

## FEATURES

- WHM, UltraHigh ohmic value precision series,
- WNM, Aryton Perry winding Non-Inductive available. Inductance <1nH at 1MHZ test,
- Designed to meet the most stringent MIL-R-26F, MIL-STD-202 standard requirements
- Miniaturized Better power to dimension ratios
- Use of the highest quality standard (96% Alumina) ceramic core
- Manufacturing process -Wire winding/ Spot Welding- by Computer Numerical Control (CNC) machine tools to ensure consistency of product quality.
- Encapsulated by epoxy molding compound
- Advanced IC encapsulation mold/die technologies

## SPECIFICATIONS

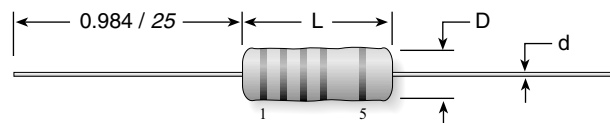
**Material**  
**Ceramic Core:** CeramTec Rubalit® 96% alumina  
**End Caps:** Stainless steel, precision formed  
**Leads:** Copper wire, 100% Sn (lead free) coated  
**ISOHMM alloy resistance wire** TC+/-20ppm/°C  
**Encapsulation:** SUMICON 1100/1200 Epoxy molding compound for IC encapsulation

**Electrical**  
**Standard Tolerance:** F (1.0%), J (5.0%)  
**Temperature Coefficient (ppm/°C):**  
 ±90 for 0.100Ω  
 ±20 for >0.100Ω  
**Maximum Working Voltage:** (PxR)1/2  
**Derating:** Linearly from 100% @ +70°C to 0% @ +150°C.  
**Operating Temp:** -55°C to +150°C



# WH/WN Series

## Miniature Molded Wirewound



| Type       | Power Rating (watts) | Resistance Range (Ω)         | Dim. L (mm/in) | Dim. D (mm/in) | Dim. d (mm/in) |
|------------|----------------------|------------------------------|----------------|----------------|----------------|
| WHA<br>WNA | 0.5                  | 0.100 - 1.0K<br>0.100 - 250  | 5.08 / 0.200   | 2.54 / 0.100   | 0.60 / 0.024   |
| WHB<br>WNB | 1                    | 0.100 - 4.0K<br>0.100 - 1.0K | 7.00 / 0.276   | 3.00 / 0.120   | 0.60 / 0.024   |
| WHC<br>WNC | 2                    | 0.10 - 8.0K<br>0.10 - 2.0K   | 11.4 / 0.450   | 6.86 / 0.270   | 0.80 / 0.031   |

## PERFORMANCE CHARACTERISTICS

| Test                            | Conditions of Test  | Performance |
|---------------------------------|---|-------------|
| Thermal Shock                   | Rated power applied until thermal stability, -55°C +0°C, -5°C, 15min.       | ±0.2%       |
| Short-time Overload             | 5 times rated wattage for 5 seconds   | ±0.2%       |
| Solderability                   | Method 208 of MIL-STD-202   | ±0.2%       |
| Terminal Strength               | Pull test: 10 pounds, 5 to 10 seconds, Twist test: 1080°, 5 second/rotation | ±0.1%       |
| Dielectric Withstanding Voltage | 500Volts rms for 1W, 2W 1000Volts rms. 1 minute                             | ±0.1%       |
| High Temperature Exposure       | Exposed to an ambient temperature of 275 ±5/-0°C for 250 ±8 hours,          | ±0.5%       |
| Moisture Resistance             | MIL-STD-202 Method 106, 7b not applicable                                   | ±0.2%       |
| Low Temperature Storage         | Cold chamber at a temperature of -65 ±2°C for 24+/-4 hours                  | ±0.2%       |
| Vibration, High Frequency       | Frequency varied 10 to 2000Hz, 200G peak, 2 directions 6 hours each         | ±0.1%       |
| Load Life                       | 1000/2000 hours at rated power, +25°C, 1.5 hours "On", 0.5 hours "Off"      | ±0.5%       |

## ORDERING INFORMATION

H = Inductive  
 N = Non Inductive  
**WHA10RFE-T**  
 Series Power Ohms Tolerance Package  
 A = 0.5 B = 1 C = 2 F = 1% J = 5% T = Tape blank = 25pc Pack  
 RoHS compliant

