

RESISTOR WIREWOUND PRECISION SMT

RWF SERIES



KEY FEATURES

- Resistance from 0.005 to 50kOhms
- Precision, Flame Proof and Pulse Withstanding
- Tolerance to $\pm 0.01\%$
- High Power to 4 Watts
- Flame Resistant UL 94V-0
- Superior Surge Handling Capability
- High Temperature Rating up to 275°
- Low Temperature Coefficient to $\pm 20\text{ppm}/^\circ\text{O}$
- Non-Inductive Windings available

APPLICATIONS

- Motor Control
- Braking Systems
- Power Supplies
- Pressure Transducers

PRODUCT SUMMARY

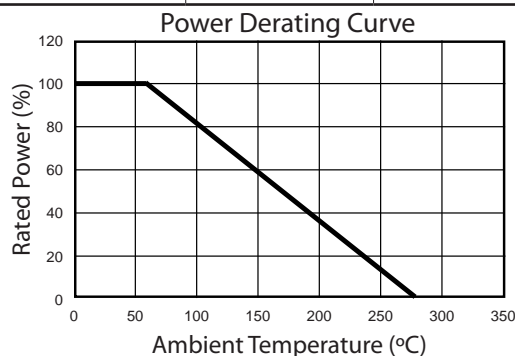
PRODUCT SERIES (RWF)	RESISTANCE RANGE (Ω) ¹	POWER RATING (W) @ 70 °C	DIELECTRIC STRENGTH	TOLERANCE	TEMPERATURE COEFFICIENT	TEMPERATURE RANGE	INSULATION RESISTANCE
C1	0.01 to 400	0.5	1000 VAC	$\pm 0.01\%$ to $\pm 5\%$	<ul style="list-style-type: none"> • $>10 \Omega$: $\pm 20\text{ppm}/^\circ\text{C}$ • 1Ω to 10Ω : $\pm 50\text{ppm}/^\circ\text{C}$ • $<1 \Omega$: Call Factory 	- 55°C to + 275°C	>1000 MOhms / Dry
C2	0.005 to 3k	1					
C3	0.01 to 15k	2					
C4	0.01 to 25k	3					
C5	0.01 to 50k	4	500 VAC	$\pm 0.1\%$ to $\pm 5\%$	$\pm 200\text{ppm}/^\circ\text{C}$ Call Factory For Lower		
D1	0.005 to 0.05	1					
D2	0.005 to 0.07	2					

¹ For non-inductive windings, divide max resistance by 2

$$\text{Maximum Working Voltage} = \sqrt{\text{Power} \times \text{Resistance}}$$

AVAILABLE OPTIONS (Consult Factory)

- Special Testing Requirements
- Special Pulse Requirements



HOW TO ORDER

RWF	N	C4	U	380R0	B	E
RESISTOR WIREWOUND SMT	WINDINGS	PACKAGE CODE, WATTS, RESISTANCE	TEMPERATURE COEFFICIENT OF RESISTANCE (TCR)	RESISTANCE	TOLERANCE	PACKING
	S = Standard N = Non-Inductive	C1, 0.5W, [0.01 to 400] Ω C2, 1.0W, [0.005 to 3k] Ω C3, 2.0W, [0.01 to 15k] Ω C4, 3.0W, [0.01 to 25k] Ω C5, 4.0W, [0.01 to 50k] Ω D1, 1.0W, [0.005 to 0.05] Ω D2, 2.0W, [0.005 to 0.07] Ω	U = $\pm 20\text{ppm}/^\circ\text{C}$ Q = $\pm 50\text{PPM}/^\circ\text{C}$ L = $\pm 200\text{ppm}/^\circ\text{C}$ Z = special	0R038 = 0.038 Ω 003K8 = 3.8k Ω 038K0 = 38.0k Ω 380K0 = 380.0k Ω 003M8 = 3.8M Ω Letter denotes decimal place. R = decimal, "K" 10^3 , "M" 10^6 Remaining 4 digits are significant placeholders	T = $\pm 0.01\%$ Q = $\pm 0.02\%$ A = $\pm 0.05\%$ B = $\pm 0.1\%$ F = $\pm 1.0\%$ J = $\pm 5.0\%$	E = Embossed Tape & Reel

* For Tin/Lead coated leads, add "- Pb" to part number

Example P/N: RWFNC4U380R0BE is Resistor Wirewound Precision SMT Non-Inductive, 3.0W, $\pm 20\text{ppm}/^\circ\text{C}$, 380 Ω , $\pm 0.1\%$, embossed tape & reel

