WH/WN Series

Miniature Molded Wirewound

FEATURES

- WH precision series
- WN Aryton Perry winding Non-Inductive series: Inductance <1nH at 1MHZ test,
- Designed to meet MIL-R-26F, MIL-STD-202 standard requirements
- 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

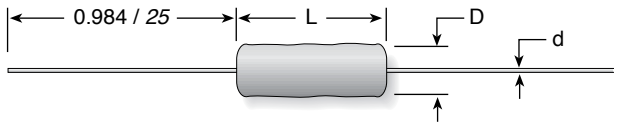
SERIES SPECIFICATIONS

Type	Power Rating (watts)	Resistance Range (Ω)	Weight (g/1000pc)
WHA	0.5	0.100 - 1.0K	216
WNA		0.100 - 250	
WHB	1	0.100 - 4.0K	296
WNB		0.100 - 1.0K	
WHC	2	0.10 - 8.0K	712
WNC		0.10 - 2.0K	
WHD	3	0.10 - 25K	1160
WND		0.10 - 5.0K	
WHE	5	0.10 - 50K	2920
WNE		0.10 - 10K	

CHARACTERISTICS

Ceramic Core	CeramTec Rubalit® 85% alumina
End Caps	Stainless steel, precision formed
Leads	Copper wire,100% Sn (lead free) coated
Resistance Wire	ISAOHM® wire TC ±20ppm/°C
Encapsulation	SUMICON 1100/1200 Epoxy molding compound for IC encapsulation
Standard Tolerance	D (0.5%), F (1.0%), J (5.0%)
Temperature Coefficient (ppm/°C)	±90 for 0.100Ω-0.99Ω, ±50 for 1.00Ω-10.00Ω, ±20 for >10.00Ω
Maximum Working Voltage	$(PxR)^{1/2}$
Derating	Linearly from 100% @ +70°C to 0% @ +150°C.
Operating Temp	-55°C to +150°C

DIMENSIONS



Type	Wattage	L	D	d
WH/N**A**	0.5	5.08 / 0.200	2.54 / 0.100	0.60 / 0.024
WH/N**B**	1	7.00 / 0.276	3.30 / 0.130	0.60 / 0.024
WH/N**C**	2	11.4 / 0.450	4.57 / 0.180	0.80 / 0.031
WH/N**D**	3	13.54 / 0.530	5.50 / 0.216	0.80 / 0.031
WH/N**E**	5	20.00 / 0.790	7.50 / 0.295	1.00 / 0.039

Packaging

Tape Width	Pitch	Reel Diam.	Pc/ reel
64 / 2.520	5.0 / 0.197	290 / 11.41	1000
64 / 2.520	5.0 / 0.197	290 / 11.41	1000
64 / 2.520	10 / 0.393	290 / 11.41	1000
84 / 3.307	10 / 0.393	290 / 11.41	500
84 / 3.307	10 / 0.393	290 / 11.41	500

(continued)

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PERFORMANCE CHARACTERISTICS

Test	Conditions of Test	Performance
Thermal shock	Environmental chamber, -55°C +0°C, -3°C to 150°C +3°C, -0°C, 5 cycles, minimum 15 min. at each extreme	±(1.0% + 0.5mΩ)ΔR
Short-time overload	Overload voltage 5x rated wattage for 5 sec.	±(0.5% + 0.5mΩ)ΔR
Solderability	Bath temp. 260°C ±5°, immersion time 5 sec. ±0.5, JIS C 5201 4.18	>90% of contact face covered new solder
Resistance to solder heat	Bath temp. 260°C ±5°, immersion time 5 sec. ±0.5, JIS C 5201 4.18	±(0.5% + 0.5mΩ)ΔR
Dielectric withstanding voltage	Magnitude of test voltage >500 volts rms.; duration 1 min.	Pass
Insulation resistance	Magnitude of test voltage 500 volts rms. ±10%; duration 1 min.	$>10^9\Omega$
High Temperature Exposure	Exposed to an ambient temperature of 175°C +5°/-0° for 250 ±8 hours	±(1.0% + 0.5mΩ)ΔR
Low Temperature Storage	At a temperature of -65°C ±2° for a period of 24 hours ±4	±(0.5% + 0.5mΩ)ΔR
Life	Test temp. at 70°C ±2°, rated DC continuous working voltage applied, 1.5 hours on and 0.5 hours off, 1000 hours	±(2.0% + 0.5mΩ)ΔR

