

COIL SPECIFICATION



ZenithTek

Brand

ZenithTek

Product Series Code

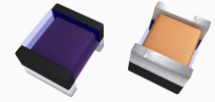
ZWP - Series

File Version

V1.5

Description

Wire Wound High Current Chip Inductor



Features

- Ferrite, Wire-Wound Construction.
- High Rated Current & Low DC Resistance.
- Wide Inductance Range.
- Halogen Free, Lead Free, RoHS and REACH Compliance.

Product Identification

ZWP - 0805 - 100 K

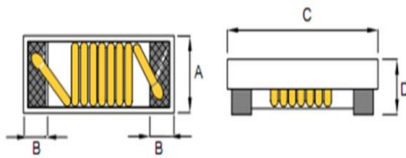
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Applications

- Fit for Power Line Circuit Inductor Applications.

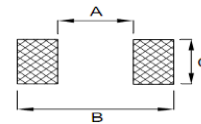
- 1.Product Code:
ZWP= ZenithTek Code.
- 2.Dimension Code:
0805 = 2.40 * 1.65 * 1.30 mm.
- 3.Inductance Code:
100 = 10μH.
- 4.Tolerance Code:
K = 10%.

Dimension (Unit: mm)



Type	A(Max.)	B(Ref.)	C(Max.)	D(Max.)
ZWP-0603	1.20	0.33	1.80	1.00
ZWP-0805	1.65	0.44	2.40	1.40
ZWP-1008	2.54	0.50	2.90	2.00
ZWP-1210	2.90	0.50	3.60	2.50

Land Pattern (Unit: mm)



Type	A(Ref.)	B(Ref.)	C(Ref.)
ZWP-0603	0.64	1.92	1.02
ZWP-0805	0.96	3.00	1.78
ZWP-1008	1.27	3.31	2.54
ZWP-1210	2.00	4.40	2.70

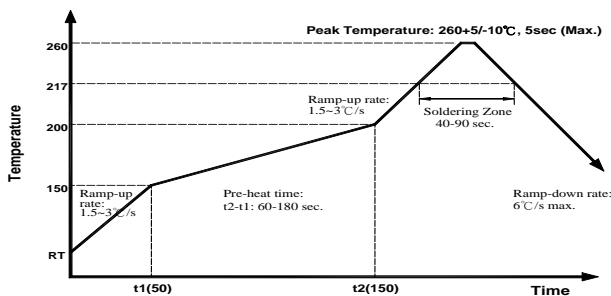
Product Structure



Schematic



Reflow Heat Endurance



Operating & Storage Conditions

Operating Temp. : -25°C~+105°C (including self-temp. rise)
Storage Temp. : -25°C~+105°C (for PCBA)

Standard & Atmospheric Conditions

Ambient Temp. : 20°C±15°C / Relative Humidity : 65±20%.
If there may be any doubt on the result, measurement shall be made within the following limits :
Ambient Temp. : 25°C±5°C / Relative Humidity : 75±10%.

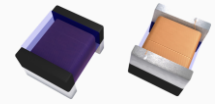
Test Equipment

LCR Meter : Agilent E4991A+16197A Test Fixture.
Resistance Meter : Chroma 16502.
Caliper : Mitsutoyo 150mm.

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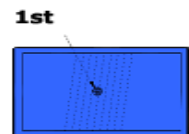


