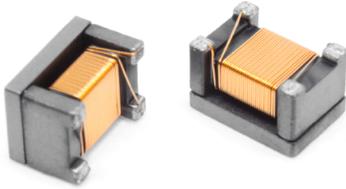


Automotive Chip Choke

EMI Suppression for CAN-Bus Networks

2-Line Common Mode Chokes



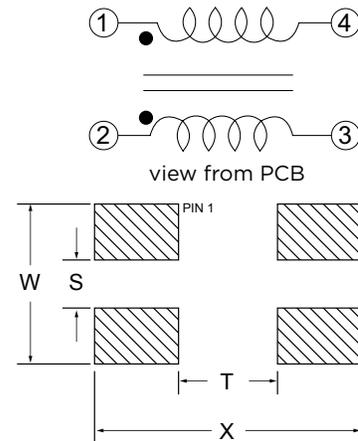
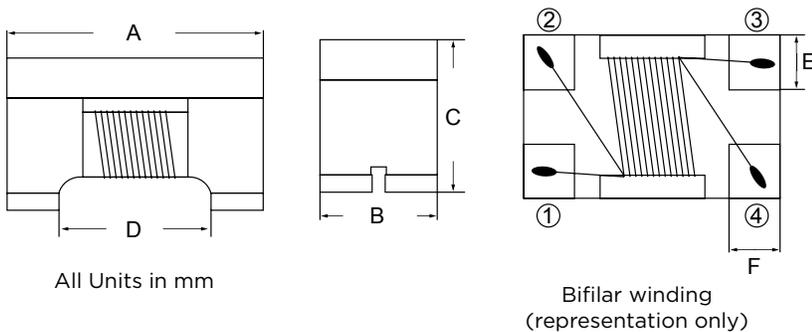
- Ⓜ Meets AEC-Q200 Requirements
- Ⓜ Suppression of common mode noise without attenuating the signal
- Ⓜ Magnetically shielded versions for lower Rdc and higher current
- Ⓜ Supports CAN-Bus, A2B and other IVN high speed differential signal lines (LVDS)

Electrical Specifications @ 25°C

Part Number	Common Mode Impedance (10MHZ)		Inductance (uH)	Standard Tolerance	RDC (Ω Max)	IDC (A MAX)	Isolation Resistance (MΩ) Min	Rated Voltage (V) Max
	Min	Typ						
Operating Temperature Range -40°C to +125°C								
PE-1812ACC110STS	300	600	11	+50/-30%	0.5	0.36	10	50
PE-1812ACC220STS	600	1200	22	+50/-30%	0.6	0.31	10	50
PE-1812ACC510STS	1500	3500	51	+50/-30%	1	0.23	10	50
PE-1812ACC101STS	3000	7500	100	+50/-30%	2	0.2	10	50

Mechanical

Schematic



Component Dimensions (mm)

SOLDER PAD (mm)

Series	A	B	C	D	E	F	X	T	W	S
1812 ACC	4.5 +/-0.20	3.2 +/-0.20	3.0 MAX	3.1 +/-0.20	0.65 +/-0.15	0.70 +/-0.15	5.90	3.20	3.40	1.60

Automotive Chip Choke

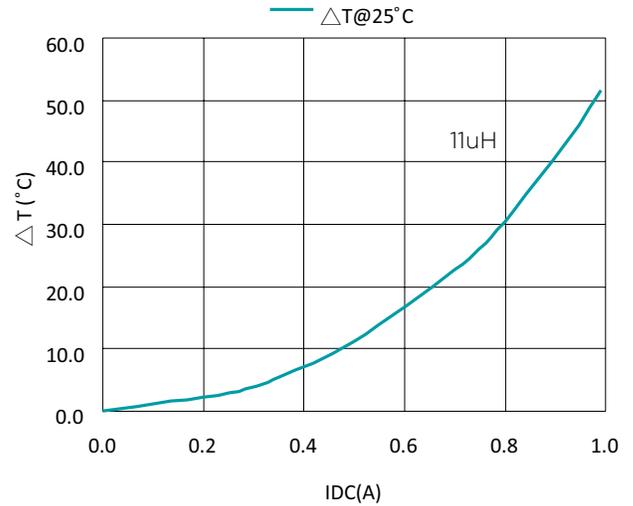
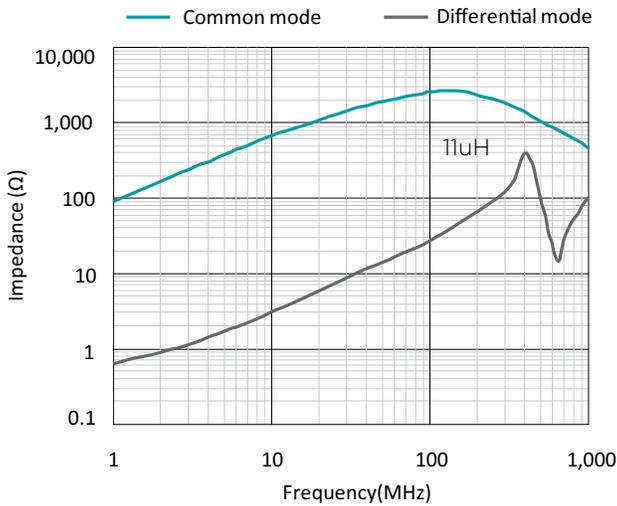
EMI Suppression for CAN-Bus Networks

