



THE DATASHEET OF
80F1R5



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 | Watts | Ohms | Voltage | Military Grade | Watts | Ohms | Voltage |
|------------------|-------|-----------|---------|----------------|-------|------------|---------|
| 81F | 1 | 0.1Ω–6K | 150 | RW70U | 1 | 0.1Ω–3.16K | 52 |
| 82 | 2 | 0.1Ω–8K | 100 | | | | |
| 83F | 3 | 0.1Ω–20K | 200 | RW79U | 3 | 0.1Ω–10.5K | 135 |
| 83J | | | | RW69V | 3 | 0.1Ω–2K | 200 |
| 85F | 5 | 0.1Ω–75K | 460 | RW74U | 5 | 0.1Ω–38.3K | 300 |
| 85J | | | | RW67V | 6.5 | 0.1Ω–8.2K | 300 |
| 80F | 10 | 0.1Ω–150K | 1000 | RW78U | 10 | 0.1Ω–90.9K | 720 |
| 80J | | | | RW68V | 11 | 0.1Ω–20K | 300 |

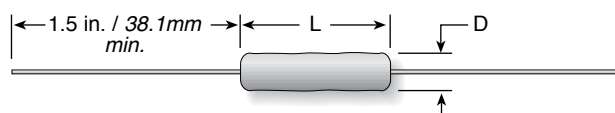
Non-Inductive versions available. Insert "N" before tolerance code.
Example: 83NF2K21

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 | RW79U | 3 | 0.593 / 15.1 | 0.218 / 5.5 | 20 |
| 83J | RW69V | | | | |
| 85F | RW74U | 5 | 0.937 / 23.8 | 0.343 / 8.7 | 18 |
| 85J | RW67V | | | | |
| 80F | RW78U | 10 | 1.842 / 46.8 | 0.406 / 10.3 | 18 |
| 80J | RW68V | | | | |

(continued)

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ORDERING INFORMATION

Commercial Grade (80 Series) Part Numbers

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

✓ = 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

81 N J R 10

80 Series
Acrasil[®]
Silicone Ceramic
Conformal Axial
Term. Wirewound

Wattage
1 = 1W
2
3
5
0 = 10W

Tolerance
F = 1%
J = 5%

Resistance Value
R10 = 0.10Ω
1R0 = 1.0Ω
10R = 10.0Ω
250 = 250Ω
1K0 = 1,000Ω
4K5 = 4,500Ω
50K = 50,000Ω

Military Grade

R W 7 4 U 1 0 0 1 F

RW Series
Military grade

Resistance Value
R100 = 0.1Ω
1R00 = 1.0Ω
10R0 = 10.0Ω
1000 = 1000Ω
1002 = 10KΩ
1001 = 1000Ω
1503 = 150KΩ


Tolerance
F = 1%
J = 5%

This product will not be made available as RoHS Compliant.

For RoHS Compliant equivalent, see 40 Series.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

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 [Ohmite Information](#)

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-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management