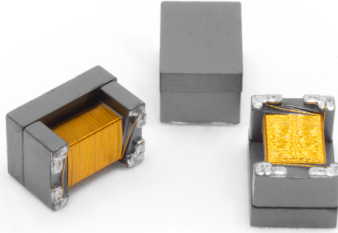


# Automotive Ethernet

Common Mode Choke for 100Base-T1



- Ⓢ Meet IEEE802.3bw and OA TC1 v2.0 Requirements
- Ⓢ Meets AEC-Q200 Requirement
- Ⓢ PPAP Documentation Support
- Ⓢ Approved by Major Automotive OEMs and PHY Partners
- Ⓢ Operating Temperature: - 40°C to +125°C
- Ⓢ Factory IATF-16949 Certified
- Ⓢ Patented Technology
- Ⓢ Open Alliance TC1 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)			
	1-60MHz	33MHz	66MHz	1-10MHz	33MHz	66MHz	1MHz	10-100MHz	40MHz	1000MHz	1-10 MHz	100 MHz	1000 MHz
<b>AE2002</b>	-1	-	-	-26	-21.1	-18	-23	-42	-25	-15	-70	-50	-24

Part Number	Insertion Loss (dB MAX)			Return Loss (dB MIN)			Common Mode Rejection (dB MIN)			Differential to Common Mode Rejection (dB MIN)		
	1-10MHz	33MHz	66MHz	1-10MHz	33MHz	66MHz	1MHz	10-80MHz	200MHz	1-10 MHz	100 MHz	200 MHz
<b>AE0100</b>	-0.5	-0.7	-1	-27	-22	-19	-25	-45	-37	-70	-50	-40

### Notes:

1. DCR per winding is 5.0mOHms for AE2002 and 3.5mOHms for AE0100
2. I<sub>max</sub> for both parts is 100mA
3. Voltage rating for both parts is 60V Max

## Mechanical

### AE2002

Top View: 4.5 ±0.2, 3.2 ±0.2, AE2002 YYWW ML

Recommended Footprint: 1, 2, 3, 4, 0.7, 2.1, 3.5, 5.9

Side View: 2.8 ±0.15, (4X 0.45)

Final Outline: 4X 0.65, (2X 1.4)

### AE0100

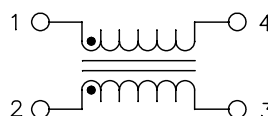
Top View: 3.2 ±0.2, 2.5 ±0.2, 3.2, 0.4, 1.6, 2.5, 2.0, 4.1, KEEP-OUT ZONE

Recommended Footprint: 1, 2, 3, 4

Side View: 2.3 ±0.15, (4X 0.6), 4 SURFACES

Final Outline: (4X 0.5), (2X 1.0)