2-Line Common Mode Chokes

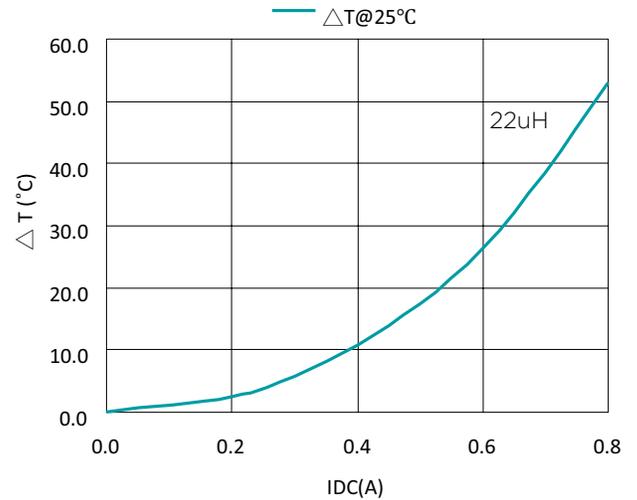
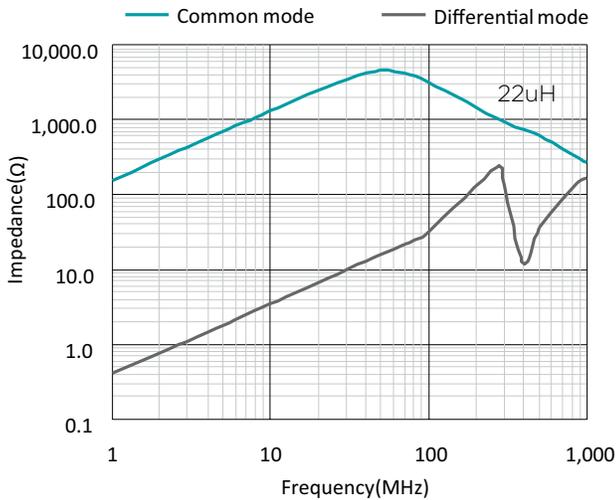
Impedance vs Frequency

Temp vs DC Current

PE-1812ACC110STS



PE-1812ACC220STS



Automotive Chip Choke

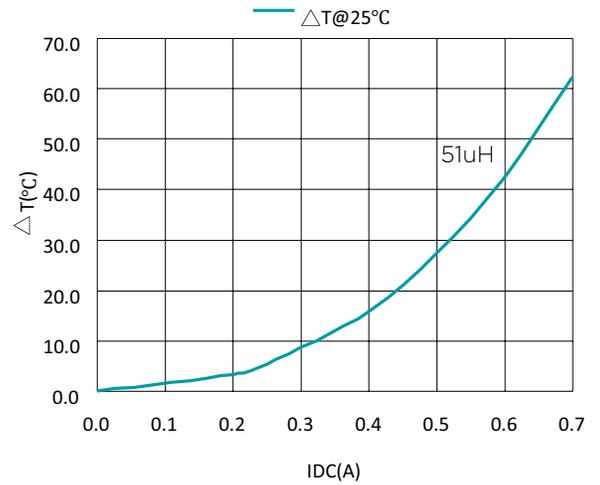
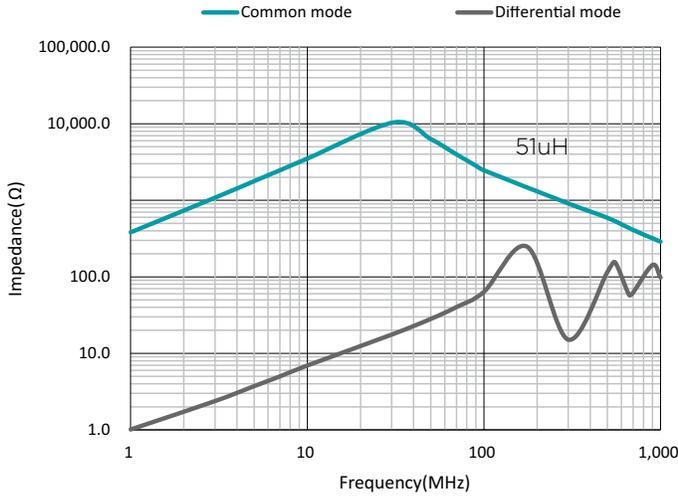
EMI Suppression for CAN-Bus Networks