Electrical Characteristic

Part Number	Inductance (μH)	Tolerance (%)	Q Value (Typ.)	Test Frequency (MHz)	SRF(MHz) (Typ.)	DCR(Ω) (+/-30%)	IDC(mA) (Typ.)	Irms(mA) (Typ.)	Color Marking
ZWP-0603-R27□	0.27	10	13	7.9	900	0.26	950	820	Green
ZWP-0603-R47□	0.47	10	13	7.9	900	0.26	920	800	Blue
ZWP-0603-R68□	0.68	10 / 20	13	7.9	650	0.27	920	800	Violet
ZWP-0603-R78□	0.78	10 / 20	16	7.9	410	0.28	920	800	Gray
ZWP-0603-1R0□	1.00	10 / 20	16	7.9	390	0.32	860	700	Black
ZWP-0603-1R5□	1.50	10 / 20	16	7.9	160	0.40	720	600	Brown
ZWP-0603-1R8□	1.80	10 / 20	16	7.9	121	0.43	640	580	Red
ZWP-0603-2R2□	2.20	10 / 20	16	7.9	103	0.56	600	580	Orange
ZWP-0603-2R7□	2.70	10 / 20	16	7.9	72	0.62	540	500	Yellow
ZWP-0603-3R3□	3.30	10 / 20	16	7.9	66	0.70	500	500	Green
ZWP-0603-3R9□	3.90	10 / 20	16	7.9	61	0.83	460	460	Blue
ZWP-0603-4R7□	4.70	10 / 20	16	7.9	51	0.97	400	420	Violet
ZWP-0603-5R6□	5.60	10 / 20	16	7.9	47	1.10	380	380	Gray
ZWP-0603-6R8□	6.80	10 / 20	16	7.9	43	1.50	340	340	White
ZWP-0603-8R2□	8.20	10 / 20	16	7.9	40	1.68	300	300	Black
ZWP-0603-100□	10	10 / 20	14	2.5	36	1.85	280	280	Brown
ZWP-0603-120□	12	10 / 20	14	2.5	32	2.28	260	260	Red
ZWP-0603-150□	15	10 / 20	14	2.5	29	2.60	240	240	Orange
ZWP-0603-180□	18	10 / 20	14	2.5	28	2.90	220	220	Yellow
ZWP-0603-220□	22	10 / 20	14	2.5	24	3.61	200	200	Green
ZWP-0603-270□	27	10 / 20	14	2.5	20	5.20	140	140	Blue
ZWP-0603-330□	33	10 / 20	14	2.5	15	6.60	120	120	Violet
ZWP-0603-470□	47	10 / 20	12	2.5	11	11.20	100	110	Gray

Note 1: Tolerance Code: J= ±5%, K= ±10%, M= ±20%.
 Note 2: IDC for Inductance drop 10% from its value without current.
 Note 3: I rms for a 15°C rise above 25°C ambient.

Color Marking

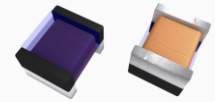


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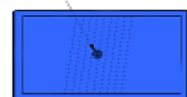
Electrical Characteristic

