

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
AE5002	-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
AE1210	-0.5	-0.8	-1.5	-25	-20	-14.5	-32.5	-42	-32.5	-65	-47.5

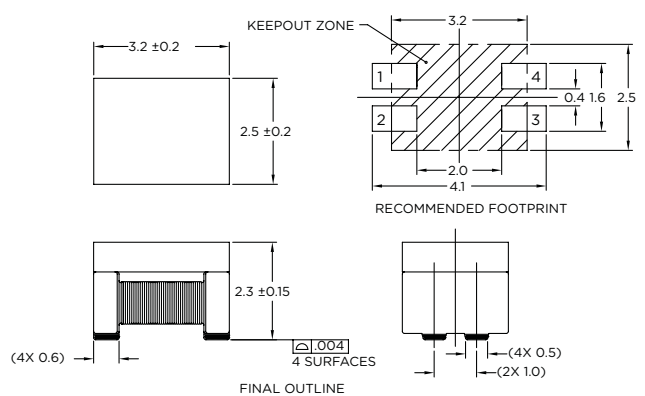
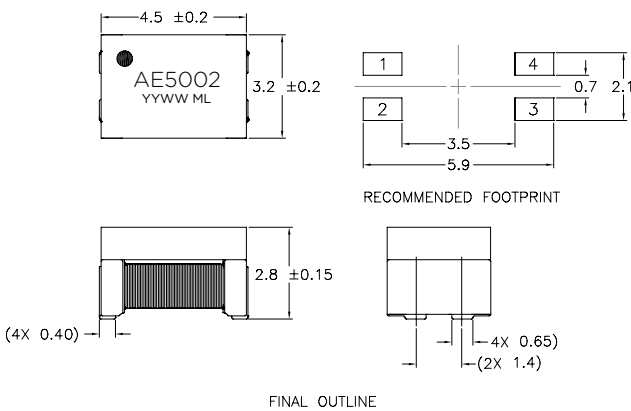
Notes:

1. DCR per winding is 4.2mOhms for AE5002 and 3.9mOhms for AE1210
2. I_{max} for both parts is 100mA
3. Voltage rating for both parts is 60V Max