2-Line Common Mode Chokes

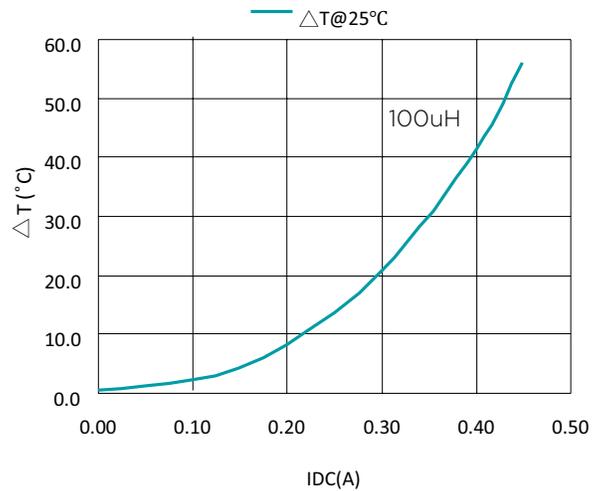
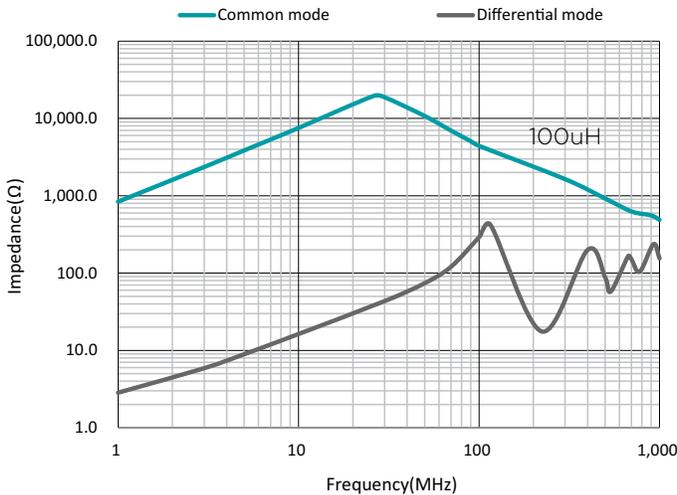
Impedance vs Frequency

Temp vs DC Current

PE-1812ACC510STS



PE-1812ACC101STS



Automotive Chip Choke

EMI Suppression for CAN-Bus Networks

2-Line Common Mode Chokes

Reliability Test

Item	Reference documents	Test Condition	Test Specification
1. High Temperature Exposure	MIL-STD-202 Method 108	1. Temperature: 125 °C 2. Time: 1000 hours	1. No mechanical and electrical damage 2. Inductance shall be within specification
2. Temperature Cycling	JESD22 Method JA-104	1. Temperature: -40 °C~125 °C 2. Number of cycles: 1000 cycle 3. Dwell time: 30 minutes	1. No mechanical and electrical damage 2. Inductance shall be within specification
3. Biased Humidity Test	MIL-STD-202 Method 103	1. Temperature: 85±5 °C 2. Time: 1000 hours 3. Humidity: 85±5% RH	1. No mechanical and electrical damage 2. Inductance shall be within specification
4. Operational Life	MIL-PRF-27	1. Temperature: 125 °C 2. Time: 1000 hours 3. Apply DC current reference	1. No mechanical and electrical damage 2. Inductance shall be within specification
5. External Visual	MIL-STD-883 Method 2009	Inspect product construction, marking and workmanship	Per product specification standard
6. Physical Dimensions	JESD22 Method JB-100	Verify physical dimensions to the applicable product detail specification	Per product specification standard
7. Vibration Test	MIL-STD-202 Method 204	1. Frequency and Amplified: 10-2000-10 Hz, 1.5mm 2. Direction: X, Y, Z 3. Test duration: 2 hours for each direction, 6 hours in total	1. No mechanical and electrical damage 2. Inductance shall be within specification
8. Resistance to Soldering Heat Test	MIL-STD-202 Method 210	1. Temperature: 250±5 °C 2. Time: (temp. ≥217 °C) 60-160 seconds 3. IR reflow times: 3 times	1. No mechanical and electrical damage 2. Inductance shall be within specification
9. Solderability Test	J-STD-002	1. Baking in pre-testing: 150±5 °C / 16Hours±30min. 2. Peak temperature: 245 °C 3. Time: (temp. ≥217 °C) 60-160 seconds 4. IR reflow times: 1 time	The terminal shall be at least 95% covered with fresh solder.
10. Electrical Characterization	User Spec.	1. Operating temperature: -40 °C~125 °C 2. Room Temperature: 25 °C	1. No mechanical and electrical damage 2. Inductance shall be within specification
11. Mechanical Shock	MIL-STD-202 Method 213	Figure 1 of Method 213. Condition C	1. No mechanical and electrical damage 2. Inductance shall be within specification
12. Board Flex Test	AEC-Q200-005	60 Seconds minimum holding time	After test, inductors shall be no mechanical damage.
13. Terminal Strength Test	AEC-Q200-006	1. Apply push force to samples mounted on PCB. 2. Force of 1.8 kg for 60±1 seconds.	After test, inductors shall be no mechanical damage.