Part Number	Inductance (μH)	Tolerance (%)	Q Value (Typ.)	Test Frequency (MHz)	SRF(MHz) (Typ.)	DCR(Ω) (±30%)	IDC(mA) (Typ.)	I _{rms} (mA) (Typ.)	Color Marking
ZWP-0805-R10□	0.10	10 / 20	9.00	7.9	1700	0.07	2400	2000	Black
ZWP-0805-R15□	0.15	10 / 20	12	7.9	1500	0.08	1900	1800	Brown
ZWP-0805-R22□	0.22	10 / 20	12	7.9	1200	0.10	1700	1700	Red
ZWP-0805-R47□	0.47	10 / 20	14	7.9	850	0.12	1400	1500	Blue
ZWP-0805-R56□	0.56	10 / 20	14	7.9	360	0.15	1200	1300	Violet
ZWP-0805-R68□	0.68	10 / 20	14	7.9	290	0.15	1200	1300	Gray
ZWP-0805-R82□	0.82	10 / 20	14	7.9	208	0.15	1100	1300	White
ZWP-0805-1R0□	1.00	10 / 20	14	7.9	208	0.13	1100	1300	Black
ZWP-0805-1R2□	1.20	10 / 20	14	7.9	159	0.16	960	1270	Red
ZWP-0805-1R5□	1.50	10 / 20	14	7.9	159	0.17	920	1260	Brown
ZWP-0805-1R8□	1.80	10 / 20	14	7.9	112	0.20	860	1080	Orange
ZWP-0805-2R2□	2.20	10 / 20	13	7.9	87	0.22	740	1040	Red
ZWP-0805-2R7□	2.70	10 / 20	13	7.9	72	0.25	680	1040	Yellow
ZWP-0805-3R3□	3.30	10 / 20	12	7.9	70	0.28	620	1020	Orange
ZWP-0805-3R9□	3.90	10 / 20	14	7.9	61	0.38	580	960	Green
ZWP-0805-4R7□	4.70	10 / 20	14	7.9	51	0.43	520	840	Yellow
ZWP-0805-5R6□	5.60	10 / 20	12	7.9	47	0.50	480	800	Blue
ZWP-0805-6R8□	6.80	10 / 20	14	7.9	46	0.68	420	700	Green
ZWP-0805-8R2□	8.20	10 / 20	13	7.9	33	0.73	400	680	Violet
ZWP-0805-100□	10	5 / 10 / 20	14	2.5	31	0.85	360	560	Blue
ZWP-0805-120□	12	5 / 10 / 20	14	2.5	30	0.90	340	460	Gray
ZWP-0805-150□	15	5 / 10 / 20	15	2.5	28	1.40	300	380	Violet
ZWP-0805-180□	18	5 / 10 / 20	15	2.5	27	1.55	280	360	White
ZWP-0805-220□	22	5 / 10 / 20	15	2.5	20	1.76	240	340	Gray
ZWP-0805-270□	27	5 / 10 / 20	15	2.5	17	2.00	220	300	Black
ZWP-0805-330□	33	5 / 10 / 20	15	2.5	17	2.35	200	300	White
ZWP-0805-390□	39	5 / 10 / 20	14	2.5	15	3.35	180	290	Brown
ZWP-0805-470□	47	5 / 10 / 20	14	2.5	15	3.40	160	280	Black
ZWP-0805-560□	56	5 / 10 / 20	14	2.5	10	4.42	150	240	Yellow
ZWP-0805-680□	68	5 / 10 / 20	14	2.5	10	4.45	140	240	Brown
ZWP-0805-820□	82	5 / 10 / 20	14	2.5	10	7.50	100	180	Orange
ZWP-0805-101□	100	5 / 10 / 20	10	1.0	9	7.50	100	180	Red
ZWP-0805-221□	220	5 / 10 / 20	8	1.0	4	23.10	70	120	Blue

Note 1: Tolerance Code: J= ±5%, K= ±10%, M= ±20%.
 Note 2: IDC for Inductance drop 10% from its value without current.
 Note 3: I_{rms} for a 25°C rise above 25°C ambient.

Color Marking

1st

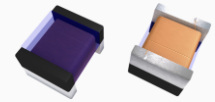


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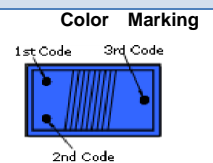
Brand **ZenithTek**
 Product Series Code **ZWP - Series**
 File Version **V1.5**
 Description **Wire Wound High Current Chip Inductor**