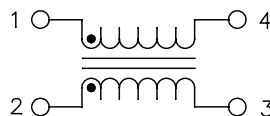
Mechanical

AE5002

AE1210



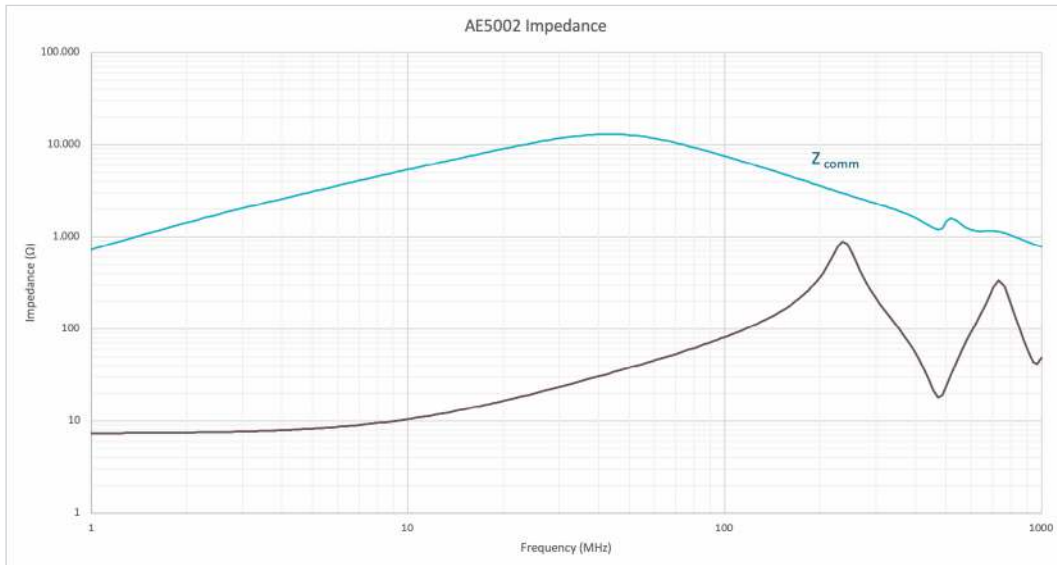
Schematic



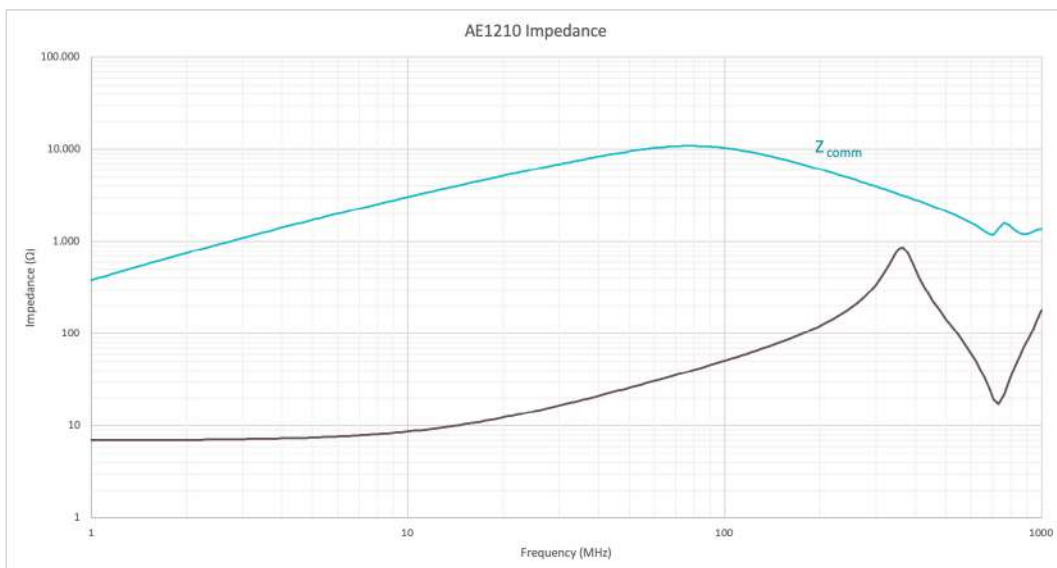
Dimensions: Inches (mm)
Unless otherwise specified, all tolerances are ± .010 (0.25)

Impedance Plot

AE5002



AE1210

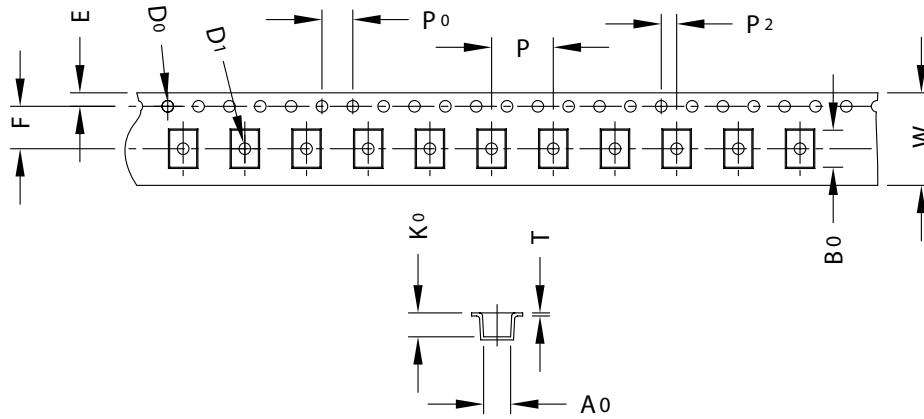


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Tape & Reel

AE5002 / AE1210



Dim Chart

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

For More Information:

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