## KEY TO FIVE-BAND CODE



| Band   | 1     | 2     | 3     | 4          | 5           |
|--------|-------|-------|-------|------------|-------------|
| Color  | Digit | Digit | Digit | Multiplier | Tolerance   |
| Black  | 0     | 0     | 0     | x 1Ω       |             |
| Brown  | 1     | 1     | 1     | x 10Ω      | ± 1% (F)    |
| Red    | 2     | 2     | 2     | x 100Ω     | ± 2% (G)    |
| Orange | 3     | 3     | 3     | x 1KΩ      |             |
| Yellow | 4     | 4     | 4     | x 10KΩ     |             |
| Green  | 5     | 5     | 5     | x 100KΩ    | ± 0.5% (D)  |
| Blue   | 6     | 6     | 6     | x 1MΩ      | ± 0.25% (C) |
| Violet | 7     | 7     | 7     | x 10MΩ     | ± 0.10% (B) |
| Grey   | 8     | 8     | 8     |            | ± 0.05%     |
| White  | 9     | 9     | 9     |            |             |
| Gold   |       |       |       | x 0.1Ω     | ± 5% (J)    |
| Silver |       |       |       | x 0.01Ω    | ± 10% (K)   |

## STANDARD PART NUMBERS FOR WH/WN SERIES

| Wattage: | 0.5      | 0.5      | 1.0      | 1.0      | 2.0      | 2.0      |
|----------|----------|----------|----------|----------|----------|----------|
| Series:  | WHA      | WNA      | WHB      | WNB      | WHC      | WNC      |
| Ohms     |          |          |          |          |          |          |
| 0.1      | WHAR10FE | WNAR10FE | WHBR10FE | WNBR10FE | WHCR10FE | WNCR10FE |
| 0.25     | WHAR25FE | WNAR25FE | WHBR25FE | WNBR25FE | WHCR25FE | WNCR25FE |
| 0.50     | WHAR50FE | WNAR50FE | WHBR50FE | WNBR50FE | WHCR50FE | WNCR50FE |
| 0.75     | WHAR75FE | WNAR75FE | WHBR75FE | WNBR75FE | WHCR75FE | WNCR75FE |
| 1        | WHA1R0FE | WNA1R0FE | WHB1R0FE | WNB1R0FE | WHC1R0FE | WNC1R0FE |
| 2        | WHA2R0FE | WNA2R0FE | WHB2R0FE | WNB2R0FE | WHC2R0FE | WNC2R0FE |
| 4        | WHA4R0FE | WNA4R0FE | WHB4R0FE | WNB4R0FE | WHC4R0FE | WNC4R0FE |
| 5        | WHA5R0FE | WNA5R0FE | WHB5R0FE | WNB5R0FE | WHC5R0FE | WNC5R0FE |
| 10       | WHA10RFE | WNA10RFE | WHB10RFE | WNB10RFE | WHC10RFE | WNC10RFE |
| 15       | WHA15RFE | WNA15RFE | WHB15RFE | WNB15RFE | WHC15RFE | WNC15RFE |
| 25       | WHA25RFE | WNA25RFE | WHB25RFE | WNB25RFE | WHC25RFE | WNC25RFE |
| 51       | WHA51RFE | WNA51RFE | WHB51RFE | WNB51RFE | WHC51RFE | WNC51RFE |
| 75       | WHA75RFE | WNA75RFE | WHB75RFE | WNB75RFE | WHC75RFE | WNC75RFE |
| 100      | WHA100FE | WNA100FE | WHB100FE | WNB100FE | WHC100FE | WNC100FE |
| 150      | WHA150FE | WNA150FE | WHB150FE | WNB150FE | WHC150FE | WNC150FE |
| 200      | WHA200FE | WNA200FE | WHB200FE | WNB200FE | WHC200FE | WNC200FE |
| 250      | WHA250FE | WNA250FE | WHB250FE | WNB250FE | WHC250FE | WNC250FE |
| 330      | WHA330FE |          | WHB330FE | WNB330FE | WHC330FE | WNC330FE |
| 470      | WHA470FE |          | WHB470FE | WNB470FE | WHC470FE | WNC470FE |
| 560      | WHA560FE |          | WHB560FE | WNB560FE | WHC560FE | WNC560FE |
| 750      | WHA750FE |          | WHB750FE | WNB750FE | WHC750FE | WNC750FE |
| 1K       | WHA1K0FE |          | WHB1K0FE | WNB1K0FE | WHC1K0FE | WNC1K0FE |
| 2.5K     |          |          | WHB2K5FE |          | WHC2K5FE |          |

Check product availability at [www.ohmite.com](http://www.ohmite.com)