Electrical Characteristic

Part Number	Inductance (μH)	Tolerance (%)	Q Value (Typ.)	Test Frequency (MHz)	SRF (MHz) (Min.)	DCR (Ω) (Max.)	IDC (mA) (Max.)	Irms (mA) (Typ.)	Color Marking		
ZWP-1008-78N□	0.078	5 / 10	19	7.9	1000	0.042	3200	2700	Black	Violet	Gray
ZWP-1008-R10□	0.10	5 / 10	35	25	1500	0.05	3200	2700	Brown	Red	Brown
ZWP-1008-R22□	0.22	5 / 10	35	25	800	0.15	2900	2400	Red	Red	Brown
ZWP-1008-R39□	0.39	5 / 10	35	25	460	0.20	2100	1800	Orange	White	Brown
ZWP-1008-R47□	0.47	10	35	25	460	0.20	2100	1800	Yellow	Violet	Brown
ZWP-1008-R56□	0.56	5 / 10	35	25	360	0.26	1800	1500	Green	Blue	Brown
ZWP-1008-R68□	0.68	5 / 10	35	25	400	0.30	1700	1500	Blue	Gray	Brown
ZWP-1008-R82□	0.82	5 / 10	35	25	360	0.35	1400	1200	Gray	Red	Brown
ZWP-1008-1R0□	1.00	10	32	7.9	340	0.34	1700	1200	Brown	Black	Red
ZWP-1008-1R1□	1.10	10	25	7.9	300	0.34	1500	1100	Brown	Brown	Red
ZWP-1008-1R2□	1.20	5 / 10	25	7.9	300	0.25	1600	1100	Brown	Red	Red
ZWP-1008-1R5□	1.50	5 / 10	32	7.9	230	0.42	1200	1000	Brown	Green	Red
ZWP-1008-1R8□	1.80	5 / 10	27	7.9	180	0.45	1100	800	Brown	Gray	Red
ZWP-1008-2R2□	2.20	5 / 10	27	7.9	140	0.50	1100	900	Red	Red	Red
ZWP-1008-2R7□	2.70	5 / 10	27	7.9	130	0.55	1000	900	Red	Violet	Red
ZWP-1008-3R3□	3.30	5 / 10	27	7.9	125	0.60	1000	900	Orange	Orange	Red
ZWP-1008-3R9□	3.90	5 / 10	27	7.9	100	0.80	990	800	Orange	White	Red
ZWP-1008-4R7□	4.70	5 / 10	30	7.9	90	0.90	880	720	Yellow	Violet	Red
ZWP-1008-5R6□	5.60	5 / 10	27	7.9	60	1.00	850	720	Green	Blue	Red
ZWP-1008-6R8□	6.80	5 / 10	27	7.9	60	1.05	840	670	Blue	Gray	Red
ZWP-1008-8R2□	8.20	5 / 10	25	7.9	55	1.20	810	640	Gray	Red	Red
ZWP-1008-100□	10	5 / 10	23	2.5	55	1.55	700	540	Brown	Black	Orange
ZWP-1008-120□	12	5 / 10	23	2.5	36	2.10	580	460	Brown	Red	Orange
ZWP-1008-150□	15	5 / 10	23	2.5	36	2.38	580	460	Brown	Green	Orange
ZWP-1008-180□	18	5 / 10	23	2.5	32	2.50	520	410	Brown	Gray	Orange
ZWP-1008-220□	22	5 / 10	23	2.5	29	2.92	500	400	Red	Red	Orange
ZWP-1008-270□	27	10	23	2.5	22	3.70	450	300	Red	Violet	Orange
ZWP-1008-330□	33	5 / 10	23	2.5	21	4.10	420	300	Orange	Orange	Orange
ZWP-1008-390□	39	5 / 10	18	2.5	15	5.50	340	270	Orange	White	Orange
ZWP-1008-470□	47	5 / 10	23	2.5	17	7.80	310	220	Yellow	Violet	Orange
ZWP-1008-680□	68	5 / 10	20	2.5	9	11.50	220	180	Blue	Gray	Orange
ZWP-1008-101□	100	5 / 10	13	1	4	13.20	210	170	Brown	Black	Yellow
ZWP-1008-151□	150	5 / 10	13	1	3	22.50	170	160	Brown	Green	Yellow
ZWP-1008-221□	220	5 / 10	13	1	3	26.50	160	100	Red	Red	Yellow
ZWP-1008-271□	270	5 / 10	13	1	2	32.00	135	95	Red	Violet	Yellow
ZWP-1008-331□	330	5 / 10	13	1	2	32.50	130	90	Orange	Orange	Yellow

Note 1: Tolerance Code: J= ±5%, K= ±10%.
 Note 2: IDC for Inductance drop 35% from its value without current.
 Note 3: Irms for a 40°C rise above 25°C ambient.