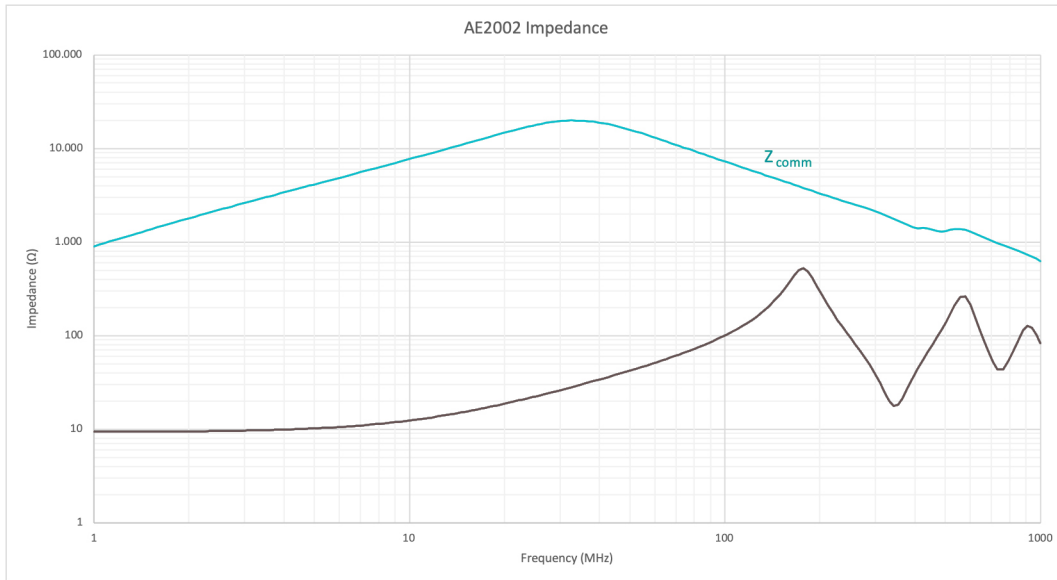
## Schematic



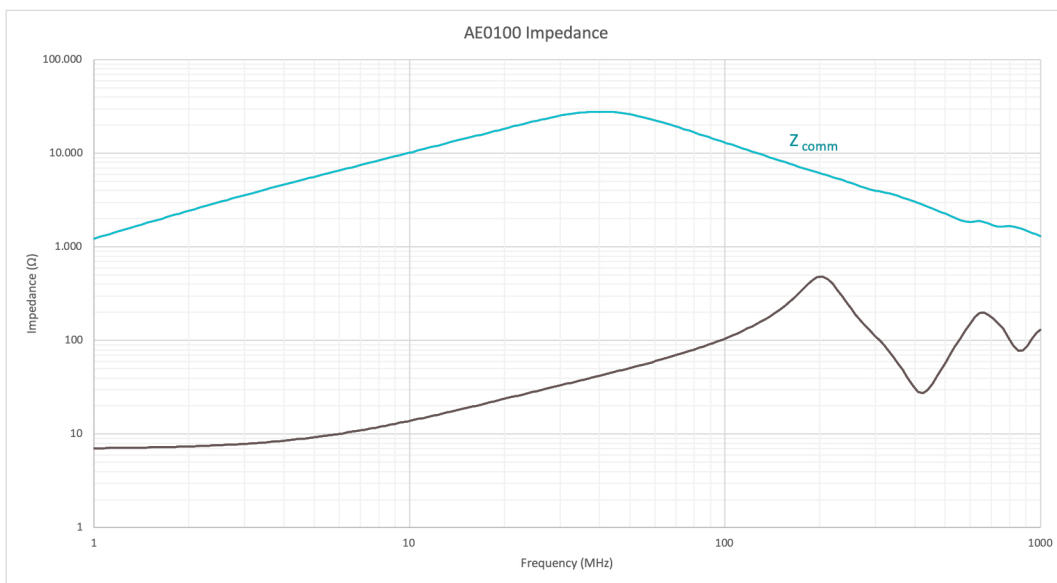
Dimensions: Inches (mm)  
Unless otherwise specified, all tolerances are ± .010 (0.25)

### Impedance Plot

AE2002



AE0100

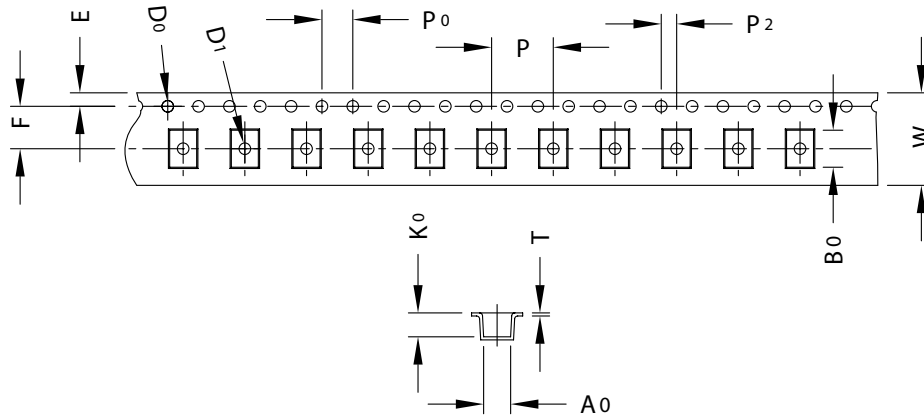


# Automotive Ethernet

Common Mode Choke for 100Base-T1

## Tape & Reel

AE2002 / AE0100



Dim Chart

Item	Quantity/ Reel	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
AE2002	2500	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
AE0100	3000	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:

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