

# 50 Series

## Economical Silicone Coated Wirewound

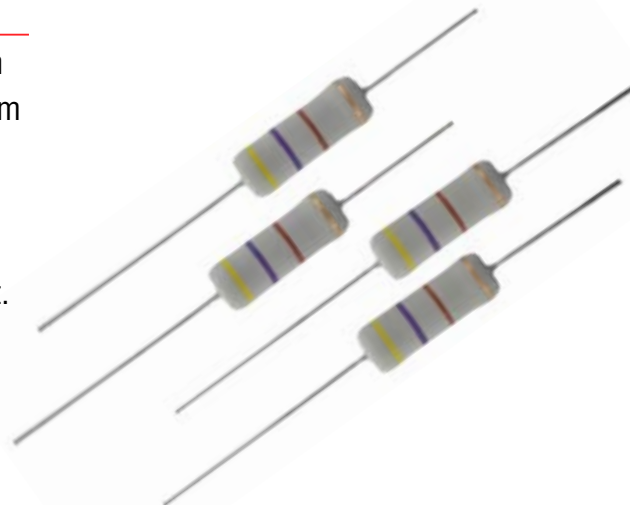


Automated winding, in-line color banding, and testing allow for an economically priced, industrial grade wirewound power resistor.

These resistors feature an all welded construction with a high purity alumina ceramic core and high quality RoHS grade tinned copper wire instead of copper weld which produces better thermal characteristics. The 50 series accompanies Ohmite's wide range of axial leaded products.

### FEATURES

- Rugged construction
- Optimized for Medium to High volume production
- Custom resistance values can also be produced on request.



### SERIES SPECIFICATIONS

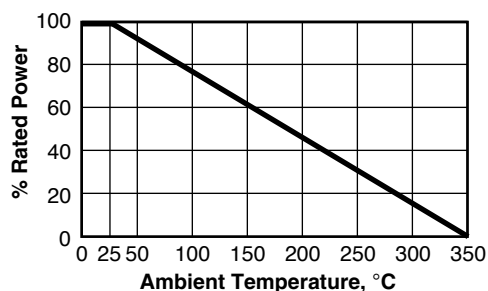
| Series | Power at 25°C | Resistance | Limiting Element Voltage |
|--------|---------------|------------|--------------------------|
| 53J    | 3W            | 0R1 to 10K | 150                      |
| 55J    | 5W            | 0R1 to 20K | 200                      |

### CHARACTERISTICS

|                                        |                            |                   |  |
|----------------------------------------|----------------------------|-------------------|--|
| <b>Temp. Coefficient of Resistance</b> | ±90 ppm/°C for below 1.0 Ω |                   |  |
|                                        | ±50 for 1.0 Ω to 99 Ω      |                   |  |
|                                        | ±30 for 100 Ω and above    |                   |  |
| <b>Short Term Overload</b>             | 53J                        | 5X for 5 seconds  |  |
|                                        | 55J                        | 10X for 5 seconds |  |
| <b>Leads</b>                           | Tin Coated Copper          |                   |  |

| Test                             | Condition                                                             | Maximum ΔR |
|----------------------------------|-----------------------------------------------------------------------|------------|
| <b>Short term overload</b>       | 5X Rated power for 5 seconds (3W); 10X Rated power for 5 seconds (5W) | <2% + 0R05 |
| <b>Load life at rated power</b>  | 1000 hours (1.5 Hrs ON, 0.5 Hrs OFF cycle)                            | <5% + 0R05 |
| <b>Robustness of termination</b> | As per BS-CECC 40201-002                                              | <1% + 0R05 |

### Derating



### Key to four-band code



| Band         | 1            | 2 | 3                 | 4                |
|--------------|--------------|---|-------------------|------------------|
| <b>Color</b> | <b>Digit</b> |   | <b>Multiplier</b> | <b>Tolerance</b> |
| Black        | 0            | 0 | x                 | 1Ω               |
| Brown        | 1            | 1 | x                 | 10Ω ± 1% (F)     |
| Red          | 2            | 2 | x                 | 100Ω ± 2% (G)    |
| Orange       | 3            | 3 | x                 | 1KΩ ± 3%         |
| Yellow       | 4            | 4 | x                 | 10KΩ ± 4%        |
| Green        | 5            | 5 | x                 | 100KΩ            |
| Blue         | 6            | 6 |                   |                  |
| Violet       | 7            | 7 |                   |                  |
| Grey         | 8            | 8 |                   |                  |
| White        | 9            | 9 |                   |                  |
| Gold         |              |   | x                 | 0.1Ω ± 5% (J)    |
| Silver       |              |   | x                 | 0.01Ω ± 10% (K)  |

# 50 Series

## Low Cost Silicone Coated Axial

### DIMENSIONS

(mm)



| Type | L nom  | D max* | d nom     |
|------|--------|--------|-----------|
| 53J  | 14±1.5 | 5.6    | 0.80±0.05 |
| 55J  | 21±1.5 | 8      | 1.0±0.05  |

\*D max. will be 6mm max. for 53J and 8.5mm for 55J for values less than or equal to 1R0.

\*\*When ordered on tape and reel, lead length will be 36mm ±3 for 53J and 34mm ± 3 for 55J.

### ORDERING INFORMATION

50 Series  
**53** Non-Inductive Winding  
 Optional (blank = std. winding)  
**N** RoHS Compliant  
**J** Tape & reel  
 1000 per reel  
 Modified lead length  
**R**  
**10** Resistance Value  
**E** Tolerance  
**-TR** Wattage  
 3 or 5 watt  
 J = 5%  
 R10 = 0.10Ω  
 1R0 = 1.0Ω  
 10R = 10.0Ω  
 250 = 250Ω  
 1K0 = 1,000Ω  
 7K5 = 7500  
 20K = 20000

### Standard Part Numbers

|         |         |
|---------|---------|
| 53JR10E | 55JR10E |
| 53JR50E | 55JR50E |
| 53J1R0E | 55J1R0E |
| 53J5R0E | 55J5R0E |
| 53J7R5E | 55J7R5E |
| 53J10RE | 55J10RE |
| 53J25RE | 55J25RE |
| 53J50RE | 55J50RE |
| 53J75RE | 55J75RE |
| 53J100E | 55J100E |
| 53J250E | 55J250E |
| 53J500E | 55J500E |
| 53J750E | 55J750E |
| 53J1K0E | 55J1K0E |
| 53J2K0E | 55J2K0E |
| 53J5K0E | 55J5K0E |
| 53J10KE | 55J10KE |
|         | 55J20KE |