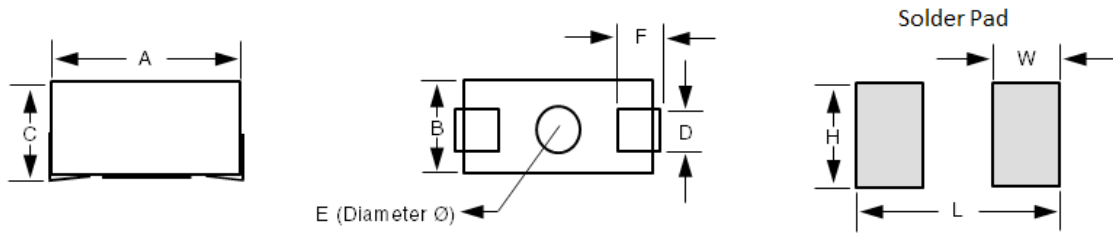


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MECHANICAL CHARACTERISTICS



Lead Thickness 0.006 [0.15mm] Tolerances ± 0.002 [±0.05mm]

Package Code		C1	C2	C3	C4	C5	D1	D2
Dimensions Inches [mm]	A (Tolerances) ± 0.015 [±0.4mm]	0.190 [4.83]	0.260 [6.60]	0.450 [11.43]	0.625 [15.83]	0.820 [20.83]	0.260 [6.60]	0.450 [11.43]
	B (Tolerances) ± 0.015 [±0.4mm]	0.130 [3.30]	0.155 [3.94]	0.250 [6.35]	0.270 [6.86]	0.295 [7.49]	0.155 [3.94]	0.250 [6.35]
	C (Tolerances) ± 0.015 [±0.4mm]	0.110 [2.79]	0.125 [3.18]	0.180 [4.57]	0.250 [6.35]	0.305 [7.75]	0.100 [2.54]	0.100 [2.54]
	D (Tolerances) ± 0.015 [±0.4mm]	0.060 [1.52]	0.070 [1.78]	0.120 [3.05]	0.120 [3.05]	0.150 [3.81]	0.070 [1.78]	0.120 [3.05]
	F (Tolerances) ± 0.015 [±0.4mm]	0.040 [1.02]	0.070 [1.78]	0.100 [2.54]	0.135 [3.43]	0.190 [4.83]	0.070 [1.78]	0.100 [2.54]
Stand-Off Inches [mm]	E (Tolerances) ± 0.015 [±0.4mm]	0.100 [2.54]	0.120 [3.05]	0.190 [4.83]	0.150 [3.81]	0.245 [6.22]	0.120 [3.05]	0.190 [4.83]
	Height (Tolerances) ± 0.005 [±0.13mm]	0.005 [0.13]	0.005 [0.13]	0.005 [0.13]	0.005 [0.13]	0.005 [0.13]	0.005 [0.13]	0.005 [0.13]
Solder Pad Inches [mm]	Width (Tolerances) ± 0.015 [±0.4mm]	0.062 [1.57]	0.096 [2.44]	0.150 [3.81]	0.200 [5.08]	0.220 [5.59]	0.096 [2.44]	0.150 [3.81]
	Height (Tolerances) ± 0.015 [±0.4mm]	0.100 [2.54]	0.150 [3.81]	0.200 [5.08]	0.220 [5.59]	0.250 [6.35]	0.150 [3.81]	0.200 [5.08]
	Length (Tolerances) ± 0.015 [±0.4mm]	0.250 [6.35]	0.337 [8.56]	0.540 [13.72]	0.700 [17.78]	0.900 [22.86]	0.337 [8.56]	0.540 [13.72]

ENVIRONMENTAL PERFORMANCE

Environmental Performance (MIL-STD 202)	ΔR Maximum
Load Life	$\pm 1\% + 0.05 \Omega$
Moisture Resistance	
Dielectric	$\pm 0.5\% + 0.05 \Omega$
Storage	
Shock	$\pm 0.5\% + 0.05 \Omega$
Thermal Shock	
5X Overload (5s)	
Resistance to Heat Solder (260C, 10s)	

PACKAGING INFORMATION

Package Code	C1	C2	C3	C4	C5	D1	D2
Reel/Tape Width [mm]	12	16	24	24	32	16	24
Small	650	600	250	125	180	600	250
Large	3000	2000	1000	500	500	2000	1000

Humidity Packaging Notes:

Moisture Barrier Bags (MBB) are used to package surface mount components. These bags include a dessicant and a Humidity Indicator Card to monitor humidity levels. All bags are marked with Moisture-Sensitive Identification Labels.

A Moisture Sensitivity Level (MSL) rating of 2 (1-year floor life) applies to the Johanson RWF Series.

This datasheet is subject to change without notice.