Notes:

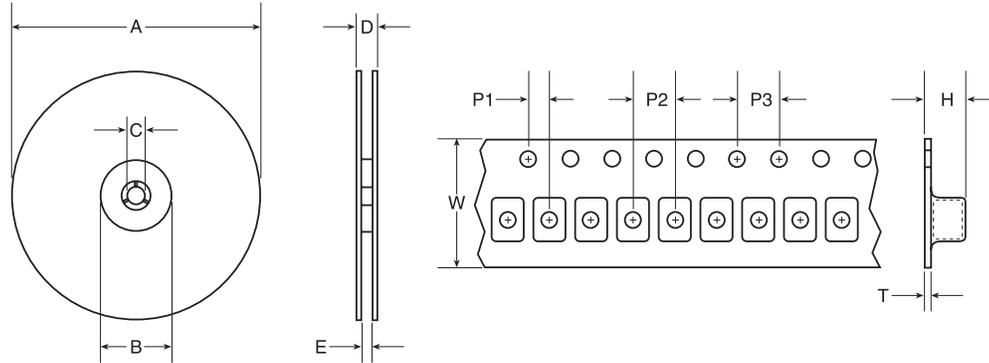
1. Inductance is measure, where applicable, with both primary windings connected in series (2 to 5, with 3 and 4 shorted).
2. Leakage inductance is measured with both primary windings connected in series (where applicable) with all other windings shorted.

Automotive Chip Choke

EMI Suppression for CAN-Bus Networks

2-Line Common Mode Chokes

Tape and Reel Specifications



Series	Parts per Reel	Reel Dimensions (mm)					Tape Dimensions (mm)					
		A	B	C	D	E	W	P1	P2	P3	H	T
1812 ACC	500	178	60	13	17	14	12	2	8	4	4	0.35

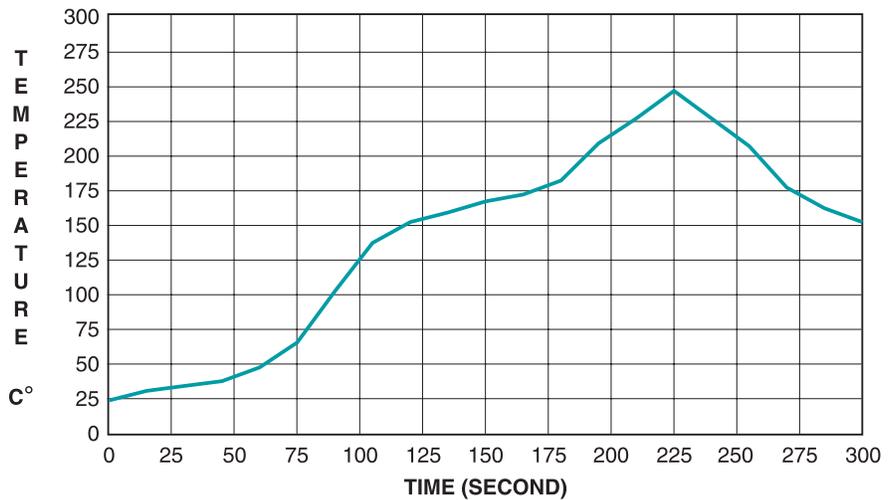
I. Description:

- Ferrite drum core construction
- Magnetically shielded
- Enameled copper wire: H class
- Product weight: 0.15g (ref.)
- Moisture sensitivity Level 1
- Products comply with RoHS' requirements
- Halogen Free available

II. General specification:

- Storage temp: -40°C to +125°C
- Operating temp: -40°C to +125°C
(Temp. rise included)
- Resistance to solder heat: 250°C 10 secs.

Recommended Solder Heat Resistance Profile



For More Information:

Americas - prodinfo_network_americas@yageo.com | Europe - prodinfo_network_emea@yageo.com | Asia - prodinfo_network_asia@yageo.com

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