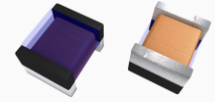


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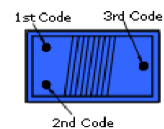


Electrical Characteristic

Part Number	Inductance (μH)	Tolerance (%)	Q Value (Min.)	Test Frequency (MHz)	SRF (MHz) (Min.)	DCR (Ω) (Max.)	IDC (mA) (Max.)	Irms (mA) (Typ.)	Color Marking		
ZWP-1210-R27□	0.27	5 / 10	40	25	500	0.080	3900	3400	Red	Violet	Brown
ZWP-1210-R33□	0.33	10	40	25	500	0.090	3400	2600	Orange	Orange	Brown
ZWP-1210-R39□	0.39	5 / 10	40	25	500	0.090	3100	2200	Orange	White	Brown
ZWP-1210-R47□	0.47	5 / 10	40	25	500	0.090	3200	2400	Yellow	Violet	Brown
ZWP-1210-R56□	0.56	10	40	25	500	0.100	2900	2300	Green	Blue	Brown
ZWP-1210-R68□	0.68	5 / 10	40	25	450	0.120	2500	2300	Blue	Gray	Brown
ZWP-1210-R82□	0.82	5 / 10	40	25	450	0.105	2400	2300	Gray	Red	Brown
ZWP-1210-R91□	0.91	5 / 10	45	25	410	0.165	2100	1600	White	Brown	Brown
ZWP-1210-1R0□	1.00	5 / 10	35	7.9	340	0.125	2400	1750	Brown	Black	Red
ZWP-1210-1R2□	1.20	10	35	7.9	280	0.135	2400	1650	Brown	Red	Red
ZWP-1210-1R5□	1.50	10	30	7.9	160	0.145	2100	1750	Brown	Green	Red
ZWP-1210-1R8□	1.80	5 / 10	30	7.9	120	0.160	2100	1450	Brown	Gray	Red
ZWP-1210-2R0□	2.00	5 / 10	30	7.9	110	0.165	1800	1450	Red	Black	Red
ZWP-1210-2R2□	2.20	5 / 10	30	7.9	100	0.170	1800	1450	Red	Red	Red
ZWP-1210-2R5□	2.50	5 / 10	30	7.9	80	0.190	1700	1400	Red	Green	Red
ZWP-1210-2R7□	2.70	5 / 10	30	7.9	75	0.185	1500	1300	Red	Violet	Red
ZWP-1210-3R3□	3.30	5 / 10	30	7.9	70	0.210	1600	1300	Orange	Orange	Red
ZWP-1210-4R7□	4.70	5 / 10	28	7.9	55	0.300	1300	1100	Yellow	Violet	Red
ZWP-1210-5R6□	5.60	5 / 10	28	7.9	50	0.350	1100	1000	Green	Blue	Red
ZWP-1210-6R8□	6.80	5 / 10	28	7.9	45	0.370	1100	1000	Blue	Gray	Red
ZWP-1210-8R2□	8.20	5 / 10	28	7.9	45	0.470	940	900	Gray	Red	Red
ZWP-1210-100□	10	5 / 10	22	2.5	47	0.500	990	800	Brown	Black	Orange
ZWP-1210-120□	12	5 / 10	22	2.5	42	0.680	770	700	Brown	Red	Orange
ZWP-1210-150□	15	5 / 10	22	2.5	34	0.720	740	660	Brown	Green	Orange
ZWP-1210-180□	18	5 / 10	22	2.5	28	0.950	630	600	Brown	Gray	Orange
ZWP-1210-220□	22	5 / 10	22	2.5	25	1.100	640	550	Red	Red	Orange
ZWP-1210-270□	27	5 / 10	20	2.5	18	1.250	600	510	Red	Violet	Orange
ZWP-1210-330□	33	5 / 10	20	2.5	13	1.370	490	420	Orange	Orange	Orange
ZWP-1210-390□	39	5 / 10	20	2.5	13	1.850	400	400	Orange	White	Orange
ZWP-1210-470□	47	5 / 10	20	2.5	12	1.880	470	410	Yellow	Violet	Orange
ZWP-1210-560□	56	5 / 10	22	2.5	10	2.750	360	340	Green	Blue	Orange
ZWP-1210-680□	68	5 / 10	22	2.5	10	3.000	380	330	Blue	Gray	Orange
ZWP-1210-820□	82	5 / 10	22	2.5	10	4.100	300	280	Gray	Red	Orange
ZWP-1210-101□	100	5 / 10	15	1	8	4.682	310	260	Brown	Black	Yellow
ZWP-1210-121□	120	5 / 10	15	1	7	5.800	220	240	Brown	Red	Yellow
ZWP-1210-151□	150	5 / 10	13	1	7	6.102	260	230	Brown	Green	Yellow
ZWP-1210-181□	180	5 / 10	13	1	3	7.100	250	210	Brown	Gray	Yellow
ZWP-1210-221□	220	5 / 10	13	1	3	7.650	220	190	Red	Red	Yellow

