

COIL SPECIFICATION



ZenithTek

Brand **ZenithTek**
 Product Series Code **ZCMN - Series**
 File Version **V1.0**
 Description **SMD Wire Wound Common Mode Filter**

Features

- SMD Type Common Mode Filter.
- High Rated Current.
- Noise Suppression for Power Line.
- Halogen Free, Lead Free, RoHS and REACH Compliance.

Product Identification

ZCMN - 504525 AA - 501

1 2 3 4

Applications

- Fit for Power Line Filtering.
- Smart Meter.
- Wireless Charger.

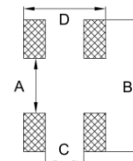
- 1.Product Code:
ZCMN = ZenithTek Code.
- 2.Dimension Code:
504525 = 5.0 * 4.5 * 2.5 mm.
- 3.Type Code:
AA.
- 4.Impedance Code:
501 = 500Ω.

Dimension (Unit: mm)



Type	A(±0.3)	B(±0.3)	C(Max.)	D(Ref.)	E(Ref.)
ZCMN-504525	5.00	4.50	2.50	1.60	1.40

Land Pattern (Unit: mm)



Type	A(Ref.)	B(Ref.)	C(Ref.)	D(Ref.)
ZCMN-504525	1.50	5.50	1.20	4.60

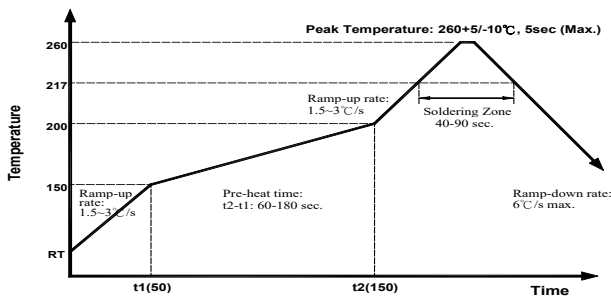
Product Structure



Schematic



Reflow Heat Endurance



Operating & Storage Conditions

Operating Temp. : -40°C~+85°C (including self-temp. rise).
 Storage Temp. : -40°C~+85°C (for PCBA).

Standard & Atmospheric Condition

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 E4291A.
 Resistance Meter : Chroma 16502.
 Caliper : Mitsutoyo 150mm.

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Electrical Characteristic

Part Number	Impedance (Ω)/Typ.	Test Frequency (MHz)0.5V	Rated Current (A)/(Max.)	Rated / Withstanding Voltage(Vdc)	DC Resistance (Ω)/(±40%)	Insulation Resistance (MΩ)/(Min.)
ZCMN-504525AA-101	100	100	6.0	50 / 125	0.009	10
ZCMN-504525AA-251	250	100	5.0	50 / 125	0.014	10
ZCMN-504525AA-501	500	100	4.0	50 / 125	0.019	10
ZCMN-504525AA-102	1000	100	3.0	50 / 125	0.024	10
ZCMN-504525AA-142	1400	100	1.5	50 / 125	0.040	10
ZCMN-504525AA-152	1500	100	1.5	50 / 125	0.040	10

Note1 : Typical Heat Rating DC Current would cause an approximately ΔT of 40°C.

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Reliability Test

No.	Item	Specification	Test Method
1	Temperature Shock.	Appearance: No damage. Impedance: within $\pm 10\%$ of initial.	Temperature: $-40\pm 2^{\circ}\text{C} \sim +85\pm 2^{\circ}\text{C}$ Kept for 30 minutes. Transition time : 5 minutes. 100 Cycles.
2	Humidity Resistance.	Appearance: No damage. Impedance: 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. Impedance: within $\pm 10\%$ of initial.	Temperature: $85\pm 2^{\circ}\text{C}$. Duration: 1000 +4/-0 hours.
4	Low Temperature Resistance.	Appearance: No damage. Impedance: within $\pm 10\%$ of initial.	Temperature: $-40\pm 2^{\circ}\text{C}$. Duration: 1000 +4/-0 hours.
5	Vibration test.	Appearance: No damage. Impedance: 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. Impedance: 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.	Reflow 2 times. Force: 10N , Keep time: 5 sec , X,Y directs.

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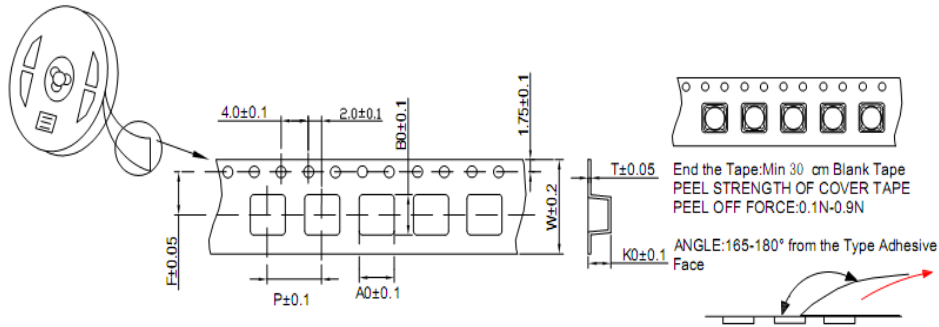


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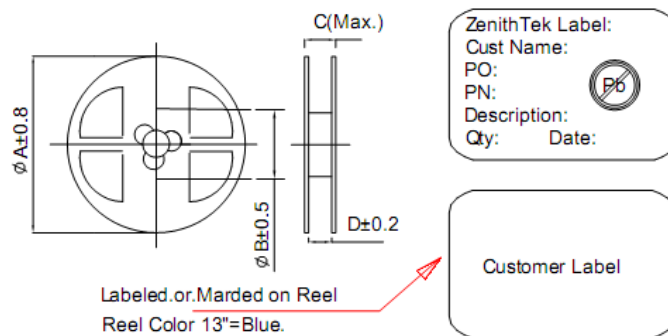
Package

Taping Dimension (mm)



Size(mm)	W	P	A0	B0	K0	T	F
ZCMN-504525	12.00	8.00	4.80	5.30	2.50	0.25	5.50

Reel Dimension (mm)



Size(mm)	A	B	C	D	Reel/Size	Qty./Size
ZCMN-504525	330	100	16.9	12.5	13"	2500 Pcs

Box Dimension (mm)

