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

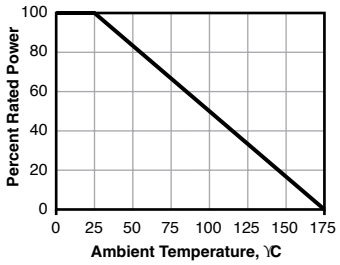
SERIES SPECIFICATIONS

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 ±20ppm/°C
Encapsulation	SUMICON 1100/1200 Epoxy molding compound for IC encapsulation
Standard Tolerance	F (1.0%), J (5.0%)
Temperature Coefficient	±300ppm/°C for ≤0.03Ω; ±100ppm/°C for ≥0.033Ω
Maximum Working Voltage	√PxR

Derating



PERFORMANCE DATA

Test	Conditions Of Test	Performance
Thermal Shock	Rated power applied until thermal stability, -55°C +0°C,-5°C,15min.	±2.0%
Short-time Overload	5 times rated wattage for 5 seconds	±2.0%
Solderability	Method 208 of MIL-STD-202	±2.0%
Terminal Strength	Pull test:10 pounds, 5 to10 seconds, Twist test: 1080°, 5 second/rotation	±1.0%
Dielectric Withstanding Voltage	500 Volts rms for 1W. 1 minute	±1.0%
High Temperature Exposure	Exposed to an ambient temperature of 275 +5/-0°C for 250 ±8 hours,	±5.0%
Moisture Resistance	MIL-STD-202 Method 106, 7b not applicable	±2.0%
Low Temperature Storage	Cold chamber at a temperature of -65 ±2°C for 24 ±4 hours	±2.0%
Vibration, High Frequency	Frequency varied 10 to 2000Hz, 200G peak, 2 directions 6 hours each	±1.0%
Load Life	1000/2000 hours at rated power, +25°C, 1.5 hours “On”, 0.5 hours “Off”	±5.0%

(continued)

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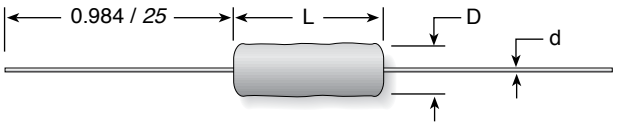
DIMENSIONS

(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	WLAR005FET	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

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CPSL07R1000JB145 SR10-0.015-1% SR20-0.008-1% HPCR0402F12K0K9 HPCR0402F130RK9 HPCR0402F13K0K9 HPCR0402F17K4K9 HPCR0402F180KK9 HPCR0402F180RK9 HPCR0402F1K10K9 HPCR0402F220KK9 HPCR0402F220RK9 HPCR0402F24K0K9 HPCR0402F27K0K9 HPCR0402F2K00K9 HPCR0402F33K0K9 HPCR0402F430KK9 HPCR0402F4K30K9 HPCR0402F4K70K9 HPCR0402F680KK9 HPCR0402F680RK9 HPCR0402F390KK9 HPCR0402F39K0K9 HPCR0402F8K20K9 HPCR0402F560RK9 HPCR0402F2K70K9 HPCR0402F360KK9 HPCR0402F36K0K9 HPCR0402F3K00K9 HPCR0402F3K90K9 HPCR0402F430RK9 HPCR0402F43K0K9 HPCR0402F475KK9 HPCR0402F47K0K9 HPCR0402F51K0K9 HPCR0402F560KK9 HPCR0402F56K0K9 HPCR0402F5K10K9 HPCR0402F5K60K9 HPCR0402F620KK9 HPCR0402F620RK9 HPCR0402F68K0K9 HPCR0402F6K20K9 HPCR0402F6K80K9 HPCR0402F750KK9 HPCR0402F750RK9 HPCR0402F7K50K9 HPCR0402F820KK9 HPCR0402F82K0K9 HPCR0402F910KK9