

# COIL SPECIFICATION



**ZenithTek**

Brand

**ZenithTek**

Product Series Code

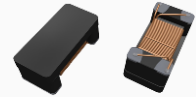
**ZCMS - Series**

File Version

**V0**

Description

**Wire Wound Common Mode Filter**



## Features

- SMD Type Common Mode Filter
- For High-Speed Differential Signal Line
- Downsized Winding Construction for Filtering
- Halogen Free, Lead Free, RoHS and REACH Compliance

## Product Identification

**ZCMS - 0805 AA - 900 N**

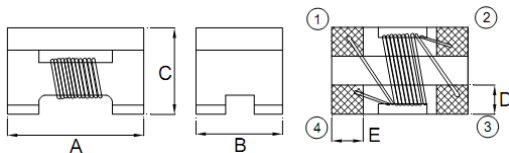
1            2            3            4            5

## Applications

- Fit for Signal Line Filtering
- For IEEE1394, LVDS, DVI, HDMI, USB2.0/ USB3.0/ USB3.1

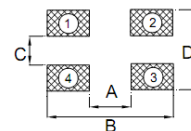
- 1.Product Code:  
ZCMS = ZenithTek Code.
- 2.Dimension Code:  
0805 = 2.0 \* 1.2 \* 1.2 mm.
- 3.Type Code:  
AA.
- 4.Impedance Code:  
900 = 90Ω.
- 5.Tolerance Code:  
N = 25%

## Dimension (Unit: mm)



Type	A(±0.2)	B(±0.2)	C(±0.2)	D(Ref.)	E(Ref.)
ZCMS-0504	1.20	1.00	0.90 Max.	0.36	0.33
ZCMS-0603	1.60±0.1	0.80±0.1	1.10±0.1	0.25	0.33
ZCMS-0805	2.00	1.20	1.20	0.40	0.45
ZCMS-1206	3.20	1.60	1.90	0.60	0.60

## Land Pattern (Unit: mm)

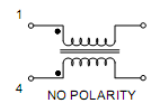


Type	A(Ref.)	B(Ref.)	C(Ref.)	D(Ref.)
ZCMS-0504	0.60	1.50	0.30	1.20
ZCMS-0603	0.70	2.10	0.30	1.00
ZCMS-0805	0.80	2.60	0.40	1.20
ZCMS-1206	1.60	3.70	0.40	1.60

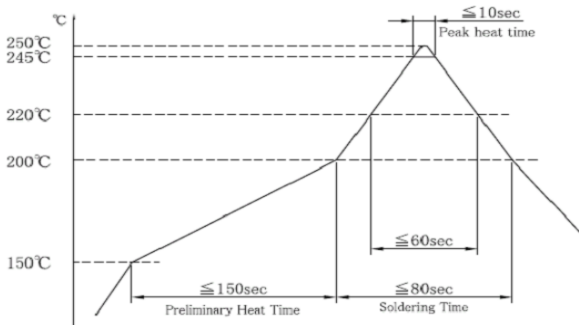
## Product Structure



## Schematic



## Reflow Heat Endurance



## Operating & Storage Conditions

Operating Temp. : -25°C~+85°C (including self-temp. rise)  
Storage Temp. : -25°C~+85°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

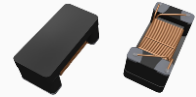
Z: Agilent 4287A.  
Insulation: Agilent 4339B.

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 Description **Wire Wound Common Mode Filter**



## Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current (mA)	Rated Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0504AA-161□	160	25	100	260	20	0.60	10
ZCMS-0504AA-221□	220	25	100	230	20	0.70	10
ZCMS-0504AA-301□	300	25	100	200	20	0.80	10
ZCMS-0504AA-331□	330	25	100	200	20	0.80	10
ZCMS-0504AA-900□	90	25	100	280	20	0.50	10

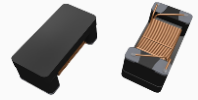
Note1 : Tolerance : N = ±25%.