HOW TO ORDER

H = Inductive
N = Non Inductive

RoHS compliant

W H A 1 0 R F E T

Series	Power	Ohms	Tolerance	Package
	A = 0.5		F = 1%	T = Tape
	B =1		J = 5%	
	C = 2		D = 0.5%	
	D = 3			
	E = 5			

Standard part numbers

Wattage:	0.5	0.5	1.0	1.0	2.0	2.0	3.0	3.0	5.0	5.0
Series:	**WHA**	**WNA**	**WHB**	**WNB**	**WHC**	**WNC**	**WHD**	**WND**	**WHE**	**WNE**
Ohms										
0.1	WHAR10FET	WNAR10FET	WHBR10FET	WNBR10FET	WHCR10FET	WNCR10FET	WHDR10FET	WNDR10FET	WHER10FET	WNER10FET
0.25	WHAR25FET	WNAR25FET	WHBR25FET	WNBR25FET	WHCR25FET	WNCR25FET				
0.5	WHAR50FET	WNAR50FET	WHBR50FET	WNBR50FET	WHCR50FET	WNCR50FET	WHDR50FET	WNDR50FET	WHER50FET	WNER50FET
0.75	WHAR75FET	WNAR75FET	WHBR75FET	WNBR75FET	WHCR75FET	WNCR75FET				
1	WHA1R0FET	WNA1R0FET	WHB1R0FET	WNB1R0FET	WHC1R0FET	WNC1R0FET	WHD1R0FET	WND1R0FET	WHE1R0FET	WNE1R0FET
2	WHA2R0FET	WNA2R0FET	WHB2R0FET	WNB2R0FET	WHC2R0FET	WNC2R0FET				
4	WHA4R0FET	WNA4R0FET	WHB4R0FET	WNB4R0FET	WHC4R0FET	WNC4R0FET				
5	WHA5R0FET	WNA5R0FET	WHB5R0FET	WNB5R0FET	WHC5R0FET	WNC5R0FET	WHD5R0FET	WND5R0FET	WHE5R0FET	WNE5R0FET
10	WHA10RFET	WNA10RFET	WHB10RFET	WNB10RFET	WHC10RFET	WNC10RFET	WHD10RFET	WND10RFET	WHE10RFET	WNE10RFET
15	WHA15RFET	WNA15RFET	WHB15RFET	WNB15RFET	WHC15RFET	WNC15RFET	WHD15RFET	WND15RFET	WHE15RFET	WNE15RFET
25	WHA25RFET	WNA25RFET	WHB25RFET	WNB25RFET	WHC25RFET	WNC25RFET				
51	WHA51RFET	WNA51RFET	WHB51RFET	WNB51RFET	WHC51RFET	WNC51RFET				
75	WHA75RFET	WNA75RFET	WHB75RFET	WNB75RFET	WHC75RFET	WNC75RFET				
100	WHA100FET	WNA100FET	WHB100FET	WNB100FET	WHC100FET	WNC100FET	WHD100FET	WND100FET	WHE100FET	WNE100FET
150	WHA150FET	WNA150FET	WHB150FET	WNB150FET	WHC150FET	WNC150FET			WHE150FET	WNE150FET
200	WHA200FET	WNA200FET	WHB200FET	WNB200FET	WHC200FET	WNC200FET				
250	WHA250FET	WNA250FET	WHB250FET	WNB250FET	WHC250FET	WNC250FET	WHD250FET	WND250FET	WHE250FET	WNE250FET
330	WHA330FET		WHB330FET	WNB330FET	WHC330FET	WNC330FET				
470	WHA470FET		WHB470FET	WNB470FET	WHC470FET	WNC470FET				
560	WHA560FET		WHB560FET	WNB560FET	WHC560FET	WNC560FET	WHD560FET	WND560FET	WHE560FET	WNE560FET
750	WHA750FET		WHB750FET	WNB750FET	WHC750FET	WNC750FET				
1K	WHA1K0FET		WHB1K0FET	WNB1K0FET	WHC1K0FET	WNC1K0FET	WHD1K0FET	WND1K0FET	WHE1K0FET	WNE1K0FET
2.5K			WHB2K5FET		WHC2K5FET			WND2K5FET		
5K							WHD5K0FET		WHE5K0FET	WNE5K0FET
10K							WHD10KFET		WHE10KFET	WNE10KFET
25K									WHE25KFET	