Note 1: Tolerance Code: J= ±5%, K= ±10%.
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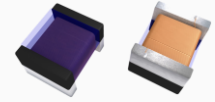
Color Marking



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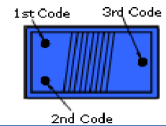


Electrical Characteristic

Part Number	Inductance (μH)	Tolerance (%)	Q Value (Min.)	Test Frequency (MHz)	SRF (MHz) (Min.)	DCR (Ω) (Max.)	IDC (mA) (Max.)	I _{rms} (mA) (Typ.)	Color Marking		
ZWP-1210-271□	270	5 / 10	13	1	3	12.52	150	170	Red	Violet	Yellow
ZWP-1210-331□	330	5 / 10	13	1	3	12.62	170	160	Orange	Orange	Yellow
ZWP-1210-391□	390	5 / 10	13	1	3	23	120	140	Orange	White	Yellow
ZWP-1210-471□	470	5 / 10	13	1	3	25	135	130	Yellow	Violet	Yellow
ZWP-1210-501□	500	5 / 10	13	1	2	25.9	100	95	Green	Black	Yellow
ZWP-1210-561□	560	5 / 10	13	1	2	27	100	95	Green	Blue	Yellow
ZWP-1210-681□	680	5 / 10	13	1	2	31	100	95	Blue	Gray	Yellow
ZWP-1210-821□	820	5 / 10	10	1	2	42	100	95	Gray	Red	Yellow
ZWP-1210-102□	1000	5 / 10	10	1	2	46	95	95	Brown	Black	Red

Note 1: Tolerance Code: J= ±5%, K= ±10%.
 Note 2: IDC for Inductance drop 35% from its value without current.
 Note 3: I_{rms} for a 40°C rise above 25°C ambient.

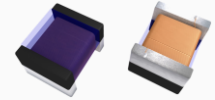
Color Marking



COIL SPECIFICATION



Brand ZenithTek
Product Series Code ZWP - Series
File Version V1.5
Description Wire Wound High Current Chip Inductor