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Brand: **ZenithTek**  
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 File Version: **V0**  
 Description: **Wire Wound Common Mode Filter**



## Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current (mA)	Rated Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0504BA-900□	90	25	100	280	20	0.50	10

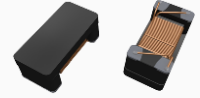
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Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current (mA)	Rated Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0504CA-121□	120	25	100	270	20	0.55	10
ZCMS-0504CA-900□	90	25	100	280	20	0.30	10

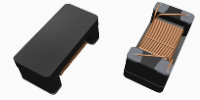
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Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current (mA)	Rated Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0504DA-120□	12	25	100	300	20	0.30	10
ZCMS-0504DA-250□	25	25	100	300	20	0.30	10
ZCMS-0504DA-500□	50	25	100	300	20	0.40	10
ZCMS-0504DA-600□	60	25	100	300	20	0.40	10
ZCMS-0504DA-670□	67	25	100	250	50	0.30	10
ZCMS-0504DA-900□	90	25	100	280	20	0.50	10
ZCMS-0504DA-121□	120	25	100	270	20	0.55	10

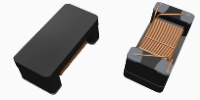
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Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current(mA)	Rated / Withstanding Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0603AA-600□	60	25	100	300	50 / 125	0.30	10
ZCMS-0603AA-670□	67	25	100	300	50 / 125	0.30	10
ZCMS-0603AA-900□	90	25	100	300	50 / 125	0.30	10
ZCMS-0603AA-121□	120	25	100	250	50 / 125	0.36	10
ZCMS-0603AA-161□	160	25	100	200	50 / 125	0.40	10
ZCMS-0603AA-221□	220	25	100	200	50 / 125	0.42	10

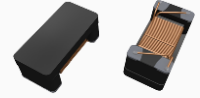
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Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current(mA)	Rated / Withstanding Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0805AA-670□	67	25	100	400	50 / 125	0.25	10
ZCMS-0805AA-900□	90	25	100	400	50 / 125	0.30	10
ZCMS-0805AA-121□	120	25	100	350	50 / 125	0.30	10
ZCMS-0805AA-161□	160	25	100	350	50 / 125	0.30	10
ZCMS-0805AA-181□	180	25	100	330	50 / 125	0.35	10
ZCMS-0805AA-221□	220	25	100	330	50 / 125	0.35	10
ZCMS-0805AA-261□	260	25	100	300	50 / 125	0.40	10
ZCMS-0805AA-361□	360	25	100	280	50 / 125	0.40	10
ZCMS-0805AA-901□	900	25	100	200	50 / 125	1.00	10

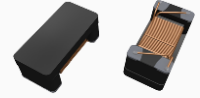
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Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current (mA)	Rated Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0805BA-900□	90	25	100	300	20	0.30	10

Note1 : Tolerance : N = ±25%.

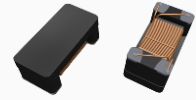


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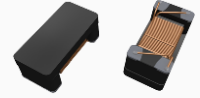
Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current (mA)	Rated Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0805CA-240□	24	25	100	300	20	0.20	10
ZCMS-0805CA-300□	30	25	100	300	20	0.20	10
ZCMS-0805CA-670□	67	25	100	300	20	0.30	10
ZCMS-0805CA-900□	90	25	100	300	20	0.30	10

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Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz)	Rated Current (mA)	Rated Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-0805DA-120□	12	25	100	420	20	0.25	10
ZCMS-0805DA-240□	24	25	100	420	20	0.25	10
ZCMS-0805DA-250□	25	25	100	420	20	0.25	10
ZCMS-0805DA-600□	60	25	100	300	20	0.30	10
ZCMS-0805DA-900□	90	25	100	300	20	0.30	10

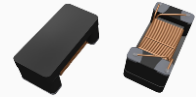
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ZenithTek

Brand: ZenithTek  
 Product Series Code: ZCMS - Series  
 File Version: V0  
 Description: Wire Wound Common Mode Filter



## Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%) T=25%	Test Frequency (MHz)	Rated Current(mA)	Rated / Withstanding Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-1206AA-670□	67	25	100	400	50 / 125	0.25	10
ZCMS-1206AA-900□	90	25	100	400	50 / 125	0.30	10
ZCMS-1206AA-121□	120	25	100	370	50 / 125	0.35	10
ZCMS-1206AA-161□	160	25	100	340	50 / 125	0.40	10
ZCMS-1206AA-261□	260	25	100	310	50 / 125	0.50	10
ZCMS-1206AA-361□	360	25	100	290	50 / 125	0.60	10
ZCMS-1206AA-601□	600	25	100	260	50 / 125	0.80	10
ZCMS-1206AA-102□	1000	25	100	230	50 / 125	1.00	10
ZCMS-1206AA-222□	2200	25	100	200	50 / 125	1.20	10

