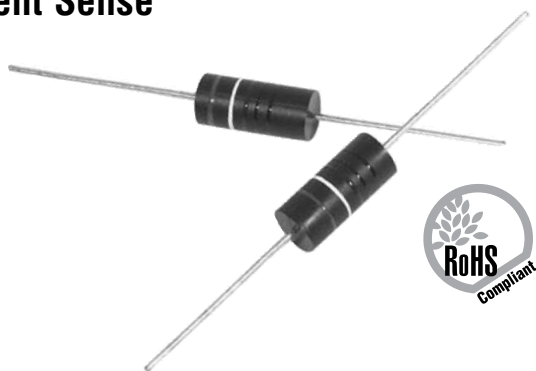


WL Series

Miniature Wirewound Current Sense



FEATURES

- Ultra-low ohmic value series for Current Sensing applications
- Very low inductance (<1nH at 1MHz Test)
- Miniaturized dimensions, 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

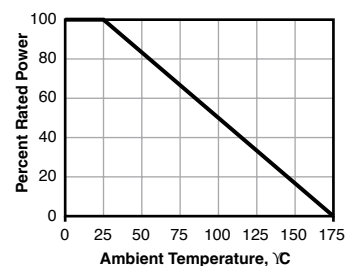
SERIES SPECIFICATIONS

Type	Power Rating (watts)	Resistance Range (Ω)
WLA	0.5	0.005-0.100
WLB	1	0.005-0.100
WLC	2	0.010-0.100
WLD	3	0.010-0.100

CHARACTERISTICS

Ceramic Core	CeramTec Rubalit® 96% alumina
End Caps	Stainless steel, precision formed
Leads	Copper wire, 100% Sn (Lead Free) coated
Resistance Wire	CN49W alloy TC $\pm 20\text{ppm}/^\circ\text{C}$
Encapsulation	SUMICON 1100/1200 Epoxy molding compound for IC encapsulation
Standard Tolerance	F (1.0%), J (5.0%)
Temperature Coefficient	$\pm 300\text{ppm}/^\circ\text{C}$ for $\leq 0.03\Omega$; $\pm 100\text{ppm}/^\circ\text{C}$ for $\geq 0.033\Omega$
Maximum Working Voltage	$\sqrt{P \times R}$

Derating



PERFORMANCE DATA

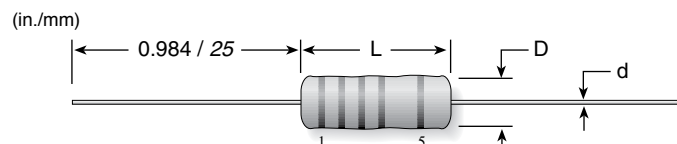
Test	Conditions Of Test	Performance
Thermal Shock	Rated power applied until thermal stability, -55°C +0°C, -5°C, 15min.	$\pm 2.0\%$
Short-time Overload	5 times rated wattage for 5 seconds	$\pm 2.0\%$
Solderability	Method 208 of MIL-STD-202	$\pm 2.0\%$
Terminal Strength	Pull test: 10 pounds, 5 to 10 seconds, Twist test: 1080°, 5 second/rotation	$\pm 1.0\%$
Dielectric Withstanding Voltage	500 Volts rms for 1W. 1 minute	$\pm 1.0\%$
High Temperature Exposure	Exposed to an ambient temperature of 275 $\pm 5/-0^\circ\text{C}$ for 250 ± 8 hours,	$\pm 5.0\%$
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	$\pm 2.0\%$
Low Temperature Storage	Cold chamber at a temperature of -65 $\pm 2^\circ\text{C}$ for 24 ± 4 hours	$\pm 2.0\%$
Vibration, High Frequency	Frequency varied 10 to 2000Hz, 200G peak, 2 directions 6 hours each	$\pm 1.0\%$
Load Life	1000/2000 hours at rated power, +25°C, 1.5 hours "On", 0.5 hours "Off"	$\pm 5.0\%$

(continued)

WL Series

Miniature Wirewound Current Sense

DIMENSIONS



Type	Power Rating (watts)	L	D	d
WLA	0.5	5.08 / 0.200	2.54 / 0.100	0.60 / 0.024
WLB	1	7.00 / 0.276	3.30 / 0.130	0.60 / 0.024
WLC	2	11.4 / 0.450	4.57 / 0.180	0.80 / 0.031
WLD	3	13.54 / 0.530	5.50 / 0.216	0.80 / 0.031

ORDERING INFORMATION

RoHS compliant				
WLAR010FE-T				
Series	Power	Ohms	Tolerance	Package
	A = 0.5 B = 1 C = 2		F = 1% J = 5%	T = Tape blank = 25pc Pack

Standard Part Numbers for WL Series

Wattage:	0.5	1.0	2.0
Series:	WLA	WLB	WLC
Ohms			
0.005	WLAR005FE	WLBR005FE	WLCR010FE
0.01	WLAR010FE	WLBR010FE	WLCR015FE
0.015	WLAR015FE	WLBR015FE	WLCR020FE
0.02	WLAR020FE	WLBR020FE	WLCR025FE
0.025	WLAR025FE	WLBR025FE	WLCR030FE
0.03	WLAR030FE	WLBR030FE	WLCR035FE
0.05	WLAR050FE	WLBR050FE	WLCR050FE
0.10	WLAR100FE	WLBR100FE	WLCR100FE

Key to five-band code



Band	1	2	3	4	5
Color	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	x 0.001Ω	
Gold				x 0.1Ω	± 5% (J)
Silver				x 0.01Ω	± 10% (K)