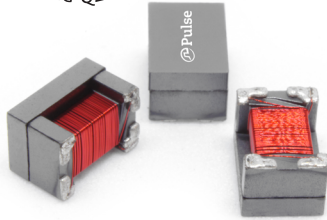




# Automotive Ethernet

Common Mode Choke for 1000Base-T1



- Ⓜ Meet IEEE802.3bp and OA TC3 v2.0 Requirements
- Ⓜ Approved by major Automotive OEMs
- Ⓜ Meets AEC-Q200 Requirement
- Ⓜ PPAP capable
- Ⓜ Tested with leading PHY partners
- Ⓜ Operating Temperature: - 40°C to +125°C
- Ⓜ Factory IATF-16949 Certified
- Ⓜ Patented Technology
- Ⓜ Open Alliance TC3 test report available

## Electrical Specifications 25°C

Part Number	Insertion Loss (dB MAX)		Return Loss (dB MIN)			Common Mode Rejection (dB MIN)				Differential to Common Mode Rejection (dB MIN)			
	10-100MHz	100-400MHz	30-80MHz	200MHz	400MHz	30-80MHz	200MHz	400MHz	1000MHz	1-30 MHz	100 MHz	200 MHz	1000 MHz
<b>AE5002</b>	-1	-1.7	-22	-17	-15	-45	-35	-32	-25	-60	-47	-40	-38

Part Number	Insertion Loss (dB MAX)			Return Loss (dB MIN)			Common Mode Rejection (dB MIN)			Differential to Common Mode Rejection (dB MIN)	
	20MHz	100MHz	400MHz	30-80MHz	200MHz	600MHz	10MHz	30-200MHz	600MHz	1-80 MHz	600 MHz
<b>AE1210</b>	-0.5	-0.8	-1.5	-25	-20	-14.5	-32.5	-42	-32.5	-65	-47.5

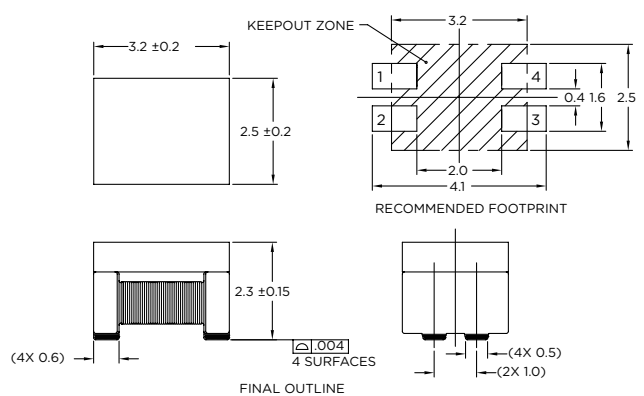
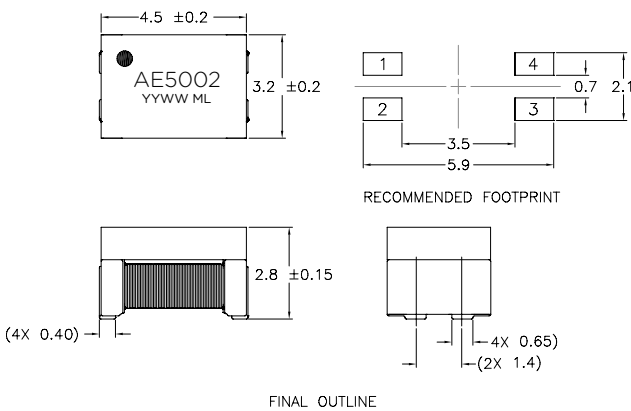
**Notes:**

1. DCR per winding is 4.2mOhms for AE5002 and 3.9mOhms for AE1210
2. I<sub>max</sub> for both parts is 100mA
3. Voltage rating for both parts is 60V Max