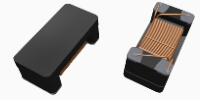
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## Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%) T=±25%	Test Frequency (MHz)	Rated Current(mA)	Rated / Withstanding Voltage (Vdc)	DC Resistance (Ω)/(Max.)	Insulation Resistance (MΩ)/(Min.)
ZCMS-1206CA-420□	42	25	100	400	50 / 125	0.25	10

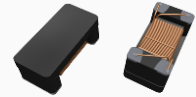
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## Reliability Test

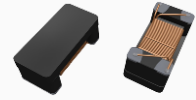
No.	Item	Specification	Test Method
1	Temperature Shock.	Appearance: No damage. Impedance: within $\pm 10\%$ of initial.	Temperature: $-25\pm 2^{\circ}\text{C}$ ~ $+85\pm 2^{\circ}\text{C}$ Kept for 30 minutes. Transition time : 5 minutes. 100 Cycles.
2	Humidity Resistance.	Appearance: No damage. Impedance: 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: $-25\pm 2^{\circ}\text{C}$ . 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: $160^{\circ}\text{C}$ , 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: $30\pm 1$ sec.
9	Terminal Strength.	No visible mechanical damage.	Reflow 2 times. Force: 10N , Keep time: 5 sec , X,Y directs.

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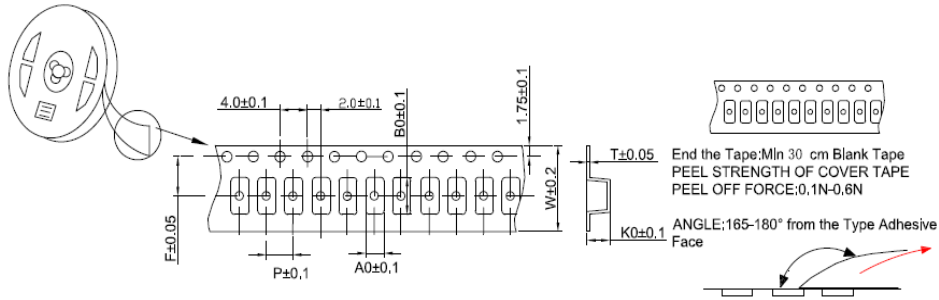
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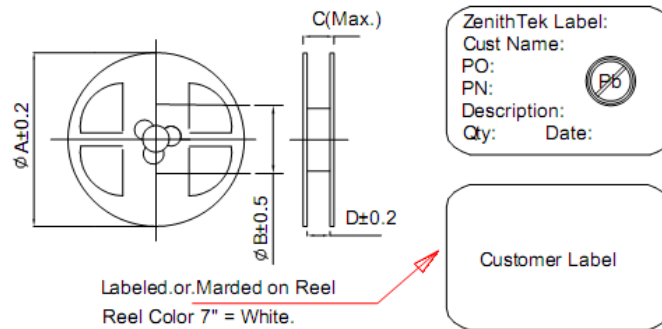
## Package

### Taping Dimension (mm)



Size(mm)	W	P	A0	B0	K0	T	F
ZCMS-0504	8.00	4.00	1.15	1.40	0.93	0.22	3.50
ZCMS-0603	8.00	4.00	1.00	1.65	1.18	0.22	3.50
ZCMS-0805	8.00	4.00	1.50	2.35	1.45	0.22	3.50
ZCMS-1206	8.00	4.00	1.88	3.50	2.10	0.22	3.50

### Reel Dimension (mm)



Size(mm)	A	B	C	D	Reel/Size	Qty./Size
ZCMS-0504	178	60	12	9	7"	3000 Pcs
ZCMS-0603	178	60	12	9	7"	2000 Pcs
ZCMS-0805	178	60	12	9	7"	2000 Pcs
ZCMS-1206	178	60	12	9	7"	2000 Pcs

### Box Dimension (mm)