Reliability Test

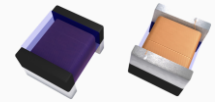
No.	Item	Specification	Test Method
1	Temperature Shock.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $-25\pm 2^{\circ}\text{C} \sim +105\pm 2^{\circ}\text{C}$ Kept for 30 minutes. Transition time : 5 minutes. 100 Cycles.
2	Humidity Resistance.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $40\pm 2^{\circ}\text{C}$. Relative Humidity: 90%. Duration: 500 +4/-0 hours.
3	High Temperature Resistance.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $105\pm 2^{\circ}\text{C}$. Duration: 1000 +4/-0 hours.
4	Low Temperature Resistance.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Temperature: $-25\pm 2^{\circ}\text{C}$. Duration: 1000 +4/-0 hours.
5	Vibration test.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Oscillation Frequency: 10Hz to 55Hz to 10Hz in 60 seconds as a period. Total amplitude: 1.5mm. Testing Time: a period of 2 hours in each 3 mutually perpendicular directions (total of 6 hours).
6	Solderability Heat test.	Appearance: No damage. Inductance: within $\pm 10\%$ of initial.	Solder temperature: $260 +0/-5^{\circ}\text{C}$. Duration: 5 sec. Allowed reflow time: 2 times.
7	Solderability test.	90% or more of electrode area shall be coated by new solder.	Preheating: 160°C , 60sec. Solder temperature: $245\pm 5^{\circ}\text{C}$. Duration : 5 sec.
8	Flexure Strength.	No visible mechanical damage.	Flexure: 2mm. Pressurizing Speed: 0.5mm/sec. Keep time: 30 ± 1 sec.
9	Terminal Strength.	No visible mechanical damage.	Force: 0.45Kg for 0603 series. Force: 0.9Kg for 0805 series. Force: 1.8Kg for 1008 series above. Keep time: 5 sec › X,Y directs.

COIL SPECIFICATION



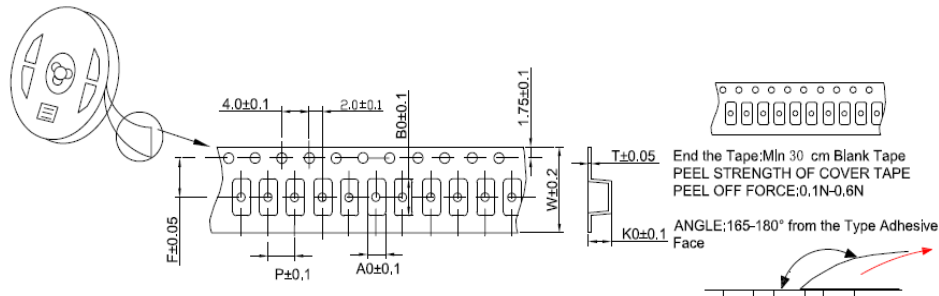
ZenithTek

Brand **ZenithTek**
 Product Series Code **ZWP - Series**
 File Version **V1.5**
 Description **Wire Wound High Current Chip Inductor**



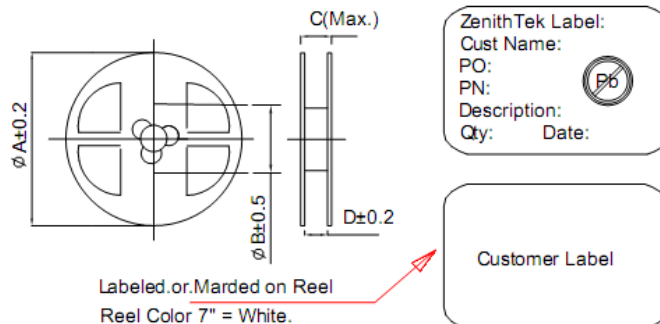
Package

Taping Dimension (mm)



Size(mm)	W	P	A0	B0	K0	T	F
ZWP-0603	8	4	1.25	1.90	1.05	0.22	3.50
ZWP-0805	8	4	1.72	2.55	1.30	0.22	3.50
ZWP-1008	8	4	2.50	2.85	2.00	0.22	3.50
ZWP-1210	8	4	2.88	3.72	2.50	0.26	5.50

Reel Dimension (mm)



Size(mm)	A	B	C	D	Reel/Size	Qty./Size
ZWP-0603	180	60	14.4	8.4	7"	4000 Pcs
ZWP-0805	180	60	14.4	8.4	7"	2000 Pcs
ZWP-1008	180	60	14.4	8.4	7"	2000 Pcs
ZWP-1210	180	60	14.4	8.4	7"	2000 Pcs

Box Dimension (mm)

