80 Series

Commercial Grade Acrasil®, Silicone-Ceramic Conformal Axial Terminal Wirewound 1% Tolerance (5% available)

RW Series

Military Grade 80 Series MIL-R-26 Qualified

Ohmite's highest quality conformal axial terminal silicone-ceramic coated resistors for applications requiring high precision and stability. These resistors have a low temperature coefficient and maintain a high degree of stability under demanding conditions.

FEATURES

- Designed for precision power applications
- All-welded construction
- RW Series "Mil" value resistors marked with "Mil" in accordance with MIL-R-26 specifications

SERIES SPECIFICATIONS

Commercial Grade	Military Grade	Watts	Ohms	Voltage
81F	RW70U	1	0.1-6K	150
82		2	0.1-8K	100
83F 83J	RW79U RW69V	3	0.1-20K	200
85F 85J	RW74U RW67V	5	0.1-75K	460
80F 80J	RW78U RW68V	10	0.1-150K	1000

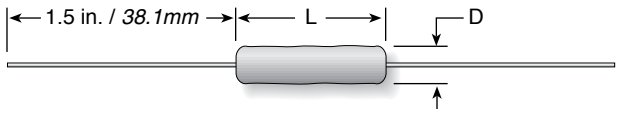
Non-Inductive versions available. Insert "N" before tolerance code. Example: 83NF2K21

CHARACTERISTICS

Coating	Silicone-ceramic
Core	Ceramic
Terminals	Solder-coated copper clad axial
Derating	Linearly from 100% @ +25°C to 0% @ +275°C.
Tolerance	±5% (J type), ±1% (F type) (other tolerances available)
Power rating	Based on 25°C free air rating
Maximum ohmic values	See chart
Overload	Under 5 watts: 5 times rated wattage for 5 seconds. 5 watts and over: 10 times rated wattage for 5 seconds
Temperature coefficient	Under 1Ω; ±90 ppm/°C 1 to 9.99Ω: ±50 ppm/°C 10Ω and over; ±20 ppm/°C
Dielectric withstanding voltage	500 VAC: 1 watt rating; 1000 VAC: 2, 3, 5, 7, and 10 watt rating

DIMENSIONS

(in./mm max.)



		Watts	Length	Diam.	Lead gauge
81F	RW70U	1	0.437 / 11.1	0.125 / 3.2	24
82		2	0.406 / 10.3	0.219 / 5.6	20
83F 83J	RW79U RW69V	3	0.593 / 15.1	0.218 / 5.5	20
85F 85J	RW74U RW67V	5	0.937 / 23.8	0.343 / 8.7	18
80F 80J	RW78U RW68V	10	1.842 / 46.8	0.406 /10.3	18

(continued)