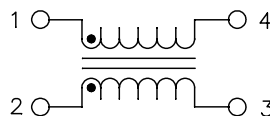
## Mechanical

### AE5002

### AE1210



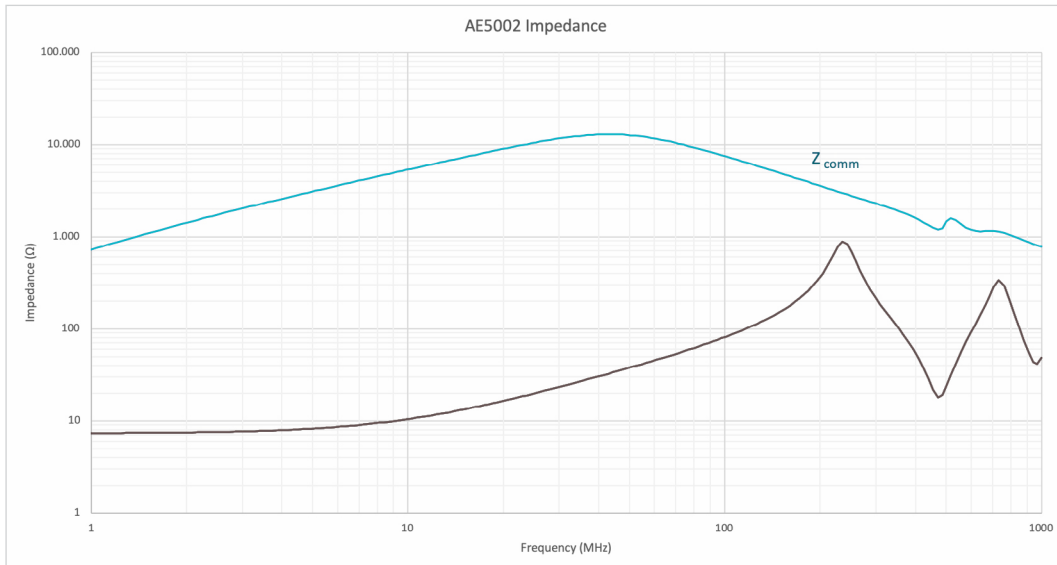
## Schematic



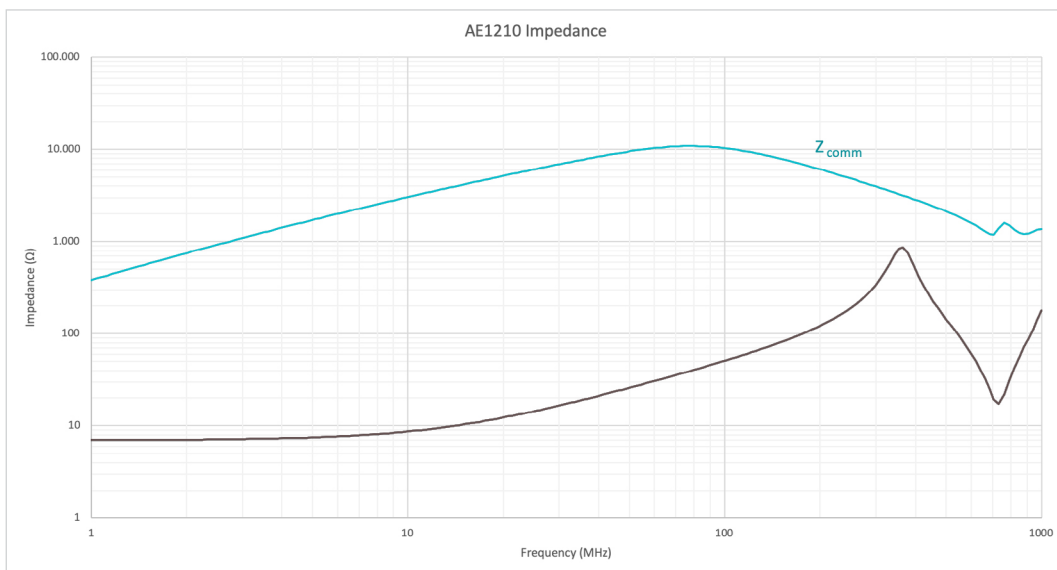
**Dimensions:** Inches (mm)  
Unless otherwise specified, all tolerances are ± .010 (0.25)

## Impedance Plot

AE5002



AE1210

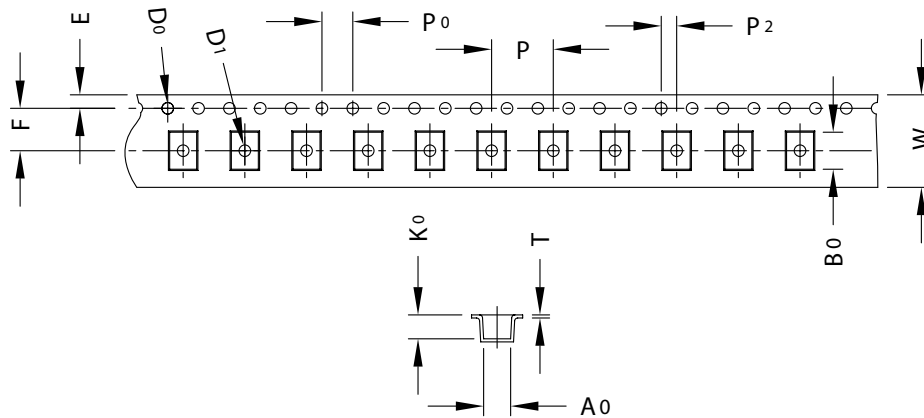


# Automotive Ethernet

Common Mode Choke for 1000Base-T1

## Tape & Reel

AE5002 / AE1210



Dim Chart

Item	W	A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	P	F	E	D <sub>0</sub>	D <sub>1</sub>	P <sub>0</sub>	P <sub>2</sub>	T
AE5002	12.00 ±0.30	3.5 ±0.10	4.8 ±0.10	3.1 ±0.10	8.00 ±0.10	5.50 ±0.10	1.75 ±0.10	1.50 <sup>+0.10</sup> <sub>-0.00</sub>	1.50 <sup>+0.10</sup> <sub>-0.00</sub>	4.00 ±0.10	2.00 ±0.10	0.40 ±0.05
AE1210	12.00 ±0.30	2.7 ±0.10	3.5 ±0.10	2.6 ±0.10	4.00 ±0.10	5.50 ±0.10	1.75 ±0.10	1.50 <sup>+0.10</sup> <sub>-0.00</sub>	1.50 <sup>+0.10</sup> <sub>-0.00</sub>	4.00 ±0.10	2.00 ±0.10	0.40 ±0.05


### For More Information:

Americas - [prodinfonetworkamericas@pulseelectronics.com](mailto:prodinfonetworkamericas@pulseelectronics.com) | Europe - [comms-apps-europe@pulseelectronics.com](mailto:comms-apps-europe@pulseelectronics.com) | Asia - [prodinfonetworkapac@pulseelectronics.com](mailto:prodinfonetworkapac@pulseelectronics.com)

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2021. Pulse Electronics, Inc. All rights reserved.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View AE5002 on WIN SOURCE](#)

 [Pulse Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management