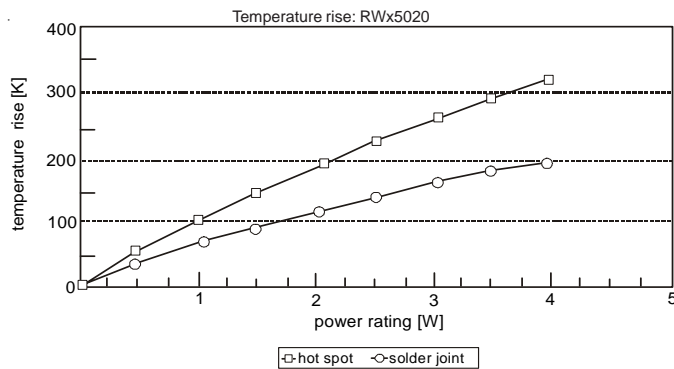
RWS

The special construction of resistance values >10R results in an immediate interruption when mains voltage (220/240V_{RMS}) is applied. No flames, no explosion. After fusing the resistance values is >100Kohm. For other voltages test suitability in the application! Resistance values <10R are flame retardant. The interruption mechanism is not clearly defined and has to be tested in the final application!

Derating:



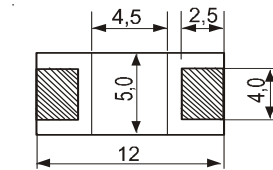
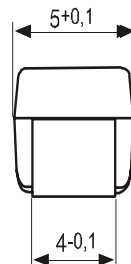
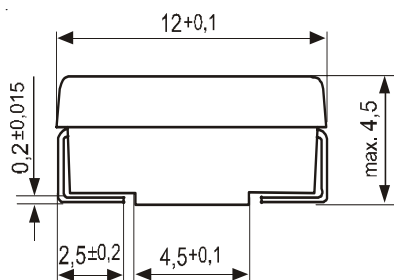
Temperature rise:



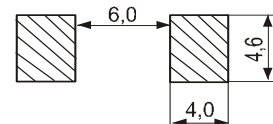
Part mounted on FR 4, pads as recommended, copper layer 35 µm

recommended solder pads:

Dimensions in mm:



Bottom view



Solder pads

Marking:

Resistor: printed in clear: Type - Value - Tolerance additional Batch-No. - Production date

Packaging:

blister tape 24 mm antistatic / 1500 pcs. on reel 330 mm Ø

Ordering example:

RWF 5020 J K - 13 10R
 Type tolerance blister tape reel TC reel diameter R-value