

# 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

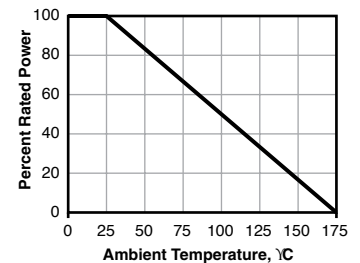
### SERIES SPECIFICATIONS

Type	Power Rating (watts)	Resistance Range ( $\Omega$ )
WLA	0.5	0.005-0.100
WLB	1	0.005-0.100
WLC	2	0.010-0.100

### CHARACTERISTICS

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

### Derating



### PERFORMANCE DATA

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

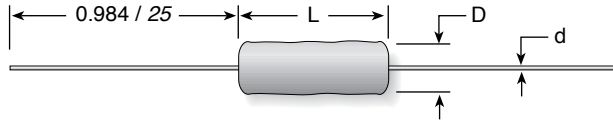
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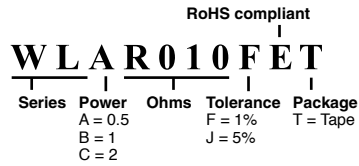
### DIMENSIONS

(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



#### Standard Part Numbers for WL Series

Wattage:	0.5	1.0	2.0
Series:	WLA	WLB	WLC
Ohms			
0.005	WLAR005FET	WLBR005FET	WLBR005FET
0.01	WLAR010FET	WLBR010FET	WLCR010FET
0.015	WLAR015FET	WLBR015FET	WLCR015FET
0.02	WLAR020FET	WLBR020FET	WLCR020FET
0.025	WLAR025FET	WLBR025FET	WLCR025FET
0.03	WLAR030FET	WLBR030FET	WLCR030FET
0.05	WLAR050FET	WLBR050FET	WLCR050FET
0.10	WLAR100FET	WLBR100FET	WLCR100FET