

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
AE2002	-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
AE0100	-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_{max} 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

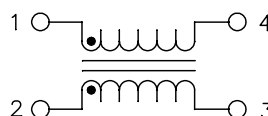
Top View: 3.2 ±0.2, 2.5 ±0.2, 3.2, 0.4, 1.6, 2.5, 2.0, 4.1

Recommended Footprint: 1, 2, 3, 4, 0.4, 1.6, 2.5

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

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

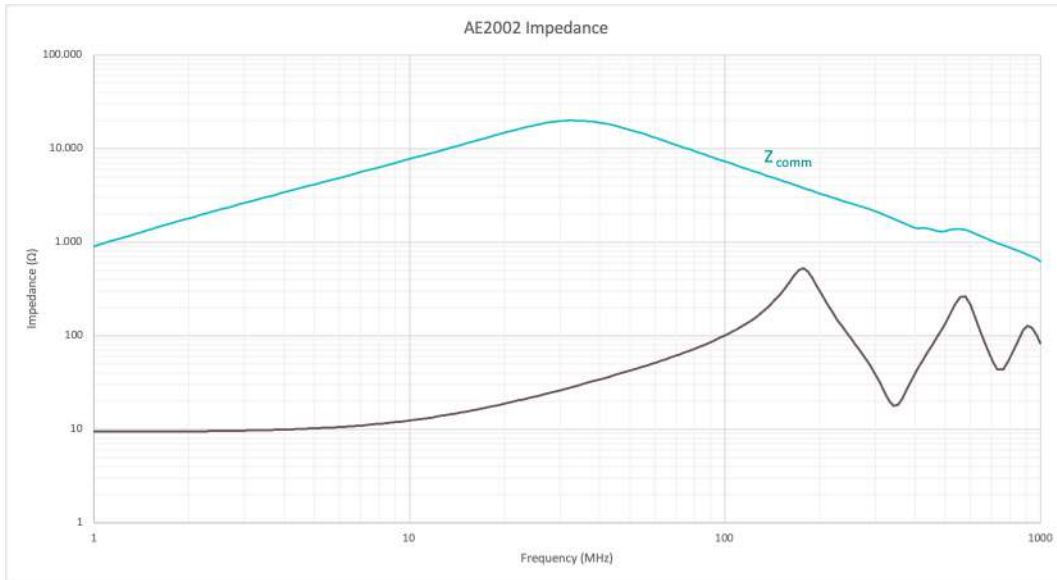
Schematic



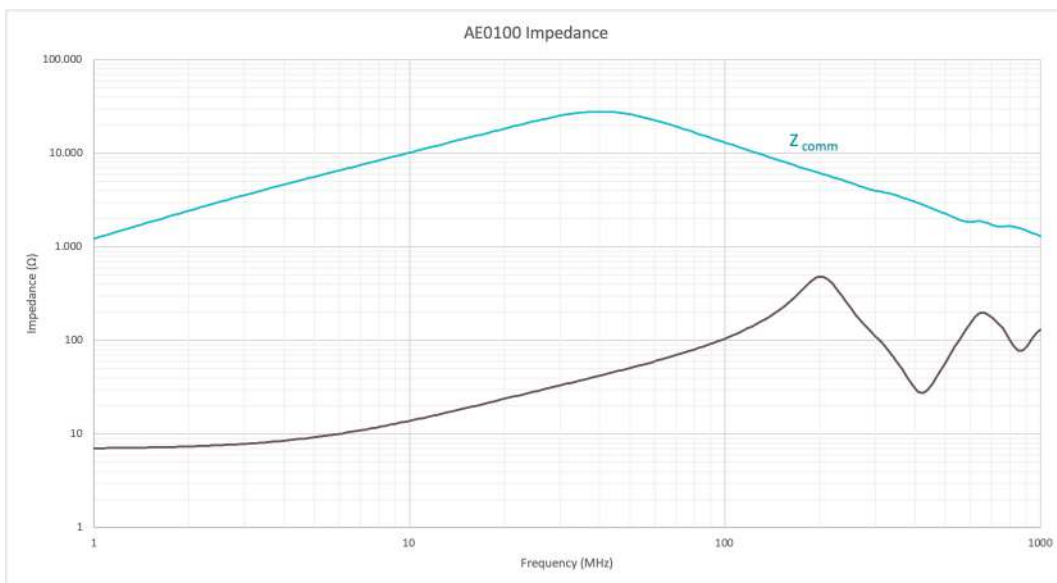
Dimensions: Inches (mm)
Unless otherwise specified, all tolerances are ± .010 (0.25)

Impedance Plot

AE2002



AE0100

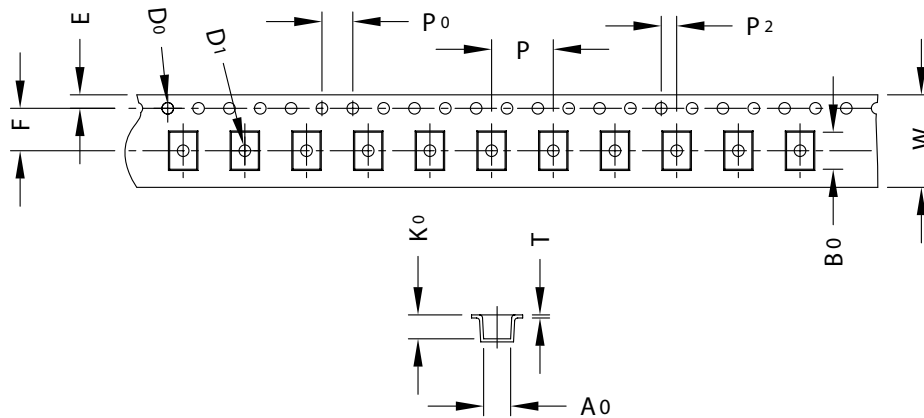


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Tape & Reel

AE2002 / AE0100



Dim Chart

Item	Quantity/ Reel	W	A ₀	B ₀	K ₀	P	F	E	D ₀	D ₁	P ₀	P ₂	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 ^{+0.10} _{-0.00}	1.50 ^{+0.10} _{-0.00}	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 ^{+0.10} _{-0.00}	1.50 ^{+0.10} _{-0.00}	4.00 ±0.10	2.00 ±0.10	0.40 ±0.05

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