

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

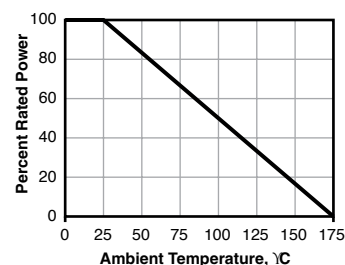
SERIES SPECIFICATIONS

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

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 $+0^\circ\text{C}$, -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, $+25^\circ\text{C}$, 1.5 hours "On", 0.5 hours "Off"	$\pm 5.0\%$

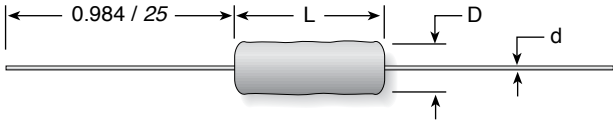
(continued)

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DIMENSIONS

(in./mm)



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

ORDERING INFORMATION

RoHS compliant
↓
W L A R 0 1 0 F E T

Series	Power	Ohms	Tolerance	Package
	A = 0.5 B = 1 C = 2		F = 1% J = 5%	T = Tape

Standard Part Numbers for WL Series

Wattage:	0.5	1.0	2.0
Series:	WLA	WLB	WLC
Ohms			
0.005	WLA005FET	WLB005FET	WLC005FET
0.01	WLA010FET	WLB010FET	WLC010FET
0.015	WLA015FET	WLB015FET	WLC015FET
0.02	WLA020FET	WLB020FET	WLC020FET
0.025	WLA025FET	WLB025FET	WLC025FET
0.03	WLA030FET	WLB030FET	WLC030FET
0.05	WLA050FET	WLB050FET	WLC050FET
0.10	WLA100FET	WLB100FET	WLC100FET

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