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ORDERING INFORMATION

Commercial Grade (80 Series) Part Numbers

Ohmic value	Part No. Prefix ➤ Suffix ▼	Wattage 1 — 81F	3 — 83F	5 — 85F	10 — 80F
0.1	R10	✔	✔	✔	✔
0.11	R11		✔	✔	✔
0.121	R121	✔	✔	✔	✔
0.133	R133		✔	✤	✔
0.15	R15	✔	✔	✔	✔
0.162	R162		✤	✤	✔
0.182	R182	✔	✔	✔	✔
0.2	R20	✔	✔	✔	✔
0.221	R221		✔	✔	✔
0.249	R249	✔	✔	✔	✔
0.274	R274		✔	✔	✔
0.301	R301	✔	✔	✔	✔
0.332	R332		✔	✤	✔
0.374	R374		✔	✤	✔
0.392	R392		✔	✔	✔
0.402	R402	✔	✔	✔	✔
0.453	R453		✔	✔	✔
0.499	R499	✔	✔	✔	✔
0.511	R511		✔	✤	✤
0.562	R562	✔	✔	✔	✔
0.619	R619		✔	✔	✔
0.681	R681	✔	✔	✔	✔
0.75	R75		✤	✔	✔
0.825	R825	✔	✔	✔	✔
0.909	R909		✔	✤	✔
1	1R0	✔	✔	✔	✔
1.1	1R1		✔	✔	✔
1.21	1R21	✔	✔	✔	✔
1.330	1R33		✤	✔	✔
1.5	1R5	✔	✔	✔	✔
1.62	1R62		✤	✔	✔
1.82	1R82	✔	✔	✔	✔
2	2R0	✔	✔	✔	✔
2.21	2R21		✔	✔	✔
2.49	2R49	✔	✔	✔	✔
2.74	2R74		✔	✔	✔
3.01	3R01	✔	✔	✔	✔
3.32	3R32		✔	✔	✔
3.74	3R74		✔	✔	✔
4.02	4R02	✔	✔	✔	✔
4.53	4R53		✔	✔	✔
4.99	4R99	✔	✔	✔	✔
5.11	5R11		✔	✔	✔
5.62	5R62	✔	✔	✔	✔
6.19	6R19		✔	✔	✔
6.81	6R81	✔	✔	✔	✔
7.5	7R5		✔	✔	✔
8.25	8R25	✔	✔	✤	✔
9.09	9R09		✔	✔	✔
10	10R	✔	✔	✔	✔
11	11R		✔	✔	✔
12.1	12R1	✔	✔	✔	✔
13.3	13R3		✤	✤	✤
15	15R	✔	✔	✔	✤
16.2	16R2		✤	✤	✤
18.2	18R2	✔	✔	✔	✔
20	20R	✔	✔	✔	✔
22.1	22R1		✔	✔	✔
24.9	24R9	✔	✔	✔	✔
27.4	27R4		✔	✔	✔
30.1	30R1	✔	✔	✔	✔
33.2	33R2		✔	✔	✔
37.4	37R4		✔	✤	✔
40.2	40R2	✔	✔	✔	✔
45.3	45R3		✔	✔	✔
49.9	49R9	✔	✔	✔	✔
51.1	51R1		✔	✔	✔
56.2	56R2	✔	✔	✔	✔
61.9	61R9		✔	✔	✔
68.1	68R1	✔	✔	✔	✔
75	75R		✔	✤	✔
82.5	82R5	✔	✔	✔	✔
90.9	90R9		✔	✔	✔
100	100	✔	✔	✔	✔
110	110		✔	✔	✔
121	121	✔	✔	✔	✔
133	133		✤	✔	✤
150	150	✔	✔	✔	✤
162	162		✔	✔	✔
182	182	✔	✔	✔	✔
200	200	✔	✔	✔	✔
221	221		✔	✔	✔
249	249	✔	✔	✔	✔
274	274		✔	✤	✔
301	301	✔	✔	✔	✔
332	332		✔	✔	✔
374	374		✔	✔	✔
402	402	✔	✔	✔	✔
453	453		✔	✔	✔
499	499	✔	✔	✔	✔
511	511		✔	✔	✔
562	562	✔	✔	✔	✔
619	619		✔	✔	✔
681	681	✔	✔	✔	✔
750	750		✔	✔	✔
825	825	✔	✔	✔	✔
909	909		✔	✔	✔
1,000	1K0	✔	✔	✔	✔
1,100	1K1		✤	✔	✔
1,210	1K21	✔	✔	✔	✔
1,330	1K33		✤	✔	✤
1,500	1K5	✔	✔	✔	✤
1,620	1K62		✔	✤	✤
1,820	1K82	✔	✔	✔	✔
2,000	2K0	✔	✔	✔	✔
2,210	2K21		✔	✔	✔
2,490	2K49	✔	✔	✔	✔
2,740	2K74		✔	✔	✔
3,010	3K01	✔	✔	✔	✔
3,320	3K32		✔	✔	✔
3,740	3K74		✔	✔	✔
4,020	4K02		✔	✔	✔
4,530	4K53		✔	✤	✔
4,990	4K99		✔	✔	✔
5,110	5K11		✔	✔	✔
5,620	5K62		✔	✔	✔
6,190	6K19		✔	✔	✔
6,810	6K81		✔	✔	✔
7,500	7K5		✔	✔	✤
8,250	8K25		✔	✔	✔
9,090	9K09		✤	✔	✤
10,000	10K		✔	✔	✔
10,500	10K5		✔	✤	✤
11,000	11K		✔	✤	✤
12,100	12K1		✤	✤	✤
13,300	13K3		✤	✔	✤
15,000	15K		✔	✔	✔
16,200	16K2		✤	✔	✤
18,200	18K2		✤	✔	✤
20,000	20K		✔	✔	✔
22,100	22K1			✔	✔
24,900	24K9			✔	✔
27,400	27K4			✔	✔
30,100	30K1			✔	✔
33,200	33K2			✔	✔
37,400	37K4			✤	✤
38,300	38K3			✔	✤
40,200	40K2			✔	✔
45,300	45K3			✔	✔
49,900	49K9			✔	✔
51,100	51K1			✔	✔
56,200	56K2			✔	✔
61,900	61K9			✔	✤
68,100	68K1			✔	✔
75,000	75K			✔	✔
82,500	82K5				✔
90,900	90K9				✔
100,000	100K				✔
150,000	150K				✔
200,000	200K				✔

✔ = Standard values

✤ = Non-standard values subject to minimum handling charge per item

Shaded values involve very fine resistance wire and should not be used in critical applications without burn-in and/or thermal cycling.

Commercial Grade

Non-Inductive Winding
Optional (blank = std. winding)

8 1 N J R 1 0

80 Series	Wattage	Tolerance	Resistance Value
Acrasil®	1 = 1W	F = 1%	R10 = 0.10Ω
Silicone Ceramic	2	J = 5%	1R0 = 1.0Ω
Conformal Axial	3		10R = 10.0Ω
Term. Wirewound	5		250 = 250Ω
	0 = 10W		1K0 = 1,000Ω
			4K5 = 4,500Ω
			50K = 50,000Ω

Military Grade

R W 7 4 U 1 0 0 1 F

RW Series	Resistance Value	Tolerance
Military grade	R100 = 0.1Ω	F = 1%
	1R00 = 1.0Ω	J = 5%
	10R0 = 10.0Ω	
	1000 = 100Ω	1002 = 10KΩ
	1001 = 1000Ω	1503 = 150KΩ

This product will not be made available as RoHS Compliant.

For RoHS Compliant equivalent, see **40 Series.**

Mouser Electronics

Authorized Distributor

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Ohmite:

80FR562 83F90R9 80F22R1 85F249 83F6K81 80F2R21 80F10K5 85FR75 80F2R74 80FR162 80F22K1 83F6K19 85F200 80F2R49 80FR133 80FR121 83F11R 80F56K2 83F15K 83F11K 83F15R 83F750 80F56R2 85F51K1 85F51R1 83F27R4 83F2K49 85F90R9 80F45K3 85F61R9 85F33R2 85F511 85F33K2 80F332 85F562 80FR909 81F10R 80F38K3 81F40R2 80F150K 85F2R49 85F2R74 85F22K1 85FR133 85FR182 81F1K82 83F51R1 85F22R1 85FR162 85FR121 81F1K21 85F40R2 83F18K2 83F18R2 83F16R2 81F82R5 83F12K1 83F1R33 83F12R1 83F1R82 81FR825 85FR301 85FR392 85FR332 85FR374 83F4K02 83F4K99 83F4K53 80F27K4 85F750 80F511 80F562 85F7R5 85F20R 85F20K 85F825 38FR392 85F9R09 81F6R81 85F6K19 80F51K1 83F4R53 83F4R99 83F4R02 85F13K3 85F13R3 85FR619 85FR221 80F61K9 80F61R9 85FR249 85FR274 81FR301 80F90K9 80F90R9 80F2K49 80F2K21 80F2K74 83F1K82 83F1K21